

Ohio

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Gross Domestic Product from Ohio

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GROSS DOMESTIC PRODUCT FROM OHIO

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INTRODUCTION

INTRODUCTION

This report provides an overview of Ohio's economy and its role in the U.S. economy. It looks at the production of goods and the provision of services by people using capital located here; i.e., the Gross Domestic Product (GDP) from Ohio.

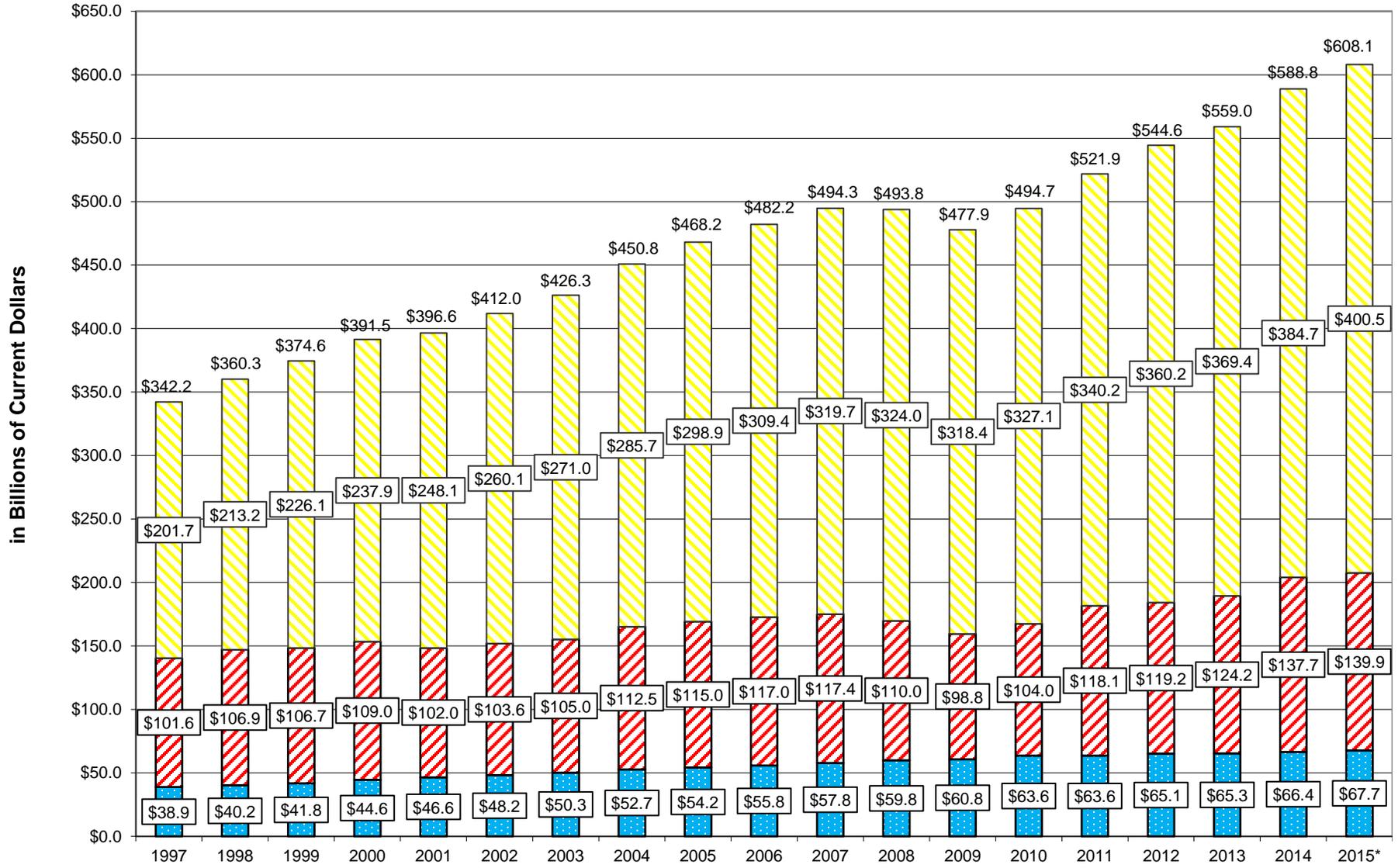
There are three major sections after this introduction and highlights. The first describes the composition of Ohio's economy, comparing it with other states and the national distribution of economic activity. The second focuses on output by sector and the major industries therein, noting the relative concentrations in Ohio, the key industries or groups within the major industries, and recent trends here and across the nation. The last is an appendix containing a section on terminology and data tables for those seeking a more-detailed understanding and recent history of economic activity here. The graphs and most of the discussions herein are based on, and refer to, the appendix tables.

The report describes economic activity from 1997 through 2015, but concentrates on 2004-2014 for the more detailed analyses of sectors and the major industries therein. Data were collected and prepared by the U.S. Bureau of Economic Analysis (BEA). The detailed GDP estimates are based on state and local taxes, value-added reports and company financial data. The BEA also has released initial total and sector-summary estimates for 2015 and the first quarter of 2016. The latter will be further revised when more information becomes available. Many figures in this report have been revised from previous reports based on the BEA's incorporation of data from 2012 Economic Census and subsequent Annual Surveys of Manufactures as well as state and local government finance data (produced by the Census Bureau), and routine revisions made by the BEA. See Coakley, et.al. (2009) and Woodruff, et.al. (2007) for more details. The U.S. Bureau of the Census, other federal agencies, and several private sector organizations developed additional statistics cited in this report.

HIGHLIGHTS

- Ohio's Gross Domestic Product for 2015 is initially estimated at \$608.1 billion, up 3.3 percent from the revised estimate of \$588.8 billion for 2014, and up 77.7 percent from 1997.
- Ohio is the 7th largest source for Gross Domestic Product among the 50 states and the District of Columbia, with 3.4 percent of the national total in 2015.
- If Ohio was a separate country, it would be the 33rd largest national economy in the world.
- Manufacturing is the largest of the 20 sectors of Ohio's economy with 17.8 percent of its total output in 2015; durable goods were 9.5 percent, while non-durable goods were 8.3 percent.
- Ohio's manufacturing sector produced \$108.1 billion worth of goods – 5.0 percent of America's manufacturing output in 2015, ranking it 3rd in the nation after California and Texas.
- Ohio is one of the nation's leading sources for primary and fabricated metal products, as well as plastic, rubber and non-metallic mineral products, electrical equipment and appliances, and motor vehicles and the associated bodies, trailers and parts.
- A number of service industries are concentrated in Ohio: enterprise management – 55 Fortune U.S.-1,000 companies have their headquarters here – banking and related services, insurance, utilities, trucking, warehousing and storage, and hospitals, nursing and residential care facilities.
- Over one-half of the state's Gross Domestic Product is created in the three largest metropolitan areas: Cincinnati, Cleveland-Elyria, and Columbus.
- Ohio was among the states hit hardest by the recession, but its growth rate in recovery has been greater than the national average – both due to changes occurring in the highly cyclical durable goods industries, particularly motor vehicles, machinery, fabricated metal products and steel production.
- Since 2004, the economies of the Canton-Massillon, Cincinnati, Columbus, Lima, Toledo and Wheeling metropolitan areas have grown at rates greater than Ohio's.

Ohio's Gross Domestic Product, 1997-2015



Note: * - preliminary; prior years may have been revised. Figures may not sum to total due to rounding. Source: U.S. BEA.



GROSS DOMESTIC PRODUCT FROM OHIO: 1997-2015

The chart above shows that the total value of goods and services produced in Ohio rose from \$342.2 to \$494.3 billion in the years 1997 to 2007, but fell to \$477.6 billion in 2009 before rising to \$608.1 billion in 2015. Figures for goods production (red and white stripes) show more ups and downs (in billions): up from \$101.6 in 1997 to \$109.0 in 2000, down to \$102.0 in 2001, up to \$117.4 in 2007, down to \$98.8 in 2009, up to \$139.9 in 2015. This contrasts with the more or less steady rise in the nominal value of private sector services (yellow) from \$201.7 to \$400.5; 2009 was the exception. The value of government services (blue) appeared to rise essentially without interruption from \$38.9 to \$67.7. It is important to note that the chart above makes no adjustment for inflation. Consequently, it cannot be determined from the current dollar figures how much of the year-to-year changes seen above are due to real economic growth, and how much are due to simple price increases. That issue is addressed later in the report.

The graph also illustrates the reorientation of economic activity in Ohio's private sector away from goods production and towards services. The net change in the portion of output was a decrease in goods production from 29.7 to 23.0 percent of output, while private sector services rose from 58.9 to 65.9 percent. Government services fluctuated, but were marginally less: 11.4 percent in 1997 and 11.1 percent in 2015.

What happened in Ohio was part of the larger but less-pronounced shift for the nation as a whole. The private goods-producing sectors' share of total U.S. GDP fell from 22.6 to 19.0 percent, while the complementary share of service providers rose from 64.6 to 68.6 percent. Government services also were marginally less: 12.4 percent in 2015 vs. 12.7 percent in 1997 (U.S. BEA, 2016).¹

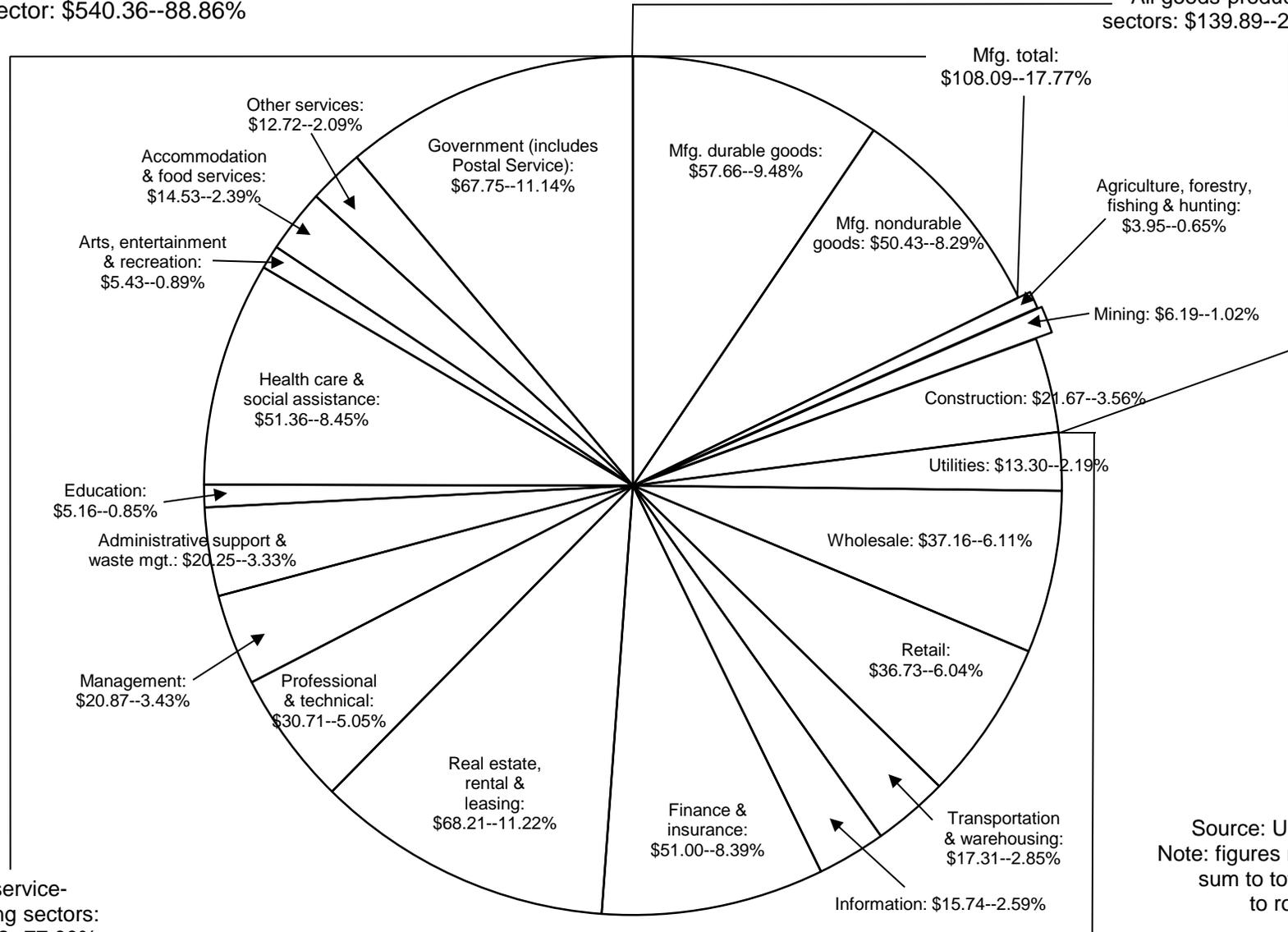
Ohio's Gross Domestic Product by Sector: Initial Figures for 2015

(in billions, except percentages)

Total: \$608.11--100.0%

Private sector: \$540.36--88.86%

All goods-producing sectors: \$139.89--23.00%



All service-providing sectors: \$468.22--77.00%

Source: U.S. BEA
Note: figures may not sum to totals due to rounding.

THE COMPOSITION OF OHIO'S ECONOMY IN 2015

The chart above illustrates the distribution of economic activity in Ohio using the North American Industry Classification System (NAICS). Ohio's total economic output of \$608.11 billion in 2015 is divided into 20 broad sectors of varying sizes. (Durable and non-durable goods manufacturing are two parts of one sector).

Manufacturing is the largest single sector, with such establishments producing final goods valued at \$108.09 billion last year, which was 17.77 percent of the state's total economic output. Manufacturers are divided into producers of durable and non-durable goods, with the former producing more than the latter: \$57.66 billion and 9.48 percent, compared with \$50.43 billion and 8.29 percent. (Durable goods generally are made to last at least three years, while non-durables are expected to last less than three years.) Other goods-producing sectors play smaller roles in Ohio's economy. They include construction at \$21.67 billion and 3.56 percent, mining at \$6.19 billion and 1.02 percent, and agriculture-forestry-fishing-hunting at \$3.95 billion and 0.65 percent. Combined output of these goods-producing sectors totaled \$139.89 billion, or 23.00 percent of the total GDP from Ohio.

Services provided by public and private sectors in Ohio were \$468.22 billion, or 77.00 percent of its economy. Total private sector services (i.e., excluding government services) were \$400.47 billion, or 65.85 percent of the total. Real estate, rental and leasing is the largest private sector service with a value of \$68.21 billion, or 11.22 percent of the economy. Its size indicates the role home-ownership plays in the economy as well as the activity of real estate agents, landlords, lessors, etc. Health care and social assistance is the next largest sector, contributing \$51.36 billion and 8.45 percent to the economy, followed by finance and insurance at \$51.00 billion and 8.39 percent. The only other private service sectors providing at least five percent of Ohio's economic output were wholesale and retail trade, and professional-and-technical services, ranging from 5.05 to 6.11 percent. Other sectors played smaller roles. These include transportation-and-warehousing, information, enterprise management, administrative-support-and-waste-management, education, arts-entertainment-recreation, accommodation-and-food services, and the catch-all category of other services. Services provided by federal, state, and local governments amounted to 11.14 percent of the economy.

See Table A1

Gross Domestic Products for Metropolitan Areas in Ohio, 2015 (in millions, except percentages)^

Area	Private Sector*								Government*	
	Goods-Producing*						Service-Providing*		Amount	Percent
	Manufacturing						Amount	Percent		
	Total	Amount	Percent	Amount	Percent	Amount				
U.S.	\$17,830,307	\$3,385,572	19.0%	\$2,167,757	12.2%	\$12,237,833	68.6%	\$2,206,901	12.4%	
Ohio	\$608,109	\$139,887	23.0%	\$108,086	17.8%	\$400,474	65.9%	\$67,748	11.1%	
Akron, OH	\$34,419	\$7,008	20.4%	\$5,407	15.7%	\$23,634	68.7%	\$3,777	11.0%	
Canton-Massillon, OH	\$17,420	\$5,815	33.4%	\$4,443	25.5%	\$10,062	57.8%	\$1,543	8.9%	
Cincinnati, OH-KY-IN	\$127,057	\$26,563	20.9%	(D)	(D)	\$89,897	70.8%	\$10,597	8.3%	
Cleveland-Elyria, OH	\$128,448	\$25,175	19.6%	\$19,166	14.9%	\$90,730	70.6%	\$12,543	9.8%	
Columbus, OH	\$124,381	\$16,545	13.3%	\$11,241	9.0%	\$91,849	73.8%	\$15,987	12.9%	
Dayton, OH	\$39,206	\$6,557	16.7%	\$5,233	13.3%	\$24,768	63.2%	\$7,882	20.1%	
Lima, OH	\$6,057	\$2,965	49.0%	\$2,758	45.5%	\$2,602	43.0%	\$489	8.1%	
Mansfield, OH	\$4,199	\$1,265	30.1%	\$1,026	24.4%	\$2,324	55.3%	\$610	14.5%	
Springfield, OH	\$4,211	\$934	22.2%	\$776	18.4%	\$2,741	65.1%	\$536	12.7%	
Toledo, OH	\$34,019	\$11,764	34.6%	\$10,163	29.9%	\$18,593	54.7%	\$3,662	10.8%	
Weirton-Steubenville, WV-OH	\$3,959	\$1,035	26.1%	\$792	20.0%	\$2,543	64.2%	\$381	9.6%	
Wheeling, WV-OH	\$7,223	\$2,417	33.5%	\$583	8.1%	\$4,134	57.2%	\$672	9.3%	
Youngstown-Warren-Boardman, OH-PA	\$21,417	\$5,182	24.2%	\$4,076	19.0%	\$13,869	64.8%	\$2,365	11.0%	

Notes: ^ - initial estimates, subject revision at a later date; * - components may not sum to total due to rounding; (D) - suppressed to maintain confidentiality for some local companies; Cincinnati's revised 2014 manufacturing figure was \$20,151, which was 16.5% of the corresponding total.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 614/466-2116 (DL, 9/16).

THE DISTRIBUTION OF GROSS DOMESTIC PRODUCTS IN METROPOLITAN AREAS, 2015

The BEA also publishes GDP data for metropolitan areas (MAs). The table above shows the GDP for nine MAs wholly in Ohio and four multi-state MAs with at least significant portions in Ohio. Cleveland-Elyria is the largest in the state, closely followed by Cincinnati (including its Kentucky and Indiana portions) and Columbus. The three are by far the largest, and combine to produce a value equal to 62.5 percent of Ohio's 2015 GDP. Akron, Dayton and Toledo clustered between \$34 billion and \$40 billion, while Canton-Massillon and Youngstown-Warren-Boardman (including the latter's Pennsylvania portion) were in the \$17-\$22 billion range.

The table above also displays the amounts and percentages of GDP derived from the private sector subdivision: goods-production – particularly manufacturing – and service-provision; government also is shown. Several characteristics are notable in this regard. First, Cleveland, Cincinnati and Columbus are the three largest goods-producing and manufacturing MAs. (While Cincinnati's 2015 manufacturing figure was suppressed to maintain confidentiality for at least one large manufacturer, its revised 2014 figure exceeded \$20.1 billion.) Second, despite their large absolute outputs, their *portions* of GDP derived from goods-production are near or below the national average; this largely reflects their portions of GDP derived from manufacturing are less than the state average (Cincinnati's revised 2014 percentage was 16.5), and in Columbus' case, less than the national average. Third, and conversely, their portions of GDP derived from private sector services are greater than the national and state averages. Akron and Dayton also have goods-production and manufacturing portions that are less than the state average.

In contrast, manufacturing plays a more-prominent role in many of Ohio's smaller MAs. MAs wherein manufacturing accounted for at least 20 percent of local GDP include Canton, Lima, Mansfield, Toledo and Weirton-Steubenville. Springfield and Youngstown derived portions of their GDPs from manufacturing that were a little greater than the state average. These higher-than-average concentrations on manufacturing largely account for the higher-than average portions of GDPs derived from goods production and average to less-than-average portions of private sector services. Wheeling is an exception in this regard. Its proportionately high reliance on goods production combined with a relatively small manufacturing sector suggests a greater reliance on agricultural, mining and/or construction activities.

Federal, state and local governments combined contributions to the MAs' GDPs ranged from 8.1 percent in Lima to 20.1 percent in Dayton. The relatively high percentage for Dayton incorporates the importance of Wright-Patterson Air Force base in its economy.

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DESCRIPTION OF OHIO'S ECONOMY

OHIO'S RANKS AMONG THE STATES AND THE WORLD

States and the Larger Economies in the World, 2015

(in billions of dollars)

Rank	Country Estimates		State Total			State Manufacturing		
	Area	GDP*	Area	GDP^	Percent of U.S.	Area	GDP^	Percent of U.S.
	World	\$107,538.2	U.S.	\$17,830.3	100%	U.S.	\$2,167.8	100%
1	China	\$19,390.0	California	\$2,458.5	13.79%	California	\$278.6	12.85%
2	United States	\$17,950.0	Texas	\$1,586.5	8.90%	Texas	\$227.5	10.49%
3	India	\$7,965.0	New York	\$1,441.0	8.08%	Ohio	\$108.1	4.99%
4	Japan	\$4,830.0	Florida	\$882.8	4.95%	Illinois	\$103.8	4.79%
5	Germany	\$3,841.0	Illinois	\$775.0	4.35%	North Carolina	\$100.1	4.62%
6	Russia	\$3,718.0	Pennsylvania	\$689.2	3.87%	Indiana	\$100.0	4.61%
7	Brazil	\$3,192.0	Ohio	\$608.1	3.41%	Michigan	\$92.5	4.27%
8	Indonesia	\$2,842.0	New Jersey	\$568.2	3.19%	Pennsylvania	\$85.1	3.93%
9	United Kingdom	\$2,679.0	North Carolina	\$499.4	2.80%	New York	\$74.6	3.44%
10	France	\$2,647.0	Georgia	\$495.7	2.78%	Washington	\$58.2	2.69%
11	Mexico	\$2,227.0	Virginia	\$479.8	2.69%	Wisconsin	\$57.9	2.67%
12	Italy	\$2,171.0	Massachusetts	\$476.7	2.67%	Georgia	\$54.8	2.53%
13	South Korea	\$1,849.0	Michigan	\$466.5	2.62%	Louisiana	\$52.7	2.43%
14	Saudi Arabia	\$1,683.0	Washington	\$443.7	2.49%	Tennessee	\$51.1	2.36%
15	Canada	\$1,632.0	Maryland	\$363.8	2.04%	Oregon	\$49.6	2.29%
16	Spain	\$1,615.0	Indiana	\$336.4	1.89%	Minnesota	\$48.2	2.22%
17	Turkey	\$1,589.0	Minnesota	\$333.3	1.87%	Massachusetts	\$48.0	2.21%
18	Australia	\$1,489.0	Colorado	\$314.9	1.77%	Florida	\$44.8	2.06%
19	Iran	\$1,371.0	Tennessee	\$314.2	1.76%	New Jersey	\$44.5	2.05%
20	Thailand	\$1,108.0	Wisconsin	\$305.8	1.72%	Virginia	\$42.9	1.98%
21	Taiwan	\$1,099.0	Missouri	\$293.4	1.65%	Missouri	\$38.5	1.77%
22	Nigeria	\$1,092.0	Arizona	\$290.6	1.63%	Kentucky	\$37.8	1.74%
23	Egypt	\$1,048.0	Connecticut	\$258.5	1.45%	Alabama	\$35.1	1.62%
24	Poland	\$1,005.0	Louisiana	\$243.3	1.36%	South Carolina	\$33.4	1.54%
25	Argentina	\$972.0	Oregon	\$215.3	1.21%	Iowa	\$31.8	1.47%
26	Pakistan	\$931.0	Alabama	\$204.2	1.15%	Connecticut	\$27.2	1.26%
27	Netherlands	\$832.6	South Carolina	\$198.7	1.11%	Arizona	\$23.5	1.09%
28	Malaysia	\$815.6	Kentucky	\$194.6	1.09%	Colorado	\$23.0	1.06%
29	Philippines	\$741.0	Oklahoma	\$180.4	1.01%	Kansas	\$22.3	1.03%
30	South Africa	\$723.5	Iowa	\$174.1	0.98%	Maryland	\$20.3	0.93%
31	Colombia	\$667.4	Kansas	\$147.8	0.83%	Arkansas	\$17.9	0.83%

States and the Larger Economies in the World, 2015
(in billions of dollars)

Country Estimates			State Total			State Manufacturing		
Rank	Area	GDP*	Area	GDP [^]	Percent of U.S.	Area	GDP [^]	Percent of U.S.
32	U.A.E.	\$647.8	Utah	\$147.1	0.83%	Oklahoma	\$17.8	0.82%
33	Ohio	\$608.1	Nevada	\$141.3	0.79%	Utah	\$17.2	0.80%
34	Algeria	\$578.7	Arkansas	\$123.2	0.69%	Mississippi	\$16.8	0.78%
35	Bangladesh	\$577.0	District of Columbia	\$122.5	0.69%	Nebraska	\$13.8	0.63%
36	Vietnam	\$552.3	Nebraska	\$114.0	0.64%	New Hampshire	\$8.0	0.37%
37	Iraq	\$544.1	Mississippi	\$107.1	0.60%	West Virginia	\$7.4	0.34%
38	Venezuela	\$515.7	New Mexico	\$92.2	0.52%	Idaho	\$7.4	0.34%
39	Belgium	\$494.1	Hawaii	\$79.7	0.45%	Nevada	\$6.5	0.30%
40	Switzerland	\$482.3	West Virginia	\$73.7	0.41%	Maine	\$5.6	0.26%
41	Sweden	\$473.4	New Hampshire	\$72.6	0.41%	Delaware	\$5.1	0.23%
42	Singapore	\$471.9	Delaware	\$68.1	0.38%	Rhode Island	\$4.6	0.21%
43	Kazakhstan	\$429.1	Idaho	\$65.2	0.37%	South Dakota	\$4.3	0.20%
44	Chile	\$422.4	Rhode Island	\$57.0	0.32%	New Mexico	\$4.2	0.20%
45	Hong Kong	\$414.6	Maine	\$56.6	0.32%	North Dakota	\$3.8	0.17%
46	Romania	\$413.8	North Dakota	\$54.8	0.31%	Montana	\$3.1	0.14%
47	Austria	\$404.3	Alaska	\$52.8	0.30%	Vermont	\$2.8	0.13%
48	Peru	\$389.1	South Dakota	\$46.7	0.26%	Wyoming	\$2.2	0.10%
49	Norway	\$356.2	Montana	\$45.9	0.26%	Alaska	\$1.6	0.07%
50	Ukraine	\$339.5	Wyoming	\$38.6	0.22%	Hawaii	\$1.4	0.07%
51	Czech Republic	\$332.5	Vermont	\$30.4	0.17%	District of Columbia	\$0.3	0.01%

Notes: * - Purchasing Power Parity basis, except Ohio – overseas territories and special areas of countries are excluded; source for 2015 estimates except Ohio is the U.S. CIA (2016); source for Ohio is U.S. BEA (2016); ^ - preliminary; source is U.S. BEA (2016).

If Ohio was a separate country, it would have the 33rd largest economy in the world. The BEA's initial estimate of \$608.1 billion for 2015 places Ohio between the United Arab Emirates and Algeria with estimated GDPs of \$647.8 and \$578.7 billion, respectively (U.S. CIA, 2016).²

The table above also shows that Ohio ranked 7th in America with 3.41 percent of U.S. GDP. This 7th rank is not, however, uniformly characteristic of every aspect of Ohio's economy. Most notably, Ohio was the 3rd greatest source of manufactured goods in America during 2014. The \$108.1 billion output was 4.99 percent of the corresponding national total. In this regard, manufacturing output from Ohio exceeded that of some more populous states: Florida, Illinois, New York and Pennsylvania (U.S. BEA, 2016). A more extensive industry comparison follows.

Ohio and U.S. Gross Domestic Products by Industry, 2014 (current dollar figures in millions)

2007 NAICS Codes	Industry Titles	GDP		Ohio as a Percent of the U.S.	Ohio::U.S. Concentra- tion Ratio	Ohio's Rank	Ohio's Top Five States
		Ohio	U.S.				
11-92	Total	\$588,827	\$17,233,139	3.42%	1.00	7	CA, TX, NY, FL, IL
11-81*	Private industries*	\$522,396	\$15,073,464	3.47%	1.01	7	CA, TX, NY, FL, IL
11, 21, 23, 33	Private goods producing industries	\$137,742	\$3,430,889	4.01%	1.17	3	TX, CA, OH , PA, IL
11	Agriculture, forestry, fishing, etc.	\$4,745	\$215,416	2.20%	0.64	14	CA, IA, TX, NE, IL
111-2	Crop & animal production (farms)	\$4,302	\$177,190	2.43%	0.71	14	CA, IA, TX, NE, MN
113-5	Forestry, fishing & related activities	\$443	\$38,226	1.16%	0.34	26	CA, WA, FL, TX, OR
21	Mining	\$6,670	\$453,756	1.47%	0.43	13	TX, OK, PA, CA, CO
211	Oil & gas extraction	\$3,934	\$302,151	1.30%	0.38	11	TX, OK, CA, PA, CO
212	Mining, exc. oil & gas	\$1,850	\$81,040	2.28%	0.67	18	AZ, WV, NV, WY, PA
213	Support activities for mining	\$885	\$70,564	1.25%	0.37	11	TX, ND, LA, OK, CO
23	Construction	\$20,702	\$664,001	3.12%	0.91	7	TX, CA, NY, FL, PA
31-33	Manufacturing	\$105,626	\$2,097,716	5.04%	1.47	3	CA, TX, OH , IL, IN
32p & 33	Durable goods	\$55,856	\$1,125,493	4.96%	1.45	4	CA, TX, MI, OH , IL
321	Wood products	\$841	\$28,687	2.93%	0.86	13	OR, WA, CA, GA, NC
327	Nonmetallic mineral products	\$3,171	\$46,432	6.83%	2.00	3	TX, CA, OH , PA, FL
331	Primary metals	\$5,708	\$59,698	9.56%	2.80	3	IN, PA, OH , AL, TX
332	Fabricated metal products	\$11,234	\$146,233	7.68%	2.25	3	TX, CA, OH , IL, PA
333	Machinery	\$8,451	\$151,207	5.59%	1.64	4	TX, IL, CA, OH , WI
334	Computer & electronic products	\$2,661	\$267,964	0.99%	0.29	17	CA, OR, TX, MA, NY
335	Electrical eqpt. & appliances	\$3,860	\$53,747	7.18%	2.10	2	TN, OH , NC, CA, WI
336	Transportation eqpt.	\$16,963	\$265,984	6.38%	1.87	6	MI, WA, TX, IN, CA
3361-3	Motor vehicles, bodies, trailers & parts	\$12,128	\$140,240	8.65%	2.53	3	MI, IN, OH , TX, TN
3364-9	Other transportation eqpt.	\$4,835	\$125,744	3.85%	1.13	5	WA, CA, TX, CT, OH
337	Furniture & related products	\$929	\$25,251	3.68%	1.08	9	CA, MI, NC, IN, TX
339	Miscellaneous mfg.	\$2,037	\$80,290	2.54%	0.74	16	CA, MN, IL, IN, FL
31 & 32p	Nondurable goods	\$49,770	\$972,223	5.12%	1.50	5	TX, CA, NC, IL, OH
311-2	Food, beverage & tobacco products	\$11,616	\$245,013	4.74%	1.39	7	CA, NC, VA, TX, IL
313-4	Textile & textile product mills	\$348	\$17,310	2.01%	0.59	14	GA, NC, SC, CA, NY
315-6	Apparel, leather & allied products	\$140	\$10,802	1.30%	0.38	17	CA, NY, TX, NC, MA
322	Paper	\$2,104	\$55,456	3.79%	1.11	8	WI, GA, PA, SC, AL
323	Printing & related support activities	\$1,858	\$38,293	4.85%	1.42	8	CA, IL, WI, PA, MN
324	Petroleum & coal products	\$14,481	\$170,173	8.51%	2.49	4	TX, LA, CA, OH , IL
325	Chemical	\$13,280	\$360,317	3.69%	1.08	10	TX, CA, IN, NC, NJ
326	Plastics & rubber products	\$5,941	\$74,858	7.94%	2.32	1	OH , IL, TX, CA, PA

Ohio and U.S. Gross Domestic Products by Industry, 2014 (current dollar figures in millions)

2007 NAICS Codes	Industry Titles	GDP		Ohio as a Percent of the U.S.	Ohio::U.S. Concentra- tion Ratio	Ohio's Rank	Ohio's Top Five States
		Ohio	U.S.				
22, 42-81 ¹	Private service providing industries ¹	\$384,654	\$11,642,576	3.30%	0.97	8	CA, NY, TX, FL, IL
22	Utilities	\$12,461	\$280,809	4.44%	1.30	6	TX, CA, NY, FL, IL
42	Wholesale trade	\$35,861	\$1,044,476	3.43%	1.00	9	CA, TX, NY, FL, IL
44-45	Retail trade	\$35,438	\$997,759	3.55%	1.04	6	CA, TX, NY, FL, IL
48-49*	Transportation & warehousing*	\$16,635	\$505,685	3.29%	0.96	9	TX, CA, IL, FL, NY
481	Air transportation	\$1,700	\$84,044	2.02%	0.59	18	CA, TX, GA, FL, IL
482	Rail transportation	\$1,587	\$46,248	3.43%	1.00	7	NE, TX, IL, MO, KS
483	Water transportation	\$130	\$18,513	0.70%	0.21	23	FL, LA, CA, TX, NY
484	Truck transportation	\$6,376	\$135,143	4.72%	1.38	4	TX, CA, IL, OH , PA
485	Transit & ground passenger transportation	\$529	\$32,673	1.62%	0.47	16	NY, CA, NJ, IL, PA
486	Pipeline transportation	\$291	\$25,650	1.13%	0.33	14	TX, AK, OK, CA, CO
487-8, 492	Other transportation & support activities	\$3,427	\$112,310	3.05%	0.89	9	CA, TX, FL, NY, IL
493	Warehousing & storage	\$2,595	\$51,103	5.08%	1.49	5	CA, TX, PA, IL, OH
51	Information	\$15,266	\$824,743	1.85%	0.54	13	CA, NY, TX, WA, FL
511	Publishing (inc. software, exc. Internet)	\$5,316	\$210,588	2.52%	0.74	12	CA, WA, NY, MA, TX
512	Motion pictures & sound recordings	\$558	\$114,607	0.49%	0.14	17	CA, NY, TX, LA, FL
515, 517	Broadcasting & telecommunications	\$8,008	\$411,141	1.95%	0.57	14	CA, NY, TX, PA, FL
518, 519	Data prcsng., hosting, other info. (inc. Internet)	\$1,384	\$88,408	1.57%	0.46	15	CA, NY, TX, FL, IL
52	Finance & insurance	\$49,211	\$1,222,890	4.02%	1.18	6	NY, CA, TX, IL, FL
521-2	Federal Reserve banks, credit intermediation, etc.	\$24,178	\$488,004	4.95%	1.45	5	NY, CA, TX, NC, OH
523	Securities, commodity contracts, investments	\$3,539	\$244,193	1.45%	0.42	14	NY, CA, MA, IL, TX
524	Insurance carriers & related activities	\$20,772	\$450,336	4.61%	1.35	7	NY, CA, TX, IL, PA
525	Funds, trusts & other financial vehicles	\$722	\$40,356	1.79%	0.52	16	NY, CA, FL, NJ, IL
53	Real estate, rental & leasing	\$65,045	\$2,247,682	2.89%	0.85	10	CA, NY, TX, FL, IL
531	Real estate	\$59,833	\$2,058,953	2.91%	0.85	10	CA, NY, FL, TX, NJ
532-3	Rental & leasing srvc. & lessors of intangible assets	\$5,212	\$188,729	2.76%	0.81	10	TX, CA, FL, IL, NY
54	Professional, scientific & technical srvc.	\$29,557	\$1,192,973	2.48%	0.73	13	CA, NY, TX, IL, VA
5411	Legal srvc.	\$4,944	\$221,091	2.24%	0.65	11	NY, CA, TX, FL, IL
5415	Computer systems design & related srvc.	\$6,526	\$249,456	2.62%	0.77	14	CA, VA, TX, NY, MA
5412-4, 5416-9	Other professional, scientific & technical srvc.	\$18,087	\$722,426	2.50%	0.73	13	CA, NY, TX, IL, FL
55	Management of companies & enterprises	\$20,869	\$337,950	6.18%	1.81	4	CA, NY, PA, OH , TX

Ohio and U.S. Gross Domestic Products by Industry, 2014 (current dollar figures in millions)

2007 NAICS Codes	Industry Titles	GDP		Ohio as a Percent of the U.S.	Ohio::U.S. Concentra- tion Ratio	Ohio's Rank	Top Five States
		Ohio	U.S.				
56	Administrative & waste svcs.	\$19,057	\$526,035	3.62%	1.06	7	CA, TX, NY, FL, IL
561	Administrative & support svcs.	\$17,306	\$483,023	3.58%	1.05	7	CA, TX, FL, NY, IL
562	Waste management & remediation svcs.	\$1,751	\$43,012	4.07%	1.19	8	CA, TX, NY, WA, IL
61	Educational svcs.	\$4,988	\$192,772	2.59%	0.76	13	NY, CA, PA, MA, IL
62	Health care & social assistance	\$49,193	\$1,226,867	4.01%	1.17	7	CA, NY, TX, FL, PA
621	Ambulatory health care svcs.	\$21,515	\$590,771	3.64%	1.07	7	CA, TX, NY, FL, PA
622-3	Hospitals & nursing & residential care facilities	\$24,195	\$526,301	4.60%	1.35	7	CA, NY, TX, PA, FL
624	Social assistance	\$3,483	\$109,796	3.17%	0.93	8	CA, NY, PA, TX, FL
71	Arts, entertainment & recreation	\$5,248	\$172,351	3.04%	0.89	7	CA, NY, FL, TX, PA
711-2	Performing arts, museums & related activities	\$2,687	\$93,436	2.88%	0.84	7	CA, NY, FL, TX, PA
713	Amusements, gambling & recreation	\$2,561	\$78,915	3.25%	0.95	7	CA, FL, TX, NY, PA
72	Accommodation & food svcs.	\$13,658	\$487,987	2.80%	0.82	9	CA, TX, FL, NY, NV
721	Accommodation	\$2,107	\$141,939	1.48%	0.43	21	CA, NV, FL, NY, TX
722	Food svcs. & drinking places	\$11,551	\$346,048	3.34%	0.98	6	CA, TX, NY, FL, IL
81	Other svcs., exc. government	\$12,167	\$381,597	3.19%	0.93	7	CA, TX, NY, FL, IL
92, 491	Government	\$66,432	\$2,159,675	3.08%	0.90	9	CA, NY, TX, FL, VA
92fc, 92811, 491	Federal government	\$14,542	\$603,073	2.41%	0.71	13	CA, VA, MD, TX, DC
92fc, 491	Civilian (inc. Postal Service)	\$10,305	\$396,954	2.60%	0.76	12	CA, MD, DC, VA, TX
92811	Military	\$4,237	\$206,119	2.06%	0.60	13	CA, VA, TX, NC, FL
92sl	State & local	\$51,890	\$1,556,602	3.33%	0.98	7	CA, NY, TX, FL, IL

Notes and abbreviations: * - excludes Postal Service (491); exc. - except; inc. - including; info. - information; p - part; prcsng. - processing; svcs. - services. Components may not sum to totals due to rounding.

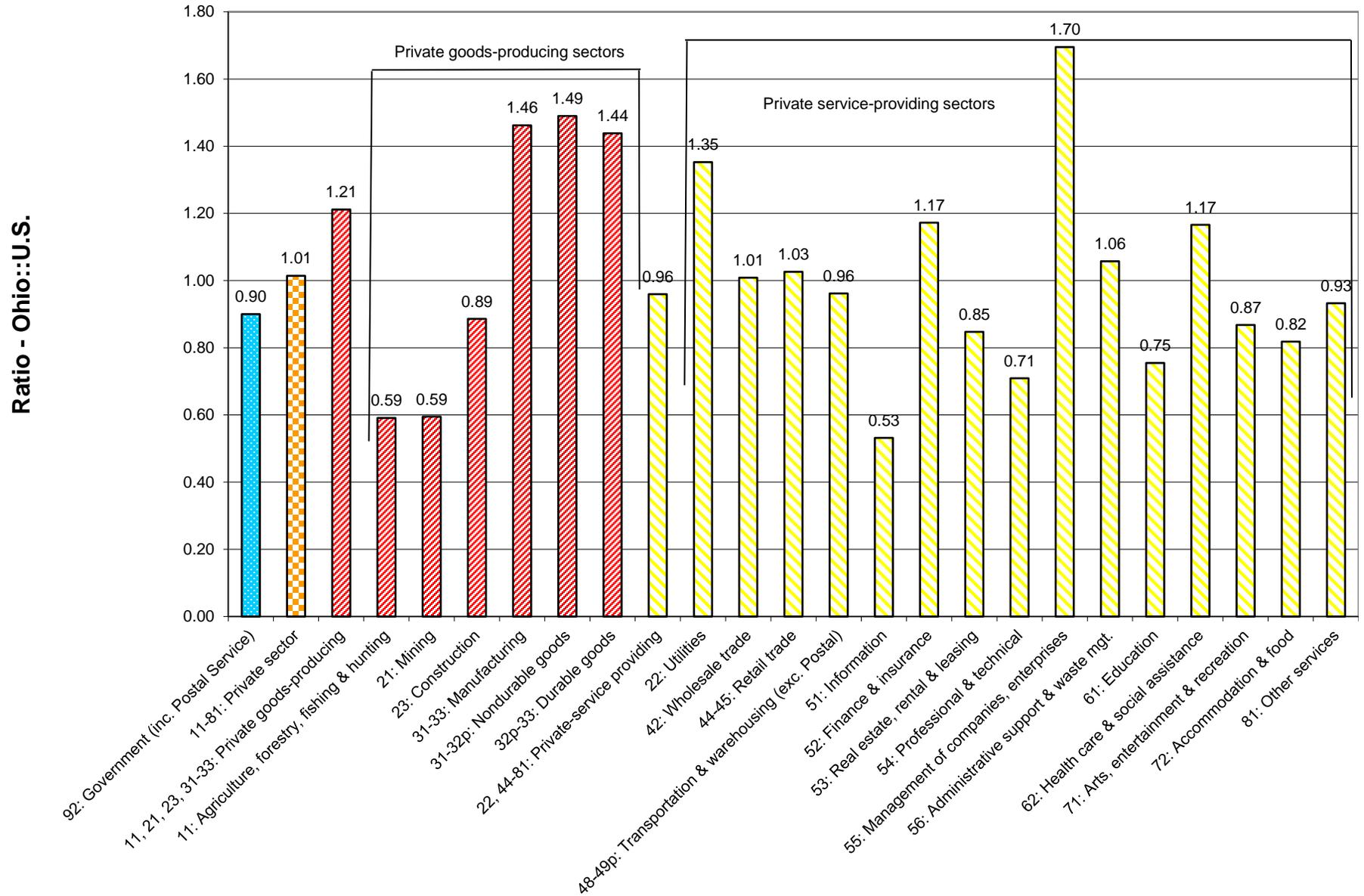
Sources: U.S. Bureau of Economic Analysis (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

The table beginning on page 14 highlights the major industries with large contributions to Ohio's 3rd rank in manufacturing during 2015 and 2014. (2015 data for major industries are not yet available.) They include plastic and rubber products (\$5.94 billion, 7.94 percent of the national total, making Ohio the largest source in the country) and electrical equipment and appliances (\$3.86 billion, 7.18 percent, ranked 2nd). Other manufacturing industries with comparatively large contributions to Ohio's total economic output include motor vehicles and associated bodies-trailers-and-parts, primary and fabricated metal products, and nonmetallic mineral products – all ranked 3rd at \$12.13, \$5.71, \$11.23 and \$3.17 billion, with 8.65, 9.56, 7.68 and 6.83 percent of corresponding U.S. industry totals. The machinery and coal-and-petroleum products industries also are exceptionally concentrated in Ohio with 5.60 and 8.51 percent of the corresponding U.S. industry totals.

The same table also shows five service-providing sectors or industries making comparatively large contributions to Ohio's GDP in 2014: finance and insurance – \$49.21 billion, 4.02 percent, 6th; enterprise management – \$20.87 billion, 6.18 percent, 4th; utilities – \$12.46 billion, 4.44 percent, 6th; truck transportation – \$6.38 billion, 4.72 percent, 4th; and warehousing and storage – \$2.60 billion, 5.08 percent, 5th.

The Relative Concentration of U.S. Economic Activity in Ohio, 2015



Source: U.S. BEA

COMPARING THE DISTRIBUTION OF ECONOMIC ACTIVITY IN OHIO WITH THAT OF THE U.S.

A previous section showed the distribution of economic activity in Ohio across sectors of the economy. For example, manufacturing was the largest sector in Ohio at 17.77 percent of GDP in 2015, while agriculture-forestry-fishing-hunting (AFFH) was the smallest at 0.65 percent. This section furthers our understanding of Ohio's economy by comparing the distribution of output across sectors in Ohio with the corresponding national distribution. The graph above shows the *ratios* of these percentages for each sector. Continuing with the two examples, output from manufacturing and AFFH comprised 12.16 and 1.10 percent, respectively, of U.S. GDP in 2015. When compared with those for Ohio, these yield ratios of 1.46 for manufacturing (17.77 percent divided by 12.16 percent) and .59 for AFFH (0.65 percent divided by 1.10 percent). There are two ways to express the meanings of these figures. One way is to say that Ohio's economy is *relatively* more dependent on manufacturing and less dependent on AFFH than the American economy. The other way is to note that manufacturing in America is concentrated in Ohio, while AFFH is not. (A ratio of 1.00 indicates proportional activity, neither concentrated nor sparse.)

The concentration of one sector or industry here means that another must be relatively sparse. In this sense, a broad description of Ohio's economy is illustrated by the chart above. It is driven a bit more by private sector activity than by government activity, as indicated by the concentration ratios of 1.01 and .90, respectively. Although overall goods-production is concentrated in the state (1.21), this reflects the concentration of manufacturing activity here (1.46); durable goods are emphasized more than nondurable goods (1.49 vs. 1.44). On the other hand, AFFH, mining and construction activity (.59, .59 and .89, respectively) are more or less sparse.

The preceding section showed that service-providing industries collectively account for most economic activity in Ohio (77.00 percent with government, 65.86 percent without); yet the graph above shows that, as a whole, the collective contribution of non-governmental services to the GDP from Ohio is close to proportional with that of the nation (.96). However, this generalization masks considerable variability. The most notable departure is the concentration of enterprise management (1.70). The utility, health care-social assistance, and finance-insurance sectors are more or less concentrated in Ohio (1.35 for the former and each 1.17 for the latter two). Other services provided that are roughly proportional with the national distribution include wholesale and retail trade, transportation-warehousing, administrative support-waste management, and other non-governmental services grouped in NAICS 81. Ohio's economy is comparatively less reliant on the remaining private service sectors.

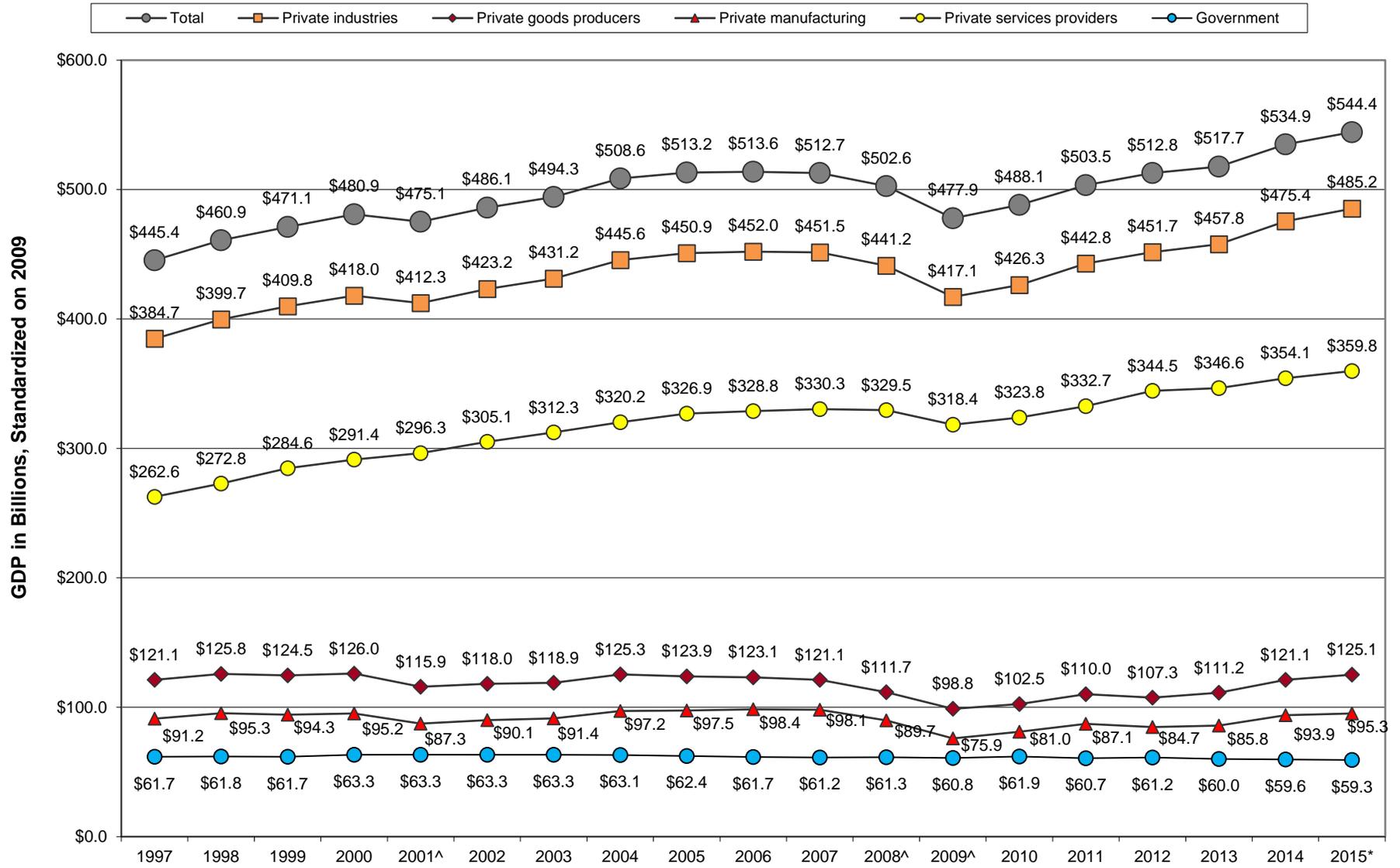
See Table A1

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RECENT CHANGES IN OHIO'S ECONOMY

Changes in Ohio's Economic Output, 1997-2015

After the Effects of Inflation Have Been Removed



Source: U.S. BEA

^ - a recession year for the nation; * - preliminary; prior years are revised.

REMOVING THE EFFECTS OF INFLATION

The chart above illustrates the expansion and contraction in Ohio's economic output over the course of 19 years after the effects of inflation have been removed, permitting comparisons between years of the *volumes* of goods produced and services provided. Figures are standardized on 2009. Total GDP figures (gray dots) show real growth in the output of goods and services in Ohio from 1997 to 2000, a recession in 2001, the resumption of growth in 2002 continuing through 2005, essentially flat output in 2006 and 2007, the "Great Recession" in 2008 and 2009, and the current recovery and expansion of 2010 to 2015. The 6.8 percent plunge from \$512.7 to \$477.9 billion (2007-2009) wiped out nearly all of the net growth from 2001 to 2007. It was not until 2013 that total output in Ohio surpassed the pre-recession peak in 2006. This history almost entirely reflects growth and contraction in the private sector (orange squares); government services (blue dots) fluctuated between \$61 to \$64 billion for most of the 19 years before decreasing to just under \$60 billion in the last two years – slight in context of the total economy.

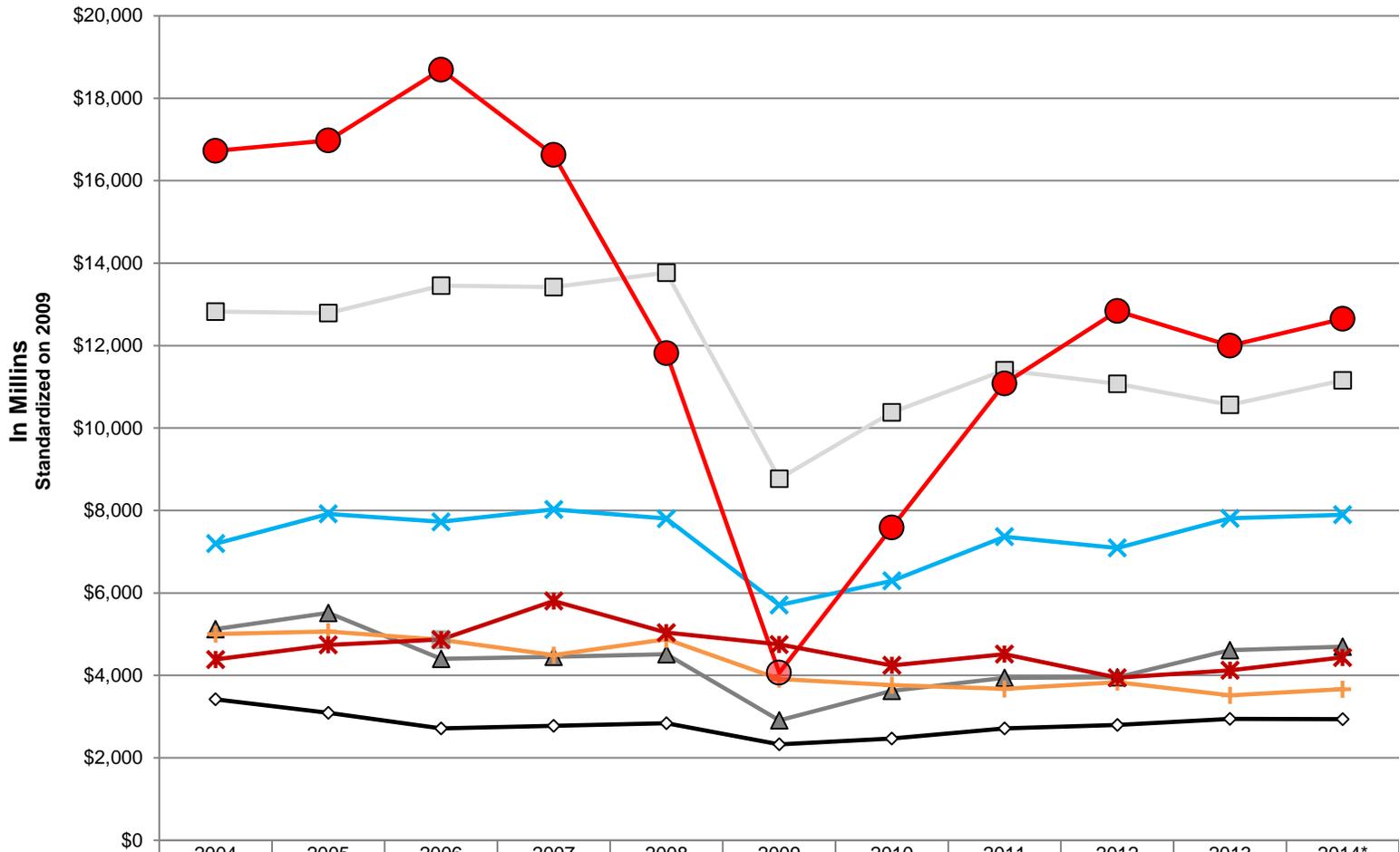
The chart above further specifies where changes occurred in the private sector. The collective output of goods producers (dark red diamonds) rose from \$121.2 to \$126.0 billion (1997-2000), fell to \$115.9 billion (2001), then grew to \$125.3 billion (2004) before sliding – gradually at first – to \$98.8 billion (2009). Aggregate output did not approach the pre-recession peak until 2015 (\$125.1 billion). The bulk of these changes were in manufacturing: from \$91.2 to \$95.2 billion (1997-2000) to \$87.3 billion (2001), to \$98.4 billion (2006) to \$75.9 billion (2009) to \$95.3 billion (2015). Among other things, these data indicate the volume of manufactured goods from factories in Ohio during 2015 was still 3.2 percent below the pre-recession peak (2006) despite the 25.6 percent growth since 2009. Data in Appendix table A2 show that most of the manufacturing volume changes occurred in the durable goods subsector; shorter term cyclical percent changes usually were in double digits. This contrasts with the corresponding non-durable changes typically in the single digits. Most of the remaining change among goods producers is due to the long-term net decline in construction (even after including growth in the current expansion).

By contrast, the collective output of private sector service-providers (yellow dots) increased nearly every year, declining 3.6 percent by 2009 from the pre-recession peak in 2007. Expansion resumed by 2010, passed the pre-recession peak in 2011 and has continued. Some sectors showed greater-than-average growth during these 19 years: information, finance-insurance, enterprise management and administrative support/waste management; others were around the long-term average of 37.0 percent: wholesale trade, real estate-rental-leasing, professional-scientific-technical services, health care-social assistance, and arts-entertainment-recreation. Most private sector services declined in the recession, but resumed growing after 2009, and surpassed their 2007 levels by 2012.

More analyses of specific sectors follow.

See Table A2

Changes in Durable Goods Manufacturing Output in Ohio, 2004-2014 (Industries Concentrated in Ohio)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
◆ 327: Nonmetallic Mineral Prdcts.	\$3,418	\$3,089	\$2,712	\$2,775	\$2,838	\$2,327	\$2,471	\$2,716	\$2,798	\$2,943	\$2,937
▲ 331: Primary Metals	\$5,123	\$5,517	\$4,399	\$4,448	\$4,516	\$2,909	\$3,624	\$3,942	\$3,951	\$4,612	\$4,696
□ 332: Fabricated Metal Prdcts.	\$12,823	\$12,791	\$13,453	\$13,420	\$13,769	\$8,771	\$10,382	\$11,401	\$11,076	\$10,559	\$11,157
✕ 333: Machinery	\$7,196	\$7,917	\$7,724	\$8,026	\$7,802	\$5,706	\$6,295	\$7,363	\$7,093	\$7,810	\$7,896
+ 335: Electrical Eqpt. & Appliances	\$5,002	\$5,064	\$4,866	\$4,492	\$4,877	\$3,911	\$3,763	\$3,672	\$3,837	\$3,515	\$3,666
● 3361-3: Motor Vehicle Industry	\$16,725	\$16,977	\$18,693	\$16,626	\$11,818	\$4,063	\$7,590	\$11,080	\$12,841	\$11,997	\$12,648
✱ 3364-9: Other Trnsprttn. Eqpt.	\$4,386	\$4,740	\$4,868	\$5,805	\$5,036	\$4,749	\$4,241	\$4,514	\$3,944	\$4,123	\$4,433

Source: U.S. BEA

* - Preliminary; earlier years may be revised

CONCENTRATED DURABLE GOODS MANUFACTURING

The chart above illustrates the changes in the inflation-adjusted output from 2004 through 2014 of seven durable goods manufacturing industries currently concentrated in Ohio. The collective output of the seven peaked at \$56.7 billion in 2006, but fell 42.8 percent to \$32.4 billion in 2009. At \$47.4 billion in 2014, collective output is 46.2 percent greater than in 2009, but is only 86.8 percent of what it was in 2004 (\$54.7 billion), and 83.6 percent of the 2006 peak.

The principal component of these changes was the striking contraction and recovery in the motor vehicle industry: cars, trucks, and associated bodies, trailers and parts (NAICS 3361-3, red dots). The changes were the most extreme: plunging 78.3 percent (2006-2009) and rebounding 211.3 percent by 2014. Despite the strong recovery, the industry output of 2014 remained 32.3 percent below the pre-recession peak and 24.4 percent below the 2004 level. Partial explanations of why industry output in 2014 remains less than pre-recession levels include the permanent closures of GM's Moraine assembly and Mansfield parts plants, and Ford's Lorain assembly and #2 Cleveland engine plants. Natural disasters and temporary closures also briefly depressed output: Ford closed its Cleveland engine plant #1 for a year beginning in May, 2007 (#2 was still operating); floods at east Asian parts plants constrained Honda's assemblies in 2011 and 2012; and FCA shut its Toledo North assembly plant for about nine months in 2012 and 2013 for a major model change-over.

Output from four other industries in this cluster also fell to nadirs in 2009: nonmetallic mineral products (327, white diamonds), primary and fabricated metals (331 and 332, gray triangles and squares) and machinery (333, blue "Xs"). While output from the four has increased, only the machinery industry has reached pre-recession levels. Output of other transportation equipment (3364-9, red asterisks) and electrical equipment and appliances (335, orange crosses) has drifted lower over the decade without any notable recovery.

What happened in Ohio often was similar to, and part of, changes in corresponding national industries. U.S. motor vehicle industry output fell 66.1 percent from 2006 to 2009 and has since risen 201.9 percent, surpassing its pre-recession peak. Primary metals production fell and recovered to a period high in 2013, and machinery output has recovered to pre-recession levels. However, fabricated metal and non-metallic mineral production, while greater than the recession depths, remains below pre-recession peaks, and electrical equipment and appliance output has varied little except for a bubble in 2006-2008. In summary, aggregate output of the seven peaked in 2007, fell 22.1 percent by 2009, and subsequently grew 38.7 percent by 2014. At \$723.3 billion, output is greater than the pre-recession peak of \$669.3 billion in 2007.

The combined output of the seven industries constituted 88.7 percent of all durable goods production in Ohio in 2014. Given that 2015 industry data are unavailable, the fact that the initial 2015 summary figure for durable goods output in Ohio is marginally lower probably indicates mixed changes during 2015 for most if not all of the seven. The correspond-

ing national figure for 2015 was marginally greater than the revised 2014 figure.

With few exceptions, GDP data provide no information about industry groups within major industries. However, value-added data from the Census Bureau's Annual Survey of Manufactures (ASM) and employment figures from its County Business Patterns (CBP) files do, providing more specific insights.³ For example, both ASM and CBP data indicate that vehicle assembly (3361) and parts production (3363) are particularly concentrated in Ohio, while manufacturing bodies and trailers (3362) is close to proportional with the nation (see Appendix tables A18 and A20). Additional data confirm this concentration in assembly and parts production: Ohio was the 2nd-ranked state with 13.7 percent of the cars, vans, pickups and sport-utility vehicles assembled in the U.S. during 2014 at six high-volume plants (Automotive News, 2016); ELM Analytics (2014) data indicate Ohio has the 2nd largest number of establishments in America (regardless of NAICS codes) supplying parts to vehicle assemblers; also, medium- and heavy-duty trucks are assembled at three Ohio plants.

Similarly, aerospace products and parts (3364) output is mildly concentrated with 4.0 percent of U.S. industry value-added here, but CBP data show only 2.7 percent of U.S. industry jobs in Ohio. This divergence may principally reflect the very high value added with large jet engines. Neither output from, nor employment in, any other transportation equipment group – ships, boats, railroads, ATVs, etc. – (3365-9) is concentrated here (U.S. Bureau of the Census, 2016a, 2016b).

ASM and CBP data illuminate other major industries as well. All primary metals group activities are concentrated in Ohio: iron and steel mills and ferroalloy production (3311), steel products made from purchased steel (3312), aluminum smelting and subsequent production (3313) as well as producing other common metals – principally copper (3314). Foundry output and employment (3315) also are concentrated here (U.S. Bureau of the Census, 2016a, 2016b). Appendix tables A18 and A20 show the highest concentrations in iron and steel and foundry groups. Data from the U.S. Geological Survey (2016) confirm Ohio's prominent role in steel production: typically, 12 to 14 percent of U.S. raw steel production has come from Ohio in recent years, ranking it 2nd.

Activity in all nine fabricated metal (332) groups is more or less concentrated in Ohio (U.S. Bureau of the Census, 2016a, 2016b). Activities include shaping metal pieces by forging, heat-treating, coating, stamping, bending, forming, machining, engraving and/or welding purchased materials. (Stampings for motor vehicles are classified as motor vehicle parts – 33637.) Products include cutlery, unpowered hand tools, boilers, containers, hardware, nuts, bolts, screws, rivets, wires, springs, valves and plumbing fixtures, bearings, safes, ladders, washers, tanks, and the output of machine shops. (Washing machines and military weapons are classified elsewhere.) In this case, ASM and CBP data lead to the conclusion that it is the combination of a variety of goods made in large volumes that results in Ohio's 3rd rank in industry GDP.

Activity in machinery manufacturing is more or less concentrated in five of the seven industry groups: the more-focused

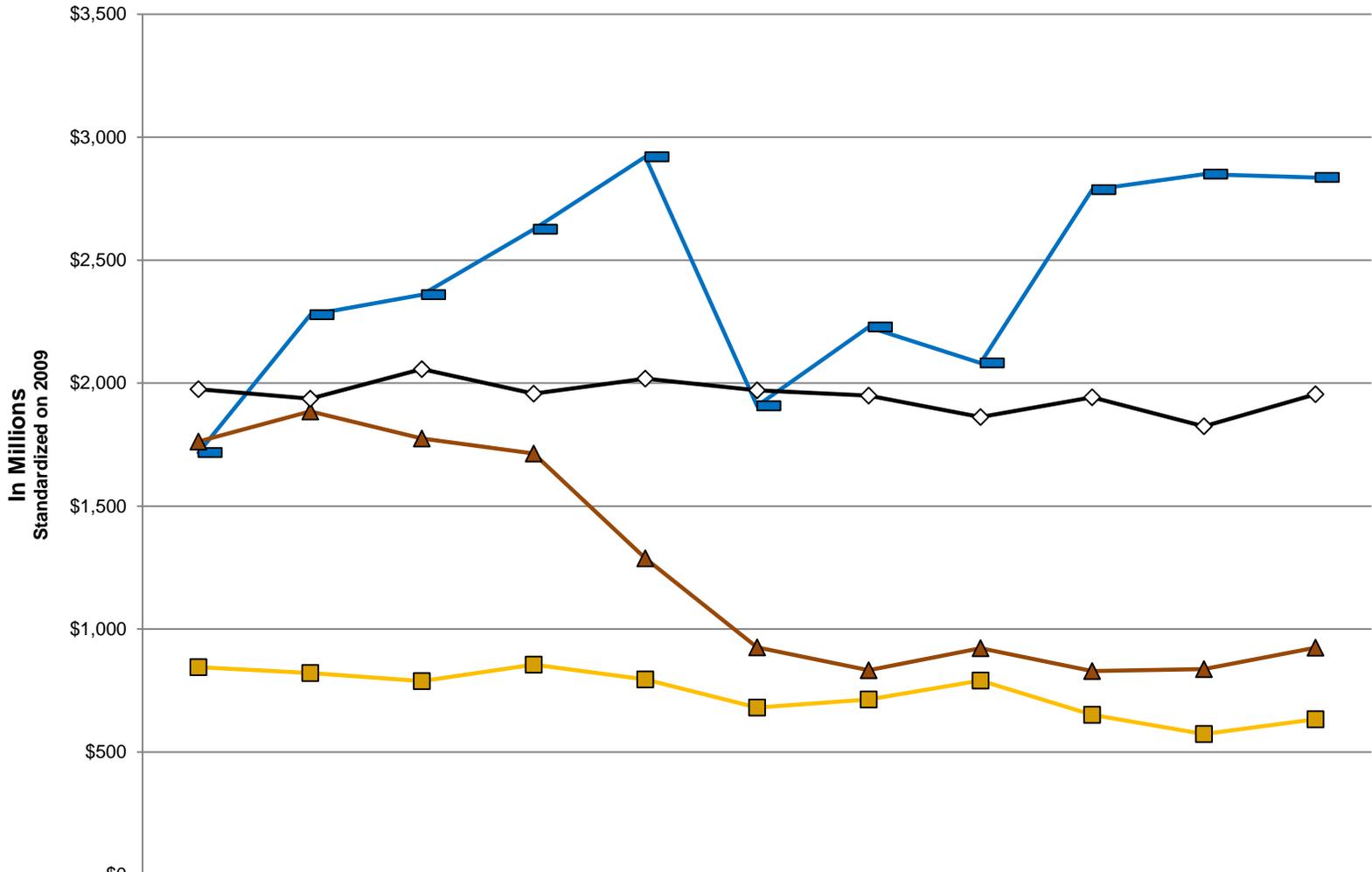
industrial, commercial and service machinery industries (3332 and 3333), and the more widely applicable heating-ventilation-air conditioning (HVAC) commercial refrigeration equipment (3334), metalworking (3335) and general purpose machinery (3339) groups. CBP data show employment in the engines-turbines-power transmission equipment group is concentrated, (3336), but ASM data do not (U.S. Bureau of the Census, 2016a, 2016b).⁴ Again, it is the combination of a variety of goods made in large volumes that results in Ohio's overall 4th rank in industry GDP.

Ohio is the 2nd-ranked source for electrical equipment and appliances in the U.S. ASM and CBP data show this rank is due to the overwhelming concentration in household appliances (3352); 24.0 percent of U.S. value-added for the group comes from Ohio and 23.1 percent of U.S. group jobs are located here – by far the largest percentages among the states. ASM and CBP data suggest milder concentrations or nearly proportional activity and jobs in the three other groups: electric lighting equipment (3351); electrical equipment (3353) such as motors, generators, transformers, switching equipment, relays and industrial controls (turbines for generating electricity are classified elsewhere); and other electrical equipment and components (3359) such as batteries, wires and cables (U.S. Bureau of the Census, 2016a, 2016b).

Manufacturing non-metallic mineral products (i.e., mostly silicates and calcites, 327) is concentrated in Ohio. ASM and CBP data agree that four of the five groups are concentrated here: clay and refractory products such as china, bricks, earthenware, pottery, porcelain, wall tiles, etc. (3271), glass (3272), lime and gypsum (3274, wall board is an example of the latter) and other materials (3279, abrasives, cut-stone products, fiberglass, stucco, etc.) (U.S. Bureau of the Census, 2016a, 2016b). As before, it is the combination of a variety of goods made in large volumes that results in Ohio's overall 3rd rank in industry GDP.

See Tables A2, A3, A14-A16, A18, A20

Changes in Durable Goods Manufacturing Output in Ohio, 2004-2014 (Industries Not Concentrated in Ohio)



Source: U.S. BEA

* - Preliminary; earlier years may be revised

OTHER DURABLE GOODS MANUFACTURING

The chart above illustrates the changing output levels of four durable goods manufacturing industries not concentrated in Ohio. Two of the four saw notable output declines sometime during the recession: furniture (NAICS 337, brown triangles) and computer and electronic products (334, blue rectangles); only in the latter has output recovered to levels approaching the pre-recession peak. On the other hand, manufacturing wood and miscellaneous products (327 and 339, gold squares and white diamonds) declined a bit during the recession, but the 10-year patterns of changes do not appear as distinct trends.

These patterns of change are at least somewhat similar to corresponding national-level changes:

- The growth of computer and electronic products output merely stalled in 2010, and then resumed growing;
- Furniture, etc. production peaked in 2006, fell during the recession and has yet to start recovering;
- Wood products gradually grew to a peak in 2007, fell in the recession, but the recovery has remained below pre-recession levels;
- Miscellaneous products manufacturing grew until 2011, but has since fluctuated.

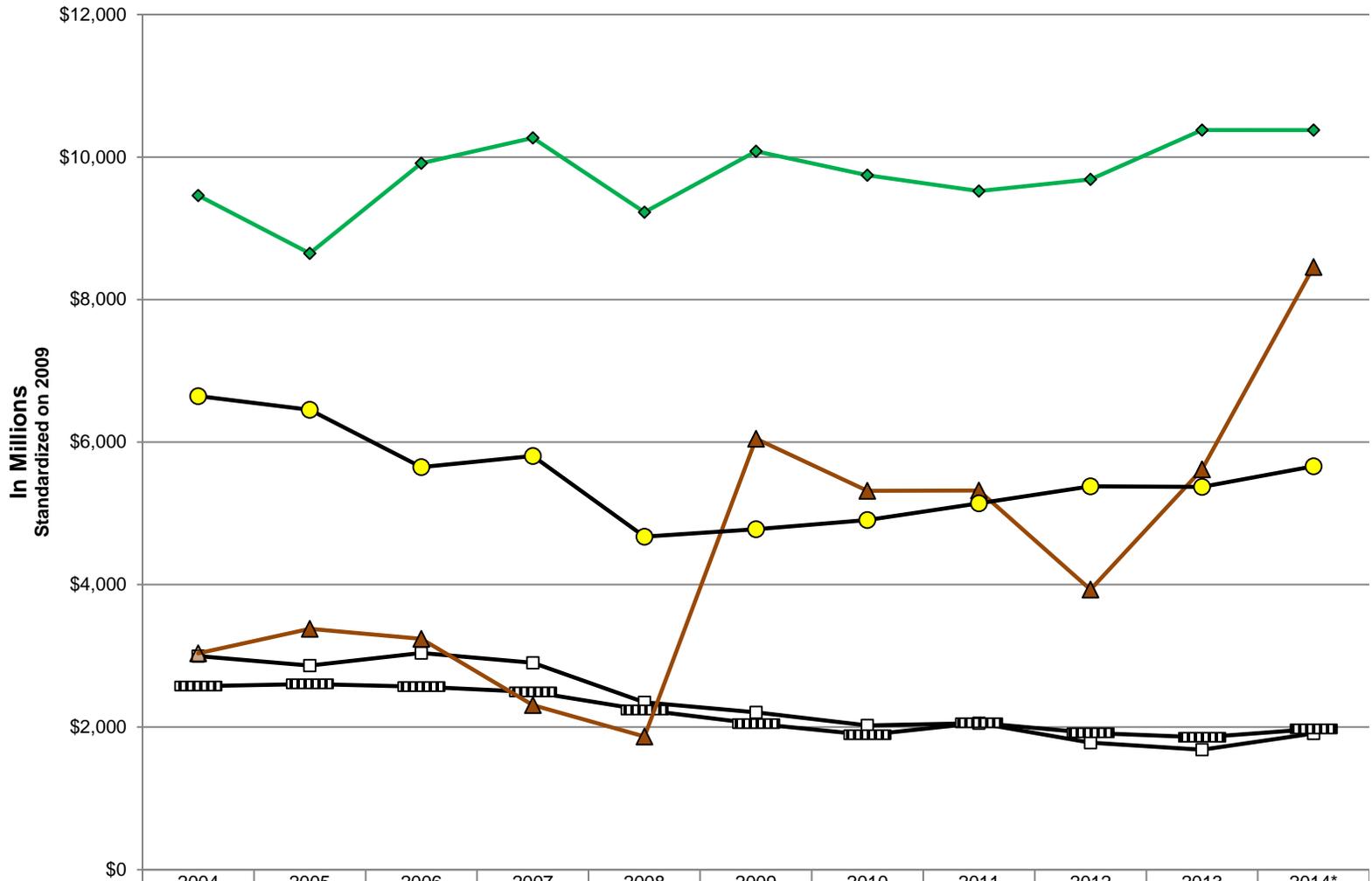
Annual Survey of Manufactures and County Business Patterns data show few exceptions to the overall sparse presence of these major industries in Ohio. Other wood products (3219 – windows, doors, stairs, pallets, ladders, toothpicks, etc.), navigational-measuring-medical-control instruments (3345) are close to proportional. The production of household and institutional furniture and kitchen cabinets (3371) and other miscellaneous manufactures (3399 – jewelry, sporting goods, toys, games, office supplies, signs, etc.) appears mildly concentrated here (U.S. Bureau of the Census, 2016a, 2016b).

Initial summary data for durables goods (32p-33) – regardless of concentration in Ohio – indicate growth during the first quarter of 2016 in Ohio and for the nation as a whole (U.S. BEA, 2016).

See Tables A2, A3, A14-A16, A18, A20

Changes in Non-durable Goods Manufacturing Output in Ohio, 2004-2014

(Industries Concentrated in Ohio)



Source: U.S. BEA

* - Preliminary; earlier years may be revised

CONCENTRATED NON-DURABLE GOODS MANUFACTURING

The chart above illustrates the changing output levels of five major non-durable goods manufacturing industries now concentrated in Ohio, and presents a marked contrast with that of most concentrated durable goods manufacturing seen in a preceding section. While all five experienced output declines at some time during the recession, food and beverage products (NAICS 331-2, green diamonds) quickly returned to pre-recession levels, and the output of petroleum and coal products (324, brown triangles) quadrupled to its highest level in 2014. These contrast with the output of the paper and printing industries (322 and 323, white squares and black-and-white rectangles), both which have since fluctuated at levels lower than before the recession. The pattern of change in plastic and rubber products (326, yellow dots) output falls between these poles: falling in 2008, gradually expanding since, but still less than pre-recession levels.

Sometimes these patterns of changes in Ohio are similar to corresponding national level changes: plastic and rubber products output trended downward before and during the recession, but is only now back to pre-recession levels; paper and printing also have remained below pre-recession levels. On the other hand, national output of coal and petroleum products contracted from 2004 to 2012 with few interruptions, rose in 2013 and 2014, but remained 22.8 lower than in 2004. Comparison of Ohio with national food, beverage and tobacco products output is incomplete because the Census Bureau does not record tobacco products manufacturing as the principal activity of *any* establishment in Ohio. Still, tobacco products are a small part of the industry, and national production – as in Ohio – has fluctuated with no apparent trend.

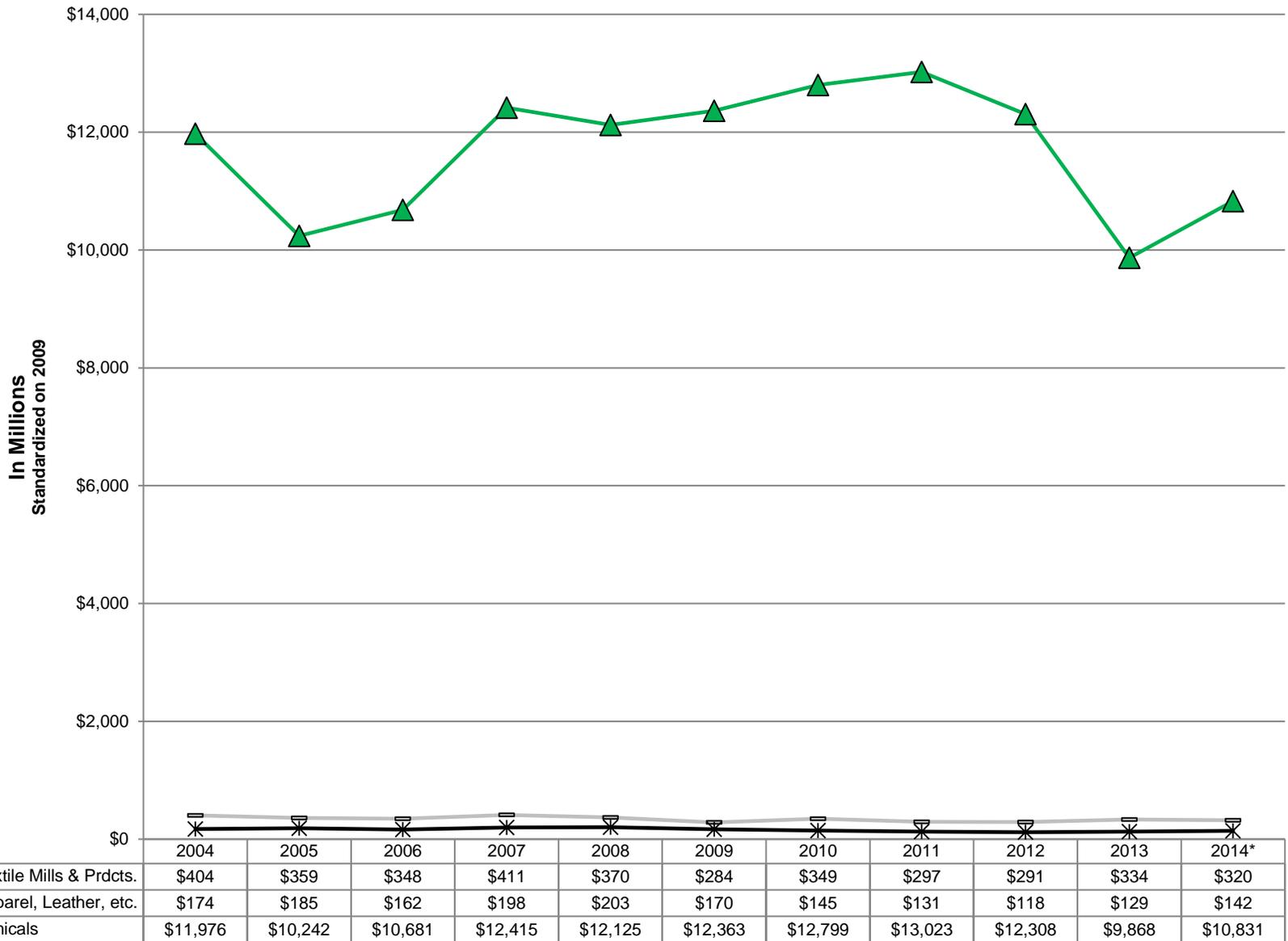
Annual Survey of Manufactures (ASM) and County Business Patterns (CBP) data specify which groups drive the overall cluster in the state. Ohio is the top-ranked state in manufacturing plastic and rubber products because it is concentrated and top-ranked in each group (3261 and 3262). Food product groups concentrated here include animal foods (3111), processing and preserving fruits and vegetables by freezing, canning, pickling or drying (3114), and other food products (3119) such as snacks, coffees and teas, flavorings, or seasonings and dressings, etc. ASM data also point to moderate concentrations of beverage production (3121), grain and oilseed milling (3112), dairy products (3115) and bakery and tortilla production (3118) while CBP data imply these latter three groups are proportional with national totals (U.S. Bureau of the Census, 2016a, 2016b). In addition, CBP data show:

- both printing industry sub-groups are concentrated in Ohio: actual printing on various materials (32311) and pre-press and post-press activities (32312); and
- petroleum refineries (32411) are relatively sparse; it is products such as asphalt (32412), lubricants, greases, petroleum jelly, coke, etc. (32419) that are concentrated here.

See Tables A2, A4, A14-A16, A18, A20

Changes in Non-durable Goods Manufacturing Output in Ohio, 2004-2014

(Industries Not Concentrated in Ohio)



Source: U.S. BEA

* - Preliminary; earlier years may be revised

OTHER NON-DURABLE GOODS MANUFACTURING

The chart above illustrates the changing output levels of the three major non-durable goods industries and clusters not currently concentrated in Ohio. The impact of the recession is evident in the chart above; all saw output declines from 2007 in either 2008 or 2009, if not both years. However, the downturns were slight either in relative terms for chemicals (325, green triangles) or absolute terms for textiles, apparel, leather, etc. (313-6, gray rectangles and black stars) due to the sizes of the latter two clusters. The big swings in chemicals industry output occurred before and after the Great Recession. Output from the textiles, apparel, leather, etc. clusters generally remained below pre-recession levels.

These patterns of change are at least somewhat similar to corresponding national-level changes. For most years, chemicals industry output moved in tandem from year to year in Ohio and the U.S. National output levels of the leather, apparel, textile mills and products sectors are lower post-recession than pre-recession.

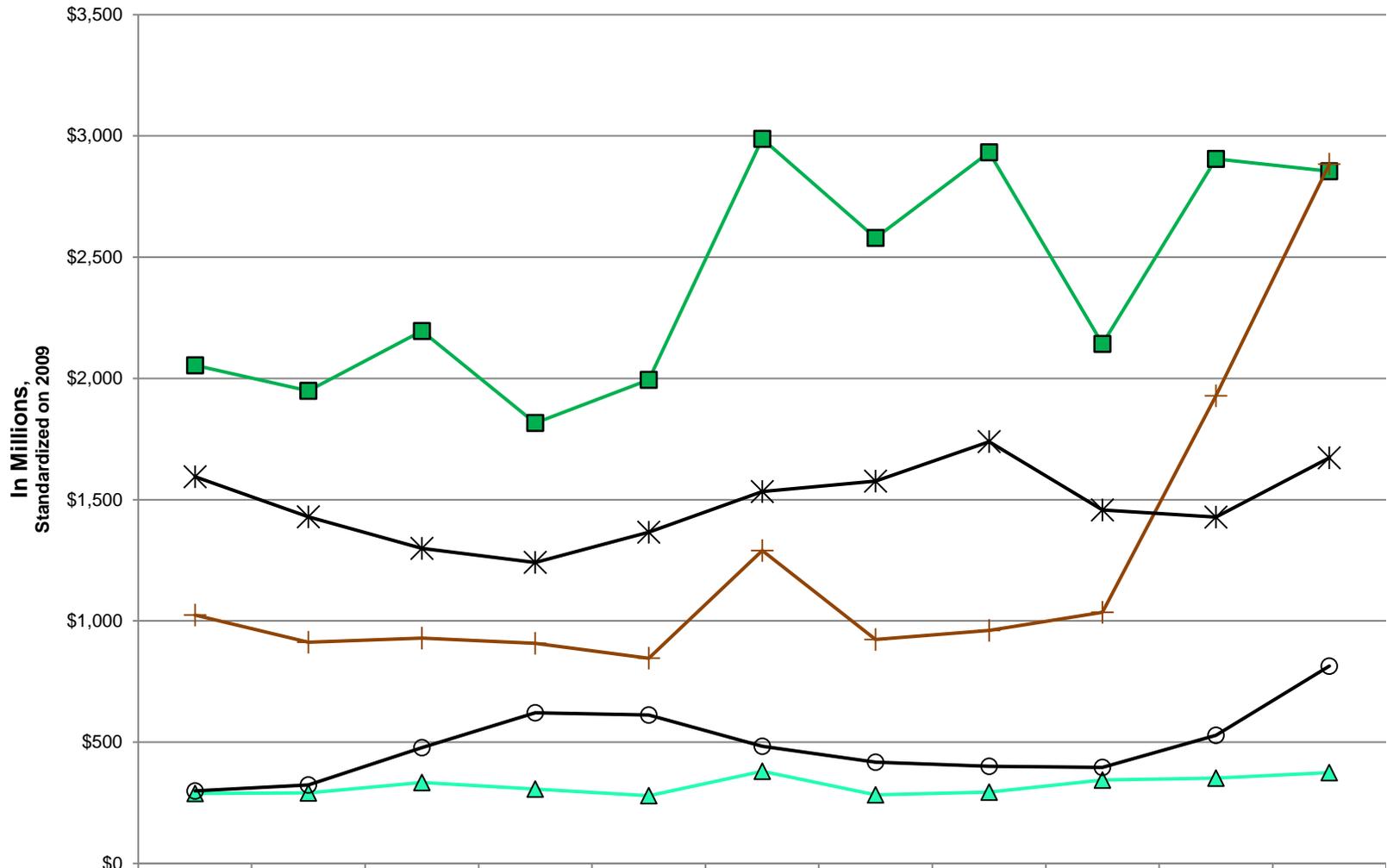
Annual Survey of Manufactures (ASM) and County Business Patterns (CBP) data show some exceptions to the overall sparse presence of these major industries in Ohio. Given the concentration of plastic and rubber products industries here, it is not surprising that the production of plastic resins, synthetic rubber and artificial fibers (3252) also is concentrated here. Other chemical groups particularly concentrated here include paints, coatings and adhesives (3255) and soaps, cleaners and toiletries (3256) – both top-ranked in the U.S. In general, basic chemicals (3251) and other chemical products (3259) such as inks, explosives or the custom compounding of purchased plastic resins are concentrated to lesser degrees. The manufacture of other-leather-and-allied products (3169) like billfolds, shoe components, collars, leashes, harnesses, watchbands, luggage, purses, welders' jackets, etc. is concentrated here (U.S. Bureau of the Census, 2016a, 2016b).

Initial summary data for non-durables goods (31-32p) – regardless of concentration in Ohio – indicate growth continuing through 2015 and the first quarter of 2016 in Ohio and for the nation as a whole (U.S. BEA, 2016).

See Tables A2, A4, A14-A16, A18, A20

Changes in Natural Resources Industries Output in Ohio, 2004-2014

(Farming, Forestry, Fishing, Hunting & Mining)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
■ 111-2: Farming	\$2,054	\$1,949	\$2,196	\$1,816	\$1,994	\$2,988	\$2,579	\$2,932	\$2,142	\$2,905	\$2,855
▲ 113-5: Frstry.-Fish.-Hunt.	\$289	\$291	\$334	\$307	\$279	\$380	\$283	\$294	\$344	\$352	\$375
+ 211: Oil-Gas Extrctn.	\$1,024	\$912	\$929	\$908	\$846	\$1,290	\$924	\$961	\$1,035	\$1,929	\$2,884
* 212: Mining, exc. Oil-Gas	\$1,595	\$1,429	\$1,299	\$1,241	\$1,366	\$1,533	\$1,577	\$1,739	\$1,458	\$1,428	\$1,673
○ 213: Mining Support	\$299	\$323	\$477	\$621	\$612	\$483	\$417	\$400	\$396	\$528	\$814

Source: U.S. BEA

* - Preliminary; earlier years may be revised

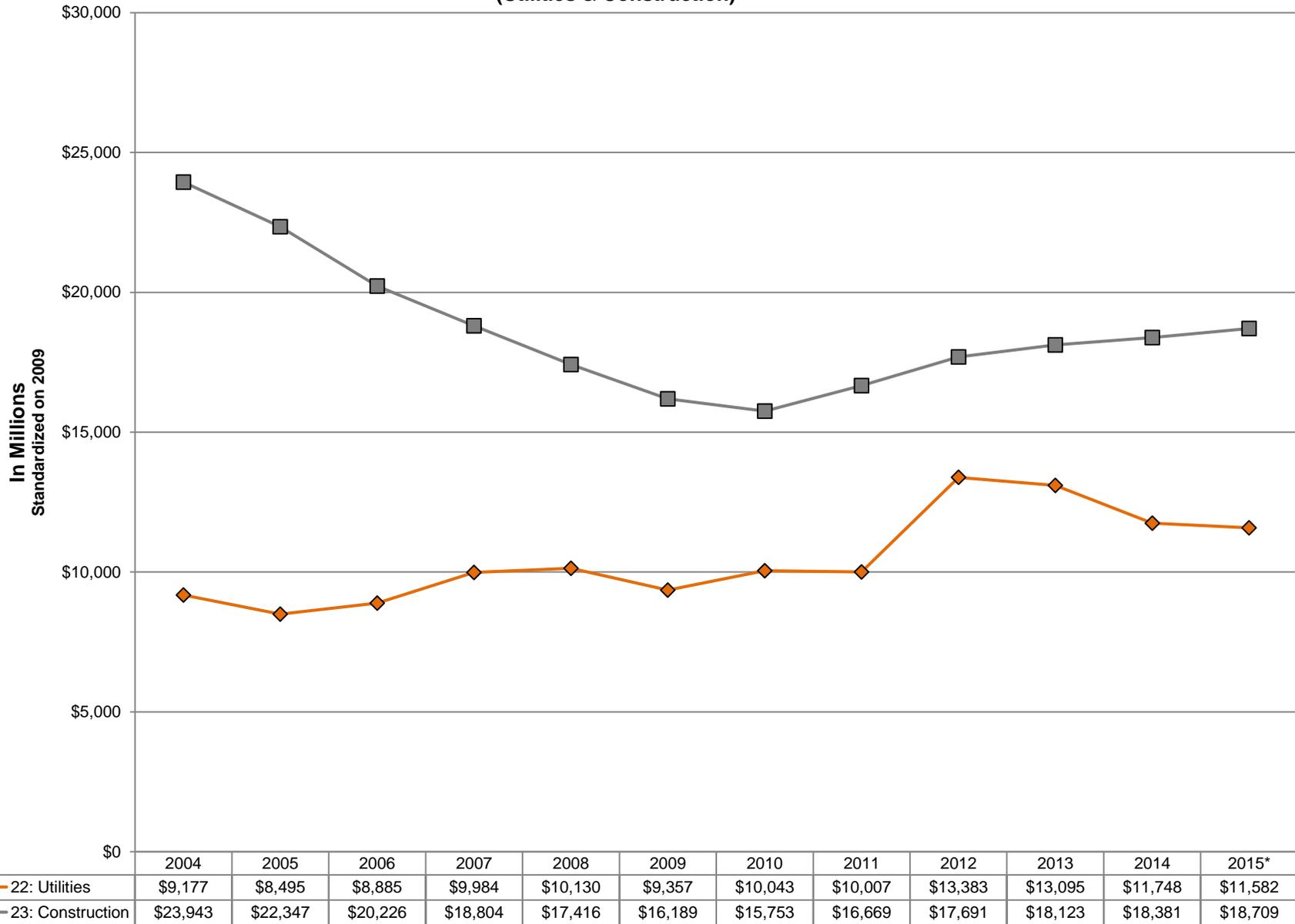
NATURAL RESOURCES AND RELATED INDUSTRIES

The chart above illustrates the varied recent histories of major natural resource and related industries in Ohio. Farm production (NAICS 111-2, green squares) fluctuated from year to year, but was greater in the last half of the decade than in first half. Output from the much smaller forestry-fishing-hunting cluster (113-5, green triangles) also has had its ups and downs, but no distinct trend is evident. Both of these roughly correspond with national level histories. County Business Patterns (CBP) data indicate all farm-support and forestry-fishing-hunting-etc. operations (1131-1153) in Ohio are more or less sparse. However, data from the U.S. DA (2016) indicate two exceptions in farming: in 2015, Ohio was the 6th-ranked source soy beans with 6.0 percent of national production, and the 8th-ranked source for corn with 3.7 percent of national production. Initial estimates show increases in sector (11) output from 2014 through 2015 into the first quarter of 2016 for Ohio and the U.S. (U.S. BEA, 2016).

The chart above also illustrates the contrasting fortunes of mining industries in Ohio. The most obvious change has been the jump in oil and gas production (211, brown crosses) and, to a lesser degree, mining support activities (213, white dots) during 2013 and 2014.⁵ ODNR (2016) production statistics confirm the tremendous increases in those years, locating them in Utica and Marcellus shale in Eastern Ohio. Production from those formations rose to become the majority Ohio's output in those years. Production of other resources (212, black stars) – principally from coal mines and quarries – fluctuated over the years with no distinct trend. National oil and gas extraction rose, fell and resumed growing during the decade, reaching it highest volume in 2014; the same is true of support activities. Other mining production showed little variation and no consistent trend. All of these extraction and related support operations remain relatively sparse in Ohio; CBP employment data indicate that coal mining and quarrying more or less proportional with the nation. Still, actual coal production in Ohio during 2014 was only 2.23 percent of the U.S. total (U.S. EIA, 2016). Initial summary estimates for 2015 indicate combined production and support activity (21) rose substantially here and more modestly for the nation as a whole. ODNR (2016) statistics indicate the rise in Ohio may be due to the doubling of oil and gas production from Utica and Marcellus shale from 2014 levels.

See Tables A2, A5, A14-A16, A20

Changes in Infrastructure Sectors' Output in Ohio, 2004-2015 (Utilities & Construction)



Source: U.S. BEA

* - Preliminary; earlier years may be revised

INFRASTRUCTURE

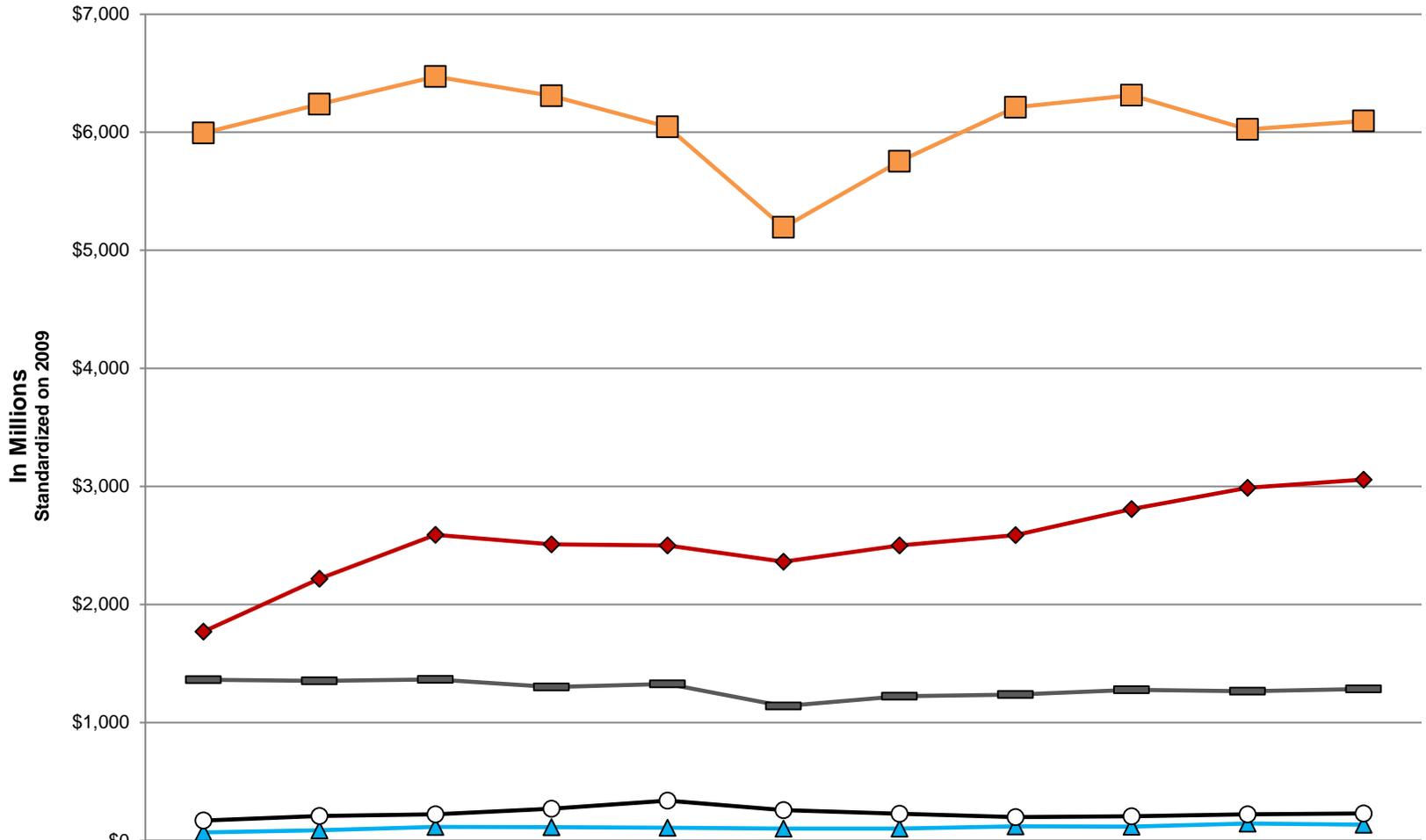
The chart above illustrates changing production levels in the two parts of what could be called the infrastructure cluster: those that build it (construction, NAICS 23) and those that supply what is necessary to keep the homes, buildings and equipment operating (utilities, 22). Construction activity in Ohio (gray squares) declined from 2004 to 2010, but has since risen a bit above the recession low. This decline incorporates the fall in residential construction (2361) (and the impact of that on specialty trades (238)) due to the financial crisis. It is consistent with the 74.2 percent drop in building permits issued for residential construction from 2004 through 2009; building permits also rose slightly thereafter, but still remain near their lowest level since 1982 (U.S. Bureau of the Census, n.d.).⁶ A similar trend in construction activity was seen for the nation as a whole: falling from 2005 through 2011, it has recovered a bit but remains well below earlier levels. While overall construction activity in Ohio is relatively sparse, County Business Patterns (CBP) data point to non-residential building (2362) and other heavy and civil engineering (2379) construction as exceptions; employment in those groups is close to proportional with the nation.

The chart above also illustrates the long-term (but occasionally interrupted) growth in aggregate utility services *supplied by the private sector* (orange diamonds): generating and distributing electric power, locally distributing natural gas, supplying water and treating sewage. The net change in Ohio was an increase of 26.2 percent from 2004 to 2015. This contrasts with the national pattern of interrupted growth to a peak in 2011 and later contraction. CBP data point to proportional activity in electric power generation, transmission and distribution (2211) and mild concentration in natural gas distribution (2212), while water and sewage services (2213) are relatively sparse.

Preliminary data show that during the first quarter of 2016 construction activity (23) increased while utility services decreased in Ohio and the nation as a whole (U.S. BEA, 2016).

See Tables A2, A13-A16, A20

Changes in Transportation and Warehouse Services in Ohio, 2004-2014 (the More-Logistical Industries)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
—■— 482: by Rail	\$1,362	\$1,354	\$1,365	\$1,301	\$1,327	\$1,139	\$1,222	\$1,236	\$1,276	\$1,266	\$1,284
—▲— 483: by Water	\$69	\$86	\$116	\$114	\$108	\$101	\$102	\$120	\$119	\$144	\$134
—■— 484: by Truck	\$5,993	\$6,239	\$6,472	\$6,309	\$6,046	\$5,195	\$5,755	\$6,211	\$6,315	\$6,025	\$6,095
—○— 486: by Pipeline	\$169	\$207	\$223	\$270	\$338	\$257	\$227	\$199	\$205	\$223	\$230
—◆— 493: Warehouse/Storage	\$1,770	\$2,217	\$2,589	\$2,509	\$2,501	\$2,363	\$2,499	\$2,587	\$2,809	\$2,989	\$3,058

Source: U.S. BEA

* - Preliminary; earlier years may be revised

TRANSPORTATION AND WAREHOUSING – MOVING AND STORING FREIGHT

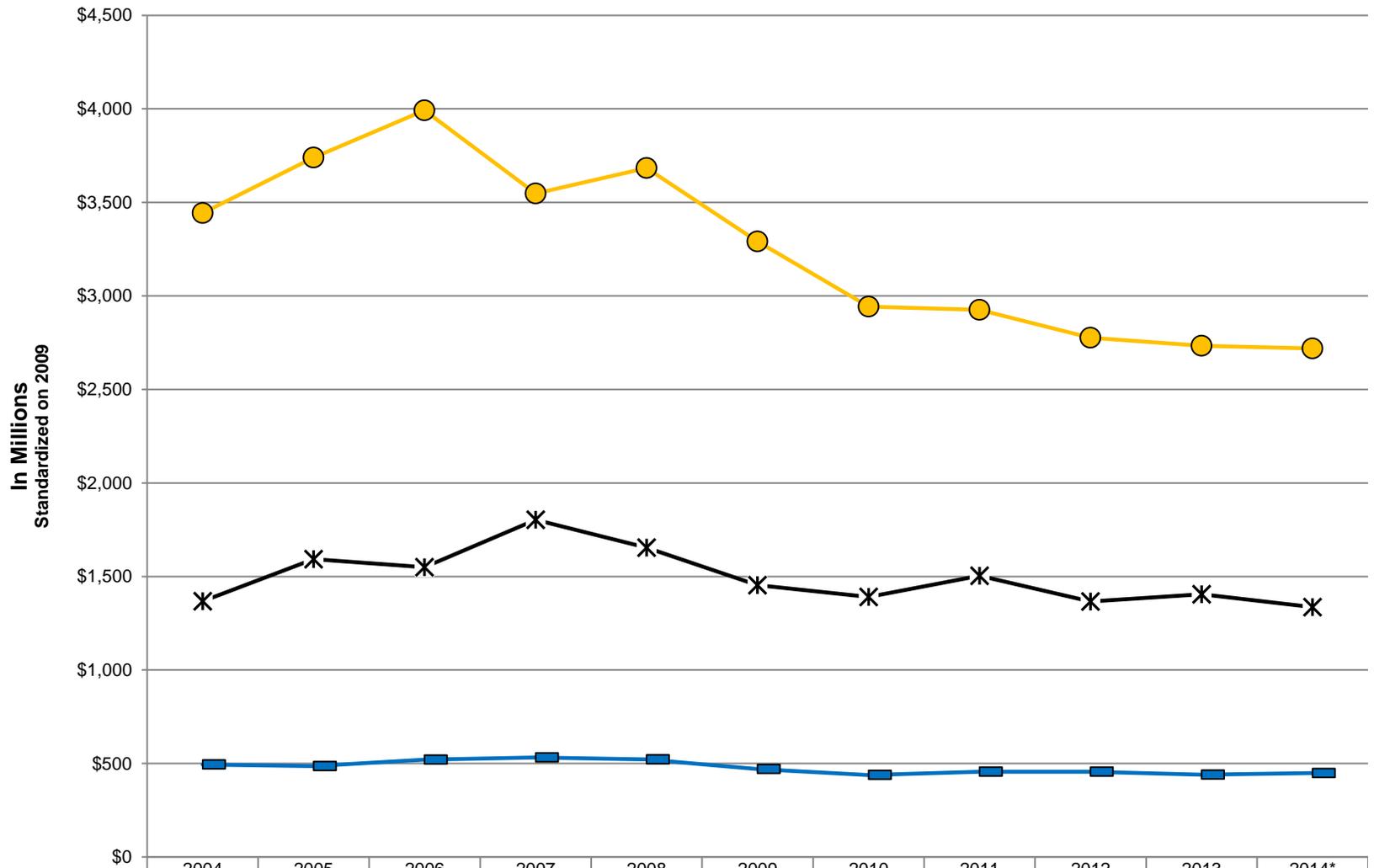
Transportation services (NAICS 48) move people and goods in large numbers. The more-logistical industries in the sector principally focus on moving and storing raw and intermediate materials as well as finished goods. The chart above shows most such transportation services are provided by the trucking industry (484, orange squares), followed by railroads (482, charcoal rectangles), pipelines (486, white dots) and ships or barges (483, blue triangles).⁷ Trucking services clearly show the effects of the recession and subsequent recovery, corresponding with changes mostly seen in durable goods production. The same may be said, to a lesser extent, of storage and warehouse (493, dark red diamonds) and rail services. These contrast with pipeline and water transportation services, which appear to have been unaffected by the recession. These patterns of change largely reflect changing services levels for the nation as a whole, excepting the faster rate of net national industry growth.

Among the industries discussed in this section, County Business Patterns (CBP) data specify only generalized freight trucking (4841) as concentrated in Ohio. Generalized freight trucking moves a wide variety of commodities, often those that can be placed on pallets or in containers. Specialized freight trucking (4842), which uses tankers, refrigerated trailers or specialized equipment for moving households and specific industrial goods, is relatively sparse. Similarly, CBP data specify the overall concentration in warehousing and storage services (493, dark red diamonds) to general and other warehousing and storage (49311 and 49319) as opposed to refrigerated and farm produce storage (49312-3). To a large extent, this is consistent with the general concentration of manufacturing here. Despite the recent increases in oil and natural gas production (212) as well as coal and petroleum products (324), employment in the associated pipeline transportation groups remained sparse in 2014 (U.S. Bureau of the Census, 2016b).

See Tables A2, A6, A14-A16, A20

Changes in Transportation Services in Ohio, 2004-2014

(Air, Passenger Ground, and All Other Services)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
—x— 481: by Air	\$1,367	\$1,593	\$1,550	\$1,803	\$1,654	\$1,453	\$1,390	\$1,503	\$1,366	\$1,405	\$1,336
—■— 485: Pssngr. Grnd./Trnst.	\$494	\$486	\$520	\$532	\$522	\$470	\$438	\$456	\$456	\$440	\$449
—○— 487-8, 92: Other & Spprt.	\$3,443	\$3,740	\$3,992	\$3,547	\$3,684	\$3,291	\$2,942	\$2,926	\$2,776	\$2,733	\$2,719

Source: U.S. BEA

* - Preliminary; earlier years may be revised

TRANSPORTATION – PASSENGERS, COURIERS AND SUPPORT SERVICES

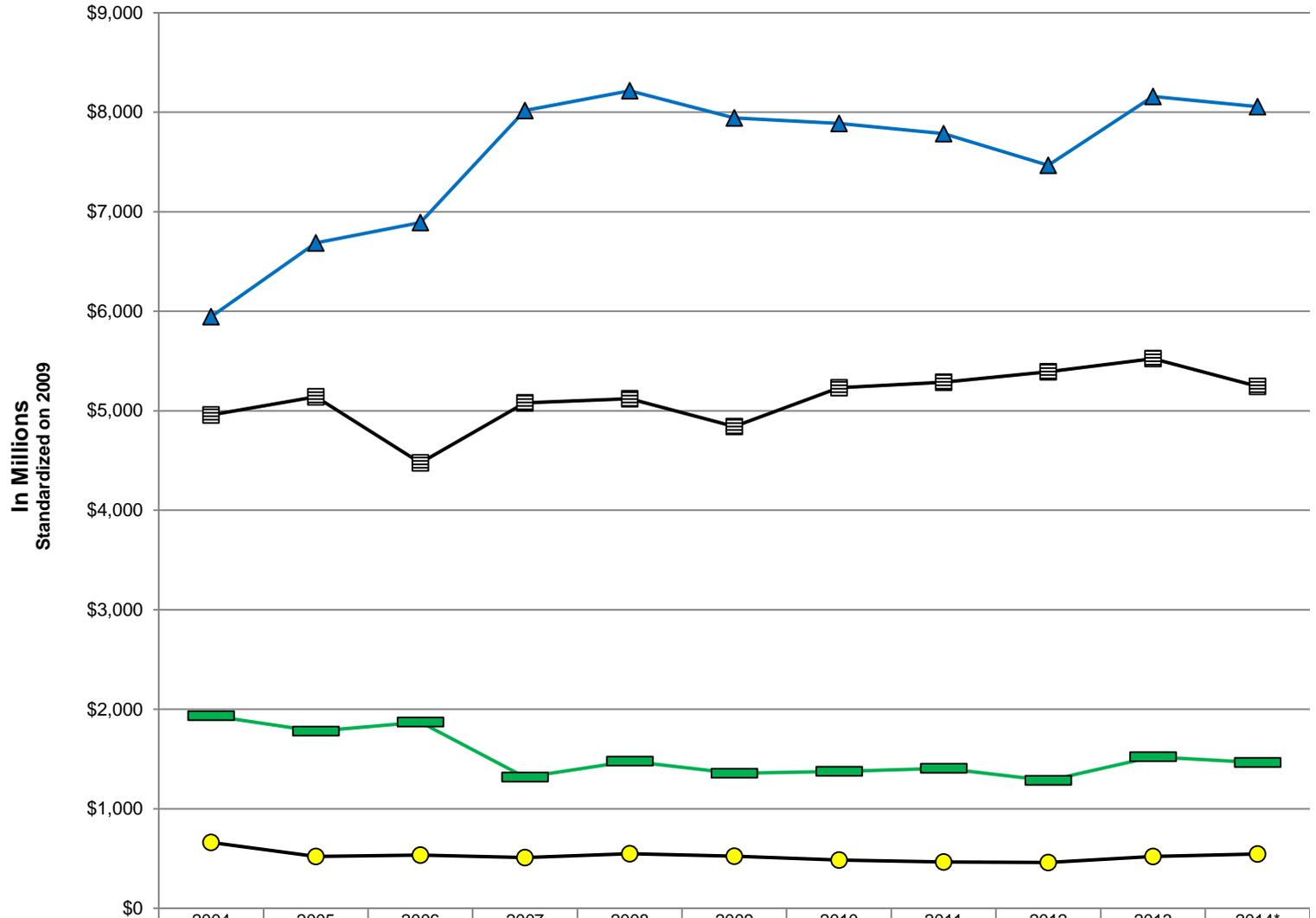
Activity levels in Ohio in passenger-oriented industries (NAICS 481, 485 and 487), those providing support services for any and all transportation modes (488), and courier and messenger services (492) varied over the course of a decade. However, the BEA presents the data differently, as seen in the chart above. Air transportation services⁸ (481, black stars) expanded from 2004 through 2007, contracted during the 2008-2009 recession, and have since remained at the lower levels. The smaller transit and ground industry (485, blue rectangles) showed relatively little change. Other-transportation-and-support activities (487-8 plus 492, gold dots)⁹ rose from 2004 through 2006, but have since contracted with little interruption. The changes charted on this page are similar to changes seen for the nation as a whole: air, transit-ground, and other-transportation-and-support services all rose from 2004 through 2006 or 2007, fell in the recession, and have fluctuated below pre-recession peaks.

None of these major transportation services is concentrated in Ohio, but County Business Patterns data point to some exceptions. These include non-scheduled air transportation (4812), rail support (4882) and other transportation support activities (4889). Non-scheduled air transportation is the flexible part of the system that will go anywhere at any time regularly scheduled planes do not. Rail services include maintaining and repairing equipment as well as terminal operations. Other transportation support includes packing and crating, arranging van and car pools, independent pipeline terminal facilities, stockyards, etc.

Initial summary data for the sector (48-49p) show contractions of 2.1 to 2.2 percent in Ohio and the nation as a whole during 2015 and continued contracting in the first quarter of 2016 (U.S. BEA, 2016).

See Tables A2, A6, A14-A16, A20

Changes in Information Services in Ohio, 2004-2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
■ 511: Publishing (inc. Sftwr. exc. Internet)	\$4,959	\$5,140	\$4,476	\$5,081	\$5,120	\$4,842	\$5,232	\$5,288	\$5,391	\$5,524	\$5,245
● 512: Motion Pic./Sound Rcrdng.	\$661	\$520	\$533	\$509	\$547	\$522	\$484	\$464	\$460	\$519	\$545
▲ 515, 7: Brdcstng./Telecmmnctns.	\$5,945	\$6,687	\$6,893	\$8,018	\$8,216	\$7,944	\$7,887	\$7,785	\$7,466	\$8,159	\$8,057
■ 518, 9: Data Prcssng., etc. (inc. Internet)	\$1,935	\$1,779	\$1,870	\$1,317	\$1,478	\$1,355	\$1,374	\$1,406	\$1,283	\$1,521	\$1,465

Source: U.S. BEA

* - Preliminary; earlier years may be revised

INFORMATION

The chart above illustrates apparently contrasting stories for two major industries in this sector. At one end of the spectrum, the large broadcasting and telecommunications cluster (NAICS 515 plus 517, blue triangles) rapidly grew from 2004 through 2008, with a notably large gain in 2007, but has fluctuated since. Near the other end of the spectrum, data processing and other information services (518-9, green rectangles) appear to have dropped significantly from 2006 to 2007, fluctuating usually between \$1.3 and \$1.5 billion thereafter. It is possible the divergent changes between 2006 and 2007 could be partially explained by regrouping Internet service providers from data processing and hosting (518) into telecommunications (517) with the implementation of the 2007 NAICS (see Office of Management and Budget, 2007: 979-980). The same phenomenon is evident at the national level – again noting the national clusters have grown.

Also evident in the chart above is the relatively steady activity levels of the publishing (511, black and white squares) and motion picture-sound recording (512, yellow dots) industries. 2006 was an exception for the publishing industry. The usually steady activity levels in these industries here contrast with their expansions elsewhere in the country.

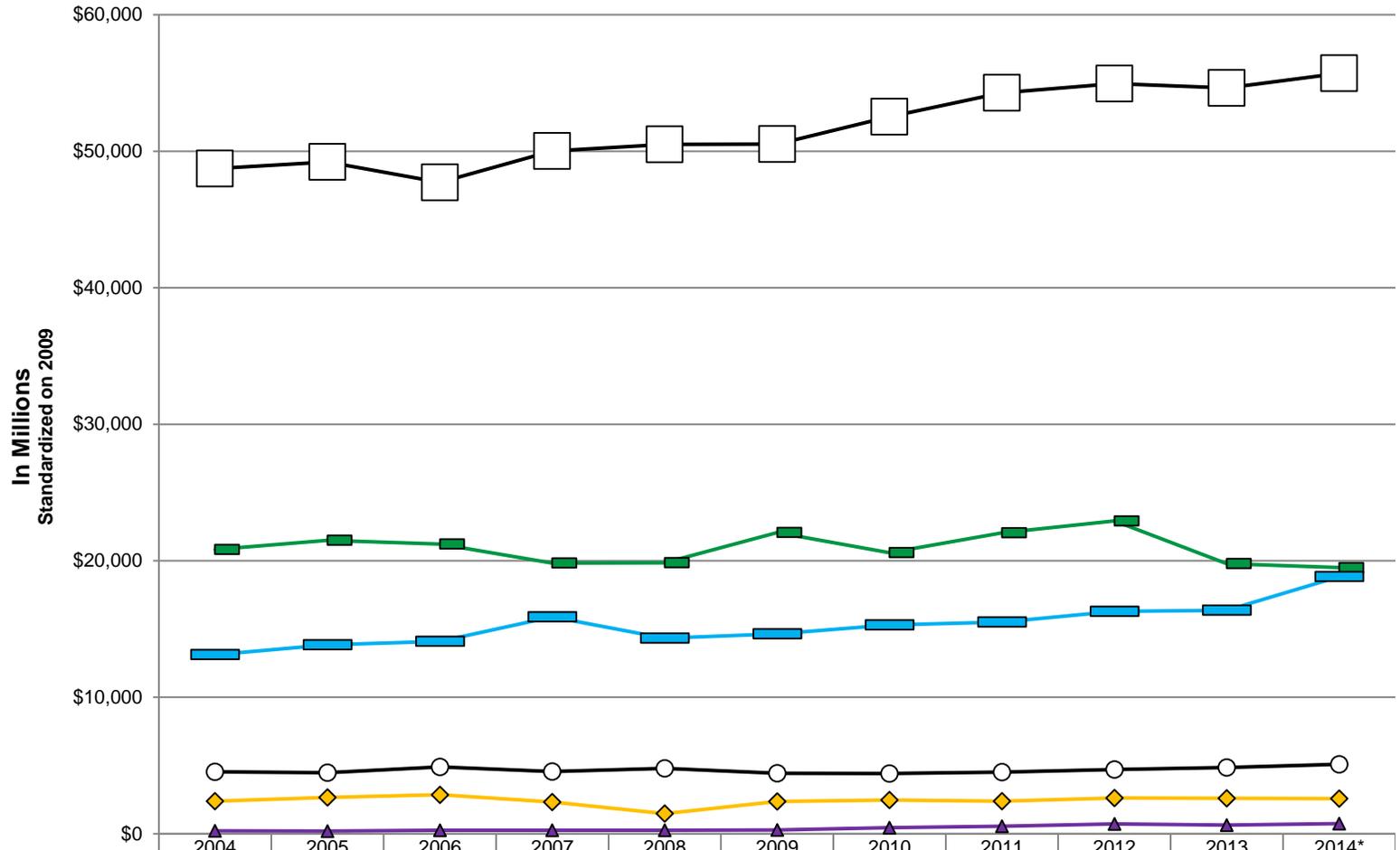
Overall, the four industries are relatively sparse in Ohio. The only exceptions are the mild concentration of newspaper-book-periodical and database publishers (5111) and the exceptional concentration of employment in all other information services (51919) for news clippings, telephone-based information, stock photo agencies, etc., according to County Business Patterns (U.S. Bureau of the Census, 2016b).

Initial figures for the sector (51) show expansions from 2014 through 2015 and the first quarter of 2016 here and across the country (U.S. BEA, 2016).

See Tables A2, A7, A14-A16, A20

Changes in Financial Services in Ohio, 2004-2014

(Banks, Investments, Insurance, Real Estate & Rental/Leasing)



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
521-2: Banks, Other Lenders, etc.	\$20,820	\$21,491	\$21,214	\$19,824	\$19,859	\$22,057	\$20,582	\$22,042	\$22,917	\$19,783	\$19,500
523: Securities/Investments	\$2,382	\$2,669	\$2,859	\$2,330	\$1,473	\$2,368	\$2,460	\$2,377	\$2,619	\$2,590	\$2,578
524: Insurance Carriers, etc.	\$13,111	\$13,833	\$14,085	\$15,885	\$14,324	\$14,646	\$15,289	\$15,508	\$16,283	\$16,362	\$18,833
525: Funds, Trusts, etc.	\$205	\$195	\$253	\$264	\$258	\$281	\$441	\$550	\$708	\$634	\$741
531: Real Estate	\$48,723	\$49,221	\$47,719	\$50,022	\$50,492	\$50,529	\$52,533	\$54,275	\$54,951	\$54,627	\$55,699
532-3: Rental/Leasing	\$4,541	\$4,471	\$4,901	\$4,564	\$4,799	\$4,420	\$4,414	\$4,506	\$4,695	\$4,846	\$5,088

Source: U.S. BEA

* - Preliminary; earlier years may be revised

FINANCIAL, REAL ESTATE, RENTAL AND LEASING ACTIVITIES

The chart above illustrates changes in various financial, real estate and rental and leasing activities in Ohio. It is interesting to note the largest changes in activity levels – both up and down – often preceded or occurred in the earliest stages of the 2008-2009 recession. Real estate activity (NAICS 531, white squares) contracted in 2006 as the housing market began to collapse, due in part to rising interest rates (MoneyCafe.com, 2015). (GDP numbers for real estate – the single largest major industry in America and Ohio – are much more indicative of the role mortgages play the economy than real estate office activities.¹⁰ The decline in real estate activity also is consistent with the drop in building permits that year.) Subsequent credit intermediation activities of banks, etc., (521-2, green rectangles) fell in 2007, perhaps due to reduced demand, while insurance activities (524, blue rectangles) rose, perhaps due to initial claims involving so-called toxic assets (unitized and packaged high-risk mortgage loans). The rise in banking and related activities in 2009 may have incorporated the Federal Reserve’s efforts in stabilizing the financial system.

Smaller industries may have felt the effects of the financial crisis as well. Security and investment establishments (523, gold diamonds) saw reduced activity from 2006 to 2008 as investors moved to the sidelines, and then returned to financial markets in 2009. Rental and leasing activity (532-3, white dots) peaked in 2006, moved lower thereafter, and did not return to pre-recession levels until 2012 or 2013. The growth of the tiny funds-and-trusts industry (525, purple triangles) is the lone exception in this cluster.

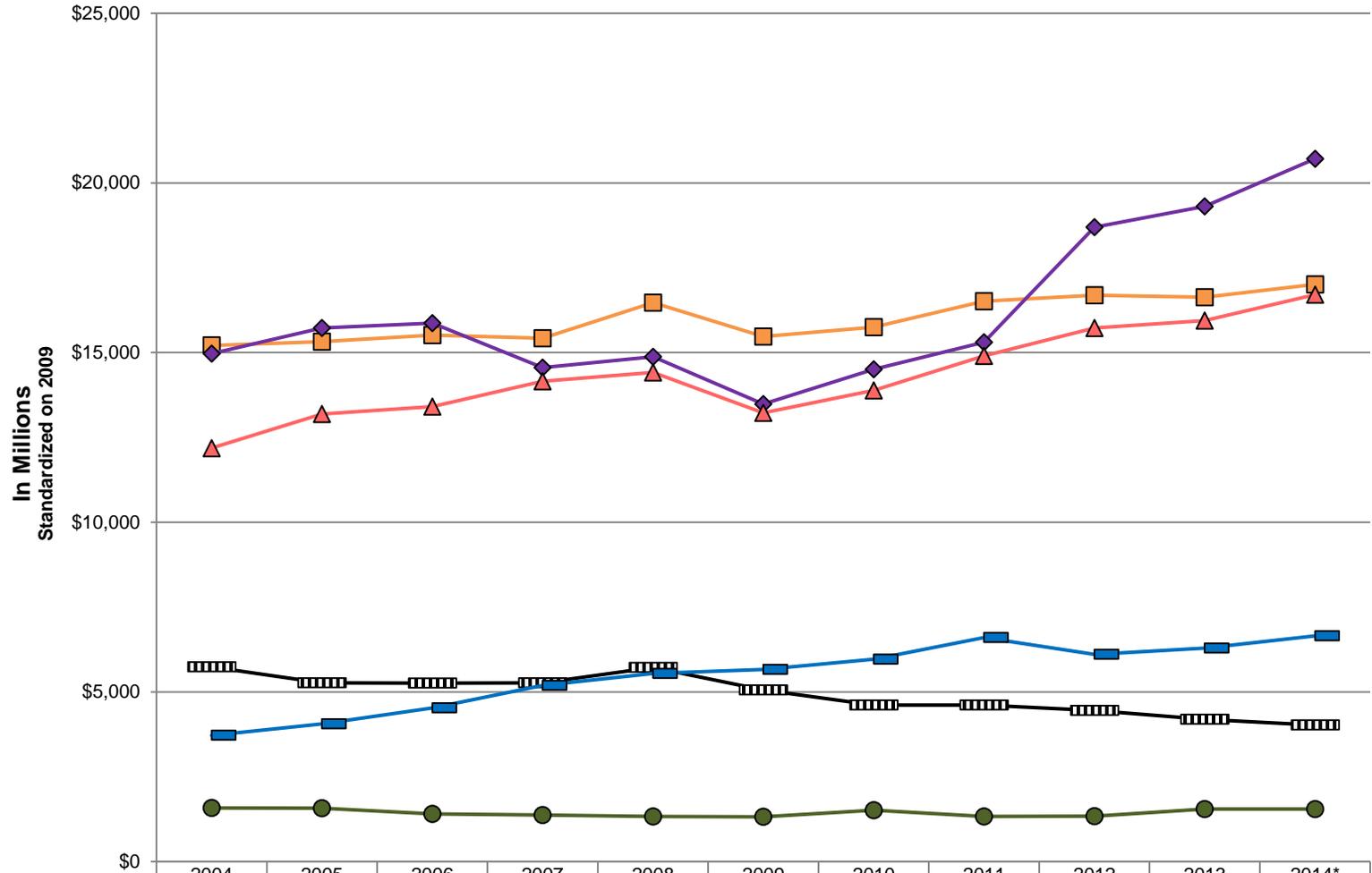
Many of these changes here were part of similar changes for the country as a whole. This is true for banks, etc., insurance, securities and investments, rental and leasing, and even funds-and-trusts.

County Business Patterns (CBP) data point primarily to insurance carriers (5241, companies actually writing the policies and assuming the risks) – and secondarily to depository credit intermediation (5221, banks, savings-and-loans, credit unions, etc.) as the groups driving sector (52) concentration here. The presence of Federal Reserve Bank (5211) offices in Cleveland and Cincinnati guarantees the concentration of monetary authority and central banking here. However, the small employment numbers – when compared to credit intermediation (522) – suggest a minor role in sector concentration. Lessors of real estate (5311) and most goods (5321-3) are more or less proportional in an otherwise sparse sector (U.S. Bureau of the Census, 2016b).

Initial figures for 2015 and the first quarter of 2016 show both sectors (52 and 53) growing in Ohio and across the nation (U.S. BEA, 2016).

See Tables A2, A8, A14-A16, A20

Changes in Professional & Business Services in Ohio, 2004-2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
5411: Legal Svcs.	\$5,734	\$5,265	\$5,254	\$5,265	\$5,716	\$5,055	\$4,615	\$4,609	\$4,451	\$4,192	\$4,022
5415: Cmptr. Systems Dsgn., etc.	\$3,718	\$4,054	\$4,527	\$5,193	\$5,542	\$5,659	\$5,961	\$6,603	\$6,106	\$6,289	\$6,650
5412-4, 6-9: Other PST Svcs.	\$15,210	\$15,320	\$15,512	\$15,421	\$16,470	\$15,472	\$15,746	\$16,518	\$16,689	\$16,633	\$17,009
55: Mgt. of Cos./Entrprss.	\$14,968	\$15,725	\$15,871	\$14,561	\$14,881	\$13,484	\$14,510	\$15,307	\$18,699	\$19,311	\$20,711
561: Admnstrv./Spprt. Svcs.	\$12,186	\$13,193	\$13,405	\$14,157	\$14,417	\$13,225	\$13,883	\$14,901	\$15,728	\$15,941	\$16,706
562: Wst. Mgt./Rmdtn. Svcs.	\$1,580	\$1,576	\$1,404	\$1,368	\$1,330	\$1,319	\$1,511	\$1,330	\$1,337	\$1,547	\$1,550

Source: U.S. BEA

* - Preliminary; earlier years may be revised

PROFESSIONAL AND BUSINESS SERVICES

The chart above illustrates the changing levels of service provided by six industries from three sectors part of or principally serving businesses. At one end, legal services (NAICS 5411, long black and white rectangles) contracted by 29.9 percent over the decade. This contrasts with the nearly uninterrupted 78.9 percent growth in computer systems design and related services (5415, short blue rectangles). The remaining professional, scientific and technical services (PST) (5412-4 and 5416-9, gold squares) also grew 11.8 percent, with the only notable decline during 2008-2009. These trends were part of similar national trends. County Business Patterns (CBP) data indicate that none of the PST services are concentrated here, although specialized design services (5414, interior, industrial, graphic, etc.) are essentially proportional (U.S. Bureau of the Census, 2016b).

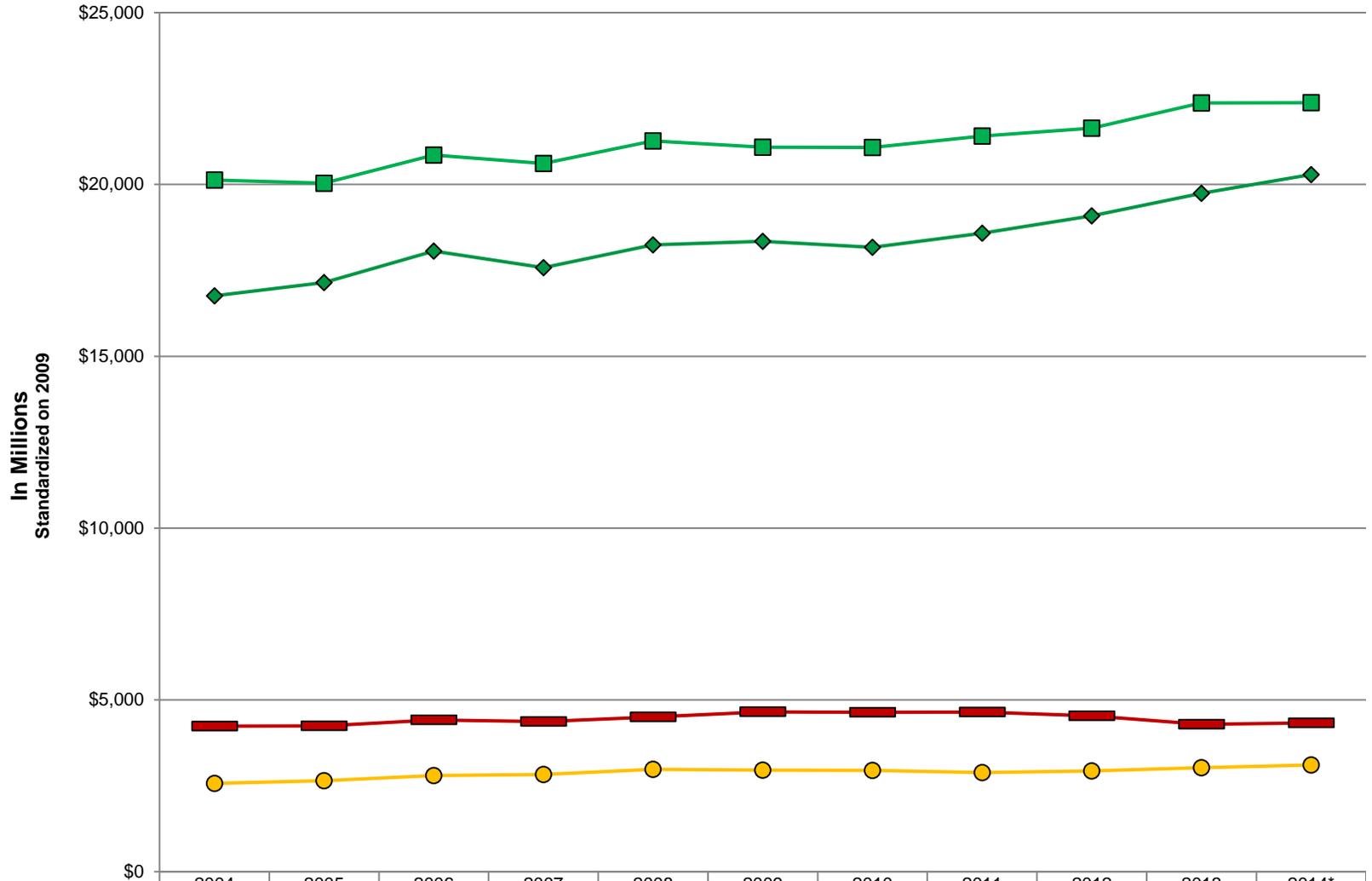
Enterprise management (55, purple diamonds) consists of holding companies and corporate offices for company, regional and subsidiary management. These types of establishments are concentrated in Ohio. This is consistent with the 55 For-une-1,000 companies headquartered here, which rank Ohio 5th in the nation (Fortune, 2016). The chart above shows services contracting to the recession's 2009 nadir and subsequently surpassing the pre-recession peak; the same is true for the industry nationwide. CBP data show this sector consists almost entirely of corporate and subsidiary managing offices (551114), which are concentrated here (U.S. Bureau of the Census, 2016b).¹¹

Administrative support establishments (561, orange triangles) specialize in providing out-sourced services to businesses. Activities include document preparation, mailing, bookkeeping, collections and repossessions, as well as the functions of call centers, personnel, security, janitorial and clerical staff – among others. The chart above shows that such services expanded 37.1 percent over the decade, with the drop in 2009 the only set-back. This growth pattern mirrors the national trend. While this major industry has a proportional role in Ohio's economy, CBP data point to other support services (5619) such as repossession, court reporting, stenography, barcoding and fundraising as concentrated here (U.S. Bureau of the Census, 2016b). Private sector waste management and remediation services (562, green dots) include collecting, treating, incinerating or otherwise disposing of waste materials (except sewage, which is classified as a utility service). Also included are operating landfills and recovering recyclables. These services have gradually grown with the nation over the decade, but fluctuated with little net change here. This major industry's concentration here is focused on waste treatment and disposal (5622) according to CBP data (U.S. Bureau of the Census, 2016b).

Initial estimates show growth continuing through the first quarter of 2016 for two sectors (54 and 56) in Ohio and for the nation as a whole. Enterprise management services (55) contracted in 2015 in Ohio, but recovered in 2016, while growing nationally in 2015 and 2016 (U.S. BEA, 2016).

See Tables A2, A9, A14-A16, A20

Changes in Educational, Health & Assistance Services in Ohio, 2004-2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
61: Educational Svcs.	\$4,235	\$4,239	\$4,414	\$4,369	\$4,504	\$4,651	\$4,640	\$4,645	\$4,537	\$4,286	\$4,330
621: Ambulatory Care	\$16,758	\$17,140	\$18,057	\$17,580	\$18,239	\$18,346	\$18,168	\$18,580	\$19,084	\$19,745	\$20,288
622-3: Hsptls. & Rltd. Fclts.	\$20,131	\$20,037	\$20,853	\$20,608	\$21,265	\$21,086	\$21,076	\$21,408	\$21,634	\$22,368	\$22,377
624: Social Assistance	\$2,570	\$2,647	\$2,798	\$2,828	\$2,981	\$2,952	\$2,951	\$2,887	\$2,933	\$3,023	\$3,105

Source: U.S. BEA

* - Preliminary; earlier years may be revised

EDUCATION, HEALTH CARE AND SOCIAL ASSISTANCE

The chart above illustrates the relatively steady provision of *private sector* educational services (61, red rectangles) in Ohio during the last decade, peaking in 2009, but still showing net growth of 2.2 percent. (Some people enroll in post-secondary schools to add or improve skills when jobs are scarce.) Corresponding services grew 16.6 percent for the nation. While overall private sector educational services here are sparse, CBP data show services by elementary and secondary schools (6111) are proportional with the nation while junior colleges (6112) are concentrated here (U.S. Bureau of the Census, 2016b).

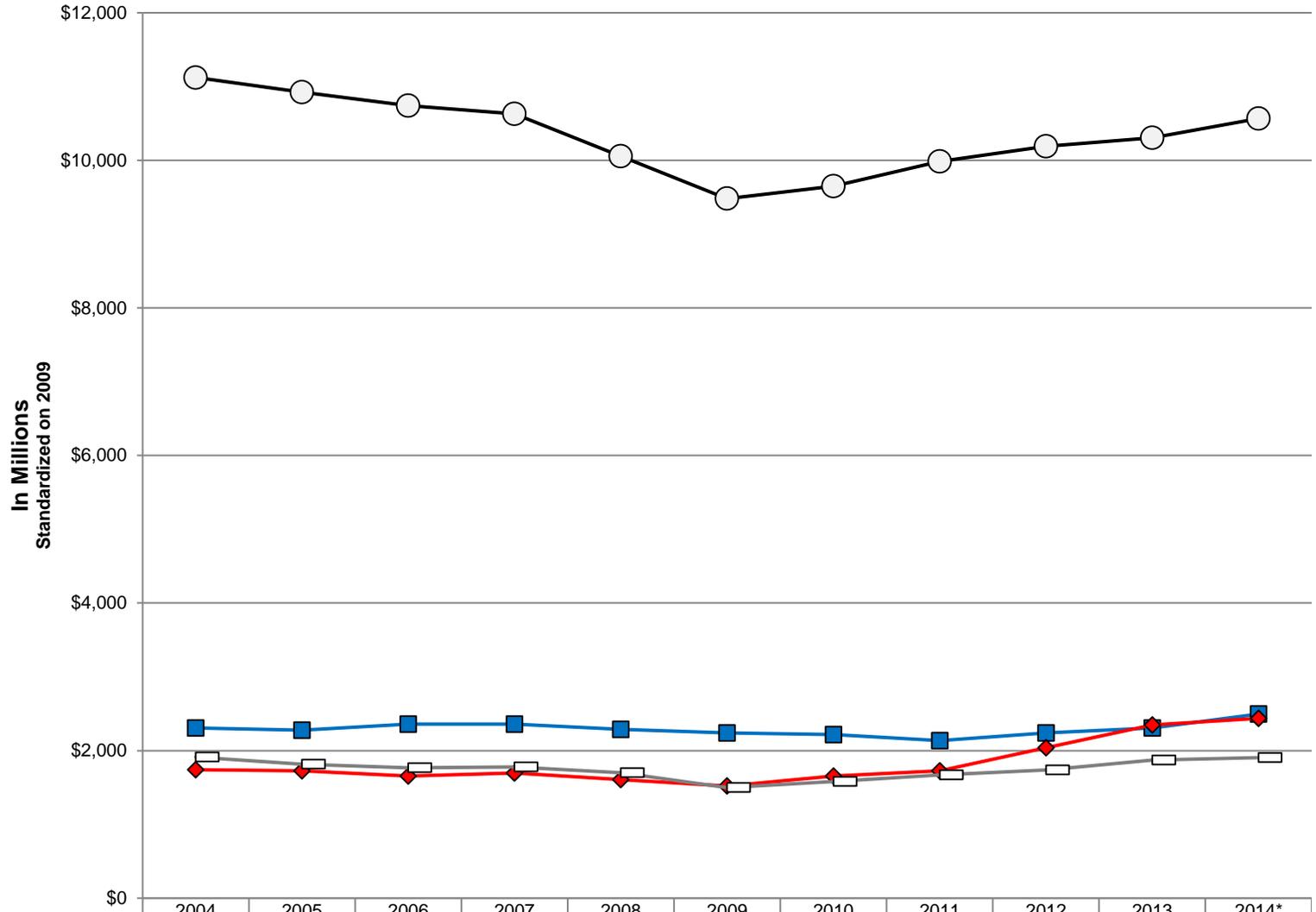
The chart also documents the expansion of the two *private sector* health care sector clusters. Ambulatory health care services (NAICS 621, green diamonds) increased 21.1 percent over the decade, while services provided by hospitals, nursing and residential care facilities (622-3, green squares) increased 11.2 percent. Neither industry was phased by the recession even as their growth rates were less than corresponding national trends. Hospitals, nursing and residential care facilities are more concentrated in Ohio than ambulatory health care. County Business Patterns (CBP) data point to general hospitals (6221) and nursing and community care facilities for the elderly (6231, 3) as the service groups notably concentrated here (U.S. Bureau of the Census, 2016b). Underlying the concentration of nursing homes here are their uses as residences for stabilized mental patients who have nowhere else to go, and as temporary locations for post-surgical rehabilitation. Nursing homes have aggressively pursued the latter because they see Medicare as a generous source of reimbursement (Sutherly, 2013). The concentration of home health care services (6216) may reflect the state's emphasis on their use as an alternative to nursing home care (Sutherly, 2013; U.S. Bureau of the Census, 2016b).

The smaller *private sector* social assistance industry (624, gold dots) expanded 20.8 percent and, like health care services, was not really phased by the recession. The expansion here was part of an encompassing national trend. Overall, the industry's role in Ohio's economy is close to proportional with the nation's, with a notable concentration in vocational rehabilitation services (6243) such as job counseling, training and/or work experience for those lacking such; sheltered workshops are included (U.S. Bureau of the Census, 2016b).

Initial figures show continued expansion through 2015 and the first quarter of 2016 in the health care and social assistance sector (62) here and for the nation as a whole; educational services (61) here and nationally contracted slightly in 2015 and expanded in the first quarter of 2016 (U.S. BEA, 2016).

See Tables A2, A10, A14-A16, A20

Changes in Leisure & Hospitality Services in Ohio, 2004-2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
711-2: Arts, Sports, Museums, etc.	\$2,309	\$2,276	\$2,359	\$2,360	\$2,290	\$2,241	\$2,219	\$2,136	\$2,239	\$2,308	\$2,496
713: Amsmnts., Gmblng., Rcrtn.	\$1,743	\$1,727	\$1,657	\$1,696	\$1,606	\$1,520	\$1,656	\$1,726	\$2,039	\$2,350	\$2,438
721: Accommodation	\$1,913	\$1,817	\$1,766	\$1,780	\$1,701	\$1,499	\$1,583	\$1,672	\$1,739	\$1,872	\$1,904
722: Food Svcs. & Drinking Places	\$11,123	\$10,923	\$10,742	\$10,628	\$10,056	\$9,481	\$9,649	\$9,986	\$10,192	\$10,305	\$10,566

Source: U.S. BEA

* - Preliminary; earlier years may be revised

LEISURE AND HOSPITALITY

A careful look at the chart above shows the varying effect of the 2008-2009 recession on all four major industries in this cluster. During hard times, people reduce discretionary expenditures such as:

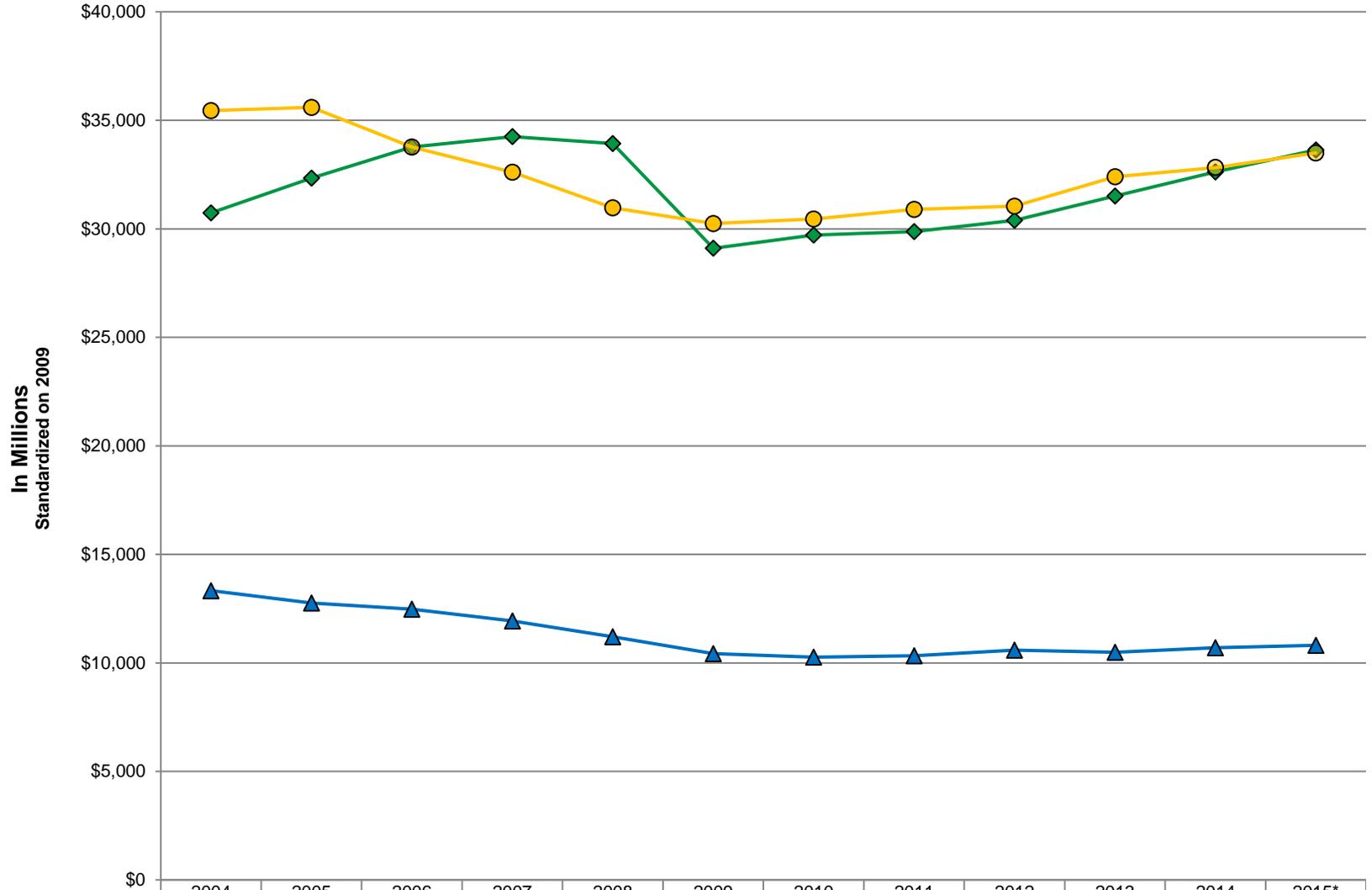
- travel, which means less use of accommodations (NAICS 721, white rectangles);
- going out, which means less patronage of food services and drinking places (722, light gray dots);
- arts, sports and museums events (711-2, blue squares);
- and even their participation in recreation and amusement activities (713, red diamonds).

Consequently, such services bottomed-out at the depths of the recession in 2009, and have risen as part of the recovery. The same phenomena are evident nationwide. County Business Patterns (CBP) data show only a concentration of spectator sports (7112), zoos and gardens (71213) and, to a lesser extent, historical sites (71212) as exceptions to industries ranging from sparse to proportional. Legal gambling (7132) expanded in Ohio a few years ago, which may be contributing to the faster growth rate of the encompassing major industry's recovery, but it remains sparse here according to CBP data (U.S. Bureau of the Census, 2016b).

Initial estimates for 2015 and the first quarter of 2016 show steady or fractionally increased use of sector services (71 and 72) here and slightly greater growth across the country (U.S. BEA, 2016).

See Tables A2, A11, A14-A16, A20

Changes in Trade and Other Private Services Sectors in Ohio, 2004-2015



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
◆ 42: Wholesale Trade	\$30,738	\$32,343	\$33,764	\$34,248	\$33,934	\$29,103	\$29,717	\$29,868	\$30,394	\$31,513	\$32,621	\$33,630
● 44-5: Retail Trade	\$35,451	\$35,600	\$33,766	\$32,612	\$30,974	\$30,247	\$30,456	\$30,902	\$31,050	\$32,395	\$32,822	\$33,493
▲ 81: Other Svcs. exc. Govt.	\$13,329	\$12,758	\$12,473	\$11,928	\$11,199	\$10,423	\$10,264	\$10,334	\$10,587	\$10,493	\$10,702	\$10,809

Source: U.S. BEA

* - Preliminary; earlier years may be revised

TRADE AND OTHER SERVICES

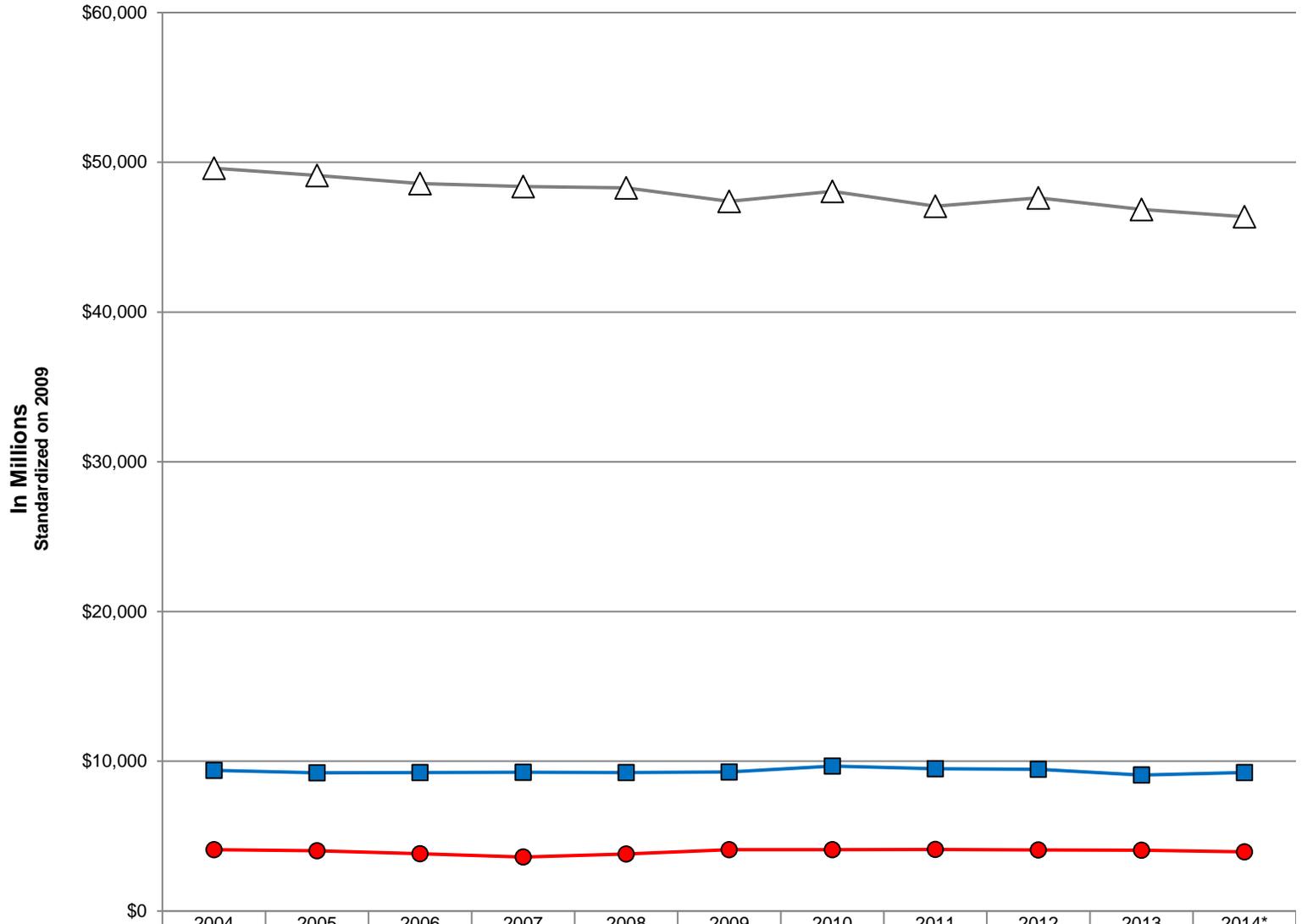
The chart above illustrates the somewhat similar, somewhat different stories of three sectors. Wholesale trade (NAICS 42, green diamonds) expanded in Ohio from 2004 through 2007, fell in 2009 (erasing the preceding gains), recovered thereafter, but still remains just below the 2007 peak. Unlike wholesale trade, retail trade (44-5, gold dots) peaked in 2005 before contracting to its lowest level of the decade in 2009; but similar to wholesale trade, it recovered somewhat and remains below the 2007 peak. Similar to retail trade, other private sector services (81, blue triangles) slid from 2004 to 2010 with only a very gradual expansion that, in recovery, remains below pre-recession levels. These trends in Ohio are quite similar to – and part of – corresponding national sector trends, although national wholesale and retail activity has now surpassed pre-recession peaks. Initial data for the first quarter of 2016 indicate continuing expansion here and for the nation as a whole in wholesale trade (42) and other services (81), while retail trade (44-45) slipped in Ohio but grew nationally (U.S. BEA, 2016).

Overall activity in all three sectors is close to proportional with the nation. However, County Business Patterns (CBP) data point to interesting wholesale sector variations: wholesalers distributing products of *manufacturing* industries concentrated in Ohio tend to have employment concentrated here, perhaps as a carry-over effect. Wholesale jobs more or less concentrated here include those dealing in motor vehicles, parts and tires (4231), metals and minerals (except petroleum) (4235), hardware, plumbing and heating equipment (4237), machinery and equipment (4238), paper and paper products (4241) and chemicals and plastics (4246). The sparse employment among electrical equipment wholesalers (4236) is an exception to this tendency (U.S. Bureau of the Census, 2016b).

CBP data also indicate the varying concentration of some sector activities in Ohio: wholesale trade agents and brokers (42512 – unlike other wholesalers, they do not take title to goods but receive commissions or fees), florists (4531), on-line and mail order shopping (4541), vending machine operators (4542), commercial equipment repair and maintenance (8113 – motor vehicle and electrical equipment repair are classified elsewhere), personal care businesses such as for hair, nails, or dieting (8121), funeral homes and cemeteries (8122), civic and social organizations (8134) and possibly pharmacies (44611) (U.S. Bureau of the Census, 2016b).

See Tables A2, A13-A16, A20

Changes in Government Services in Ohio, 2004-2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
■ 92fc, 491: Fdrl. Cvln. (inc. Pstl. Srvc.)	\$9,393	\$9,237	\$9,258	\$9,267	\$9,261	\$9,293	\$9,681	\$9,502	\$9,460	\$9,082	\$9,244
● 92811: Federal - Military	\$4,106	\$4,034	\$3,826	\$3,610	\$3,808	\$4,094	\$4,108	\$4,114	\$4,087	\$4,072	\$3,954
△ 92sl: State & Local	\$49,606	\$49,118	\$48,575	\$48,382	\$48,287	\$47,393	\$48,064	\$47,064	\$47,622	\$46,846	\$46,366

Source: U.S. BEA

* - Preliminary; earlier years may be revised

FEDERAL, STATE AND LOCAL GOVERNMENT

Taken together, the services provided by federal, state and local government agencies verge on the sparse side in Ohio. However, the graph above illustrates the differences between the three parts of the sector. Between 77 and 79 percent of all government services in Ohio are provided by state and local agencies (NAICS 92c, white triangles).¹² Those services contracted 6.5 percent over the decade from \$49.6 to \$46.4 billion, with seemingly little effect by the recession. Concentration ratios at or very close to 1.00 mean that the state and local government services provided here remained in the middle of the range of services provided by all state and local governments.

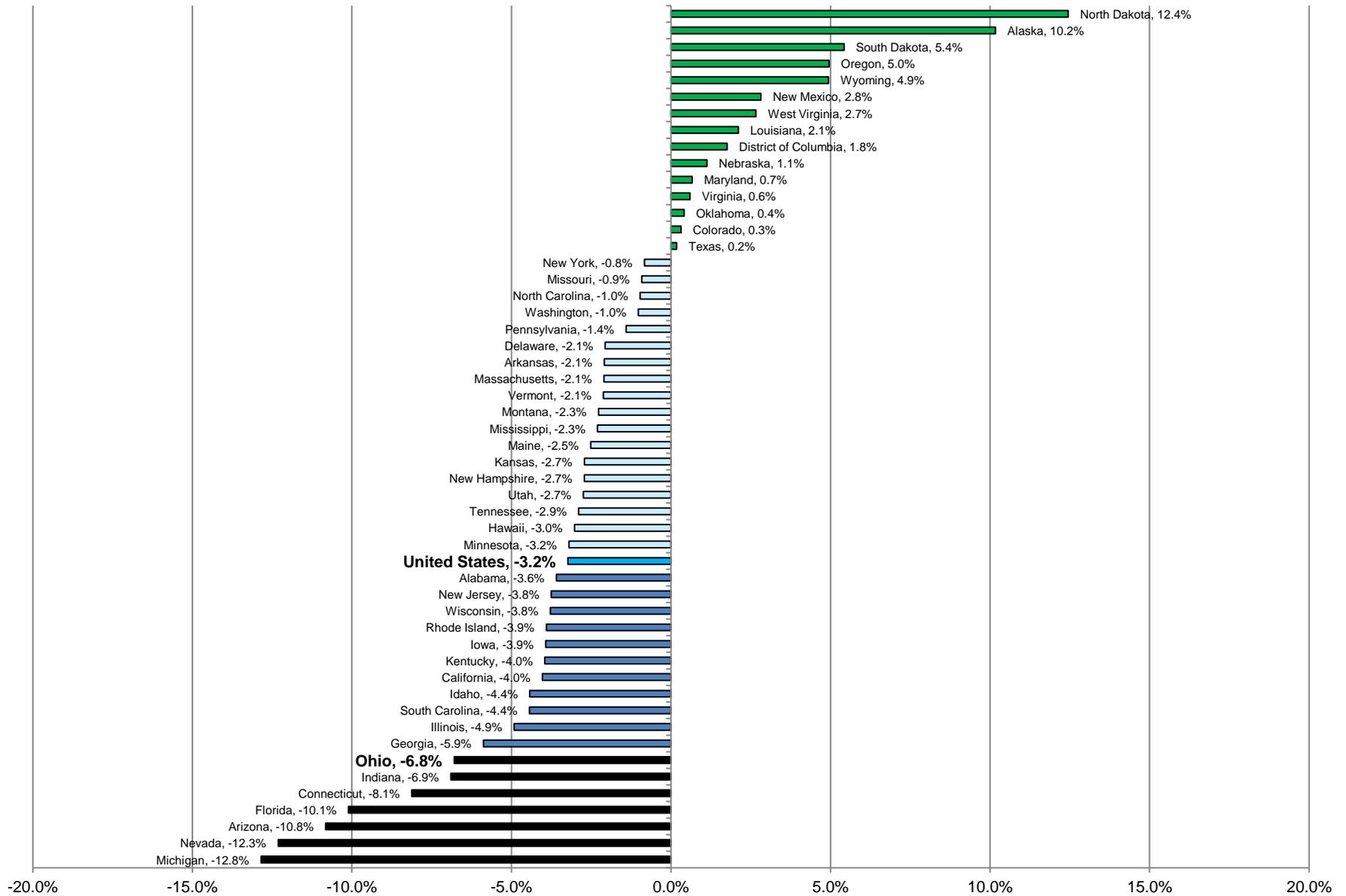
By contrast, the civilian part of the federal government, including the Postal Service (92fc and 491, blue squares), plays a relatively small and sparse role in the state's economy. Such services reached their highest level in 2010 – almost \$9.7 billion, coinciding with the peak of Ohio's unemployment rate in the recession. The military's role (92811, red dots) is even smaller and sparser, despite the presence of facilities such as the Defense Supply Center (Columbus), Wright-Patterson Air Force Base (Dayton), and two Defense Finance and Accounting Service centers (Cleveland and Columbus). The roles of the civilian and military branches of the federal government fluctuated slightly over the decade with no apparent long term trends. As with state and local spending, the changes seem almost unaffected by the recession. Data from other sources are consistent with the GDP concentration ratios; in 2014:

- 0.14 percent of the labor force (age 16 years and older, employed and unemployed) in Ohio was in the armed forces – less than the national average of 0.61 percent (U.S. Bureau of the Census, 2016c);
- 1.68 percent of all employed civilians ages 16 years and older in Ohio worked for the federal government – less than the national average of 2.49 percent (U.S. Bureau of the Census, 2016c; the percentage bases includes self-employed and unpaid family workers);
- 1.40 percent of the value of Defense Department procurement contracts went to firms in Ohio (U.S. FPDS, 2016).

The initial summary figures for government services (92) in Ohio indicate a slight contraction through 2015 and the first quarter of 2016, while the corresponding national figures were fractionally lower in 2015 and essentially unchanged in the first quarter of 2016 (U.S. BEA, 2016).

See Tables A2, A12, A14-A16

Percentage Change in Aggregate GDP: 2007-2009 (After Adjusting for Inflation)



Source: U.S. BEA

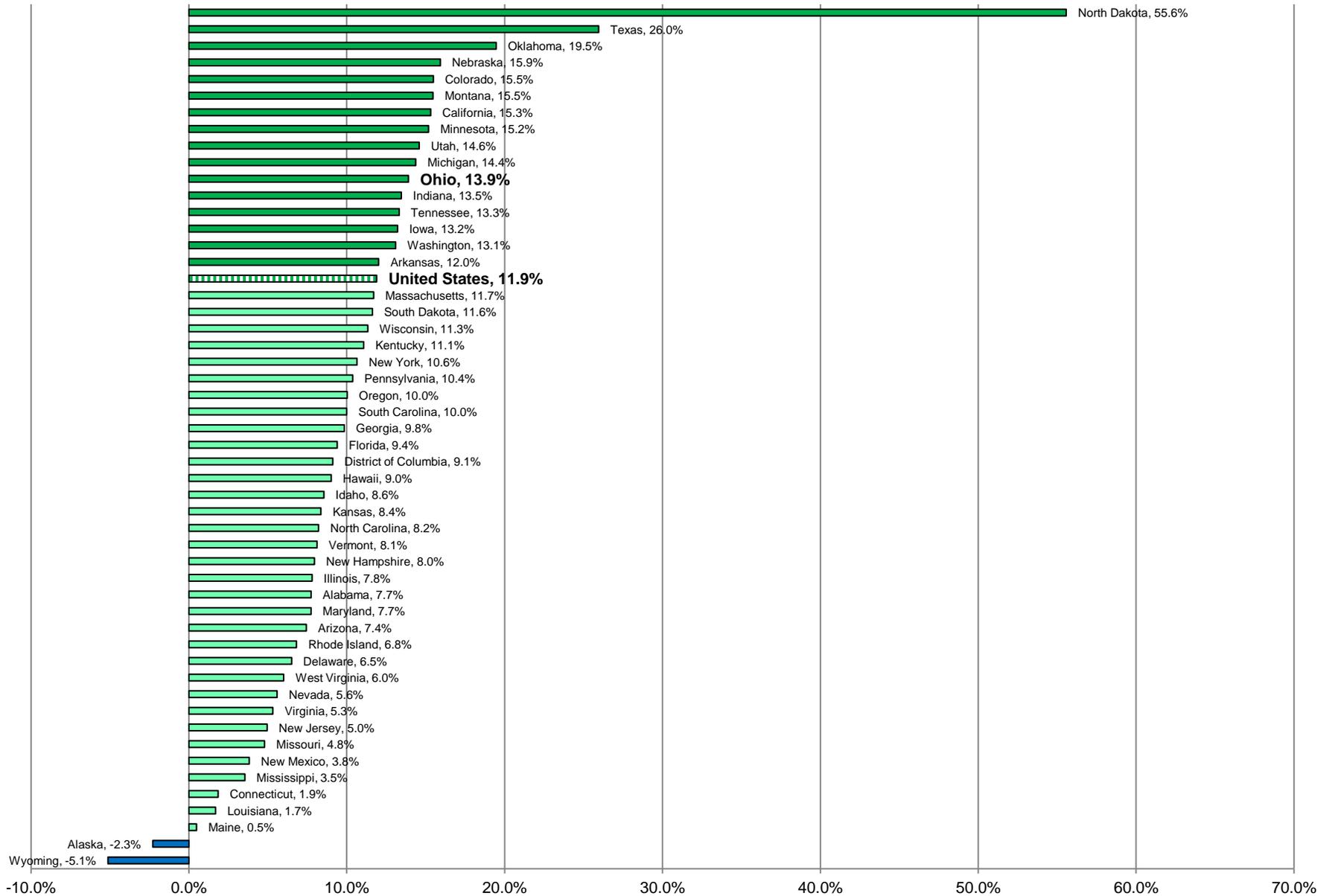
A SUMMARY OF AGGREGATE CHANGES: 2007-2009

The chart above shows that Ohio was hit relatively hard by the 2008-2009 recession; total output fell 6.8 percent from 2007 to 2009. Only six states suffered steeper declines: Arizona, Connecticut, Florida, Indiana, Michigan and Nevada. The table below shows 69.3 percent of Ohio's \$34.8 billion output decline was due to the \$24.2 billion/38.9 percent drop in durable goods. Although all such major industries saw reduced production, the data in Appendix table A3 point to the near collapse of the motor vehicle industry in Ohio, a \$12.6 billion, 75.6 percent plunge in output, as the largest contributing factor. As the distress of the financial crisis ricocheted through the economy, consumers (both individuals and organizations) cut way back on "postpone-able" purchases of big-ticket items in general. (This is one reason why durable goods industries are highly cyclical). Given the concentration of durable goods production in Ohio, it is understandable how and why its economy was hit so hard.¹³

Sector	GDP*		Changes*	
	2007	2009	Numeric	Percent
Total	\$512.7	\$477.9	-\$34.8	-6.8%
Private sector	\$451.5	\$417.1	-\$34.3	-7.6%
Goods-producing summary	\$121.1	\$98.8	-\$22.3	-18.4%
Agriculture, forestry, fishing & hunting	\$2.1	\$3.4	\$1.3	59.7%
Mining	\$2.7	\$3.3	\$0.6	20.6%
Construction	\$18.8	\$16.2	-\$2.6	-13.9%
Durable goods manufacturing	\$62.1	\$37.9	-\$24.2	-38.9%
Non-durable goods manufacturing	\$36.2	\$38.0	\$1.8	5.0%
Service-providing summary	\$330.3	\$318.4	-\$12.0	-3.6%
Utilities	\$10.0	\$9.4	-\$0.6	-6.3%
Wholesale trade	\$34.2	\$29.1	-\$5.1	-15.0%
Retail trade	\$32.6	\$30.2	-\$2.4	-7.3%
Transportation & warehousing	\$16.4	\$14.3	-\$2.1	-12.9%
Information	\$14.9	\$14.7	-\$0.3	-1.7%
Finance & insurance	\$38.0	\$39.4	\$1.3	3.4%
Real estate, rental & leasing	\$54.6	\$54.9	\$0.4	0.7%
Professional, scientific & technical	\$25.9	\$26.2	\$0.3	1.2%
Management of companies & enterprises	\$14.6	\$13.5	-\$1.1	-7.4%
Administrative support & waste management	\$15.5	\$14.5	-\$1.0	-6.3%
Education	\$4.4	\$4.7	\$0.3	6.5%
Health care & social assistance	\$41.0	\$42.4	\$1.4	3.3%
Arts, entertainment & recreation	\$4.1	\$3.8	-\$0.3	-7.3%
Accommodation & food services	\$12.4	\$11.0	-\$1.4	-11.5%
Other non-governmental services	\$11.9	\$10.4	-\$1.5	-12.6%
Government	\$61.2	\$60.8	-\$0.5	-0.8%

Notes: * - in billions standardized on 2009; figures may not sum to totals due to rounding; percentages are based on unrounded numbers.

Percentage Change in Aggregate GDP: 2009-2015 (After Adjusting for Inflation)



Source: U.S. BEA

A SUMMARY OF AGGREGATE CHANGES: 2009-2015

The chart above shows that Ohio's economic recovery, starting from 2009, has been at an above-average rate that exceeded that of 40 states and the District of Columbia. The table below shows an inflation-adjusted 13.9 percent increase of \$66.5 billion in the volume of goods produced and services provided in six years. All of this growth has come from the private sector, which offset the slight drop in government services. The rapid rise has been due in part to the 39.8 percent growth in durable goods output, which added \$15.1 billion. Data in Appendix table A3 point to the motor vehicle industry's addition of \$8.1 billion in output by 2014 – a 198.5 percent increase – as the greatest part of durable goods growth.¹⁴ However, it has been the steadier collective growth of the service cluster that contributed 62.4 percent of the net increase with \$41.5 billion in expansion from 2009 through 2015. The largest service sector contributions have been in real estate-rental-leasing and enterprise management: \$7.0 and \$6.9 billion.

Sector	GDP*		Changes*	
	2009	2015	Numeric	Percent
Total	\$447.9	\$544.4	\$66.5	13.9%
Private sector	\$417.1	\$485.2	\$68.1	16.3%
Goods-producing summary	\$98.8	\$125.1	\$26.3	26.7%
Agriculture, forestry, fishing & hunting	\$3.4	\$3.3	-\$0.1	-3.4%
Mining	\$3.3	\$8.1	\$4.7	143.6%
Construction	\$16.2	\$18.7	\$2.5	15.6%
Durable goods manufacturing	\$37.9	\$53.0	\$15.1	39.8%
Non-durable goods manufacturing	\$38.0	\$42.5	\$4.5	9.7%
Service-providing summary	\$318.4	\$359.8	\$41.5	13.0%
Utilities	\$9.4	\$11.6	\$2.2	23.8%
Wholesale trade	\$29.1	\$33.6	\$4.5	15.6%
Retail trade	\$30.2	\$33.5	\$3.2	10.7%
Transportation & warehousing	\$14.3	\$14.8	\$0.5	3.8%
Information	\$14.7	\$16.0	\$1.3	8.9%
Finance & insurance	\$39.4	\$41.8	\$2.5	6.3%
Real estate, rental & leasing	\$54.9	\$61.9	\$7.0	12.7%
Professional, scientific & technical	\$26.2	\$28.3	\$2.1	8.0%
Management of companies & enterprises	\$13.5	\$20.4	\$6.9	51.3%
Administrative support & waste management	\$14.5	\$18.9	\$4.3	29.8%
Education	\$4.7	\$4.3	-\$0.3	-7.5%
Health care & social assistance	\$42.4	\$46.8	\$4.5	10.5%
Arts, entertainment & recreation	\$3.8	\$4.9	\$1.2	30.9%
Accommodation & food services	\$11.0	\$12.6	\$1.6	14.5%
Other non-governmental services	\$10.4	\$10.8	\$0.4	3.7%
Government	\$60.8	\$59.3	-\$1.5	-2.5%

Notes: * - in billions standardized on 2009; figures may not sum to totals due to rounding; percentages are based on unrounded numbers.

Aggregate Gross Domestic Products for Metropolitan Areas in Ohio, 2004-2015
(in millions of chained dollars standardized on 2009)

Area	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$16,023,115
Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$544,360
Akron, OH	\$29,217	\$29,911	\$29,863	\$29,900	\$29,712	\$27,845	\$28,451	\$28,955	\$29,359	\$29,383	\$30,295	\$31,160
Canton-Massillon, OH	\$14,363	\$14,515	\$14,083	\$13,858	\$13,759	\$12,860	\$13,191	\$13,791	\$14,204	\$15,296	\$15,932	\$16,046
Cincinnati, OH-KY-IN	\$102,850	\$105,007	\$104,664	\$105,331	\$104,586	\$100,448	\$103,061	\$105,261	\$107,393	\$107,782	\$111,622	\$113,601
Cleveland-Elyria, OH	\$113,116	\$113,244	\$112,757	\$112,553	\$111,430	\$105,166	\$107,972	\$111,127	\$111,797	\$111,245	\$114,189	\$115,432
Columbus, OH	\$95,094	\$96,701	\$97,240	\$97,995	\$96,150	\$93,069	\$95,577	\$99,409	\$103,717	\$105,166	\$107,634	\$111,199
Dayton, OH	\$36,746	\$37,036	\$37,575	\$36,888	\$35,734	\$33,284	\$33,857	\$34,953	\$34,933	\$34,497	\$35,152	\$35,038
Lima, OH	\$4,794	\$4,850	\$4,845	\$4,738	\$4,354	\$4,800	\$4,774	\$4,728	\$4,429	\$4,682	\$5,150	\$5,222
Mansfield, OH	\$4,432	\$4,467	\$4,494	\$4,274	\$4,132	\$3,564	\$3,657	\$3,737	\$3,753	\$3,794	\$3,875	\$3,793
Springfield, OH	\$3,977	\$3,972	\$4,095	\$3,923	\$3,789	\$3,525	\$3,527	\$3,698	\$3,773	\$3,799	\$3,842	\$3,765
Toledo, OH	\$27,470	\$27,564	\$27,732	\$27,519	\$26,440	\$26,177	\$26,352	\$27,151	\$26,925	\$27,314	\$29,622	\$29,951
Weirton-Steubenville, WV-OH	\$3,860	\$3,898	\$3,572	\$3,654	\$3,772	\$3,553	\$3,424	\$3,297	\$3,496	\$3,481	\$3,461	\$3,540
Wheeling, WV-OH	\$5,195	\$5,279	\$5,324	\$5,316	\$5,494	\$5,634	\$5,691	\$5,642	\$5,721	\$6,210	\$6,523	\$6,470
Youngstown..., OH-PA	\$19,249	\$19,473	\$19,386	\$18,879	\$17,899	\$16,387	\$16,931	\$18,085	\$19,110	\$18,703	\$18,910	\$19,224

Areas	Net Changes: '04-'07		Net Changes: '07-'09		Net Changes: '09-'15		Net Changes: '04-'15	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
U.S.	\$1,025,585	7.4%	-\$478,253	-3.2%	\$1,703,001	11.9%	\$2,250,333	16.3%
Ohio	\$4,112	0.8%	-\$34,838	-6.8%	\$66,458	13.9%	\$35,732	7.0%
Akron, OH	\$683	2.3%	-\$2,055	-6.9%	\$3,315	11.9%	\$1,943	6.7%
Canton-Massillon, OH	-\$505	-3.5%	-\$998	-7.2%	\$3,186	24.8%	\$1,683	11.7%
Cincinnati, OH-KY-IN	\$2,481	2.4%	-\$4,883	-4.6%	\$13,153	13.1%	\$10,751	10.5%
Cleveland-Elyria, OH	-\$563	-0.5%	-\$7,387	-6.6%	\$10,266	9.8%	\$2,316	2.0%
Columbus, OH	\$2,901	3.1%	-\$4,926	-5.0%	\$18,130	19.5%	\$16,105	16.9%
Dayton, OH	\$142	0.4%	-\$3,604	-9.8%	\$1,754	5.3%	-\$1,708	-4.6%
Lima, OH	-\$56	-1.2%	\$62	1.3%	\$422	8.8%	\$428	8.9%
Mansfield, OH	-\$158	-3.6%	-\$710	-16.6%	\$229	6.4%	-\$639	-14.4%
Springfield, OH	-\$54	-1.4%	-\$398	-10.1%	\$240	6.8%	-\$212	-5.3%
Toledo, OH	\$49	0.2%	-\$1,342	-4.9%	\$3,774	14.4%	\$2,481	9.0%
Weirton-Steubenville, WV-OH	-\$206	-5.3%	-\$101	-2.8%	-\$13	-0.4%	-\$320	-8.3%
Wheeling, WV-OH	\$121	2.3%	\$318	6.0%	\$836	14.8%	\$1,275	24.5%
Youngstown..., OH-PA	-\$370	-1.9%	-\$2,492	-13.2%	\$2,837	17.3%	-\$25	-0.1%

Note: * - initial estimates, subject to revision at a later date; estimates for earlier years may be revised.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 614/466-2116 (DL, 9/16).

AGGREGATE GROWTH, RECESSION AND RECOVERY IN METROPOLITAN AREAS

The table above displays changes in economic output from metropolitan areas (MAs) wholly or substantially in Ohio, as well as for the state and the nation. The figures have been adjusted for inflation and standardized on 2009.

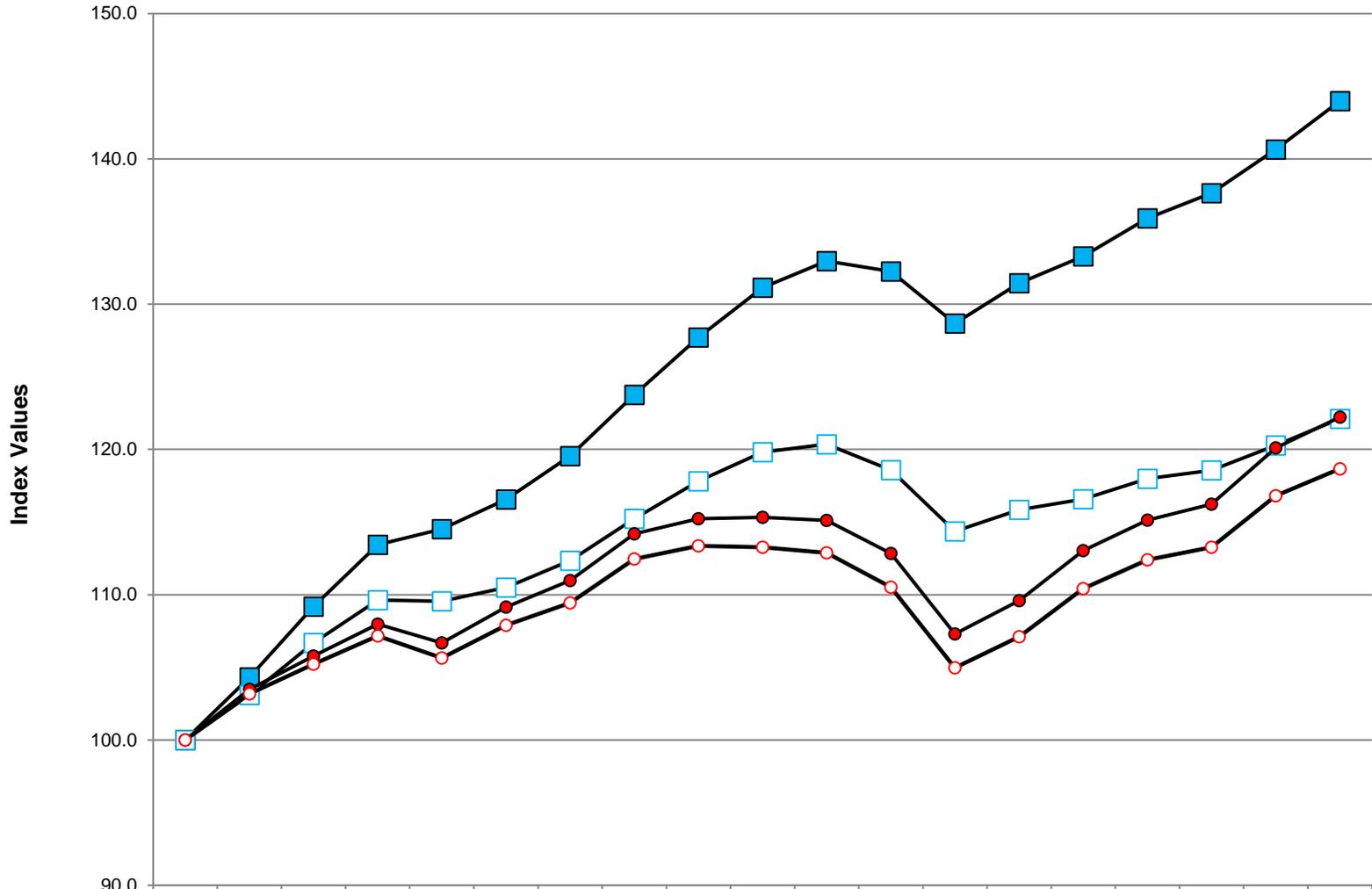
While the national economy grew 7.4 percent from 2004 through 2007 (the national recession began in December), output from most MAs in Ohio peaked in 2005 or 2006; only four – Akron, Cincinnati, Columbus and Wheeling – had net growth exceeding 2.0 percent from 2004 to 2007 (most of the Wheeling MA is in West Virginia).

The widespread impact of the recession during 2008-2009 is evident with output from 11 of the 13 MAs declining: Wheeling and Lima were the only exceptions, and Lima's fell to its low point in 2008. The largest absolute contractions occurred in Cincinnati, Cleveland and Columbus, but their proportional contractions were no more severe than the state's overall average of 6.8 percent. Mansfield, Springfield and Youngstown-Warren-Boardman (including the latter's Pennsylvania portion) were the hardest-hit with contractions of at least 10.0 percent. Akron, Canton-Massillon and Dayton also were hit hard, with output dropping more than the state's 6.8 percent. All of these smaller MAs were highly dependent on either or both of the highly cyclical steel and motor vehicle industries. (Cleveland is a notable steel and motor vehicle industry location, but is much larger and therefore less dependent on these industries, as seen in the table on page 8.)

All but one the MAs have expanded in the 2009-2015 recovery, and Cincinnati, Cleveland and Columbus combined to account for the majority the state's aggregate expansion. While Columbus has experienced the greatest aggregate growth, Canton has expanded at a faster rate: 24.8 vs. 19.5 percent. Toledo, Wheeling and Youngstown also have expanded at rates greater than the state's average. Again, all but Columbus are highly dependent on either or both of the steel and motor vehicle industries. Dayton's and Mansfield's expansion rates since 2009 are less than the state's, which may be due in part to the permanent closure of General Motors' plants in those two cities. (Springfield, adjacent to Dayton, might also have been affected by the GM closure as well as the highly cyclical fortunes of Navistar's truck plant.) Weirton-Steubenville may have been affected by the permanent closure of several steel mills.

Inflation-Adjusted Changes in Aggregate and Per Capita GDP, 1997-2015

Ohio and the U.S. 1997=100



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
—■— U.S. Aggregate GDP	100.0	104.3	109.2	113.4	114.5	116.6	119.5	123.8	127.7	131.1	133.0	132.3	128.7	131.4	133.3	135.9	137.6	140.7	144.0
—□— U.S. Per Capita GDP	100.0	103.1	106.7	109.6	109.6	110.5	112.3	115.2	117.8	119.8	120.4	118.6	114.4	115.8	116.6	118.0	118.6	120.3	122.1
—●— Ohio Aggregate GDP	100.0	103.5	105.8	108.0	106.7	109.1	111.0	114.2	115.2	115.3	115.1	112.8	107.3	109.6	113.0	115.1	116.2	120.1	122.2
—○— Ohio Per Capita GDP	100.0	103.2	105.2	107.2	105.6	107.9	109.4	112.5	113.4	113.3	112.9	110.5	105.0	107.1	110.4	112.4	113.3	116.8	118.7

Source: U.S. BEA

* - Preliminary; earlier years may be revised

PAST CHANGES AND FORECASTS FOR THE FUTURE: FOUR PARTS

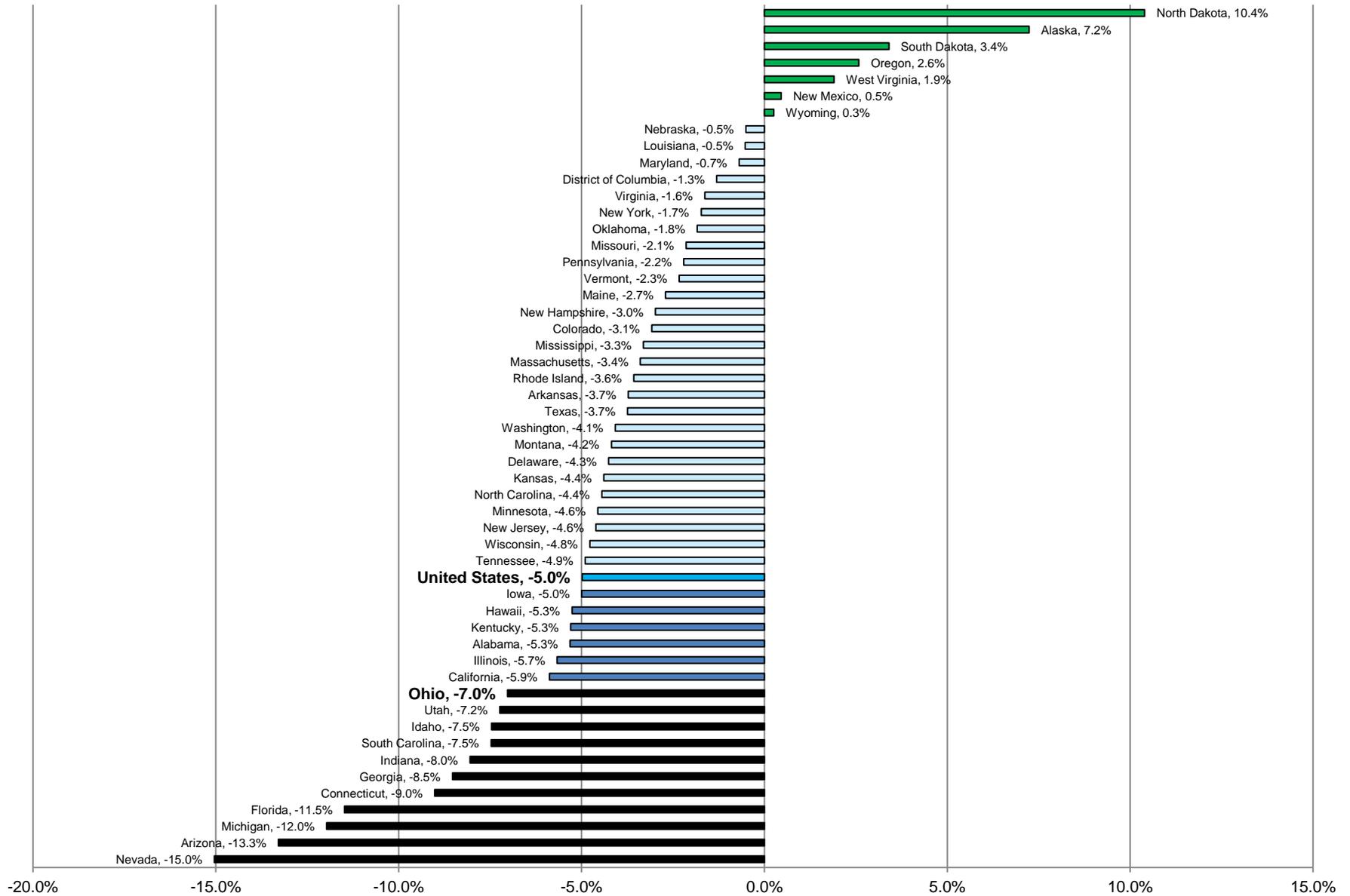
The chart above shows that, after adjusting for inflation, Ohio's aggregate output (red dots) grew 15.1 percent from 1997 through 2007. The corresponding growth of the U.S. aggregate output (blue squares) was 33.0 percent. As mentioned earlier, the chart also shows 2008-2009 recession hit Ohio harder than most of the nation: total output of goods and services here fell 6.8 percent as the index value dropped from 115.1 to 107.3, while national output fell 3.2 percent from 133.0 to 128.7. Initial figures for 2015 suggest that Ohio's recovery rate, starting from 2009, has been faster than for the nation as a whole: 13.9 vs. 11.9 percent. Despite the more-rapid growth rate here, aggregate output from Ohio remained less than its pre-recession peak until 2013 – two years later than what characterized the nation as a whole.

Aggregate numbers do not tell the whole story. A number of factors may explain the seemingly faster recovery of the U.S. economy as compared with Ohio's. One is population growth. Population figures used by the BEA show the U.S. population growing 17.9 percent from 1997 through 2015, a faster rate than Ohio's 3.0 percent; and the chart on page 128 in the Appendix shows faster-growing states tended to have more rapidly growing economies. For this reason, the chart above also illustrates expansions and contractions after adjusting for population growth. Per capita GDP from Ohio (white dots) rose 12.9 percent from 1997 through 2007, modestly less than the 15.1 percent for the state's total output. By comparison, per capita GDP for the nation (white squares) rose 20.4 percent during the same time. This is still notably greater than Ohio, but substantially less than the 33.0 percent increase in total output. The population growth adjustment also means the impact of the recession has been deeper than indicated by aggregate figures alone. Per capita GDP from Ohio fell 7.0 percent – a fraction more than the 6.8 percent based on aggregate output. However, per capita GDP for the nation declined 5.0 percent, notably more than the 3.2 percent for aggregate output. Furthermore, the higher national population growth rate means, even with economic expansion evident since 2009, national per capita GDP remained less than its 2007 pre-recession peak until 2015 – two years later than in Ohio.

The charts on the following two pages put the recession and recovery in a somewhat different light than the corresponding charts on pages 56 and 58. After adjusting for population changes, the chart on page 64 illustrates just how much deeper and more widespread the recession was for all but seven states. Although the contraction was a little deeper in Ohio (7.0 vs. 6.8 percent), the populations of 10 states – not just six – were hit harder than Ohio. Conversely, the chart on page 65 shows that Ohio's recovery rate is slightly diminished after adjusting for its small population increase (13.1 vs. 13.9 percent), but it moves up to become the 5th fastest growing state.

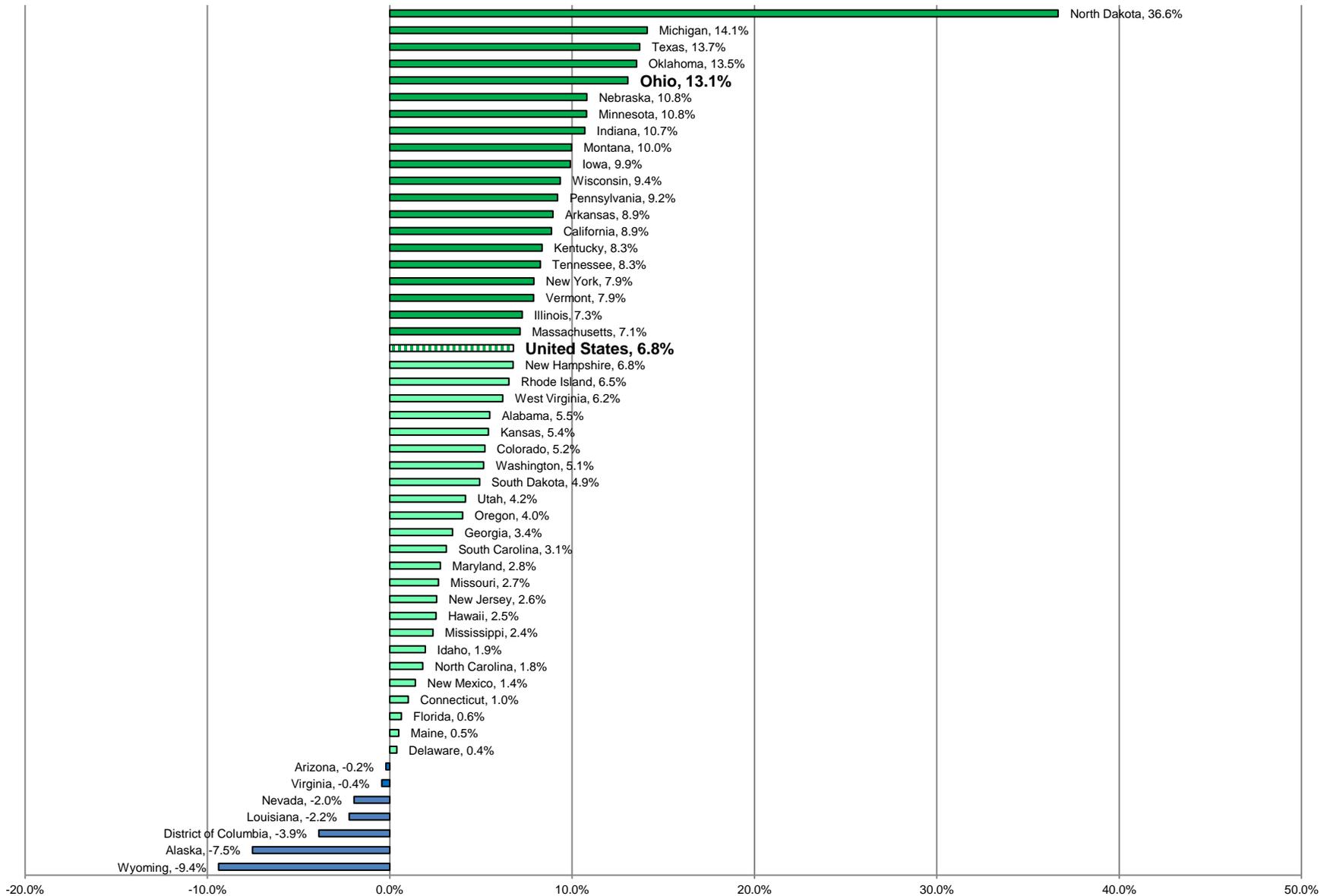
See Table A21

Percentage Change in Per Capita GDP: 2007-2009 (After Adjusting for Inflation)



Source: U.S. BEA

Percentage Change in Per Capita GDP: 2009-2015 (After Adjusting for Inflation)



Source: U.S. BEA

Per Capita Gross Domestic Products for Metropolitan Areas in Ohio, 2004-2015
(in chained dollars standardized on 2009)

Area	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015*
U.S.	\$47,037	\$48,090	\$48,909	\$49,126	\$48,401	\$46,680	\$47,287	\$47,586	\$48,156	\$48,396	\$49,091	\$49,844
Ohio	\$44,413	\$44,772	\$44,738	\$44,584	\$43,646	\$41,453	\$42,299	\$43,610	\$44,394	\$44,736	\$46,137	\$46,867
Akron, OH	\$41,631	\$42,578	\$42,513	\$42,506	\$42,246	\$39,589	\$40,472	\$41,194	\$41,810	\$41,784	\$43,044	\$44,246
Canton-Massillon, OH	\$35,381	\$35,825	\$34,743	\$34,139	\$33,877	\$31,743	\$32,634	\$34,210	\$35,211	\$37,909	\$39,444	\$39,819
Cincinnati, OH-KY-IN	\$50,349	\$51,101	\$50,563	\$50,542	\$49,921	\$47,659	\$48,663	\$49,573	\$50,424	\$50,400	\$51,930	\$52,649
Cleveland-Elyria, OH	\$53,283	\$53,627	\$53,709	\$53,812	\$53,441	\$50,535	\$52,021	\$53,726	\$54,150	\$53,863	\$55,335	\$56,013
Columbus, OH	\$53,738	\$53,989	\$53,517	\$53,214	\$51,537	\$49,307	\$50,141	\$51,627	\$53,307	\$53,410	\$53,964	\$55,005
Dayton, OH	\$45,595	\$46,021	\$46,765	\$46,004	\$44,656	\$41,663	\$42,309	\$43,619	\$43,545	\$43,033	\$43,894	\$43,748
Lima, OH	\$44,880	\$45,385	\$45,404	\$44,400	\$40,778	\$45,064	\$44,883	\$44,639	\$42,064	\$44,501	\$49,025	\$50,010
Mansfield, OH	\$34,598	\$34,970	\$35,302	\$33,652	\$32,760	\$28,444	\$29,452	\$30,365	\$30,612	\$31,027	\$31,775	\$31,163
Springfield, OH	\$28,126	\$28,099	\$29,115	\$28,057	\$27,182	\$25,402	\$25,513	\$26,850	\$27,501	\$27,773	\$28,138	\$27,693
Toledo, OH	\$44,437	\$44,688	\$45,124	\$44,851	\$43,204	\$42,861	\$43,186	\$44,539	\$44,245	\$44,893	\$48,764	\$49,428
Weirton-Steubenville, WV-OH	\$30,096	\$30,583	\$28,274	\$29,177	\$30,186	\$28,484	\$27,552	\$26,736	\$28,548	\$28,545	\$28,524	\$29,378
Wheeling, WV-OH	\$34,593	\$35,329	\$35,681	\$35,745	\$37,107	\$38,090	\$38,499	\$38,363	\$39,085	\$42,580	\$44,924	\$44,871
Youngstown..., OH-PA	\$32,710	\$33,331	\$33,400	\$32,802	\$31,350	\$28,842	\$29,973	\$32,151	\$34,187	\$33,630	\$34,180	\$34,960

Areas	Net Changes: '04-'07		Net Changes: '07-'09		Net Changes: '09-'15		Net Changes: '04-'15	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
U.S.	\$2,089	4.4%	-\$2,446	-5.0%	\$3,164	6.8%	\$2,807	6.0%
Ohio	\$171	0.4%	-\$3,131	-7.0%	\$5,414	13.1%	\$2,454	5.5%
Akron, OH	\$875	2.1%	-\$2,917	-6.9%	\$4,657	11.8%	\$2,615	6.3%
Canton-Massillon, OH	-\$1,242	-3.5%	-\$2,396	-7.0%	\$8,076	25.4%	\$4,438	12.5%
Cincinnati, OH-KY-IN	\$193	0.4%	-\$2,883	-5.7%	\$4,990	10.5%	\$2,300	4.6%
Cleveland-Elyria, OH	\$529	1.0%	-\$3,277	-6.1%	\$5,478	10.8%	\$2,730	5.1%
Columbus, OH	-\$524	-1.0%	-\$3,907	-7.3%	\$5,698	11.6%	\$1,267	2.4%
Dayton, OH	\$409	0.9%	-\$4,341	-9.4%	\$2,085	5.0%	-\$1,847	-4.1%
Lima, OH	-\$480	-1.1%	\$664	1.5%	\$4,946	11.0%	\$5,130	11.4%
Mansfield, OH	-\$946	-2.7%	-\$5,208	-15.5%	\$2,719	9.6%	-\$3,435	-9.9%
Springfield, OH	-\$69	-0.2%	-\$2,655	-9.5%	\$2,291	9.0%	-\$433	-1.5%
Toledo, OH	\$414	0.9%	-\$1,990	-4.4%	\$6,567	15.3%	\$4,991	11.2%
Weirton-Steubenville, WV-OH	-\$919	-3.1%	-\$693	-2.4%	\$894	3.1%	-\$718	-2.4%
Wheeling, WV-OH	\$1,152	3.3%	\$2,345	6.6%	\$6,781	17.8%	\$10,278	29.7%
Youngstown..., OH-PA	\$92	0.3%	-\$3,960	-12.1%	\$6,118	21.2%	\$2,250	6.9%

Note: * - initial estimates, subject to revision at a later date; estimates for earlier years may be revised.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 614/466-2116 (DL, 9/16).

The same per capita GDP approach has been applied to the metropolitan areas (MAs) in Ohio, and yields further insight into their economic fortunes. The table above displays and summarizes the changes in inflation-adjusted per capita GDP from 2004 through 2015. Similar to the state as a whole, 11 of the 13 experienced saw per capita GDP peaks in either 2005 or 2006; Cleveland and Wheeling were the exceptions, peaking in 2007. Ohio's net change from 2004 to 2007 was 0.4 percent, reflecting the fact that six of the MAs were below that mark, five were above, and two were essentially on it.

Eleven of the 13 MAs experienced real decreases in per capita output during the recession. Controlling for population changes shows that Columbus, Dayton, Mansfield, Springfield and Youngstown-Warren-Boardman all suffered steeper declines in output than the state as a whole. Although Lima and Wheeling appeared to prosper, this is partially an artifact of the decreasing populations, and Lima's per capita GDP fell to its lowest level in 2008.

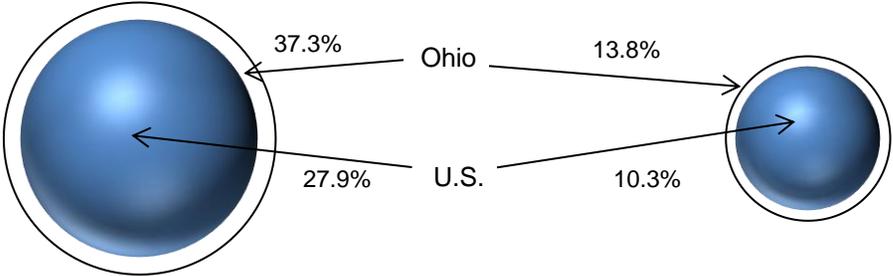
Just as the recession was widely spread across Ohio, so has been the recovery. All MAs have positive net per capita growth; 11 of the 13 have expanded at rates exceeding the national rate of 6.8 percent, and Canton, Toledo, Wheeling and Youngstown have grown at rates exceeding the state average of 13.1 percent. (The last observation is tempered by slight population declines in the four.) The same four, plus Akron and Youngstown, also had the per capita growth rates from 2004 through 2015 greater than the national rate of 6.0 percent (but only Akron avoided a net loss of population).

Despite the various changes, it should be noted that Cincinnati, Cleveland and Columbus maintained per capita GDP output levels usually exceeding \$50,000 per year and surpassing the national average. These were the three highest of all 13 MAs substantially in Ohio. In other words, these three remained economic powerhouses even after adjusting for their much larger populations.

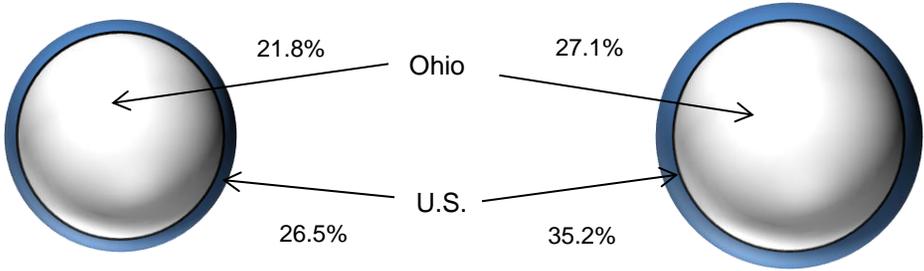
Comparing Relative Portions of Ohio's Economy with the U.S.

by Concentration (1997) and Inflation-Adjusted Growth (1997-2014)

Industries More or Less Concentrated in Ohio:
Ohio - 51.1%
U.S. - 38.2%



Industries More or Less Sparse in Ohio:
Ohio: 48.9%
U.S.: 61.7%



Slower-Growth or Contracting Industries:
Ohio - 59.1%
U.S. - 54.5%

More or Less Rapidly Growing Industries:
Ohio - 40.9%
U.S. - 45.5%

Source: U.S. BEA

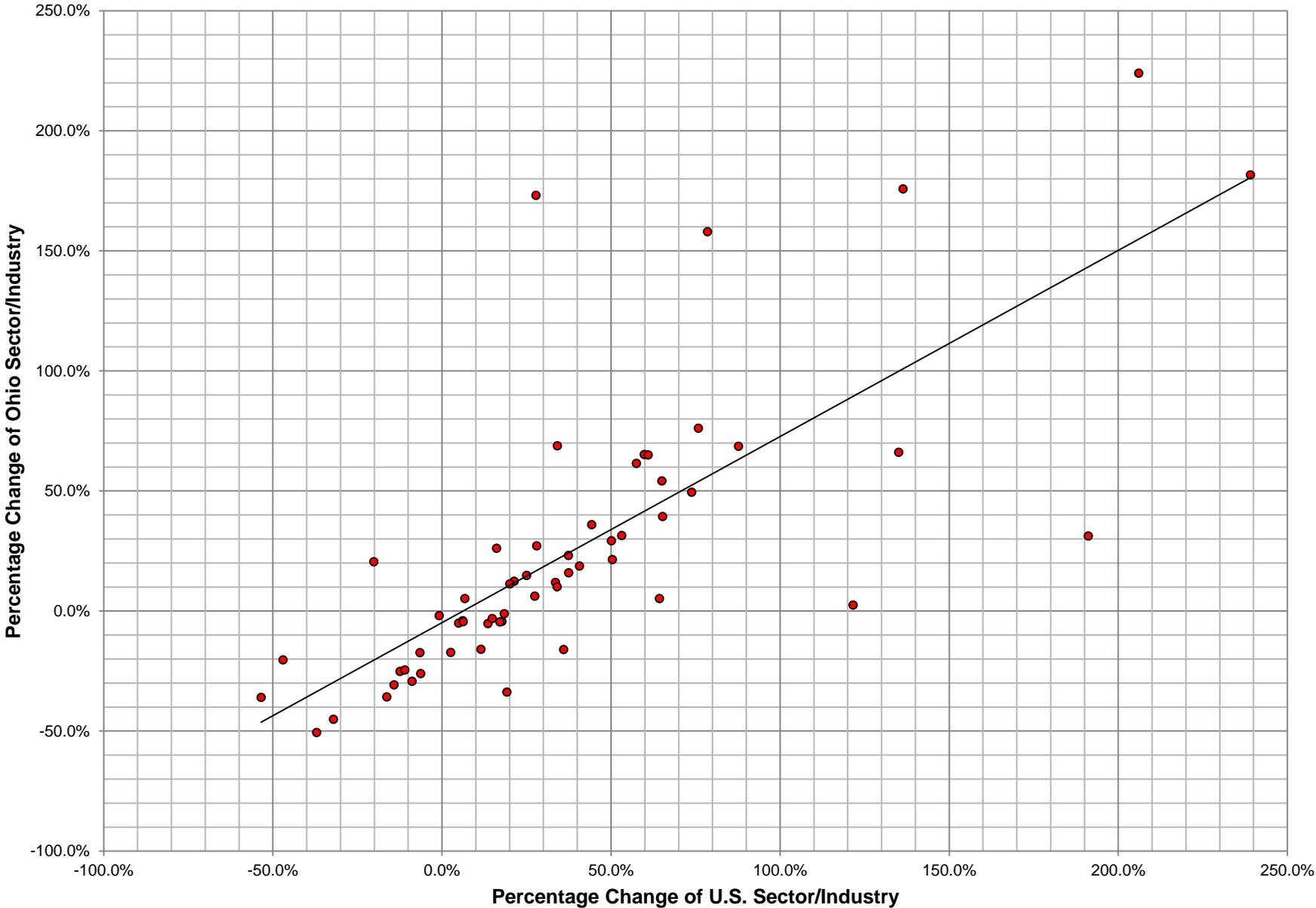
A second factor associated with the different economic growth rates of Ohio and the U.S. may be differences in the composition of their economies. Appendix table A22 shows that various industries grew at rates faster or slower than the national average of 40.7 percent for 1997-2014; some industries even contracted during that time. It also shows the industries more or less concentrated in Ohio as well as those that are relatively sparse. The industries can be grouped by those characteristics, and the portion of the economy may be calculated for each of the four groups – those with a faster-than-average national growth rate and concentrated-in-Ohio, slower-growing/contracting and concentrated, faster-growing but sparse in Ohio, and slower-growing/contracting and sparse.

The chart above illustrates the relative portions of the four groups for America's and Ohio's economies in 1997 as represented by the blue and white areas, respectively. Overall, 40.9 percent of Ohio's economic output in 1997 was in industries characterized by faster-than-average national growth rates for the then-coming 17 years. (See the white areas on the right side; $13.8 + 27.1 = 40.9$.) This compares with 45.5 percent for the U.S. economy. (See the blue areas on the right side; $10.3 + 35.2 = 45.5$.) Conversely, 59.1 percent of Ohio's economic output in 1997 was in industries that would be characterized by slower-than-average or negative growth rates, compared with 54.5 percent of the U.S. economy. (These are the sums of the white and blue areas on the left side; parts may not sum to higher levels due to rounding and inflation-adjustment weights.)

Specific comparisons are even more telling. In 1997, 13.8 percent of Ohio's output was from rapid-growth industries concentrated here compared with only 10.3 percent of U.S. output, a difference of 3.5 percent favoring more rapid growth in Ohio. However, this was more than offset by the relative scarcity of *other* rapid-growth industries in Ohio: 27.1 vs. 35.2 percent, a deficit of 8.1 for the state. Furthermore, 37.3 percent Ohio's output that year came from slow-growth or contracting industries concentrated here vs. only 27.9 percent of total U.S. output, an 9.4 percent difference more than offsetting the state's advantage in *other* such industries *not* concentrated here (21.8 vs. 26.5, or 4.7 percent). All of these contrasts point to the conclusion that Ohio had a mix of industries in 1997 predisposing it toward slower net economic growth through 2014.

See Table A22

The Association of Percentage Changes in GDP (1997-2014) for the U.S. and Ohio



Source: U.S. BEA

NAICS 213, 324, 334, 483 & 525 not shown

The differing mix of industries between Ohio and the nation is matter of degree, and should not be over-emphasized. The chart above illustrates the association between changes in industry output – both growth and decline – in Ohio with corresponding changes at the national level for 1997-2014. The dots collectively cover at least 96.7 percent of each economy.¹⁵ It is evident that faster-growing industries in one were, much more often than not, more or less faster-growing industries in the other; the same may be said for slower-growing or contracting industries. Consequently, national forecasts for industries and the economy are, within limits, fairly reliable indicators of what to expect in Ohio over the long term.¹⁶

The U.S. BLS (2015) predicts national gross duplicated output (*i.e.*, GDP plus the value of intermediate goods and services) will grow at an average annual rate of 2.2 percent during the 2014-2024 decade. (See the table on the following page.) The private sector is expected to grow faster than government services: 2.4 vs. 1.0 percent. Within the private sector, the service providers collectively are expected to grow faster the goods producers: 2.5 vs. 2.0 percent. However, this is not true of every sector within the two super clusters. The fastest growing sectors are forecast to be, in descending order: health care/social assistance, information, retail trade and construction. Other sectors predicted to expand faster than average are finance/insurance, wholesale trade and real estate-rental-leasing. The prevalence of faster-growing sectors in the service super cluster means that the *distribution* of economic activity is expected to continue the long-term shift away from goods production.

The concentration or sparsity in Ohio of sectors with different growth rates has implications for the state's potential growth in this decade. On one hand, the concentration of sectors forecast to grow faster than average – finance/insurance and health care/social assistance – may drive economic growth. Conversely, the sparsity of predicted slower-growth sectors – accommodation/food services, agriculture-forestry-fishing-hunting, education and mining – are an absence of restraint. On the other hand, the concentration of slower-growth sectors – manufacturing and utilities – as well as the sparsity of more-rapid growth sectors – construction, information and professional/scientific/technical services – may bode slower overall growth. The remaining sectors, with varying projected growth rates, are roughly proportional with the nation. The projected slower population growth rate for Ohio points towards a slower overall economic growth rate (compare Office of Research of Research, 2013, with U.S. Bureau of the Census, 2014b).

In the near term, though, Moody's (2016) predicts that Ohio's economy will grow 1.70 percent in 2016 and 2.65 percent in 2017. Growth in the service super cluster – particularly finance and health care – may drive overall growth, with help from professional/scientific/technical services and a strengthening housing market. Moody's further highlights recent health care related activity – manufacturing medical devices and pharmaceuticals in Cleveland, and pharmaceutical research and development in Cincinnati – as supporting economic and job growth. On the other hand, the motor vehicle and parts manufacturing growth has slowed, with recent capital investment focused on automation, and the steel and fabricated metals industries face competition from imports – all of which constrain output and job growth.

Forecasted U.S. Economic Annual Growth Rates, 2014-2024, and Projected Job Changes in Ohio, 2012-2022

2007 NAICS Codes	Industry Titles	Forecast U.S. Annual Growth Rates 2014-24		Projected Job Changes in Ohio 2012-22	
		Gross Duplicated Output ¹	Jobs ¹	Annual Growth Rate	Total ²
11-92	Total	2.2%	0.6%	0.8%	455,000
11-81	Private industries	2.4%	0.7%	0.9%	433,930
11, 21, 23, 33	Private goods-producing industries	2.0%	0.0%	0.2%	19,530
11	Agriculture, forestry, fishing & hunting	1.9%	-0.5%	-0.2%	-1,880
21	Mining	1.9%	0.9%	0.4%	500
23	Construction	2.8%	1.2%	2.1%	41,590
31-33	Manufacturing	1.9%	-0.7%	-0.3%	-20,680
32p & 33	Durable goods	1.8%	-0.5%	-0.1%	-3,900
31 & 32p	Nondurable goods	2.0%	-1.0%	-0.8%	-16,780
22, 42-81	Private service-providing industries	2.5%	0.9%	0.4%	405,100
22	Utilities	1.8%	-0.9%	-1.6%	-2,780
42	Wholesale trade	2.6%	0.5%	1.0%	23,160
44-45	Retail trade	2.9%	0.5%	0.2%	10,220
48-49p	Transportation & warehousing ³	2.3%	0.3%	0.7%	13,030
51	Information	2.9%	-0.1%	-0.3%	-2,400
52	Finance & insurance	2.7%	0.7%	0.6%	14,360
53	Real estate, rental & leasing	2.5%	0.5%	1.0%	5,880
54	Professional, scientific & technical services	2.4%	1.2%	1.7%	45,590
55	Management of companies & enterprises	2.2%	0.4%	0.3%	3,340
56	Administrative support & waste management	2.4%	0.8%	1.7%	55,970
61	Educational services	2.1%	0.9%	1.4%	14,560
62	Health care & social assistance	2.9%	1.9%	2.0%	166,200
71	Arts, entertainment & recreation	2.3%	0.7%	0.5%	3,410
72	Accommodation & food services	2.1%	0.6%	0.8%	36,650
81	Other services, exc. government	2.2%	0.4%	0.7%	17,930
n.a.	Self-employed & unpaid family workers ⁴	n.a.	0.7%	0.3%	9,300
92, 491	Government (inc. U.S. Postal Service)	1.0%	0.2%	0.3%	21,070

Notes: 1 - gross duplicated output includes all new goods and services produced as intermediate goods for further use in production as well as the GDP (the final demand purchased of new goods and services); the non-agricultural self-employed are wholly or partially excluded from all sectors and higher levels except in agriculture (NAICS code 11); 2 - some components may not sum to totals due to rounding; 3 - except the U.S. Postal Service; 4 - the self-employed and unpaid family workers may be in any private sector industry, but, except for the total, are not included in the U.S. figures above. Abbreviations: exc. - except; inc. - including; n.a. - not applicable, not available; p - part. Sources: ODJFS/LMI (2014) and U.S. BLS (2015).

Ohio's overall growth rate may decelerate after 2017. Despite a diversifying industrial base, its mid-term growth may lag the national average due in part to its net concentration in slower-growth or contracting industries and the net out migration of the population.

Real economic growth is associated with employment growth. Figures in the table on the preceding page show longer-term overall economic growth averaging 2.2 percent per year with the corresponding employment growth averaging 0.6 percent. However, there are exceptions. The U.S. BLS (2015) predicts greater volumes of manufactured and agricultural-forestry-fishing-hunting goods will be produced in America in the future, utilities will provide more energy to their clients and information services will grow, but the number of jobs in these sectors is expected to decrease. (In any case, though, real economic growth above and beyond employment growth is indicative of increased productivity.) Earlier projections by the Ohio Dept. of Job and Family Services Labor Market Information division predicted 455,000 jobs may be added in Ohio from 2012 through 2022, amounting to an annual average growth rate of 0.8 percent per year. 89 percent of those predicted jobs are expected in private sector services, with the plurality added in health care and social assistance.

APPENDICES

TERMINOLOGY

The *Gross Domestic Product* (GDP) of Ohio is the final value of goods produced and services provided by capital and labor located in the state. Put another way, a state's total GDP is the sum of the value-added – revenue less the costs of goods and services purchased – for all industries therein. It “is the most comprehensive measure of overall economic activity... the state counterpart to GDP in the national income and products accounts” (Coakley, et.al., 2009: 62). It is actually measured using data such as employees' compensation, taxes on production and imports less subsidies, and gross operating surplus. See Downey and Aman (2006), Woodruff, et.al. (2007), and Coakley, et.al. (2009) for details about the data sources and the calculations for each industry.

Beginning in 1997, statistics on the nation's industries have been organized under the North American Industrial Classification System (NAICS). Establishments producing goods or providing services sufficiently alike are classified in the same *industry*. A six-digit NAICS code is assigned to each industry. Closely related industries formed an *industry group*. The first four digits of the code indicate the group to which the industries belong. (The first five digits occasionally indicate a sub-group.) Industry groups with common elements and shared characteristics comprise a *major industry* or *sub-sector*. The first three digits of the code indicate a major industry, and the first two digits indicate the *sector* (Office of Management and Budget, 1998, 2007). The U.S. BEA usually publishes GDP-by-state figures down to the major industry level. However, figures are available only at the sector level in some instances, while in a few others, they are available for industry groups or a combination of industry groups within a major industry.

The NAICS uses guidelines that may be new or different from the 1987 Standard Industrial Classification (SIC) system that it replaced. Occasionally, this has meant that establishments classified in the same industry under the SIC system were classified in different industries – even different groups, major industries, and sectors – under the NAICS. Consequently, the change from the SIC system to the NAICS represents an insurmountable discontinuity in charting more or less specific changes in Ohio's economy before 1997. This report is therefore limited to the years beginning with 1997.

DETAILED TABLES

Table A1: Ohio's GDP by Sector*, 2015 (in millions of current dollars, except percentages and ratios)

2007 NAICS Codes	Sector Titles	Ohio GDP 2015		U.S. GDP 2015		Ohio as a Percentage of the U.S.	Ohio::U.S. Concentra- tion Ratio
		(000,000)	Percent Distribution	(000,000)	Percent Distribution		
11-92	Total	\$608,109	100.00%	\$17,830,307	100.00%	3.41%	1.00
11-81	Private industries	\$540,361	88.86%	\$15,623,406	87.62%	3.46%	1.01
11, 21, 23-33	Private goods producers	\$139,887	23.00%	\$3,385,572	18.99%	4.13%	1.21
11	Agriculture, forestry, fishing & hunting	\$3,950	0.65%	\$196,009	1.10%	2.02%	0.59
21	Mining	\$6,185	1.02%	\$304,888	1.71%	2.03%	0.59
23	Construction	\$21,665	3.56%	\$716,917	4.02%	3.02%	0.89
31-33	Manufacturing	\$108,086	17.77%	\$2,167,757	12.16%	4.99%	1.46
32p & 33	Durable goods	\$57,660	9.48%	\$1,175,327	6.59%	4.91%	1.44
31 & 32p	Nondurable goods	\$50,427	8.29%	\$992,430	5.57%	5.08%	1.49
22, 42-81 ¹	Private service providers ¹	\$400,474	65.86%	\$12,237,833	68.64%	3.27%	0.96
22	Utilities	\$13,301	2.19%	\$288,333	1.62%	4.61%	1.35
42	Wholesale trade	\$37,163	6.11%	\$1,080,429	6.06%	3.44%	1.01
44-45	Retail trade	\$36,733	6.04%	\$1,049,698	5.89%	3.50%	1.03
48-49 ¹	Transportation & warehousing ¹	\$17,306	2.85%	\$527,656	2.96%	3.28%	0.96
51	Information	\$15,740	2.59%	\$868,008	4.87%	1.81%	0.53
52	Finance & insurance	\$50,995	8.39%	\$1,275,451	7.15%	4.00%	1.17
53	Real estate, rental & leasing	\$68,211	11.22%	\$2,360,137	13.24%	2.89%	0.85
54	Professional & technical services	\$30,711	5.05%	\$1,269,823	7.12%	2.42%	0.71
55	Management of companies & enterprises	\$20,866	3.43%	\$360,936	2.02%	5.78%	1.70
56	Administrative & waste services	\$20,254	3.33%	\$561,648	3.15%	3.61%	1.06
61	Educational services	\$5,155	0.85%	\$200,252	1.12%	2.57%	0.75
62	Health care & social assistance	\$51,362	8.45%	\$1,291,631	7.24%	3.98%	1.17
71	Arts, entertainment & recreation	\$5,427	0.89%	\$183,343	1.03%	2.96%	0.87
72	Accommodation & food services	\$14,526	2.39%	\$520,469	2.92%	2.79%	0.82
81	Other services, exc. government	\$12,723	2.09%	\$400,020	2.24%	3.18%	0.93
92	Government ^c	\$67,748	11.14%	\$2,206,901	12.38%	3.07%	0.90

Notes: * - sector figures are preliminary, and may not sum to totals due to rounding; major industry data are not available; exc. - except; p - part;
1 - excludes Postal Service; 2 - includes Postal Service.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 6/16).

Table A2: Ohio and U.S. GDP by Sector, 1997-2015 (in billions of chained 2009 dollars)

2007 NAICS Codes		Industry Titles	Area	1997	1998	1999	2000	2001 [^]	2002	2003	2004	2005	2006	2007	Percent Change	
															'97-'01	'01-'07
11-92	Total [#]	U.S.	\$11,128.85	\$11,607.61	\$12,150.91	\$12,625.32	\$12,743.62	\$12,970.94	\$13,303.90	\$13,772.78	\$14,211.39	\$14,593.54	\$14,798.37		14.5%	16.1%
		Ohio	\$445.40	\$460.90	\$471.09	\$480.91	\$475.12	\$486.12	\$494.25	\$508.63	\$513.24	\$513.65	\$512.74		6.7%	7.9%
11-81	Private sector [#]	U.S.	\$9,423.89	\$9,873.64	\$10,385.92	\$10,826.18	\$10,926.99	\$11,120.13	\$11,432.23	\$11,886.12	\$12,311.12	\$12,678.66	\$12,872.99		15.9%	17.8%
		Ohio	\$384.69	\$399.66	\$409.75	\$418.00	\$412.30	\$423.19	\$431.23	\$445.61	\$450.86	\$451.97	\$451.46		7.2%	9.5%
11, 21, 23-33	Goods producers [#]	U.S.	\$2,307.69	\$2,404.14	\$2,515.16	\$2,643.67	\$2,575.25	\$2,575.71	\$2,666.42	\$2,807.23	\$2,854.86	\$2,956.86	\$2,986.21		11.6%	16.0%
		Ohio	\$121.12	\$125.82	\$124.50	\$126.03	\$115.87	\$118.02	\$118.87	\$125.31	\$123.90	\$123.13	\$121.08		-4.3%	4.5%
11	Agriculture, forestry, fishing & hunting	U.S.	\$90.94	\$87.61	\$92.08	\$105.73	\$100.42	\$104.17	\$114.21	\$121.38	\$127.20	\$132.37	\$114.27		10.4%	13.8%
		Ohio	\$2.28	\$1.96	\$1.59	\$2.19	\$1.90	\$1.91	\$1.98	\$2.34	\$2.23	\$2.52	\$2.11		-16.5%	10.9%
21	Mining	U.S.	\$236.78	\$248.66	\$237.37	\$210.77	\$246.49	\$242.25	\$216.14	\$214.13	\$212.91	\$235.76	\$251.33		4.1%	2.0%
		Ohio	\$2.72	\$3.37	\$3.24	\$3.24	\$3.09	\$3.52	\$2.92	\$2.84	\$2.59	\$2.67	\$2.74		13.6%	-11.3%
23	Construction	U.S.	\$686.76	\$715.46	\$741.31	\$768.87	\$755.37	\$731.46	\$744.42	\$770.46	\$772.76	\$753.46	\$725.13		10.0%	-4.0%
		Ohio	\$26.56	\$27.02	\$27.56	\$27.41	\$25.51	\$24.20	\$23.91	\$23.94	\$22.35	\$20.23	\$18.80		-3.9%	-26.3%
31-33	Manufacturing [#]	U.S.	\$1,365.08	\$1,431.12	\$1,509.47	\$1,603.28	\$1,538.54	\$1,553.68	\$1,632.13	\$1,737.53	\$1,776.69	\$1,864.92	\$1,924.83		12.7%	25.1%
		Ohio	\$91.20	\$95.32	\$94.28	\$95.17	\$87.35	\$90.09	\$91.37	\$97.18	\$97.52	\$98.36	\$98.12		-4.2%	12.3%
32p & 33	Durable goods	U.S.	\$624.87	\$676.25	\$723.95	\$806.08	\$754.51	\$769.44	\$820.59	\$874.22	\$930.15	\$994.49	\$1,037.32		20.7%	37.5%
		Ohio	\$55.55	\$59.46	\$58.20	\$60.44	\$53.23	\$54.48	\$55.71	\$60.33	\$62.66	\$62.84	\$62.07		-4.2%	16.6%
31 & 32p	Nondurable goods	U.S.	\$788.39	\$788.52	\$813.81	\$807.05	\$801.61	\$799.23	\$823.14	\$875.45	\$850.56	\$872.13	\$888.33		1.7%	10.8%
		Ohio	\$36.43	\$36.13	\$36.56	\$34.69	\$34.66	\$36.25	\$36.23	\$37.25	\$34.90	\$35.59	\$36.17		-4.9%	4.4%
22, 42-81	Service providers ^{##}	U.S.	\$7,119.44	\$7,471.62	\$7,872.03	\$8,178.57	\$8,347.59	\$8,540.19	\$8,761.13	\$9,074.26	\$9,452.30	\$9,717.19	\$9,882.09		17.3%	18.4%
		Ohio	\$262.60	\$272.83	\$284.59	\$291.37	\$296.29	\$305.06	\$312.29	\$320.19	\$326.88	\$328.77	\$330.32		12.8%	11.5%
22	Utilities	U.S.	\$266.92	\$254.61	\$297.91	\$303.95	\$257.56	\$262.69	\$254.95	\$267.23	\$250.61	\$264.15	\$267.36		-3.5%	3.8%
		Ohio	\$11.99	\$11.13	\$12.92	\$12.48	\$10.38	\$10.12	\$9.30	\$9.18	\$8.50	\$8.89	\$9.98		-13.4%	-3.8%
42	Wholesale trade	U.S.	\$620.14	\$672.29	\$697.88	\$740.70	\$754.19	\$757.01	\$802.01	\$845.77	\$889.68	\$923.36	\$954.48		21.6%	26.6%
		Ohio	\$24.83	\$26.21	\$26.80	\$27.32	\$27.85	\$27.81	\$29.22	\$30.74	\$32.34	\$33.76	\$34.25		12.2%	23.0%
44-45	Retail trade	U.S.	\$672.02	\$735.20	\$759.73	\$782.71	\$804.78	\$835.03	\$882.76	\$895.47	\$925.07	\$929.83	\$904.18		19.8%	12.4%
		Ohio	\$28.34	\$31.22	\$31.69	\$32.42	\$32.94	\$33.76	\$35.77	\$35.45	\$35.60	\$33.77	\$32.61		16.3%	-1.0%
48-49p	Transportation & warehousing ¹	U.S.	\$357.46	\$370.44	\$373.79	\$379.91	\$354.51	\$343.25	\$357.16	\$392.26	\$414.45	\$439.98	\$434.46		-0.8%	22.6%
		Ohio	\$12.87	\$13.40	\$13.62	\$14.16	\$13.11	\$12.99	\$13.39	\$14.63	\$15.92	\$16.83	\$16.38		1.9%	24.9%
51	Information	U.S.	\$373.80	\$409.18	\$455.22	\$444.75	\$470.02	\$515.39	\$529.42	\$588.01	\$620.45	\$635.67	\$697.35		25.7%	48.4%
		Ohio	\$9.96	\$10.35	\$10.54	\$9.69	\$10.23	\$11.60	\$12.26	\$13.38	\$14.06	\$13.76	\$14.92		2.7%	45.9%
52	Finance & insurance	U.S.	\$582.41	\$649.29	\$712.21	\$782.77	\$862.46	\$866.16	\$872.56	\$870.08	\$947.91	\$988.81	\$962.89		48.1%	11.6%
		Ohio	\$20.05	\$22.23	\$25.38	\$28.07	\$29.60	\$32.80	\$33.89	\$36.58	\$38.19	\$38.36	\$38.04		47.6%	28.5%
53	Real estate, rental & leasing	U.S.	\$1,413.04	\$1,427.79	\$1,502.70	\$1,539.74	\$1,604.43	\$1,632.17	\$1,655.91	\$1,698.46	\$1,787.09	\$1,816.33	\$1,898.23		13.5%	18.3%
		Ohio	\$47.61	\$47.95	\$50.80	\$52.19	\$54.82	\$54.73	\$54.34	\$53.26	\$53.69	\$52.60	\$54.59		15.1%	-0.4%
54	Professional, scientific & technical	U.S.	\$706.77	\$743.83	\$782.15	\$818.00	\$841.01	\$862.76	\$868.45	\$900.08	\$926.95	\$960.28	\$990.79		19.0%	17.8%
		Ohio	\$21.39	\$22.40	\$23.19	\$23.26	\$24.00	\$24.33	\$24.14	\$24.53	\$24.58	\$25.26	\$25.88		12.2%	7.8%
55	Mgt. of companies & enterprises	U.S.	\$249.95	\$258.37	\$259.41	\$272.82	\$280.63	\$278.85	\$288.16	\$274.08	\$276.15	\$278.60	\$271.38		12.3%	-3.3%
		Ohio	\$12.27	\$12.61	\$12.09	\$12.07	\$13.41	\$15.03	\$15.77	\$14.97	\$15.73	\$15.87	\$14.56		9.3%	8.6%
56	Administrative support & waste mgt.	U.S.	\$278.63	\$288.50	\$305.02	\$328.43	\$334.56	\$335.35	\$359.85	\$376.69	\$411.08	\$420.46	\$439.36		20.1%	31.3%
		Ohio	\$11.25	\$11.40	\$11.91	\$12.21	\$12.13	\$12.20	\$13.19	\$13.76	\$14.76	\$14.80	\$15.52		7.8%	28.0%
61	Education	U.S.	\$118.96	\$117.24	\$120.54	\$124.58	\$128.84	\$130.82	\$136.83	\$143.58	\$143.07	\$146.49	\$149.67		8.3%	16.2%
		Ohio	\$3.65	\$3.55	\$3.68	\$3.80	\$3.91	\$3.88	\$4.05	\$4.24	\$4.24	\$4.41	\$4.37		7.2%	11.7%
62	Health care & social assistance	U.S.	\$750.46	\$758.64	\$778.38	\$798.05	\$817.53	\$853.68	\$880.83	\$914.35	\$932.83	\$970.84	\$978.34		8.9%	19.7%
		Ohio	\$33.06	\$33.46	\$34.06	\$34.84	\$36.00	\$37.17	\$38.14	\$39.45	\$39.82	\$41.71	\$41.01		8.9%	13.9%
71	Arts, entertainment & recreation	U.S.	\$119.81	\$119.64	\$123.84	\$129.34	\$121.94	\$127.72	\$132.69	\$137.48	\$137.87	\$142.07	\$144.30		1.8%	18.3%
		Ohio	\$3.80	\$3.72	\$3.92	\$3.97	\$3.86	\$3.96	\$4.04	\$4.05	\$4.01	\$4.02	\$4.06		1.6%	5.1%
72	Accommodation & food services	U.S.	\$337.31	\$348.13	\$369.23	\$391.73	\$382.78	\$389.87	\$400.83	\$420.27	\$421.72	\$430.23	\$428.65		13.5%	12.0%
		Ohio	\$11.42	\$11.57	\$12.02	\$12.49	\$12.20	\$12.24	\$12.61	\$13.04	\$12.74	\$12.51	\$12.41		6.8%	1.8%
81	Other services (exc. Government)	U.S.	\$376.83	\$391.94	\$394.73	\$403.48	\$363.43	\$373.35	\$361.67	\$367.33	\$368.62	\$370.12	\$360.89		-3.6%	-0.7%
		Ohio	\$14.19	\$14.70	\$14.68	\$14.81	\$13.61	\$13.79	\$13.23	\$13.33	\$12.76	\$12.47	\$11.93		-4.1%	-12.3%
92	Government ²	U.S.	\$1,726.87	\$1,748.66	\$1,771.49	\$1,804.59	\$1,824.19	\$1,858.65	\$1,877.41	\$1,888.24	\$1,899.23	\$1,911.72	\$1,922.31		5.6%	5.4%
		Ohio	\$61.66	\$61.85	\$61.68	\$63.31	\$63.34	\$63.26	\$63.25	\$63.10	\$62.38	\$61.65	\$61.24		2.7%	-3.3%

Notes: ^ - there was a recession in 2001, but it was relatively short and mild for the nation as a whole; * - preliminary; prior years may be revised; 1 - excluded Postal Service (NAICS 491); 2 - includes Postal Service; p - part;

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 8/16).

Table A2: Ohio and U.S. GDP by Sector, 1997-2015 (in billions of chained 2009 dollars)

2007 NAICS Codes	Industry Titles	Area	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 (1st qtr. extrapolated to annual)	Percent Change		
													'07-'09	'09-'15*	'97-'15*
11-92	Total [#]	U.S. Ohio	\$14,798.37 \$512.74	\$14,718.30 \$502.60	\$14,320.11 \$477.90	\$14,628.17 \$488.13	\$14,833.68 \$503.46	\$15,126.28 \$512.79	\$15,317.17 \$517.69	\$15,653.00 \$534.92	\$16,023.12 \$544.36	\$16,194.73 \$551.42	-3.2%	11.9%	44.0%
11-81	Private sector [#]	U.S. Ohio	\$12,872.99 \$451.46	\$12,760.08 \$441.23	\$12,352.98 \$417.12	\$12,650.15 \$426.28	\$12,871.72 \$442.83	\$13,169.04 \$451.68	\$13,377.53 \$457.75	\$13,714.83 \$475.45	\$14,094.14 \$485.23	\$14,266.85 \$492.56	-4.0%	14.1%	49.6%
11, 21, 23-33	Goods producers [#]	U.S. Ohio	\$2,986.21 \$121.08	\$2,887.44 \$111.69	\$2,732.01 \$98.77	\$2,781.99 \$102.47	\$2,796.46 \$110.03	\$2,842.39 \$107.34	\$2,931.20 \$111.17	\$2,997.07 \$121.07	\$3,089.40 \$125.11	n.a. n.a.	-8.5%	13.1%	33.9%
11	Agriculture, forestry, fishing & hunting	U.S. Ohio	\$114.27 \$2.11	\$121.99 \$2.27	\$137.66 \$3.37	\$140.21 \$2.86	\$133.99 \$3.23	\$122.93 \$2.45	\$145.72 \$3.25	\$149.58 \$3.21	\$162.82 \$3.25	\$169.62 \$3.27	20.5%	18.3%	79.0%
21	Mining	U.S. Ohio	\$251.33 \$2.74	\$254.22 \$2.73	\$290.35 \$3.31	\$272.71 \$2.90	\$290.14 \$3.08	\$320.34 \$2.89	\$335.40 \$3.99	\$358.79 \$5.57	\$376.94 \$8.05	\$349.79 \$8.28	15.5%	29.8%	59.2%
23	Construction	U.S. Ohio	\$725.13 \$18.80	\$662.20 \$17.42	\$577.30 \$16.19	\$551.60 \$15.75	\$548.64 \$16.67	\$569.17 \$17.69	\$584.09 \$18.12	\$589.56 \$18.38	\$619.12 \$18.71	\$650.46 \$19.65	-20.4%	7.2%	-9.8%
31-33	Manufacturing [#]	U.S. Ohio	\$1,924.83 \$98.12	\$1,869.13 \$89.74	\$1,726.71 \$75.90	\$1,818.19 \$81.02	\$1,823.26 \$87.07	\$1,828.87 \$84.74	\$1,856.18 \$85.82	\$1,886.15 \$93.90	\$1,911.11 \$95.26	\$1,932.93 \$96.98	-10.3%	10.7%	40.0%
32p & 33	Durable goods	U.S. Ohio	\$1,037.32 \$62.07	\$1,025.20 \$57.47	\$874.27 \$37.92	\$976.08 \$44.04	\$1,037.52 \$50.05	\$1,068.82 \$51.24	\$1,078.26 \$51.34	\$1,095.91 \$53.46	\$1,106.22 \$53.00	\$1,108.17 \$53.25	-15.7%	26.5%	77.0%
31 & 32p	Nondurable goods	U.S. Ohio	\$888.33 \$36.17	\$844.20 \$32.36	\$852.44 \$37.98	\$843.85 \$37.08	\$793.41 \$37.43	\$772.47 \$34.34	\$789.38 \$35.23	\$801.93 \$40.85	\$816.36 \$42.53	\$835.18 \$43.96	-4.0%	-4.2%	3.5%
22, 42-81	Service providers [#]	U.S. Ohio	\$9,882.09 \$330.32	\$9,873.06 \$329.49	\$9,620.97 \$318.36	\$9,870.06 \$323.81	\$10,077.40 \$332.70	\$10,330.51 \$344.50	\$10,447.28 \$346.62	\$10,719.01 \$354.14	\$11,002.88 \$359.81	n.a. n.a.	-2.6%	14.4%	54.5%
22	Utilities	U.S. Ohio	\$267.36 \$9.98	\$269.65 \$10.13	\$250.79 \$9.36	\$274.43 \$10.04	\$277.86 \$10.01	\$276.87 \$13.38	\$275.87 \$13.10	\$264.75 \$11.75	\$250.96 \$11.58	\$244.47 \$11.10	-6.2%	0.1%	-6.0%
42	Wholesale trade	U.S. Ohio	\$954.48 \$34.25	\$943.48 \$33.93	\$822.85 \$29.10	\$848.34 \$29.72	\$866.04 \$29.87	\$891.10 \$30.39	\$919.37 \$31.51	\$950.11 \$32.62	\$977.63 \$33.63	\$981.43 \$33.84	-13.8%	18.8%	57.6%
44-45	Retail trade	U.S. Ohio	\$904.18 \$32.61	\$866.40 \$30.97	\$842.13 \$30.25	\$862.17 \$30.46	\$867.51 \$30.90	\$883.59 \$31.05	\$907.73 \$32.40	\$924.09 \$32.82	\$957.13 \$33.49	\$979.50 \$34.38	-6.9%	13.7%	42.4%
48-49p	Transportation & warehousing ¹	U.S. Ohio	\$434.46 \$16.38	\$433.98 \$16.18	\$398.84 \$14.27	\$421.40 \$15.55	\$436.51 \$15.19	\$439.80 \$15.21	\$442.07 \$15.10	\$445.73 \$15.15	\$436.18 \$14.81	\$427.00 \$14.44	-8.2%	9.4%	22.0%
51	Information	U.S. Ohio	\$697.35 \$14.92	\$732.05 \$15.36	\$705.35 \$14.66	\$735.11 \$14.98	\$736.16 \$14.94	\$744.57 \$14.60	\$795.46 \$15.72	\$826.25 \$15.31	\$878.19 \$15.97	\$911.05 \$16.60	1.1%	24.5%	134.9%
52	Finance & insurance	U.S. Ohio	\$962.89 \$38.04	\$837.26 \$35.85	\$969.25 \$39.35	\$968.72 \$38.76	\$977.93 \$40.47	\$1,028.41 \$42.53	\$994.02 \$39.28	\$1,016.67 \$41.37	\$1,030.68 \$41.84	\$1,034.24 \$42.04	0.7%	6.3%	77.0%
53	Real estate, rental & leasing	U.S. Ohio	\$1,898.23 \$54.59	\$1,930.55 \$55.29	\$1,904.78 \$54.95	\$1,957.14 \$56.95	\$2,009.17 \$58.78	\$2,040.28 \$59.65	\$2,051.99 \$59.47	\$2,100.73 \$60.78	\$2,143.39 \$61.92	\$2,155.30 \$62.88	0.3%	12.5%	51.7%
54	Professional, scientific & technical	U.S. Ohio	\$990.79 \$25.88	\$1,065.54 \$27.72	\$1,000.36 \$26.19	\$1,009.36 \$26.31	\$1,046.07 \$27.70	\$1,081.38 \$27.22	\$1,071.53 \$27.05	\$1,107.21 \$27.57	\$1,162.55 \$28.28	\$1,192.49 \$29.16	1.0%	16.2%	64.5%
55	Mgt. of companies & enterprises	U.S. Ohio	\$271.38 \$14.56	\$270.00 \$14.88	\$247.14 \$13.48	\$266.05 \$14.51	\$277.67 \$15.31	\$298.60 \$18.70	\$313.70 \$19.31	\$335.39 \$20.71	\$352.88 \$20.40	\$364.19 \$20.69	-8.9%	42.8%	41.2%
56	Administrative support & waste mgt.	U.S. Ohio	\$439.36 \$15.52	\$442.40 \$15.75	\$413.64 \$14.55	\$442.84 \$15.40	\$459.38 \$16.22	\$476.52 \$17.05	\$483.02 \$17.49	\$503.82 \$18.25	\$523.86 \$18.89	\$528.59 \$19.24	-5.9%	26.6%	88.0%
61	Education	U.S. Ohio	\$149.67 \$4.37	\$155.56 \$4.50	\$162.99 \$4.65	\$164.82 \$4.64	\$166.15 \$4.65	\$167.60 \$4.54	\$164.20 \$4.29	\$167.36 \$4.33	\$167.17 \$4.30	\$167.34 \$4.34	8.9%	2.6%	40.5%
62	Health care & social assistance	U.S. Ohio	\$978.34 \$41.01	\$1,032.22 \$42.49	\$1,051.04 \$42.38	\$1,055.73 \$42.20	\$1,073.67 \$42.87	\$1,095.81 \$43.65	\$1,117.51 \$45.13	\$1,141.69 \$45.77	\$1,180.37 \$46.85	\$1,205.73 \$47.84	7.4%	12.3%	57.3%
71	Arts, entertainment & recreation	U.S. Ohio	\$144.30 \$4.06	\$143.77 \$3.90	\$138.84 \$3.76	\$144.90 \$3.87	\$147.80 \$3.86	\$152.69 \$4.27	\$157.20 \$4.65	\$161.85 \$4.93	\$166.36 \$4.93	\$168.24 \$4.72	-3.8%	19.8%	38.8%
72	Accommodation & food services	U.S. Ohio	\$428.65 \$12.41	\$414.94 \$11.76	\$383.46 \$10.98	\$396.37 \$11.23	\$414.70 \$11.66	\$423.64 \$11.93	\$431.67 \$12.18	\$444.74 \$12.47	\$451.07 \$12.57	\$451.44 \$12.62	-10.5%	17.6%	33.7%
81	Other services (exc. Government)	U.S. Ohio	\$360.89 \$11.93	\$347.43 \$11.20	\$329.51 \$10.42	\$323.92 \$10.26	\$322.70 \$10.33	\$329.60 \$10.59	\$327.52 \$10.49	\$335.63 \$10.70	\$339.87 \$10.81	\$342.22 \$10.90	-8.7%	3.1%	-9.8%
92	Government ²	U.S. Ohio	\$1,922.31 \$61.24	\$1,955.39 \$61.35	\$1,967.14 \$60.78	\$1,976.59 \$61.85	\$1,962.47 \$60.68	\$1,957.66 \$61.17	\$1,940.52 \$60.00	\$1,939.68 \$59.57	\$1,934.11 \$59.25	\$1,934.42 \$59.01	2.3%	-1.7%	12.0%

Notes (continued): # - components may not sum to totals due to rounding and/or different inflators/deflators used for different sectors; n.a. - not available.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 8/16).

Table A3: Comparing Ohio and U.S. GDP by Industry - Durable Goods, 2004-2014

		Dollar figures in millions											Nominal
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Net
NAICS	Industry Title												Change
Durable Goods in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
32p & 33	Durable goods summary: Ohio	\$59,088	\$61,359	\$60,925	\$60,324	\$55,272	\$37,920	\$43,252	\$48,958	\$51,317	\$52,087	\$55,856	
	U.S.	\$908,498	\$959,473	\$1,005,359	\$1,030,035	\$994,444	\$874,274	\$956,595	\$1,003,844	\$1,053,283	\$1,082,011	\$1,125,493	
	Ohio as percent of U.S.	6.50%	6.40%	6.06%	5.86%	5.56%	4.34%	4.52%	4.88%	4.87%	4.81%	4.96%	-1.54%
	Concentration ratio - Ohio::U.S.	1.76	1.78	1.73	1.70	1.65	1.30	1.36	1.44	1.44	1.43	1.45	-0.31
321	Wood products: Ohio	\$1,152	\$1,098	\$980	\$932	\$820	\$681	\$737	\$747	\$656	\$669	\$841	
	U.S.	\$32,760	\$34,865	\$31,771	\$29,131	\$25,326	\$20,667	\$22,081	\$22,127	\$23,537	\$26,398	\$28,687	
	Ohio as percent of U.S.	3.52%	3.15%	3.08%	3.20%	3.24%	3.30%	3.34%	3.38%	2.79%	2.53%	2.93%	-0.58%
	Concentration ratio - Ohio::U.S.	0.95	0.88	0.88	0.93	0.96	0.99	1.00	1.00	0.82	0.75	0.86	-0.09
327	Nonmetallic mineral products: Ohio	\$2,859	\$2,751	\$2,675	\$2,724	\$2,652	\$2,327	\$2,393	\$2,540	\$2,725	\$3,014	\$3,171	
	U.S.	\$45,551	\$49,051	\$50,618	\$50,275	\$43,809	\$37,330	\$36,181	\$36,062	\$38,666	\$43,236	\$46,432	
	Ohio as percent of U.S.	6.28%	5.61%	5.28%	5.42%	6.05%	6.23%	6.61%	7.04%	7.05%	6.97%	6.83%	0.55%
	Concentration ratio - Ohio::U.S.	1.70	1.56	1.51	1.58	1.79	1.87	1.99	2.08	2.08	2.06	2.00	0.30
331	Primary metals: Ohio	\$5,896	\$7,054	\$6,840	\$7,306	\$7,505	\$2,909	\$4,575	\$5,705	\$5,058	\$5,209	\$5,708	
	U.S.	\$55,438	\$56,636	\$62,978	\$64,707	\$67,322	\$40,111	\$48,444	\$58,119	\$60,155	\$57,444	\$59,698	
	Ohio as percent of U.S.	10.64%	12.45%	10.86%	11.29%	11.15%	7.25%	9.44%	9.82%	8.41%	9.07%	9.56%	-1.07%
	Concentration ratio - Ohio::U.S.	2.88	3.46	3.10	3.28	3.30	2.17	2.84	2.90	2.48	2.68	2.80	-0.08
332	Fabricated metal products: Ohio	\$9,917	\$10,348	\$10,836	\$11,064	\$11,853	\$8,771	\$9,664	\$10,572	\$10,816	\$10,634	\$11,234	
	U.S.	\$115,275	\$122,936	\$127,137	\$135,076	\$132,981	\$117,937	\$120,326	\$127,437	\$138,482	\$140,374	\$146,233	
	Ohio as percent of U.S.	8.60%	8.42%	8.52%	8.19%	8.91%	7.44%	8.03%	8.30%	7.81%	7.58%	7.68%	-0.92%
	Concentration ratio - Ohio::U.S.	2.33	2.34	2.44	2.38	2.64	2.23	2.41	2.45	2.30	2.24	2.25	-0.08
333	Machinery: Ohio	\$6,231	\$7,003	\$6,810	\$7,194	\$6,983	\$5,706	\$6,015	\$6,965	\$7,030	\$8,098	\$8,451	
	U.S.	\$104,666	\$114,887	\$122,252	\$129,732	\$129,727	\$115,561	\$122,087	\$136,712	\$143,054	\$146,035	\$151,207	
	Ohio as percent of U.S.	5.95%	6.10%	5.57%	5.55%	5.38%	4.94%	4.93%	5.09%	4.91%	5.55%	5.59%	-0.36%
	Concentration ratio - Ohio::U.S.	1.61	1.70	1.59	1.61	1.59	1.48	1.48	1.50	1.45	1.64	1.64	0.02
334	Computer & electronic products: Ohio	\$2,541	\$3,126	\$2,936	\$2,944	\$3,005	\$1,907	\$2,169	\$1,956	\$2,589	\$2,668	\$2,661	
	U.S.	\$201,530	\$211,046	\$223,441	\$227,248	\$234,108	\$228,922	\$248,999	\$248,885	\$256,849	\$259,746	\$267,964	
	Ohio as percent of U.S.	1.26%	1.48%	1.31%	1.30%	1.28%	0.83%	0.87%	0.79%	1.01%	1.03%	0.99%	-0.27%
	Concentration ratio - Ohio::U.S.	0.34	0.41	0.38	0.38	0.38	0.25	0.26	0.23	0.30	0.30	0.29	-0.05
335	Electrical eqpt. & appliances: Ohio	\$4,101	\$4,223	\$4,152	\$3,994	\$4,468	\$3,911	\$3,665	\$3,532	\$3,918	\$3,667	\$3,860	
	U.S.	\$42,106	\$43,247	\$51,434	\$50,193	\$55,089	\$50,177	\$49,971	\$47,393	\$50,995	\$52,786	\$53,747	
	Ohio as percent of U.S.	9.74%	9.76%	8.07%	7.96%	8.11%	7.79%	7.33%	7.45%	7.68%	6.95%	7.18%	-2.56%
	Concentration ratio - Ohio::U.S.	2.64	2.72	2.31	2.31	2.40	2.34	2.20	2.20	2.26	2.06	2.10	-0.54
3361-3	Motor vehicles, bodies, trailers & parts: Ohio	\$19,114	\$17,940	\$17,625	\$15,264	\$10,143	\$4,063	\$7,068	\$9,657	\$11,671	\$11,024	\$12,128	
	U.S.	\$140,278	\$136,908	\$134,632	\$125,258	\$91,667	\$48,439	\$92,904	\$111,116	\$125,662	\$133,860	\$140,240	
	Ohio as percent of U.S.	13.63%	13.10%	13.09%	12.19%	11.07%	8.39%	7.61%	8.69%	9.29%	8.24%	8.65%	-4.98%
	Concentration ratio - Ohio::U.S.	3.69	3.64	3.74	3.54	3.28	2.51	2.29	2.57	2.74	2.44	2.53	-1.16
3364-9	Other transportation eqpt.: Ohio	\$3,882	\$4,323	\$4,559	\$5,475	\$4,761	\$4,749	\$4,237	\$4,555	\$4,070	\$4,377	\$4,835	
	U.S.	\$75,954	\$89,914	\$96,266	\$114,048	\$111,581	\$111,855	\$112,157	\$115,436	\$114,053	\$119,832	\$125,744	
	Ohio as percent of U.S.	5.11%	4.81%	4.74%	4.80%	4.27%	4.25%	3.78%	3.95%	3.57%	3.65%	3.85%	-1.27%
	Concentration ratio - Ohio::U.S.	1.38	1.34	1.35	1.40	1.26	1.27	1.13	1.16	1.05	1.08	1.13	-0.26
337	Furniture & related products: Ohio	\$1,456	\$1,610	\$1,524	\$1,522	\$1,145	\$925	\$795	\$881	\$823	\$832	\$929	
	U.S.	\$31,083	\$33,783	\$34,584	\$32,498	\$27,943	\$23,068	\$22,225	\$22,495	\$23,103	\$24,267	\$25,251	
	Ohio as percent of U.S.	4.68%	4.77%	4.41%	4.68%	4.10%	4.01%	3.58%	3.92%	3.56%	3.43%	3.68%	-1.01%
	Concentration ratio - Ohio::U.S.	1.27	1.33	1.26	1.36	1.21	1.20	1.07	1.16	1.05	1.02	1.08	-0.19
339	Miscellaneous mfg.: Ohio	\$1,940	\$1,884	\$1,989	\$1,904	\$1,939	\$1,971	\$1,933	\$1,847	\$1,961	\$1,894	\$2,037	
	U.S.	\$63,856	\$66,198	\$70,247	\$71,869	\$74,889	\$80,209	\$81,221	\$78,062	\$78,727	\$78,033	\$80,290	
	Ohio as percent of U.S.	3.04%	2.85%	2.83%	2.65%	2.59%	2.46%	2.38%	2.37%	2.49%	2.43%	2.54%	-0.50%
	Concentration ratio - Ohio::U.S.	0.82	0.79	0.81	0.77	0.77	0.74	0.71	0.70	0.73	0.72	0.74	-0.08

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A3: Comparing Ohio and U.S. GDP by Industry - Durable Goods, 2004-2014

		Dollar figures in millions, standardized on 2009												Real Net Change	
2007 NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent	
Durable Goods in Constant Dollars															
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%	
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%	
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%		
32p & 33	Durable goods summary: Ohio	\$60,328	\$62,656	\$62,840	\$62,072	\$57,465	\$37,920	\$44,041	\$50,050	\$51,243	\$51,344	\$53,456	-\$6,872	-11.4%	
	U.S.	\$874,220	\$930,148	\$994,490	\$1,037,315	\$1,025,202	\$874,274	\$976,078	\$1,037,520	\$1,068,824	\$1,078,264	\$1,095,908	\$221,688	25.4%	
	Ohio as percent of U.S.	6.90%	6.74%	6.32%	5.98%	5.61%	4.34%	4.51%	4.82%	4.79%	4.76%	4.88%	-2.02%		
	Concentration ratio - Ohio::U.S.	1.87	1.87	1.80	1.73	1.64	1.30	1.35	1.42	1.41	1.41	1.43	-0.44		
321	Wood products: Ohio	\$845	\$821	\$788	\$855	\$795	\$681	\$714	\$790	\$651	\$573	\$633	-\$212	-25.1%	
	U.S.	\$24,031	\$26,093	\$25,566	\$26,747	\$24,552	\$20,667	\$21,372	\$23,400	\$23,385	\$22,607	\$21,590	-\$2,441	-10.2%	
	Ohio as percent of U.S.	3.52%	3.15%	3.08%	3.20%	3.24%	3.30%	3.34%	3.38%	2.78%	2.53%	2.93%	-0.58%		
	Concentration ratio - Ohio::U.S.	0.95	0.87	0.88	0.92	0.95	0.99	1.00	0.99	0.82	0.75	0.86	-0.09		
327	Nonmetallic mineral products: Ohio	\$3,418	\$3,089	\$2,712	\$2,775	\$2,838	\$2,327	\$2,471	\$2,716	\$2,798	\$2,943	\$2,937	-\$481	-14.1%	
	U.S.	\$54,460	\$55,078	\$51,320	\$51,221	\$46,892	\$37,330	\$37,349	\$38,553	\$39,698	\$42,218	\$43,007	-\$11,453	-21.0%	
	Ohio as percent of U.S.	6.28%	5.61%	5.28%	5.42%	6.05%	6.23%	6.62%	7.04%	7.05%	6.97%	6.83%	0.55%		
	Concentration ratio - Ohio::U.S.	1.70	1.55	1.50	1.56	1.77	1.87	1.98	2.08	2.08	2.06	2.00	0.30		
331	Primary metals: Ohio	\$5,123	\$5,517	\$4,399	\$4,448	\$4,516	\$2,909	\$3,624	\$3,942	\$3,951	\$4,612	\$4,696	-\$427	-8.3%	
	U.S.	\$48,172	\$44,294	\$40,499	\$39,392	\$40,509	\$40,111	\$38,375	\$40,159	\$46,986	\$50,856	\$49,116	\$944	2.0%	
	Ohio as percent of U.S.	10.63%	12.46%	10.86%	11.29%	11.15%	7.25%	9.44%	9.82%	8.41%	9.07%	9.56%	-1.07%		
	Concentration ratio - Ohio::U.S.	2.88	3.45	3.09	3.26	3.26	2.17	2.83	2.89	2.48	2.68	2.80	-0.08		
332	Fabricated metal products: Ohio	\$12,823	\$12,791	\$13,453	\$13,420	\$13,769	\$8,771	\$10,382	\$11,401	\$11,076	\$10,559	\$11,157	-\$1,666	-13.0%	
	U.S.	\$149,051	\$151,957	\$157,849	\$163,838	\$154,469	\$117,937	\$129,261	\$137,431	\$141,808	\$139,374	\$145,224	-\$3,827	-2.6%	
	Ohio as percent of U.S.	8.60%	8.42%	8.52%	8.19%	8.91%	7.44%	8.03%	8.30%	7.81%	7.58%	7.68%	-0.92%		
	Concentration ratio - Ohio::U.S.	2.33	2.33	2.42	2.36	2.61	2.23	2.41	2.44	2.30	2.24	2.25	-0.08		
333	Machinery: Ohio	\$7,196	\$7,917	\$7,724	\$8,026	\$7,802	\$5,706	\$6,295	\$7,363	\$7,093	\$7,810	\$7,896	\$700	9.7%	
	U.S.	\$120,862	\$129,872	\$138,667	\$144,743	\$144,944	\$115,561	\$127,767	\$144,525	\$144,335	\$140,846	\$141,280	\$20,418	16.9%	
	Ohio as percent of U.S.	5.95%	6.10%	5.57%	5.55%	5.38%	4.94%	4.93%	5.09%	4.91%	5.55%	5.59%	-0.36%		
	Concentration ratio - Ohio::U.S.	1.61	1.69	1.58	1.60	1.58	1.48	1.48	1.50	1.45	1.64	1.64	0.02		
334	Computer & electronic products: Ohio	\$1,717	\$2,278	\$2,359	\$2,625	\$2,920	\$1,907	\$2,228	\$2,082	\$2,786	\$2,849	\$2,836	\$1,119	65.2%	
	U.S.	\$136,124	\$153,798	\$179,519	\$202,658	\$227,525	\$228,922	\$255,798	\$264,862	\$276,445	\$277,340	\$285,602	\$149,478	109.8%	
	Ohio as percent of U.S.	1.26%	1.48%	1.31%	1.30%	1.28%	0.83%	0.87%	0.79%	1.01%	1.03%	0.99%	-0.27%		
	Concentration ratio - Ohio::U.S.	0.34	0.41	0.37	0.37	0.38	0.25	0.26	0.23	0.30	0.30	0.29	-0.05		
335	Electrical eqpt. & appliances: Ohio	\$5,002	\$5,064	\$4,866	\$4,492	\$4,877	\$3,911	\$3,763	\$3,672	\$3,837	\$3,515	\$3,666	-\$1,336	-26.7%	
	U.S.	\$51,350	\$51,863	\$60,281	\$56,441	\$60,134	\$50,177	\$51,300	\$49,269	\$49,942	\$50,590	\$51,042	-\$308	-0.6%	
	Ohio as percent of U.S.	9.74%	9.76%	8.07%	7.96%	8.11%	7.79%	7.34%	7.45%	7.68%	6.95%	7.18%	-2.56%		
	Concentration ratio - Ohio::U.S.	2.64	2.70	2.29	2.30	2.38	2.34	2.20	2.20	2.27	2.06	2.10	-0.54		
3361-3	Motor vehicles, bodies, trailers & parts: Ohio	\$16,725	\$16,977	\$18,693	\$16,626	\$11,818	\$4,063	\$7,590	\$11,080	\$12,841	\$11,997	\$12,648	-\$4,077	-24.4%	
	U.S.	\$122,752	\$129,563	\$142,791	\$136,434	\$106,799	\$48,439	\$99,759	\$127,496	\$138,255	\$145,680	\$146,253	\$23,501	19.1%	
	Ohio as percent of U.S.	13.63%	13.10%	13.09%	12.19%	11.07%	8.39%	7.61%	8.69%	9.29%	8.24%	8.65%	-4.98%		
	Concentration ratio - Ohio::U.S.	3.69	3.63	3.72	3.52	3.24	2.51	2.28	2.56	2.74	2.44	2.53	-1.16		
3364-9	Other transportation eqpt.: Ohio	\$4,386	\$4,740	\$4,868	\$5,805	\$5,036	\$4,749	\$4,241	\$4,514	\$3,944	\$4,123	\$4,433	\$47	1.1%	
	U.S.	\$85,815	\$98,588	\$102,796	\$120,912	\$118,030	\$111,855	\$112,283	\$114,391	\$110,532	\$112,892	\$115,278	\$29,463	34.3%	
	Ohio as percent of U.S.	5.11%	4.81%	4.74%	4.80%	4.27%	4.25%	3.78%	3.95%	3.57%	3.65%	3.85%	-1.27%		
	Concentration ratio - Ohio::U.S.	1.38	1.33	1.35	1.39	1.25	1.27	1.13	1.16	1.05	1.08	1.13	-0.26		
337	Furniture & related products: Ohio	\$1,762	\$1,885	\$1,775	\$1,714	\$1,288	\$925	\$832	\$922	\$829	\$837	\$924	-\$838	-47.6%	
	U.S.	\$37,627	\$39,554	\$40,275	\$36,583	\$31,432	\$23,068	\$23,259	\$23,534	\$23,269	\$24,428	\$25,124	-\$12,503	-33.2%	
	Ohio as percent of U.S.	4.68%	4.77%	4.41%	4.69%	4.10%	4.01%	3.58%	3.92%	3.56%	3.43%	3.68%	-1.01%		
	Concentration ratio - Ohio::U.S.	1.27	1.32	1.25	1.35	1.20	1.20	1.07	1.15	1.05	1.01	1.08	-0.19		
339	Miscellaneous mfg.: Ohio	\$1,975	\$1,937	\$2,057	\$1,957	\$2,018	\$1,971	\$1,949	\$1,862	\$1,942	\$1,824	\$1,955	-\$20	-1.0%	
	U.S.	\$65,038	\$68,049	\$72,679	\$73,870	\$77,959	\$80,209	\$81,897	\$78,681	\$77,958	\$75,141	\$77,083	\$12,045	18.5%	
	Ohio as percent of U.S.	3.04%	2.85%	2.83%	2.65%	2.59%	2.46%	2.38%	2.37%	2.49%	2.43%	2.54%	-0.50%		
	Concentration ratio - Ohio::U.S.	0.82	0.79	0.80	0.76	0.76	0.74	0.71	0.70	0.73	0.72	0.74	-0.08		

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A4: Comparing Ohio and U.S. GDP by Industry - Non-durable Goods, 2004-2014

		Dollar figures in millions											Nominal
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Net
NAICS	Industry Title												Change
Non-durable Goods in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
31 & 32p	Non-durable goods summary: Ohio	\$30,413	\$30,130	\$32,143	\$32,829	\$30,988	\$37,982	\$38,613	\$43,582	\$42,331	\$42,722	\$49,770	
	U.S.	\$710,661	\$744,700	\$798,862	\$824,295	\$819,676	\$852,439	\$873,990	\$903,467	\$930,360	\$942,644	\$972,223	
	Ohio as percent of U.S.	4.28%	4.05%	4.02%	3.98%	3.78%	4.46%	4.42%	4.82%	4.55%	4.53%	5.12%	0.84%
	Concentration ratio - Ohio::U.S.	1.16	1.13	1.15	1.16	1.12	1.34	1.33	1.42	1.34	1.34	1.50	0.34
311-2	Food, beverage & tobacco products: Ohio	\$7,881	\$7,337	\$8,193	\$8,446	\$8,239	\$10,083	\$9,595	\$9,159	\$10,046	\$11,068	\$11,616	
	U.S.	\$177,589	\$179,914	\$194,825	\$194,404	\$201,150	\$243,160	\$229,730	\$216,720	\$229,931	\$235,995	\$245,013	
	Ohio as percent of U.S.	4.44%	4.08%	4.21%	4.34%	4.10%	4.15%	4.18%	4.23%	4.37%	4.69%	4.74%	0.30%
	Concentration ratio - Ohio::U.S.	1.20	1.13	1.20	1.26	1.21	1.24	1.25	1.25	1.29	1.39	1.39	0.19
313-4	Textile & textile product mills: Ohio	\$359	\$335	\$331	\$390	\$344	\$284	\$348	\$334	\$314	\$357	\$348	
	U.S.	\$22,287	\$20,783	\$20,170	\$19,369	\$17,813	\$15,133	\$15,555	\$15,075	\$15,992	\$16,677	\$17,310	
	Ohio as percent of U.S.	1.61%	1.61%	1.64%	2.01%	1.93%	1.88%	2.24%	2.22%	1.96%	2.14%	2.01%	0.40%
	Concentration ratio - Ohio::U.S.	0.44	0.45	0.47	0.59	0.57	0.56	0.67	0.65	0.58	0.63	0.59	0.15
315-6	Apparel, leather & allied products: Ohio	\$186	\$193	\$166	\$199	\$200	\$170	\$141	\$129	\$116	\$127	\$140	
	U.S.	\$14,612	\$13,860	\$12,878	\$11,856	\$11,583	\$9,924	\$10,516	\$10,316	\$10,234	\$10,429	\$10,802	
	Ohio as percent of U.S.	1.27%	1.39%	1.29%	1.68%	1.73%	1.71%	1.34%	1.25%	1.13%	1.22%	1.30%	0.02%
	Concentration ratio - Ohio::U.S.	0.34	0.39	0.37	0.49	0.51	0.51	0.40	0.37	0.33	0.36	0.38	0.03
322	Paper: Ohio	\$2,364	\$2,292	\$2,584	\$2,522	\$2,139	\$2,207	\$2,096	\$2,127	\$1,839	\$1,836	\$2,104	
	U.S.	\$53,086	\$51,945	\$58,187	\$55,823	\$51,056	\$58,506	\$55,313	\$52,536	\$51,714	\$54,098	\$55,456	
	Ohio as percent of U.S.	4.45%	4.41%	4.44%	4.52%	4.19%	3.77%	3.79%	4.05%	3.56%	3.39%	3.79%	-0.66%
	Concentration ratio - Ohio::U.S.	1.21	1.23	1.27	1.31	1.24	1.13	1.14	1.20	1.05	1.00	1.11	-0.10
323	Printing & related support activities: Ohio	\$2,512	\$2,610	\$2,658	\$2,552	\$2,211	\$2,050	\$1,848	\$1,927	\$1,776	\$1,724	\$1,858	
	U.S.	\$42,939	\$44,649	\$46,974	\$47,786	\$44,909	\$39,263	\$38,800	\$37,936	\$37,473	\$37,658	\$38,293	
	Ohio as percent of U.S.	5.85%	5.85%	5.66%	5.34%	4.92%	5.22%	4.76%	5.08%	4.74%	4.58%	4.85%	-1.00%
	Concentration ratio - Ohio::U.S.	1.58	1.63	1.62	1.55	1.46	1.56	1.43	1.50	1.40	1.36	1.42	-0.16
324	Petroleum & coal products: Ohio	\$2,491	\$3,783	\$4,179	\$3,237	\$2,470	\$6,049	\$7,016	\$10,650	\$8,383	\$10,209	\$14,481	
	U.S.	\$105,662	\$142,706	\$140,854	\$154,948	\$156,777	\$114,617	\$129,979	\$169,180	\$172,989	\$163,846	\$170,173	
	Ohio as percent of U.S.	2.36%	2.65%	2.97%	2.09%	1.58%	5.28%	5.40%	6.30%	4.85%	6.23%	8.51%	6.15%
	Concentration ratio - Ohio::U.S.	0.64	0.74	0.85	0.61	0.47	1.58	1.62	1.86	1.43	1.84	2.49	1.85
325	Chemicals: Ohio	\$9,170	\$8,176	\$8,831	\$10,287	\$11,134	\$12,363	\$12,815	\$14,105	\$14,204	\$11,682	\$13,280	
	U.S.	\$230,121	\$227,299	\$260,582	\$276,412	\$280,057	\$310,296	\$330,822	\$337,154	\$341,905	\$351,602	\$360,317	
	Ohio as percent of U.S.	3.98%	3.60%	3.39%	3.72%	3.98%	3.98%	3.87%	4.18%	4.15%	3.32%	3.69%	-0.30%
	Concentration ratio - Ohio::U.S.	1.08	1.00	0.97	1.08	1.18	1.19	1.16	1.24	1.22	0.98	1.08	0.00
326	Plastic & rubber products: Ohio	\$5,450	\$5,404	\$5,201	\$5,196	\$4,251	\$4,777	\$4,754	\$5,152	\$5,654	\$5,720	\$5,941	
	U.S.	\$64,366	\$63,543	\$64,392	\$63,696	\$56,330	\$61,540	\$63,274	\$64,551	\$70,123	\$72,338	\$74,858	
	Ohio as percent of U.S.	8.47%	8.50%	8.08%	8.16%	7.55%	7.76%	7.51%	7.98%	8.06%	7.91%	7.94%	-0.53%
	Concentration ratio - Ohio::U.S.	2.29	2.37	2.31	2.37	2.24	2.33	2.26	2.36	2.38	2.34	2.32	0.03

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A4: Comparing Ohio and U.S. GDP by Industry - Non-durable Goods, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Non-durable Goods in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
31 & 32p	Non-durable goods summary: Ohio	\$37,250	\$34,899	\$35,593	\$36,167	\$32,359	\$37,982	\$37,084	\$37,429	\$34,337	\$35,229	\$40,847	\$3,597	9.7%
	U.S.	\$875,451	\$850,561	\$872,129	\$888,329	\$844,201	\$852,439	\$843,845	\$793,414	\$772,471	\$789,380	\$801,934	-\$73,517	-8.4%
	Ohio as percent of U.S.	4.25%	4.10%	4.08%	4.07%	3.83%	4.46%	4.39%	4.72%	4.45%	4.46%	5.09%	0.84%	
	Concentration ratio - Ohio::U.S.	1.15	1.14	1.16	1.18	1.12	1.34	1.32	1.39	1.31	1.32	1.49	0.34	
311-2	Food, beverage & tobacco products: Ohio	\$9,461	\$8,649	\$9,913	\$10,270	\$9,228	\$10,083	\$9,745	\$9,523	\$9,688	\$10,379	\$10,378	\$917	9.7%
	U.S.	\$213,188	\$212,102	\$235,730	\$236,395	\$225,298	\$243,160	\$233,325	\$225,347	\$221,741	\$221,299	\$218,906	\$5,718	2.7%
	Ohio as percent of U.S.	4.44%	4.08%	4.21%	4.34%	4.10%	4.15%	4.18%	4.23%	4.37%	4.69%	4.74%	0.30%	
	Concentration ratio - Ohio::U.S.	1.20	1.13	1.19	1.25	1.20	1.24	1.25	1.25	1.29	1.39	1.39	0.19	
313-4	Textile & textile product mills: Ohio	\$404	\$359	\$348	\$411	\$370	\$284	\$349	\$297	\$291	\$334	\$320	-\$84	-20.8%
	U.S.	\$25,059	\$22,273	\$21,189	\$20,394	\$19,148	\$15,133	\$15,573	\$13,403	\$14,802	\$15,617	\$15,883	-\$9,176	-36.6%
	Ohio as percent of U.S.	1.61%	1.61%	1.64%	2.02%	1.93%	1.88%	2.24%	2.22%	1.97%	2.14%	2.01%	0.40%	
	Concentration ratio - Ohio::U.S.	0.44	0.45	0.47	0.58	0.57	0.56	0.67	0.65	0.58	0.63	0.59	0.15	
315-6	Apparel, leather & allied products: Ohio	\$174	\$185	\$162	\$198	\$203	\$170	\$145	\$131	\$118	\$129	\$142	-\$32	-18.4%
	U.S.	\$13,709	\$13,281	\$12,583	\$11,801	\$11,749	\$9,924	\$10,815	\$10,504	\$10,378	\$10,559	\$10,892	-\$2,817	-20.5%
	Ohio as percent of U.S.	1.27%	1.39%	1.29%	1.68%	1.73%	1.71%	1.34%	1.25%	1.14%	1.22%	1.30%	0.03%	
	Concentration ratio - Ohio::U.S.	0.34	0.39	0.37	0.48	0.51	0.51	0.40	0.37	0.34	0.36	0.38	0.04	
322	Paper: Ohio	\$2,998	\$2,863	\$3,041	\$2,902	\$2,351	\$2,207	\$2,024	\$2,055	\$1,782	\$1,684	\$1,912	-\$1,086	-36.2%
	U.S.	\$67,335	\$64,885	\$68,477	\$64,233	\$56,105	\$58,506	\$53,403	\$50,762	\$50,111	\$49,623	\$50,388	-\$16,947	-25.2%
	Ohio as percent of U.S.	4.45%	4.41%	4.44%	4.52%	4.19%	3.77%	3.79%	4.05%	3.56%	3.39%	3.79%	-0.66%	
	Concentration ratio - Ohio::U.S.	1.21	1.22	1.26	1.30	1.23	1.13	1.14	1.19	1.05	1.00	1.11	-0.10	
323	Printing & related support activities: Ohio	\$2,574	\$2,606	\$2,568	\$2,492	\$2,238	\$2,050	\$1,891	\$2,060	\$1,918	\$1,858	\$1,976	-\$598	-23.2%
	U.S.	\$44,005	\$44,588	\$45,398	\$46,652	\$45,471	\$39,263	\$39,713	\$40,560	\$40,465	\$40,587	\$40,720	-\$3,285	-7.5%
	Ohio as percent of U.S.	5.85%	5.84%	5.66%	5.34%	4.92%	5.22%	4.76%	5.08%	4.74%	4.58%	4.85%	-1.00%	
	Concentration ratio - Ohio::U.S.	1.58	1.62	1.61	1.54	1.44	1.56	1.43	1.50	1.40	1.35	1.42	-0.16	
324	Petroleum & coal products: Ohio	\$3,036	\$3,379	\$3,240	\$2,310	\$1,869	\$6,049	\$5,318	\$5,322	\$3,929	\$5,617	\$8,458	\$5,422	178.6%
	U.S.	\$128,799	\$127,465	\$109,199	\$110,611	\$118,611	\$114,617	\$98,517	\$84,541	\$81,081	\$90,147	\$99,393	-\$29,406	-22.8%
	Ohio as percent of U.S.	2.36%	2.65%	2.97%	2.09%	1.58%	5.28%	5.40%	6.30%	4.85%	6.23%	8.51%	6.15%	
	Concentration ratio - Ohio::U.S.	0.64	0.73	0.84	0.60	0.46	1.58	1.62	1.85	1.43	1.84	2.49	1.85	
325	Chemicals: Ohio	\$11,976	\$10,242	\$10,681	\$12,415	\$12,125	\$12,363	\$12,799	\$13,023	\$12,308	\$9,868	\$10,831	-\$1,145	-9.6%
	U.S.	\$300,535	\$284,749	\$315,165	\$333,576	\$304,982	\$310,296	\$330,404	\$311,294	\$296,278	\$297,011	\$293,876	-\$6,659	-2.2%
	Ohio as percent of U.S.	3.98%	3.60%	3.39%	3.72%	3.98%	3.98%	3.87%	4.18%	4.15%	3.32%	3.69%	-0.30%	
	Concentration ratio - Ohio::U.S.	1.08	1.00	0.96	1.07	1.16	1.19	1.16	1.23	1.23	0.98	1.08	0.00	
326	Plastic & rubber products: Ohio	\$6,646	\$6,454	\$5,648	\$5,806	\$4,674	\$4,777	\$4,909	\$5,142	\$5,380	\$5,371	\$5,662	-\$984	-14.8%
	U.S.	\$78,495	\$75,886	\$69,917	\$71,175	\$61,939	\$61,540	\$65,337	\$64,435	\$66,723	\$67,920	\$71,342	-\$7,153	-9.1%
	Ohio as percent of U.S.	8.47%	8.50%	8.08%	8.16%	7.55%	7.76%	7.51%	7.98%	8.06%	7.91%	7.94%	-0.53%	
	Concentration ratio - Ohio::U.S.	2.29	2.35	2.30	2.35	2.21	2.33	2.25	2.35	2.38	2.34	2.32	0.03	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A5: Comparing Ohio and U.S. GDP by Industry - Natural Resources, 2004-2014

2007 NAICS	Industry Title	Dollar figures in millions											Nominal Net Change
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Natural Resources in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
11	Agriculture, forestry, fishing, etc.: Ohio	\$2,806	\$2,271	\$2,444	\$2,693	\$2,946	\$3,368	\$3,301	\$4,931	\$3,846	\$5,203	\$4,745	
	U.S.	\$142,695	\$128,571	\$128,345	\$141,999	\$154,525	\$137,655	\$160,217	\$197,241	\$185,800	\$225,438	\$215,416	
	Ohio as percent of U.S.	1.97%	1.77%	1.90%	1.90%	1.91%	2.45%	2.06%	2.50%	2.07%	2.31%	2.20%	0.24%
	Concentration ratio - Ohio::U.S.	0.53	0.49	0.54	0.55	0.56	0.73	0.62	0.74	0.61	0.68	0.64	0.11
111-2	Crop & animal production (farms): Ohio	\$2,542	\$2,004	\$2,130	\$2,393	\$2,660	\$2,988	\$3,002	\$4,611	\$3,465	\$4,801	\$4,302	
	U.S.	\$118,908	\$104,514	\$99,352	\$113,533	\$126,345	\$109,800	\$129,725	\$166,249	\$151,489	\$189,912	\$177,190	
	Ohio as percent of U.S.	2.14%	1.92%	2.14%	2.11%	2.11%	2.72%	2.31%	2.77%	2.29%	2.53%	2.43%	0.29%
	Concentration ratio - Ohio::U.S.	0.58	0.53	0.61	0.61	0.62	0.82	0.70	0.82	0.67	0.75	0.71	0.13
113-5	Forestry, fishing & related activities: Ohio	\$264	\$268	\$314	\$300	\$285	\$380	\$299	\$320	\$381	\$402	\$443	
	U.S.	\$23,787	\$24,057	\$28,993	\$28,466	\$28,180	\$27,855	\$30,492	\$30,992	\$34,311	\$35,526	\$38,226	
	Ohio as percent of U.S.	1.11%	1.11%	1.08%	1.05%	1.01%	1.36%	0.98%	1.03%	1.11%	1.13%	1.16%	0.05%
	Concentration ratio - Ohio::U.S.	0.30	0.31	0.31	0.31	0.30	0.41	0.29	0.30	0.33	0.34	0.34	0.04
21	Mining: Ohio	\$1,947	\$2,355	\$2,705	\$2,996	\$3,609	\$3,306	\$3,369	\$3,997	\$3,588	\$4,965	\$6,670	
	U.S.	\$167,561	\$226,646	\$273,405	\$314,018	\$401,457	\$290,349	\$331,720	\$398,632	\$410,940	\$441,048	\$453,756	
	Ohio as percent of U.S.	1.16%	1.04%	0.99%	0.95%	0.90%	1.14%	1.02%	1.00%	0.87%	1.13%	1.47%	0.31%
	Concentration ratio - Ohio::U.S.	0.31	0.29	0.28	0.28	0.27	0.34	0.31	0.30	0.26	0.33	0.43	0.12
211	Oil & gas extraction: Ohio	\$932	\$1,179	\$1,261	\$1,329	\$1,686	\$1,290	\$1,220	\$1,469	\$1,413	\$2,768	\$3,934	
	U.S.	\$113,403	\$156,230	\$178,223	\$205,288	\$280,516	\$184,601	\$209,323	\$252,490	\$267,432	\$298,081	\$302,151	
	Ohio as percent of U.S.	0.82%	0.75%	0.71%	0.65%	0.60%	0.70%	0.58%	0.58%	0.53%	0.93%	1.30%	0.48%
	Concentration ratio - Ohio::U.S.	0.22	0.21	0.20	0.19	0.18	0.21	0.18	0.17	0.16	0.27	0.38	0.16
212	Mining, exc. oil & gas: Ohio	\$806	\$895	\$959	\$1,004	\$1,253	\$1,533	\$1,741	\$2,116	\$1,750	\$1,621	\$1,850	
	U.S.	\$34,135	\$43,496	\$52,394	\$58,462	\$62,971	\$65,757	\$77,327	\$88,447	\$80,072	\$79,109	\$81,040	
	Ohio as percent of U.S.	2.36%	2.06%	1.83%	1.72%	1.99%	2.33%	2.25%	2.39%	2.19%	2.05%	2.28%	-0.08%
	Concentration ratio - Ohio::U.S.	0.64	0.57	0.52	0.50	0.59	0.70	0.68	0.71	0.64	0.61	0.67	0.03
213	Support activities for mining: Ohio	\$209	\$281	\$485	\$662	\$671	\$483	\$408	\$413	\$426	\$576	\$885	
	U.S.	\$20,023	\$26,921	\$42,788	\$50,268	\$57,970	\$39,991	\$45,070	\$57,695	\$63,436	\$63,858	\$70,564	
	Ohio as percent of U.S.	1.04%	1.04%	1.13%	1.32%	1.16%	1.21%	0.91%	0.72%	0.67%	0.90%	1.25%	0.21%
	Concentration ratio - Ohio::U.S.	0.28	0.29	0.32	0.38	0.34	0.36	0.27	0.21	0.20	0.27	0.37	0.08

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A5: Comparing Ohio and U.S. GDP by Industry - Natural Resources, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Natural Resources in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
11	Agriculture, forestry, fishing, etc.: Ohio	\$2,335	\$2,229	\$2,517	\$2,109	\$2,270	\$3,368	\$2,863	\$3,233	\$2,454	\$3,246	\$3,212	\$877	37.6%
	U.S.	\$121,383	\$127,202	\$132,372	\$114,267	\$121,988	\$137,655	\$140,205	\$133,986	\$122,933	\$145,724	\$149,580	\$28,197	23.2%
	Ohio as percent of U.S.	1.92%	1.75%	1.90%	1.85%	1.86%	2.45%	2.04%	2.41%	2.00%	2.23%	2.15%	0.22%	
	Concentration ratio - Ohio::U.S.	0.52	0.49	0.54	0.53	0.54	0.73	0.61	0.71	0.59	0.66	0.63	0.11	
111-2	Crop & animal production (farms): Ohio	\$2,054	\$1,949	\$2,196	\$1,816	\$1,994	\$2,988	\$2,579	\$2,932	\$2,142	\$2,905	\$2,855	\$801	39.0%
	U.S.	\$96,078	\$101,646	\$102,413	\$86,173	\$94,712	\$109,800	\$111,455	\$105,712	\$93,662	\$114,906	\$117,575	\$21,497	22.4%
	Ohio as percent of U.S.	2.14%	1.92%	2.14%	2.11%	2.11%	2.72%	2.31%	2.77%	2.29%	2.53%	2.43%	0.29%	
	Concentration ratio - Ohio::U.S.	0.58	0.53	0.61	0.61	0.62	0.82	0.69	0.82	0.67	0.75	0.71	0.13	
113-5	Forestry, fishing & related activities: Ohio	\$289	\$291	\$334	\$307	\$279	\$380	\$283	\$294	\$344	\$352	\$375	\$86	29.8%
	U.S.	\$26,067	\$26,157	\$30,835	\$29,129	\$27,523	\$27,855	\$28,765	\$28,487	\$30,977	\$31,070	\$32,376	\$6,309	24.2%
	Ohio as percent of U.S.	1.11%	1.11%	1.08%	1.05%	1.01%	1.36%	0.98%	1.03%	1.11%	1.13%	1.16%	0.05%	
	Concentration ratio - Ohio::U.S.	0.30	0.31	0.31	0.30	0.30	0.41	0.29	0.30	0.33	0.34	0.34	0.04	
21	Mining: Ohio	\$2,835	\$2,587	\$2,669	\$2,741	\$2,734	\$3,306	\$2,898	\$3,081	\$2,893	\$3,993	\$5,567	\$2,732	96.4%
	U.S.	\$214,129	\$212,911	\$235,762	\$251,329	\$254,216	\$290,349	\$272,711	\$290,137	\$320,343	\$335,398	\$358,790	\$144,661	67.6%
	Ohio as percent of U.S.	1.32%	1.22%	1.13%	1.09%	1.08%	1.14%	1.06%	1.06%	0.90%	1.19%	1.55%	0.23%	
	Concentration ratio - Ohio::U.S.	0.36	0.34	0.32	0.31	0.31	0.34	0.32	0.31	0.27	0.35	0.45	0.10	
211	Oil & gas extraction: Ohio	\$1,024	\$912	\$929	\$908	\$846	\$1,290	\$924	\$961	\$1,035	\$1,929	\$2,884	\$1,860	181.6%
	U.S.	\$124,653	\$120,935	\$131,355	\$140,231	\$140,735	\$184,601	\$158,615	\$165,233	\$195,954	\$207,747	\$221,513	\$96,860	77.7%
	Ohio as percent of U.S.	0.82%	0.75%	0.71%	0.65%	0.60%	0.70%	0.58%	0.58%	0.53%	0.93%	1.30%	0.48%	
	Concentration ratio - Ohio::U.S.	0.22	0.21	0.20	0.19	0.18	0.21	0.17	0.17	0.16	0.27	0.38	0.16	
212	Mining, exc. oil & gas: Ohio	\$1,595	\$1,429	\$1,299	\$1,241	\$1,366	\$1,533	\$1,577	\$1,739	\$1,458	\$1,428	\$1,673	\$78	4.9%
	U.S.	\$67,542	\$69,408	\$70,984	\$72,219	\$68,653	\$65,757	\$70,026	\$72,687	\$66,704	\$69,709	\$73,280	\$5,738	8.5%
	Ohio as percent of U.S.	2.36%	2.06%	1.83%	1.72%	1.99%	2.33%	2.25%	2.39%	2.19%	2.05%	2.28%	-0.08%	
	Concentration ratio - Ohio::U.S.	0.64	0.57	0.52	0.50	0.58	0.70	0.67	0.70	0.64	0.61	0.67	0.03	
213	Support activities for mining: Ohio	\$299	\$323	\$477	\$621	\$612	\$483	\$417	\$400	\$396	\$528	\$814	\$515	172.2%
	U.S.	\$28,620	\$30,944	\$42,049	\$47,117	\$52,947	\$39,991	\$45,973	\$55,959	\$58,952	\$58,536	\$64,867	\$36,247	126.6%
	Ohio as percent of U.S.	1.04%	1.04%	1.13%	1.32%	1.16%	1.21%	0.91%	0.71%	0.67%	0.90%	1.25%	0.21%	
	Concentration ratio - Ohio::U.S.	0.28	0.29	0.32	0.38	0.34	0.36	0.27	0.21	0.20	0.27	0.37	0.08	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A6: Comparing Ohio and U.S. GDP by Industry - Transportation and Warehousing, 2004-2014

		Dollar figures in millions											Nominal
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Net
NAICS	Industry Title												Change
Transportation and Warehousing in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
48-49*	Transportation* & warehousing: Ohio	\$12,859	\$14,277	\$15,432	\$15,412	\$15,746	\$14,271	\$14,440	\$15,237	\$15,756	\$16,039	\$16,635	
	U.S.	\$351,124	\$375,119	\$407,597	\$409,597	\$422,352	\$398,843	\$425,131	\$446,857	\$467,407	\$483,529	\$505,685	
	Ohio as percent of U.S.	3.66%	3.81%	3.79%	3.76%	3.73%	3.58%	3.40%	3.41%	3.37%	3.32%	3.29%	-0.37%
	Concentration ratio - Ohio::U.S.	0.99	1.06	1.08	1.09	1.10	1.07	1.02	1.01	0.99	0.98	0.96	-0.03
481	Air: Ohio	\$1,290	\$1,447	\$1,444	\$1,661	\$1,569	\$1,453	\$1,431	\$1,619	\$1,593	\$1,701	\$1,700	
	U.S.	\$58,655	\$59,987	\$64,602	\$68,765	\$64,012	\$63,725	\$72,192	\$74,304	\$75,358	\$81,793	\$84,044	
	Ohio as percent of U.S.	2.20%	2.41%	2.24%	2.42%	2.45%	2.28%	1.98%	2.18%	2.11%	2.08%	2.02%	-0.18%
	Concentration ratio - Ohio::U.S.	0.60	0.67	0.64	0.70	0.73	0.68	0.60	0.64	0.62	0.62	0.59	0.00
482	Rail: Ohio	\$973	\$1,054	\$1,176	\$1,143	\$1,296	\$1,139	\$1,243	\$1,329	\$1,469	\$1,519	\$1,587	
	U.S.	\$25,358	\$28,110	\$32,163	\$32,365	\$37,551	\$33,680	\$35,012	\$37,931	\$41,830	\$43,778	\$46,248	
	Ohio as percent of U.S.	3.84%	3.75%	3.66%	3.53%	3.45%	3.38%	3.55%	3.50%	3.51%	3.47%	3.43%	-0.41%
	Concentration ratio - Ohio::U.S.	1.04	1.04	1.04	1.03	1.02	1.01	1.07	1.03	1.03	1.03	1.00	-0.03
483	Water: Ohio	\$145	\$144	\$171	\$143	\$131	\$101	\$116	\$119	\$111	\$126	\$130	
	U.S.	\$9,004	\$9,267	\$13,165	\$14,674	\$16,851	\$16,609	\$15,913	\$15,539	\$14,959	\$17,144	\$18,513	
	Ohio as percent of U.S.	1.61%	1.55%	1.30%	0.97%	0.78%	0.61%	0.73%	0.77%	0.74%	0.73%	0.70%	-0.91%
	Concentration ratio - Ohio::U.S.	0.44	0.43	0.37	0.28	0.23	0.18	0.22	0.23	0.22	0.22	0.21	-0.23
484	Truck: Ohio	\$5,367	\$5,774	\$6,062	\$5,988	\$5,879	\$5,195	\$5,442	\$5,831	\$6,117	\$6,033	\$6,376	
	U.S.	\$109,316	\$116,829	\$125,160	\$123,016	\$119,879	\$109,285	\$113,293	\$121,745	\$128,327	\$128,993	\$135,143	
	Ohio as percent of U.S.	4.91%	4.94%	4.84%	4.87%	4.90%	4.75%	4.80%	4.79%	4.77%	4.68%	4.72%	-0.19%
	Concentration ratio - Ohio::U.S.	1.33	1.37	1.38	1.42	1.45	1.42	1.44	1.41	1.40	1.38	1.38	0.05
485	Transit & ground passengers: Ohio	\$391	\$395	\$443	\$458	\$467	\$470	\$449	\$478	\$498	\$513	\$529	
	U.S.	\$23,125	\$23,634	\$25,938	\$26,290	\$26,888	\$27,244	\$28,046	\$29,516	\$30,587	\$31,466	\$32,673	
	Ohio as percent of U.S.	1.69%	1.67%	1.71%	1.74%	1.74%	1.73%	1.60%	1.62%	1.63%	1.63%	1.62%	-0.07%
	Concentration ratio - Ohio::U.S.	0.46	0.46	0.49	0.51	0.51	0.52	0.48	0.48	0.48	0.48	0.47	0.02
486	Pipelines: Ohio	\$144	\$165	\$189	\$233	\$276	\$257	\$246	\$218	\$235	\$275	\$291	
	U.S.	\$10,903	\$10,136	\$11,022	\$13,357	\$15,868	\$14,018	\$18,710	\$19,417	\$22,367	\$23,435	\$25,650	
	Ohio as percent of U.S.	1.32%	1.63%	1.71%	1.74%	1.74%	1.83%	1.31%	1.12%	1.05%	1.17%	1.13%	-0.19%
	Concentration ratio - Ohio::U.S.	0.36	0.45	0.49	0.51	0.52	0.55	0.39	0.33	0.31	0.35	0.33	-0.03
487-8,	Other modes & support activities: Ohio	\$2,956	\$3,318	\$3,646	\$3,409	\$3,666	\$3,291	\$3,094	\$3,254	\$3,243	\$3,313	\$3,427	
492	U.S.	\$81,209	\$89,081	\$94,747	\$89,861	\$95,775	\$88,407	\$95,722	\$101,823	\$104,897	\$107,463	\$112,310	
	Ohio as percent of U.S.	3.64%	3.72%	3.85%	3.79%	3.83%	3.72%	3.23%	3.20%	3.09%	3.08%	3.05%	-0.59%
	Concentration ratio - Ohio::U.S.	0.99	1.04	1.10	1.10	1.13	1.12	0.97	0.94	0.91	0.91	0.89	-0.09
493	Warehousing & storage: Ohio	\$1,593	\$1,980	\$2,302	\$2,377	\$2,461	\$2,363	\$2,419	\$2,390	\$2,490	\$2,559	\$2,595	
	U.S.	\$33,555	\$38,074	\$40,799	\$41,270	\$45,527	\$45,875	\$46,243	\$46,582	\$49,080	\$49,456	\$51,103	
	Ohio as percent of U.S.	4.75%	5.20%	5.64%	5.76%	5.41%	5.15%	5.23%	5.13%	5.07%	5.17%	5.08%	0.33%
	Concentration ratio - Ohio::U.S.	1.29	1.45	1.61	1.67	1.60	1.54	1.57	1.51	1.49	1.53	1.49	0.20

Note: * - Excludes the U.S. Postal Service (491). Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A6: Comparing Ohio and U.S. GDP by Industry - Transportation and Warehousing, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Transportation and Warehousing in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
48-49*	Transportation* & warehousing: Ohio	\$14,626	\$15,917	\$16,833	\$16,384	\$16,175	\$14,271	\$14,548	\$15,186	\$15,209	\$15,098	\$15,152	\$526	3.6%
	U.S.	\$392,264	\$414,454	\$439,976	\$434,459	\$433,978	\$398,843	\$421,398	\$436,513	\$439,797	\$442,066	\$445,732	\$53,468	13.6%
	Ohio as percent of U.S.	3.73%	3.84%	3.83%	3.77%	3.73%	3.58%	3.45%	3.48%	3.46%	3.42%	3.40%	-0.33%	
	Concentration ratio - Ohio::U.S.	1.01	1.06	1.09	1.09	1.09	1.07	1.03	1.03	1.02	1.01	0.99	-0.01	
481	Air: Ohio	\$1,367	\$1,593	\$1,550	\$1,803	\$1,654	\$1,453	\$1,390	\$1,503	\$1,366	\$1,405	\$1,336	-\$31	-2.3%
	U.S.	\$62,133	\$66,034	\$69,388	\$74,644	\$67,473	\$63,726	\$70,135	\$68,975	\$64,604	\$67,568	\$66,058	\$3,925	6.3%
	Ohio as percent of U.S.	2.20%	2.41%	2.23%	2.42%	2.45%	2.28%	1.98%	2.18%	2.11%	2.08%	2.02%	-0.18%	
	Concentration ratio - Ohio::U.S.	0.60	0.67	0.63	0.70	0.72	0.68	0.59	0.64	0.62	0.62	0.59	0.00	
482	Rail: Ohio	\$1,362	\$1,354	\$1,365	\$1,301	\$1,327	\$1,139	\$1,222	\$1,236	\$1,276	\$1,266	\$1,284	-\$78	-5.7%
	U.S.	\$35,500	\$36,137	\$37,320	\$36,837	\$38,437	\$33,680	\$34,410	\$35,286	\$36,325	\$36,503	\$37,433	\$1,933	5.4%
	Ohio as percent of U.S.	3.84%	3.75%	3.66%	3.53%	3.45%	3.38%	3.55%	3.50%	3.51%	3.47%	3.43%	-0.41%	
	Concentration ratio - Ohio::U.S.	1.04	1.04	1.04	1.02	1.01	1.01	1.06	1.03	1.04	1.03	1.00	-0.04	
483	Water: Ohio	\$69	\$86	\$116	\$114	\$108	\$101	\$102	\$120	\$119	\$144	\$134	\$65	94.2%
	U.S.	\$4,256	\$5,568	\$8,945	\$11,779	\$13,905	\$16,609	\$13,918	\$15,781	\$16,045	\$19,625	\$19,015	\$14,759	346.8%
	Ohio as percent of U.S.	1.62%	1.54%	1.30%	0.97%	0.78%	0.61%	0.73%	0.76%	0.74%	0.73%	0.70%	-0.92%	
	Concentration ratio - Ohio::U.S.	0.44	0.43	0.37	0.28	0.23	0.18	0.22	0.22	0.22	0.22	0.21	-0.23	
484	Truck: Ohio	\$5,993	\$6,239	\$6,472	\$6,309	\$6,046	\$5,195	\$5,755	\$6,211	\$6,315	\$6,025	\$6,095	\$102	1.7%
	U.S.	\$122,068	\$126,229	\$133,617	\$129,623	\$123,273	\$109,285	\$119,805	\$129,663	\$132,479	\$128,813	\$129,190	\$7,122	5.8%
	Ohio as percent of U.S.	4.91%	4.94%	4.84%	4.87%	4.90%	4.75%	4.80%	4.79%	4.77%	4.68%	4.72%	-0.19%	
	Concentration ratio - Ohio::U.S.	1.33	1.37	1.38	1.40	1.44	1.42	1.44	1.41	1.41	1.38	1.38	0.05	
485	Transit & ground passengers: Ohio	\$494	\$486	\$520	\$532	\$522	\$470	\$438	\$456	\$456	\$440	\$449	-\$45	-9.1%
	U.S.	\$29,239	\$29,084	\$30,444	\$30,521	\$30,096	\$27,244	\$27,360	\$28,185	\$27,982	\$27,018	\$27,776	-\$1,463	-5.0%
	Ohio as percent of U.S.	1.69%	1.67%	1.71%	1.74%	1.73%	1.73%	1.60%	1.62%	1.63%	1.63%	1.62%	-0.07%	
	Concentration ratio - Ohio::U.S.	0.46	0.46	0.49	0.50	0.51	0.52	0.48	0.48	0.48	0.48	0.47	0.02	
486	Pipelines: Ohio	\$169	\$207	\$223	\$270	\$338	\$257	\$227	\$199	\$205	\$223	\$230	\$61	36.1%
	U.S.	\$12,785	\$12,737	\$13,041	\$15,440	\$19,481	\$14,018	\$17,315	\$17,723	\$19,498	\$19,044	\$20,221	\$7,436	58.2%
	Ohio as percent of U.S.	1.32%	1.63%	1.71%	1.75%	1.74%	1.83%	1.31%	1.12%	1.05%	1.17%	1.14%	-0.18%	
	Concentration ratio - Ohio::U.S.	0.36	0.45	0.49	0.50	0.51	0.55	0.39	0.33	0.31	0.35	0.33	-0.03	
487-8,	Other modes & support activities: Ohio	\$3,443	\$3,740	\$3,992	\$3,547	\$3,684	\$3,291	\$2,942	\$2,926	\$2,776	\$2,733	\$2,719	-\$724	-21.0%
492	U.S.	\$94,574	\$100,423	\$103,737	\$93,477	\$96,241	\$88,407	\$91,016	\$91,577	\$89,778	\$88,648	\$89,100	-\$5,474	-5.8%
	Ohio as percent of U.S.	3.64%	3.72%	3.85%	3.79%	3.83%	3.72%	3.23%	3.20%	3.09%	3.08%	3.05%	-0.59%	
	Concentration ratio - Ohio::U.S.	0.99	1.03	1.09	1.10	1.12	1.12	0.97	0.94	0.91	0.91	0.89	-0.09	
493	Warehousing & storage: Ohio	\$1,770	\$2,217	\$2,589	\$2,509	\$2,501	\$2,363	\$2,499	\$2,587	\$2,809	\$2,989	\$3,058	\$1,288	72.8%
	U.S.	\$37,302	\$42,641	\$45,889	\$43,555	\$46,257	\$45,875	\$47,781	\$50,417	\$55,383	\$57,772	\$60,214	\$22,912	61.4%
	Ohio as percent of U.S.	4.75%	5.20%	5.64%	5.76%	5.41%	5.15%	5.23%	5.13%	5.07%	5.17%	5.08%	0.33%	
	Concentration ratio - Ohio::U.S.	1.28	1.44	1.60	1.66	1.58	1.54	1.57	1.51	1.50	1.53	1.49	0.20	

Note: * - Excludes the U.S. Postal Service (491). Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A7: Comparing Ohio and U.S. GDP by Industry - Information, 2004-2014

		Dollar figures in millions											Nominal Net Change
2007 NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Information in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
51	Information: Ohio	\$14,102	\$14,529	\$14,058	\$15,024	\$15,311	\$14,663	\$14,858	\$14,772	\$14,447	\$15,682	\$15,266	
	U.S.	\$620,785	\$641,552	\$649,017	\$702,387	\$730,484	\$705,347	\$730,179	\$728,431	\$737,471	\$793,824	\$824,743	
	Ohio as percent of U.S.	2.27%	2.26%	2.17%	2.14%	2.10%	2.08%	2.03%	2.03%	1.96%	1.98%	1.85%	-0.42%
	Concentration ratio - Ohio::U.S.	0.62	0.63	0.62	0.62	0.62	0.62	0.61	0.60	0.58	0.58	0.54	-0.07
511	Publishing (inc. software, exc. Internet): Ohio	\$4,663	\$4,885	\$4,342	\$4,937	\$5,035	\$4,842	\$5,170	\$5,246	\$5,372	\$5,565	\$5,316	
	U.S.	\$160,663	\$172,476	\$161,370	\$190,366	\$187,148	\$175,756	\$182,366	\$188,574	\$194,389	\$200,821	\$210,588	
	Ohio as percent of U.S.	2.90%	2.83%	2.69%	2.59%	2.69%	2.75%	2.83%	2.78%	2.76%	2.77%	2.52%	-0.38%
	Concentration ratio - Ohio::U.S.	0.79	0.79	0.77	0.75	0.80	0.83	0.85	0.82	0.81	0.82	0.74	-0.05
512	Motion pictures & sound recordings: Ohio	\$629	\$501	\$518	\$501	\$546	\$522	\$485	\$464	\$463	\$525	\$558	
	U.S.	\$72,648	\$60,843	\$65,003	\$73,671	\$83,206	\$90,850	\$107,498	\$105,905	\$110,283	\$113,450	\$114,607	
	Ohio as percent of U.S.	0.87%	0.82%	0.80%	0.68%	0.66%	0.57%	0.45%	0.44%	0.42%	0.46%	0.49%	-0.38%
	Concentration ratio - Ohio::U.S.	0.23	0.23	0.23	0.20	0.19	0.17	0.14	0.13	0.12	0.14	0.14	-0.09
515, 517	Broadcasting & telecommunications: Ohio	\$6,851	\$7,331	\$7,276	\$8,275	\$8,273	\$7,944	\$7,847	\$7,688	\$7,372	\$8,140	\$8,008	
	U.S.	\$313,252	\$336,424	\$341,041	\$373,754	\$388,783	\$372,266	\$370,842	\$361,275	\$366,123	\$398,546	\$411,141	
	Ohio as percent of U.S.	2.19%	2.18%	2.13%	2.21%	2.13%	2.13%	2.12%	2.13%	2.01%	2.04%	1.95%	-0.24%
	Concentration ratio - Ohio::U.S.	0.59	0.61	0.61	0.64	0.63	0.64	0.64	0.63	0.59	0.60	0.57	-0.02
518, 519	Data prcsng., hosting, other info. (inc. Internet)	\$1,959	\$1,813	\$1,922	\$1,311	\$1,457	\$1,355	\$1,356	\$1,373	\$1,240	\$1,453	\$1,384	
	U.S.	\$74,223	\$71,809	\$81,603	\$64,596	\$71,346	\$66,476	\$69,472	\$72,677	\$66,676	\$81,006	\$88,408	
	Ohio as percent of U.S.	2.64%	2.52%	2.36%	2.03%	2.04%	2.04%	1.95%	1.89%	1.86%	1.79%	1.57%	-1.07%
	Concentration ratio - Ohio::U.S.	0.71	0.70	0.67	0.59	0.60	0.61	0.59	0.56	0.55	0.53	0.46	-0.26

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A7: Comparing Ohio and U.S. GDP by Industry - Information, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Information in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
51	Information: Ohio	\$13,380	\$14,063	\$13,761	\$14,923	\$15,359	\$14,663	\$14,976	\$14,942	\$14,602	\$15,718	\$15,306	\$1,926	14.4%
	U.S.	\$588,012	\$620,448	\$635,671	\$697,345	\$732,049	\$705,347	\$735,108	\$736,161	\$744,568	\$795,459	\$826,253	\$238,241	40.5%
	Ohio as percent of U.S.	2.28%	2.27%	2.16%	2.14%	2.10%	2.08%	2.04%	2.03%	1.96%	1.98%	1.85%	-0.42%	
	Concentration ratio - Ohio::U.S.	0.62	0.63	0.62	0.62	0.61	0.62	0.61	0.60	0.58	0.58	0.54	-0.07	
511	Publishing (inc. software, exc. Internet): Ohio	\$4,959	\$5,140	\$4,476	\$5,081	\$5,120	\$4,842	\$5,232	\$5,288	\$5,391	\$5,524	\$5,245	\$286	5.8%
	U.S.	\$170,828	\$181,495	\$166,369	\$195,914	\$190,300	\$175,756	\$184,550	\$190,095	\$195,086	\$199,366	\$207,753	\$36,925	21.6%
	Ohio as percent of U.S.	2.90%	2.83%	2.69%	2.59%	2.69%	2.75%	2.84%	2.78%	2.76%	2.77%	2.52%	-0.38%	
	Concentration ratio - Ohio::U.S.	0.79	0.78	0.76	0.75	0.79	0.83	0.85	0.82	0.82	0.82	0.74	-0.05	
512	Motion pictures & sound recordings: Ohio	\$661	\$520	\$533	\$509	\$547	\$522	\$484	\$464	\$460	\$519	\$545	-\$116	-17.5%
	U.S.	\$76,390	\$63,104	\$66,834	\$74,882	\$83,396	\$90,850	\$107,437	\$105,860	\$109,602	\$112,206	\$112,038	\$35,648	46.7%
	Ohio as percent of U.S.	0.87%	0.82%	0.80%	0.68%	0.66%	0.57%	0.45%	0.44%	0.42%	0.46%	0.49%	-0.38%	
	Concentration ratio - Ohio::U.S.	0.23	0.23	0.23	0.20	0.19	0.17	0.14	0.13	0.12	0.14	0.14	-0.09	
515,	Broadcasting & telecommunications: Ohio	\$5,945	\$6,687	\$6,893	\$8,018	\$8,216	\$7,944	\$7,887	\$7,785	\$7,466	\$8,159	\$8,057	\$2,112	35.5%
517	U.S.	\$271,815	\$306,888	\$323,097	\$362,113	\$386,087	\$372,266	\$372,705	\$365,808	\$370,794	\$399,488	\$413,622	\$141,807	52.2%
	Ohio as percent of U.S.	2.19%	2.18%	2.13%	2.21%	2.13%	2.13%	2.12%	2.13%	2.01%	2.04%	1.95%	-0.24%	
	Concentration ratio - Ohio::U.S.	0.59	0.60	0.61	0.64	0.62	0.64	0.63	0.63	0.59	0.60	0.57	-0.02	
518,	Data prcsng., hosting, other info. (inc. Internet)	\$1,935	\$1,779	\$1,870	\$1,317	\$1,478	\$1,355	\$1,374	\$1,406	\$1,283	\$1,521	\$1,465	-\$470	-24.3%
519	U.S.	\$73,309	\$70,463	\$79,366	\$64,875	\$72,346	\$66,476	\$70,396	\$74,439	\$68,968	\$84,799	\$93,597	\$20,288	27.7%
	Ohio as percent of U.S.	2.64%	2.52%	2.36%	2.03%	2.04%	2.04%	1.95%	1.89%	1.86%	1.79%	1.57%	-1.07%	
	Concentration ratio - Ohio::U.S.	0.71	0.70	0.67	0.59	0.60	0.61	0.58	0.56	0.55	0.53	0.46	-0.26	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A8: Comparing Ohio and U.S. GDP by Industry - Finance-Insurance-Real Estate, 2004-2014

		Dollar figures in millions											Nominal
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Net
NAICS	Industry Title												Change
Finance-Insurance-Real Estate in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
52	Finance & insurance: Ohio	\$38,490	\$40,935	\$41,774	\$41,869	\$39,259	\$39,352	\$40,295	\$42,796	\$47,063	\$45,164	\$49,211	
	U.S.	\$890,279	\$991,844	\$1,048,838	\$1,040,521	\$907,226	\$969,254	\$1,005,832	\$1,038,026	\$1,142,684	\$1,150,177	\$1,222,890	
	Ohio as percent of U.S.	4.32%	4.13%	3.98%	4.02%	4.33%	4.06%	4.01%	4.12%	4.12%	3.93%	4.02%	-0.30%
	Concentration ratio - Ohio::U.S.	1.17	1.15	1.14	1.17	1.28	1.22	1.20	1.22	1.21	1.16	1.18	0.01
521-2	Federal reserve/credit intermediation: Ohio	\$23,348	\$24,436	\$24,755	\$23,408	\$23,380	\$22,057	\$21,741	\$23,449	\$25,880	\$23,580	\$24,178	
	U.S.	\$390,442	\$426,193	\$436,701	\$420,460	\$417,408	\$399,458	\$410,157	\$437,783	\$484,085	\$483,174	\$488,004	
	Ohio as percent of U.S.	5.98%	5.73%	5.67%	5.57%	5.60%	5.52%	5.30%	5.36%	5.35%	4.88%	4.95%	-1.03%
	Concentration ratio - Ohio::U.S.	1.62	1.59	1.62	1.62	1.66	1.65	1.59	1.58	1.57	1.44	1.45	-0.17
523	Securities, etc.: Ohio	\$2,104	\$2,464	\$2,681	\$2,376	\$1,613	\$2,368	\$2,553	\$2,601	\$3,025	\$3,249	\$3,539	
	U.S.	\$156,039	\$195,402	\$223,633	\$200,617	\$119,930	\$186,701	\$199,473	\$190,332	\$218,992	\$219,734	\$244,193	
	Ohio as percent of U.S.	1.35%	1.26%	1.20%	1.18%	1.34%	1.27%	1.28%	1.37%	1.38%	1.48%	1.45%	0.10%
	Concentration ratio - Ohio::U.S.	0.37	0.35	0.34	0.34	0.40	0.38	0.38	0.40	0.41	0.44	0.42	0.06
524	Insurance carriers & related activities: Ohio	\$12,760	\$13,768	\$13,990	\$15,760	\$13,960	\$14,646	\$15,523	\$16,160	\$17,335	\$17,662	\$20,772	
	U.S.	\$320,255	\$343,555	\$363,782	\$392,633	\$339,636	\$357,572	\$365,176	\$379,452	\$402,646	\$410,277	\$450,336	
	Ohio as percent of U.S.	3.98%	4.01%	3.85%	4.01%	4.11%	4.10%	4.25%	4.26%	4.31%	4.30%	4.61%	0.63%
	Concentration ratio - Ohio::U.S.	1.08	1.11	1.10	1.17	1.22	1.23	1.28	1.26	1.27	1.27	1.35	0.27
525	Funds-trusts-other financial vehicles: Ohio	\$279	\$267	\$347	\$325	\$306	\$281	\$478	\$587	\$824	\$673	\$722	
	U.S.	\$23,543	\$26,693	\$24,722	\$26,811	\$30,252	\$25,524	\$31,026	\$30,458	\$36,960	\$36,993	\$40,356	
	Ohio as percent of U.S.	1.19%	1.00%	1.40%	1.21%	1.01%	1.10%	1.54%	1.93%	2.23%	1.82%	1.79%	0.60%
	Concentration ratio - Ohio::U.S.	0.32	0.28	0.40	0.35	0.30	0.33	0.46	0.57	0.66	0.54	0.52	0.20
53	Real estate, rental & leasing: Ohio	\$48,124	\$49,570	\$49,884	\$52,834	\$54,345	\$54,949	\$56,614	\$58,933	\$60,995	\$62,182	\$65,045	
	U.S.	\$1,533,974	\$1,649,219	\$1,721,869	\$1,836,585	\$1,897,287	\$1,904,778	\$1,945,721	\$2,014,402	\$2,086,301	\$2,145,282	\$2,247,682	
	Ohio as percent of U.S.	3.14%	3.01%	2.90%	2.88%	2.86%	2.88%	2.91%	2.93%	2.92%	2.90%	2.89%	-0.24%
	Concentration ratio - Ohio::U.S.	0.85	0.84	0.83	0.84	0.85	0.86	0.87	0.86	0.86	0.86	0.85	0.00
531	Real estate: Ohio	\$44,194	\$45,596	\$45,416	\$48,582	\$49,731	\$50,529	\$52,217	\$54,408	\$56,233	\$57,228	\$59,833	
	U.S.	\$1,392,758	\$1,503,645	\$1,551,875	\$1,670,844	\$1,718,954	\$1,740,571	\$1,783,933	\$1,849,196	\$1,908,481	\$1,965,473	\$2,058,953	
	Ohio as percent of U.S.	3.17%	3.03%	2.93%	2.91%	2.89%	2.90%	2.93%	2.94%	2.95%	2.91%	2.91%	-0.27%
	Concentration ratio - Ohio::U.S.	0.86	0.84	0.84	0.85	0.86	0.87	0.88	0.87	0.87	0.86	0.85	-0.01
532-3	Rental & leasing (inc. intangible assets): Ohio	\$3,931	\$3,974	\$4,468	\$4,252	\$4,614	\$4,420	\$4,397	\$4,525	\$4,761	\$4,953	\$5,212	
	U.S.	\$141,216	\$145,574	\$169,995	\$165,741	\$178,333	\$164,207	\$161,788	\$165,206	\$177,820	\$179,809	\$188,729	
	Ohio as percent of U.S.	2.78%	2.73%	2.63%	2.57%	2.59%	2.69%	2.72%	2.74%	2.68%	2.75%	2.76%	-0.02%
	Concentration ratio - Ohio::U.S.	0.75	0.76	0.75	0.75	0.77	0.81	0.82	0.81	0.79	0.82	0.81	0.05

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A8: Comparing Ohio and U.S. GDP by Industry - Finance-Insurance-Real Estate, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Finance-Insurance-Real Estate in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
52	Finance & insurance: Ohio	\$36,575	\$38,188	\$38,361	\$38,043	\$35,852	\$39,352	\$38,755	\$40,473	\$42,530	\$39,278	\$41,369	\$4,794	13.1%
	U.S.	\$870,078	\$947,909	\$988,806	\$962,887	\$837,257	\$969,254	\$968,719	\$977,934	\$1,028,412	\$994,021	\$1,016,665	\$146,587	16.8%
	Ohio as percent of U.S.	4.20%	4.03%	3.88%	3.95%	4.28%	4.06%	4.00%	4.14%	4.14%	3.95%	4.07%	-0.13%	
	Concentration ratio - Ohio::U.S.	1.14	1.12	1.10	1.14	1.25	1.22	1.20	1.22	1.22	1.17	1.19	0.05	
521-2	Federal reserve/credit intermediation: Ohio	\$20,820	\$21,491	\$21,214	\$19,824	\$19,859	\$22,057	\$20,582	\$22,042	\$22,917	\$19,783	\$19,500	-\$1,320	-6.3%
	U.S.	\$348,163	\$374,834	\$374,226	\$356,078	\$354,533	\$399,458	\$388,275	\$411,510	\$428,669	\$405,376	\$393,581	\$45,418	13.0%
	Ohio as percent of U.S.	5.98%	5.73%	5.67%	5.57%	5.60%	5.52%	5.30%	5.36%	5.35%	4.88%	4.95%	-1.03%	
	Concentration ratio - Ohio::U.S.	1.62	1.59	1.61	1.61	1.64	1.65	1.59	1.58	1.58	1.44	1.45	-0.17	
523	Securities, etc.: Ohio	\$2,382	\$2,669	\$2,859	\$2,330	\$1,473	\$2,368	\$2,460	\$2,377	\$2,619	\$2,590	\$2,578	\$196	8.2%
	U.S.	\$176,722	\$211,698	\$238,485	\$196,756	\$109,565	\$186,701	\$192,176	\$174,002	\$189,653	\$175,172	\$177,904	\$1,182	0.7%
	Ohio as percent of U.S.	1.35%	1.26%	1.20%	1.18%	1.34%	1.27%	1.28%	1.37%	1.38%	1.48%	1.45%	0.10%	
	Concentration ratio - Ohio::U.S.	0.36	0.35	0.34	0.34	0.39	0.38	0.38	0.40	0.41	0.44	0.42	0.06	
524	Insurance carriers & related activities: Ohio	\$13,111	\$13,833	\$14,085	\$15,885	\$14,324	\$14,646	\$15,289	\$15,508	\$16,283	\$16,362	\$18,833	\$5,722	43.6%
	U.S.	\$329,071	\$345,173	\$366,236	\$395,742	\$348,501	\$357,572	\$359,654	\$364,134	\$378,194	\$380,070	\$408,302	\$79,231	24.1%
	Ohio as percent of U.S.	3.98%	4.01%	3.85%	4.01%	4.11%	4.10%	4.25%	4.26%	4.31%	4.30%	4.61%	0.63%	
	Concentration ratio - Ohio::U.S.	1.08	1.11	1.09	1.16	1.20	1.23	1.27	1.25	1.27	1.27	1.35	0.27	
525	Funds-trusts-other financial vehicles: Ohio	\$205	\$195	\$253	\$264	\$258	\$281	\$441	\$550	\$708	\$634	\$741	\$536	261.5%
	U.S.	\$17,347	\$19,532	\$18,017	\$21,783	\$25,533	\$25,524	\$28,676	\$28,525	\$31,762	\$34,830	\$41,421	\$24,074	138.8%
	Ohio as percent of U.S.	1.18%	1.00%	1.40%	1.21%	1.01%	1.10%	1.54%	1.93%	2.23%	1.82%	1.79%	0.61%	
	Concentration ratio - Ohio::U.S.	0.32	0.28	0.40	0.35	0.30	0.33	0.46	0.57	0.66	0.54	0.52	0.20	
53	Real estate, rental & leasing: Ohio	\$53,261	\$53,694	\$52,600	\$54,587	\$55,287	\$54,949	\$56,947	\$58,781	\$59,646	\$59,469	\$60,779	\$7,518	14.1%
	U.S.	\$1,698,459	\$1,787,088	\$1,816,329	\$1,898,232	\$1,930,548	\$1,904,778	\$1,957,143	\$2,009,174	\$2,040,280	\$2,051,985	\$2,100,731	\$402,272	23.7%
	Ohio as percent of U.S.	3.14%	3.00%	2.90%	2.88%	2.86%	2.88%	2.91%	2.93%	2.92%	2.90%	2.89%	-0.24%	
	Concentration ratio - Ohio::U.S.	0.85	0.83	0.82	0.83	0.84	0.86	0.87	0.86	0.86	0.86	0.85	0.00	
531	Real estate: Ohio	\$48,723	\$49,221	\$47,719	\$50,022	\$50,492	\$50,529	\$52,533	\$54,275	\$54,951	\$54,627	\$55,699	\$6,976	14.3%
	U.S.	\$1,535,497	\$1,623,183	\$1,630,556	\$1,720,363	\$1,745,253	\$1,740,571	\$1,794,743	\$1,844,696	\$1,864,970	\$1,876,126	\$1,916,693	\$381,196	24.8%
	Ohio as percent of U.S.	3.17%	3.03%	2.93%	2.91%	2.89%	2.90%	2.93%	2.94%	2.95%	2.91%	2.91%	-0.27%	
	Concentration ratio - Ohio::U.S.	0.86	0.84	0.83	0.84	0.85	0.87	0.88	0.87	0.87	0.86	0.85	-0.01	
532-3	Rental & leasing (inc. intangible assets): Ohio	\$4,541	\$4,471	\$4,901	\$4,564	\$4,799	\$4,420	\$4,414	\$4,506	\$4,695	\$4,846	\$5,088	\$547	12.0%
	U.S.	\$163,145	\$163,771	\$186,471	\$177,903	\$185,474	\$164,207	\$162,410	\$164,494	\$175,358	\$175,900	\$184,224	\$21,079	12.9%
	Ohio as percent of U.S.	2.78%	2.73%	2.63%	2.57%	2.59%	2.69%	2.72%	2.74%	2.68%	2.75%	2.76%	-0.02%	
	Concentration ratio - Ohio::U.S.	0.75	0.76	0.75	0.74	0.76	0.81	0.81	0.81	0.79	0.82	0.81	0.05	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A9: Comparing Ohio and U.S. GDP by Industry - Professional/Business Services, 2004-2014

2007		Dollar figures in millions											Nominal Net Change
NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Professional/Business Services in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
54	Prfsnl.-scntfc.-tchncl. srvcs.: Ohio	\$21,573	\$22,423	\$23,840	\$25,300	\$27,426	\$26,187	\$26,598	\$28,358	\$28,313	\$28,576	\$29,557	
	U.S.	\$787,405	\$842,818	\$903,735	\$967,317	\$1,053,337	\$1,000,361	\$1,022,001	\$1,074,069	\$1,128,761	\$1,136,616	\$1,192,973	
	Ohio as percent of U.S.	2.74%	2.66%	2.64%	2.62%	2.60%	2.62%	2.60%	2.64%	2.51%	2.51%	2.48%	-0.26%
	Concentration ratio - Ohio::U.S.	0.74	0.74	0.75	0.76	0.77	0.78	0.78	0.78	0.74	0.74	0.73	-0.02
5411	Legal srvcs.: Ohio	\$4,574	\$4,570	\$4,752	\$5,011	\$5,615	\$5,055	\$4,802	\$5,027	\$5,036	\$4,947	\$4,944	
	U.S.	\$180,865	\$193,891	\$202,928	\$215,331	\$238,106	\$213,934	\$206,249	\$217,826	\$219,983	\$218,746	\$221,091	
	Ohio as percent of U.S.	2.53%	2.36%	2.34%	2.33%	2.36%	2.36%	2.33%	2.31%	2.29%	2.26%	2.24%	-0.29%
	Concentration ratio - Ohio::U.S.	0.68	0.66	0.67	0.68	0.70	0.71	0.70	0.68	0.67	0.67	0.65	-0.03
5415	Computer systems & related srvcs.: Ohio	\$3,692	\$4,001	\$4,511	\$5,206	\$5,569	\$5,659	\$5,864	\$6,493	\$6,001	\$6,207	\$6,526	
	U.S.	\$122,975	\$134,958	\$149,018	\$167,141	\$177,472	\$180,391	\$189,914	\$206,973	\$229,384	\$232,193	\$249,456	
	Ohio as percent of U.S.	3.00%	2.96%	3.03%	3.11%	3.14%	3.14%	3.09%	3.14%	2.62%	2.67%	2.62%	-0.39%
	Concentration ratio - Ohio::U.S.	0.81	0.82	0.87	0.91	0.93	0.94	0.93	0.93	0.77	0.79	0.77	-0.05
5412-4,	Other prfsnl.-scntfc.-tchncl. srvcs.: Ohio	\$13,307	\$13,852	\$14,578	\$15,083	\$16,242	\$15,472	\$15,932	\$16,838	\$17,277	\$17,423	\$18,087	
5416-9	U.S.	\$483,565	\$513,969	\$551,789	\$584,845	\$637,759	\$606,036	\$625,838	\$649,270	\$679,395	\$685,678	\$722,426	
	Ohio as percent of U.S.	2.75%	2.70%	2.64%	2.58%	2.55%	2.55%	2.55%	2.59%	2.54%	2.54%	2.50%	-0.25%
	Concentration ratio - Ohio::U.S.	0.75	0.75	0.76	0.75	0.75	0.76	0.76	0.77	0.75	0.75	0.73	-0.01
55	Enterprise mgt.: Ohio	\$11,286	\$12,490	\$13,586	\$13,926	\$14,414	\$13,484	\$14,628	\$15,493	\$19,055	\$19,823	\$20,869	
	U.S.	\$206,668	\$219,345	\$238,491	\$259,539	\$261,516	\$247,136	\$268,205	\$281,044	\$304,281	\$322,016	\$337,950	
	Ohio as percent of U.S.	5.46%	5.69%	5.70%	5.37%	5.51%	5.46%	5.45%	5.51%	6.26%	6.16%	6.18%	0.71%
	Concentration ratio - Ohio::U.S.	1.48	1.58	1.63	1.56	1.63	1.63	1.64	1.63	1.84	1.82	1.81	0.33
56	Administrative & waste mgt. srvcs.: Ohio	\$12,656	\$13,664	\$14,060	\$15,205	\$15,599	\$14,545	\$15,280	\$16,155	\$17,160	\$17,877	\$19,057	
	U.S.	\$346,464	\$380,548	\$399,359	\$430,362	\$438,237	\$413,636	\$439,508	\$457,515	\$479,550	\$493,845	\$526,035	
	Ohio as percent of U.S.	3.65%	3.59%	3.52%	3.53%	3.56%	3.52%	3.48%	3.53%	3.58%	3.62%	3.62%	-0.03%
	Concentration ratio - Ohio::U.S.	0.99	1.00	1.01	1.03	1.05	1.05	1.04	1.04	1.05	1.07	1.06	0.07
561	Administrative & support srvcs.: Ohio	\$11,219	\$12,237	\$12,773	\$13,906	\$14,297	\$13,225	\$13,727	\$14,767	\$15,748	\$16,197	\$17,306	
	U.S.	\$314,078	\$346,586	\$367,414	\$394,722	\$401,950	\$376,448	\$393,992	\$417,753	\$439,897	\$452,961	\$483,023	
	Ohio as percent of U.S.	3.57%	3.53%	3.48%	3.52%	3.56%	3.51%	3.48%	3.53%	3.58%	3.58%	3.58%	0.01%
	Concentration ratio - Ohio::U.S.	0.97	0.98	0.99	1.02	1.05	1.05	1.05	1.04	1.05	1.06	1.05	0.08
562	Waste mgt. & remediation srvcs.: Ohio	\$1,437	\$1,427	\$1,287	\$1,300	\$1,302	\$1,319	\$1,553	\$1,388	\$1,412	\$1,680	\$1,751	
	U.S.	\$32,385	\$33,963	\$31,945	\$35,641	\$36,287	\$37,187	\$45,516	\$39,762	\$39,653	\$40,884	\$43,012	
	Ohio as percent of U.S.	4.44%	4.20%	4.03%	3.65%	3.59%	3.55%	3.41%	3.49%	3.56%	4.11%	4.07%	-0.37%
	Concentration ratio - Ohio::U.S.	1.20	1.17	1.15	1.06	1.06	1.06	1.02	1.03	1.05	1.22	1.19	-0.01

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A9: Comparing Ohio and U.S. GDP by Industry - Professional/Business Services, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Professional/Business Services in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
54	Prfsnl.-scntfc.-tchncl. svcs.: Ohio	\$24,533	\$24,577	\$25,263	\$25,876	\$27,723	\$26,187	\$26,311	\$27,696	\$27,223	\$27,054	\$27,568	\$3,035	12.4%
	U.S.	\$900,075	\$926,953	\$960,283	\$990,792	\$1,065,538	\$1,000,361	\$1,009,357	\$1,046,074	\$1,081,384	\$1,071,534	\$1,107,205	\$207,130	23.0%
	Ohio as percent of U.S.	2.73%	2.65%	2.63%	2.61%	2.60%	2.62%	2.61%	2.65%	2.52%	2.52%	2.49%	-0.24%	
	Concentration ratio - Ohio::U.S.	0.74	0.73	0.75	0.75	0.76	0.78	0.78	0.78	0.74	0.75	0.73	-0.01	
5411	Legal svcs.: Ohio	\$5,734	\$5,265	\$5,254	\$5,265	\$5,716	\$5,055	\$4,615	\$4,609	\$4,451	\$4,192	\$4,022	-\$1,712	-29.9%
	U.S.	\$226,730	\$223,421	\$224,394	\$226,246	\$242,394	\$213,934	\$198,190	\$199,696	\$194,425	\$185,366	\$179,854	-\$46,876	-20.7%
	Ohio as percent of U.S.	2.53%	2.36%	2.34%	2.33%	2.36%	2.36%	2.31%	2.31%	2.29%	2.26%	2.24%	-0.29%	
	Concentration ratio - Ohio::U.S.	0.68	0.65	0.67	0.67	0.69	0.71	0.70	0.68	0.68	0.67	0.65	-0.03	
5415	Computer systems & related svcs.: Ohio	\$3,718	\$4,054	\$4,527	\$5,193	\$5,542	\$5,659	\$5,961	\$6,603	\$6,106	\$6,289	\$6,650	\$2,932	78.9%
	U.S.	\$123,871	\$136,742	\$149,542	\$166,712	\$176,617	\$180,391	\$193,048	\$210,490	\$233,405	\$235,268	\$254,215	\$130,344	105.2%
	Ohio as percent of U.S.	3.00%	2.96%	3.03%	3.11%	3.14%	3.14%	3.09%	3.14%	2.62%	2.67%	2.62%	-0.39%	
	Concentration ratio - Ohio::U.S.	0.81	0.82	0.86	0.90	0.92	0.94	0.93	0.92	0.77	0.79	0.77	-0.05	
5412-4, 5416-9	Other prfsnl.-scntfc.-tchncl. svcs.: Ohio	\$15,210	\$15,320	\$15,512	\$15,421	\$16,470	\$15,472	\$15,746	\$16,518	\$16,689	\$16,633	\$17,009	\$1,799	11.8%
	U.S.	\$552,688	\$568,412	\$587,157	\$597,961	\$646,711	\$606,036	\$618,515	\$636,909	\$656,269	\$654,604	\$679,367	\$126,679	22.9%
	Ohio as percent of U.S.	2.75%	2.70%	2.64%	2.58%	2.55%	2.55%	2.55%	2.59%	2.54%	2.54%	2.50%	-0.25%	
	Concentration ratio - Ohio::U.S.	0.75	0.75	0.75	0.74	0.75	0.76	0.76	0.76	0.75	0.75	0.73	-0.01	
55	Enterprise mgt.: Ohio	\$14,968	\$15,725	\$15,871	\$14,561	\$14,881	\$13,484	\$14,510	\$15,307	\$18,699	\$19,311	\$20,711	\$5,743	38.4%
	U.S.	\$274,084	\$276,145	\$278,599	\$271,382	\$269,995	\$247,136	\$266,045	\$277,669	\$298,597	\$313,703	\$335,393	\$61,309	22.4%
	Ohio as percent of U.S.	5.46%	5.69%	5.70%	5.37%	5.51%	5.46%	5.45%	5.51%	6.26%	6.16%	6.18%	0.71%	
	Concentration ratio - Ohio::U.S.	1.48	1.58	1.62	1.55	1.61	1.63	1.63	1.62	1.85	1.82	1.81	0.33	
56	Administrative & waste mgt. svcs.: Ohio	\$13,756	\$14,759	\$14,804	\$15,524	\$15,748	\$14,545	\$15,396	\$16,222	\$17,052	\$17,485	\$18,248	\$4,492	32.7%
	U.S.	\$376,690	\$411,079	\$420,459	\$439,358	\$442,402	\$413,636	\$442,840	\$459,380	\$476,522	\$483,017	\$503,816	\$127,126	33.7%
	Ohio as percent of U.S.	3.65%	3.59%	3.52%	3.53%	3.56%	3.52%	3.48%	3.53%	3.58%	3.62%	3.62%	-0.03%	
	Concentration ratio - Ohio::U.S.	0.99	0.99	1.00	1.02	1.04	1.05	1.04	1.04	1.06	1.07	1.06	0.07	
561	Administrative & support svcs.: Ohio	\$12,186	\$13,193	\$13,405	\$14,157	\$14,417	\$13,225	\$13,883	\$14,901	\$15,728	\$15,941	\$16,706	\$4,520	37.1%
	U.S.	\$341,159	\$373,658	\$385,590	\$401,846	\$405,340	\$376,449	\$398,456	\$421,549	\$439,351	\$445,788	\$466,283	\$125,124	36.7%
	Ohio as percent of U.S.	3.57%	3.53%	3.48%	3.52%	3.56%	3.51%	3.48%	3.53%	3.58%	3.58%	3.58%	0.01%	
	Concentration ratio - Ohio::U.S.	0.97	0.98	0.99	1.02	1.04	1.05	1.04	1.04	1.06	1.06	1.05	0.08	
562	Waste mgt. & remediation svcs.: Ohio	\$1,580	\$1,576	\$1,404	\$1,368	\$1,330	\$1,319	\$1,511	\$1,330	\$1,337	\$1,547	\$1,550	-\$30	-1.9%
	U.S.	\$35,615	\$37,487	\$34,833	\$37,516	\$37,051	\$37,187	\$44,298	\$38,108	\$37,564	\$37,653	\$38,071	\$2,456	6.9%
	Ohio as percent of U.S.	4.44%	4.20%	4.03%	3.65%	3.59%	3.55%	3.41%	3.49%	3.56%	4.11%	4.07%	-0.36%	
	Concentration ratio - Ohio::U.S.	1.20	1.16	1.15	1.05	1.05	1.06	1.02	1.03	1.05	1.22	1.19	-0.01	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A10: Comparing Ohio and U.S. GDP by Industry - Education-Health-Social Assistance, 2004-2014

		Dollar figures in millions											Nominal Net Change
2007 NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Education-Health-Social Assistance in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
61	Educational svcs.: Ohio	\$3,444	\$3,585	\$3,914	\$4,048	\$4,322	\$4,651	\$4,765	\$4,906	\$4,954	\$4,821	\$4,988	
	U.S.	\$116,747	\$121,000	\$129,910	\$138,670	\$149,285	\$162,991	\$169,271	\$175,464	\$183,029	\$184,696	\$192,772	
	Ohio as percent of U.S.	2.95%	2.96%	3.01%	2.92%	2.90%	2.85%	2.82%	2.80%	2.71%	2.61%	2.59%	-0.36%
	Concentration ratio - Ohio::U.S.	0.80	0.82	0.86	0.85	0.86	0.86	0.85	0.83	0.80	0.77	0.76	-0.04
62	Health care & social assistance: Ohio	\$33,957	\$35,321	\$37,909	\$38,775	\$40,978	\$42,384	\$43,119	\$44,371	\$45,957	\$48,012	\$49,193	
	U.S.	\$788,841	\$828,880	\$883,002	\$925,919	\$996,023	\$1,051,042	\$1,079,189	\$1,111,578	\$1,153,783	\$1,188,527	\$1,226,867	
	Ohio as percent of U.S.	4.30%	4.26%	4.29%	4.19%	4.11%	4.03%	4.00%	3.99%	3.98%	4.04%	4.01%	-0.30%
	Concentration ratio - Ohio::U.S.	1.17	1.19	1.23	1.22	1.22	1.21	1.20	1.18	1.17	1.20	1.17	0.01
621	Ambulatory health care svcs.: Ohio	\$14,783	\$15,477	\$16,478	\$16,771	\$17,637	\$18,346	\$18,618	\$19,233	\$20,050	\$20,808	\$21,515	
	U.S.	\$377,031	\$398,480	\$424,555	\$443,395	\$475,849	\$498,278	\$517,567	\$535,993	\$551,503	\$571,360	\$590,771	
	Ohio as percent of U.S.	3.92%	3.88%	3.88%	3.78%	3.71%	3.68%	3.60%	3.59%	3.64%	3.64%	3.64%	-0.28%
	Concentration ratio - Ohio::U.S.	1.06	1.08	1.11	1.10	1.10	1.10	1.08	1.06	1.07	1.08	1.07	0.00
622-3	Hospitals-nursing-residential care facilities: O	\$16,975	\$17,493	\$18,859	\$19,313	\$20,444	\$21,086	\$21,478	\$22,105	\$22,781	\$23,891	\$24,195	
	U.S.	\$343,878	\$357,810	\$381,624	\$402,093	\$434,131	\$463,700	\$469,956	\$484,354	\$503,591	\$512,803	\$526,301	
	Ohio as percent of U.S.	4.94%	4.89%	4.94%	4.80%	4.71%	4.55%	4.57%	4.56%	4.52%	4.66%	4.60%	-0.34%
	Concentration ratio - Ohio::U.S.	1.34	1.36	1.41	1.40	1.39	1.36	1.37	1.35	1.33	1.38	1.35	0.01
624	Social assistance: Ohio	\$2,198	\$2,351	\$2,572	\$2,691	\$2,897	\$2,952	\$3,022	\$3,034	\$3,125	\$3,313	\$3,483	
	U.S.	\$67,931	\$72,590	\$76,823	\$80,431	\$86,044	\$89,065	\$91,666	\$91,231	\$98,688	\$104,364	\$109,796	
	Ohio as percent of U.S.	3.24%	3.24%	3.35%	3.35%	3.37%	3.31%	3.30%	3.33%	3.17%	3.17%	3.17%	-0.06%
	Concentration ratio - Ohio::U.S.	0.88	0.90	0.96	0.97	1.00	0.99	0.99	0.98	0.93	0.94	0.93	0.05

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A10: Comparing Ohio and U.S. GDP by Industry - Education-Health-Social Assistance, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Education-Health-Social Assistance in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
61	Educational svcs.: Ohio	\$4,235	\$4,239	\$4,414	\$4,369	\$4,504	\$4,651	\$4,640	\$4,645	\$4,537	\$4,286	\$4,330	\$95	2.2%
	U.S.	\$143,583	\$143,072	\$146,491	\$149,666	\$155,558	\$162,991	\$164,815	\$166,146	\$167,601	\$164,202	\$167,361	\$23,778	16.6%
	Ohio as percent of U.S.	2.95%	2.96%	3.01%	2.92%	2.90%	2.85%	2.82%	2.80%	2.71%	2.61%	2.59%	-0.36%	
	Concentration ratio - Ohio::U.S.	0.80	0.82	0.86	0.84	0.85	0.86	0.84	0.82	0.80	0.77	0.76	-0.04	
62	Health care & social assistance: Ohio	\$39,446	\$39,822	\$41,708	\$41,014	\$42,485	\$42,384	\$42,195	\$42,873	\$43,650	\$45,134	\$45,766	\$6,320	16.0%
	U.S.	\$914,354	\$932,834	\$970,838	\$978,342	\$1,032,223	\$1,051,042	\$1,055,731	\$1,073,674	\$1,095,808	\$1,117,508	\$1,141,694	\$227,340	24.9%
	Ohio as percent of U.S.	4.31%	4.27%	4.30%	4.19%	4.12%	4.03%	4.00%	3.99%	3.98%	4.04%	4.01%	-0.31%	
	Concentration ratio - Ohio::U.S.	1.17	1.18	1.22	1.21	1.21	1.21	1.20	1.18	1.18	1.19	1.17	0.00	
621	Ambulatory health care svcs.: Ohio	\$16,758	\$17,140	\$18,057	\$17,580	\$18,239	\$18,346	\$18,168	\$18,580	\$19,084	\$19,745	\$20,288	\$3,530	21.1%
	U.S.	\$427,407	\$441,308	\$465,214	\$464,789	\$492,096	\$498,278	\$505,043	\$517,790	\$524,927	\$542,169	\$557,090	\$129,683	30.3%
	Ohio as percent of U.S.	3.92%	3.88%	3.88%	3.78%	3.71%	3.68%	3.60%	3.59%	3.64%	3.64%	3.64%	-0.28%	
	Concentration ratio - Ohio::U.S.	1.06	1.08	1.10	1.09	1.09	1.10	1.08	1.06	1.07	1.08	1.07	0.00	
622-3	Hospitals-nursing-residential care facilities: O	\$20,131	\$20,037	\$20,853	\$20,608	\$21,265	\$21,086	\$21,076	\$21,408	\$21,634	\$22,368	\$22,377	\$2,246	11.2%
	U.S.	\$407,806	\$409,858	\$421,985	\$429,037	\$451,578	\$463,700	\$461,157	\$469,093	\$478,229	\$480,111	\$486,763	\$78,957	19.4%
	Ohio as percent of U.S.	4.94%	4.89%	4.94%	4.80%	4.71%	4.55%	4.57%	4.56%	4.52%	4.66%	4.60%	-0.34%	
	Concentration ratio - Ohio::U.S.	1.34	1.35	1.40	1.39	1.38	1.36	1.37	1.34	1.33	1.38	1.35	0.01	
624	Social assistance: Ohio	\$2,570	\$2,647	\$2,798	\$2,828	\$2,981	\$2,952	\$2,951	\$2,887	\$2,933	\$3,023	\$3,105	\$535	20.8%
	U.S.	\$79,407	\$81,716	\$83,585	\$84,514	\$88,534	\$89,065	\$89,517	\$86,808	\$92,610	\$95,223	\$97,869	\$18,462	23.2%
	Ohio as percent of U.S.	3.24%	3.24%	3.35%	3.35%	3.37%	3.31%	3.30%	3.33%	3.17%	3.17%	3.17%	-0.06%	
	Concentration ratio - Ohio::U.S.	0.88	0.90	0.95	0.97	0.99	0.99	0.99	0.98	0.93	0.94	0.93	0.05	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A11: Comparing Ohio and U.S. GDP by Industry - Leisure and Hospitality, 2004-2014

		Dollar figures in millions											Nominal Net Change
2007 NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
Leisure and Hospitality in Current Dollars													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
71	Arts-entertainment-recreation: Ohio	\$3,474	\$3,548	\$3,679	\$3,867	\$3,797	\$3,761	\$3,864	\$3,853	\$4,396	\$4,864	\$5,248	
	U.S.	\$117,987	\$122,261	\$130,279	\$137,638	\$140,134	\$138,842	\$144,446	\$147,482	\$157,003	\$164,301	\$172,351	
	Ohio as percent of U.S.	2.94%	2.90%	2.82%	2.81%	2.71%	2.71%	2.68%	2.61%	2.80%	2.96%	3.04%	0.10%
	Concentration ratio - Ohio::U.S.	0.80	0.81	0.81	0.82	0.80	0.81	0.80	0.77	0.82	0.88	0.89	0.09
711-2	Performing arts, museums etc.: Ohio	\$1,918	\$1,986	\$2,136	\$2,233	\$2,234	\$2,241	\$2,233	\$2,156	\$2,319	\$2,429	\$2,687	
	U.S.	\$64,811	\$66,786	\$73,063	\$74,966	\$78,174	\$78,762	\$78,767	\$80,642	\$85,355	\$88,860	\$93,436	
	Ohio as percent of U.S.	2.96%	2.97%	2.92%	2.98%	2.86%	2.85%	2.83%	2.67%	2.72%	2.73%	2.88%	-0.08%
	Concentration ratio - Ohio::U.S.	0.80	0.83	0.84	0.87	0.85	0.85	0.85	0.79	0.80	0.81	0.84	0.04
713	Amusements-gambling-recreation: Ohio	\$1,556	\$1,562	\$1,544	\$1,634	\$1,563	\$1,520	\$1,632	\$1,697	\$2,077	\$2,435	\$2,561	
	U.S.	\$53,175	\$55,475	\$57,217	\$62,672	\$61,959	\$60,081	\$65,679	\$66,840	\$71,648	\$75,441	\$78,915	
	Ohio as percent of U.S.	2.93%	2.82%	2.70%	2.61%	2.52%	2.53%	2.48%	2.54%	2.90%	3.23%	3.25%	0.32%
	Concentration ratio - Ohio::U.S.	0.79	0.78	0.77	0.76	0.75	0.76	0.75	0.75	0.85	0.96	0.95	0.16
72	Accommodation & food svcs.: Ohio	\$10,553	\$10,697	\$10,878	\$11,233	\$11,033	\$10,980	\$11,246	\$11,618	\$12,388	\$13,026	\$13,658	
	U.S.	\$343,460	\$359,009	\$379,695	\$394,467	\$394,930	\$383,462	\$396,225	\$413,899	\$439,885	\$461,355	\$487,987	
	Ohio as percent of U.S.	3.07%	2.98%	2.86%	2.85%	2.79%	2.86%	2.84%	2.81%	2.82%	2.82%	2.80%	-0.27%
	Concentration ratio - Ohio::U.S.	0.83	0.83	0.82	0.83	0.83	0.86	0.85	0.83	0.83	0.84	0.82	-0.01
721	Accommodation: Ohio	\$1,640	\$1,653	\$1,672	\$1,772	\$1,735	\$1,499	\$1,568	\$1,681	\$1,807	\$1,992	\$2,107	
	U.S.	\$102,574	\$109,044	\$115,762	\$124,078	\$122,725	\$106,640	\$110,687	\$119,889	\$126,103	\$135,059	\$141,939	
	Ohio as percent of U.S.	1.60%	1.52%	1.44%	1.43%	1.41%	1.41%	1.42%	1.40%	1.43%	1.47%	1.48%	-0.11%
	Concentration ratio - Ohio::U.S.	0.43	0.42	0.41	0.42	0.42	0.42	0.43	0.41	0.42	0.44	0.43	0.00
722	Food svcs. & drinking places: Ohio	\$8,913	\$9,044	\$9,206	\$9,461	\$9,298	\$9,481	\$9,678	\$9,937	\$10,581	\$11,034	\$11,551	
	U.S.	\$240,886	\$249,965	\$263,933	\$270,390	\$272,205	\$276,822	\$285,538	\$294,010	\$313,782	\$326,297	\$346,048	
	Ohio as percent of U.S.	3.70%	3.62%	3.49%	3.50%	3.42%	3.42%	3.39%	3.38%	3.37%	3.38%	3.34%	-0.36%
	Concentration ratio - Ohio::U.S.	1.00	1.01	1.00	1.02	1.01	1.03	1.02	1.00	0.99	1.00	0.98	-0.02

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A11: Comparing Ohio and U.S. GDP by Industry - Leisure and Hospitality, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Leisure and Hospitality in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
71	Arts-entertainment-recreation: Ohio	\$4,053	\$4,005	\$4,016	\$4,057	\$3,896	\$3,761	\$3,874	\$3,859	\$4,272	\$4,650	\$4,926	\$873	21.5%
	U.S.	\$137,475	\$137,867	\$142,066	\$144,300	\$143,770	\$138,842	\$144,904	\$147,798	\$152,691	\$157,198	\$161,848	\$24,373	17.7%
	Ohio as percent of U.S.	2.95%	2.90%	2.83%	2.81%	2.71%	2.71%	2.67%	2.61%	2.80%	2.96%	3.04%	0.10%	
	Concentration ratio - Ohio::U.S.	0.80	0.80	0.80	0.81	0.79	0.81	0.80	0.77	0.83	0.88	0.89	0.09	
711-2	Performing arts, museums etc.: Ohio	\$2,309	\$2,276	\$2,359	\$2,360	\$2,290	\$2,241	\$2,219	\$2,136	\$2,239	\$2,308	\$2,496	\$187	8.1%
	U.S.	\$77,996	\$76,525	\$80,703	\$79,258	\$80,118	\$78,762	\$78,285	\$79,889	\$82,393	\$84,452	\$86,781	\$8,785	11.3%
	Ohio as percent of U.S.	2.96%	2.97%	2.92%	2.98%	2.86%	2.85%	2.83%	2.67%	2.72%	2.73%	2.88%	-0.08%	
	Concentration ratio - Ohio::U.S.	0.80	0.82	0.83	0.86	0.84	0.85	0.85	0.79	0.80	0.81	0.84	0.04	
713	Amusements-gambling-recreation: Ohio	\$1,743	\$1,727	\$1,657	\$1,696	\$1,606	\$1,520	\$1,656	\$1,726	\$2,039	\$2,350	\$2,438	\$695	39.9%
	U.S.	\$59,566	\$61,341	\$61,420	\$65,036	\$63,655	\$60,081	\$66,667	\$67,957	\$70,351	\$72,807	\$75,133	\$15,567	26.1%
	Ohio as percent of U.S.	2.93%	2.82%	2.70%	2.61%	2.52%	2.53%	2.48%	2.54%	2.90%	3.23%	3.24%	0.32%	
	Concentration ratio - Ohio::U.S.	0.79	0.78	0.77	0.75	0.74	0.76	0.74	0.75	0.85	0.96	0.95	0.16	
72	Accommodation & food svcs.: Ohio	\$13,043	\$12,742	\$12,509	\$12,412	\$11,762	\$10,980	\$11,232	\$11,657	\$11,931	\$12,177	\$12,469	-\$574	-4.4%
	U.S.	\$420,266	\$421,724	\$430,233	\$428,649	\$414,938	\$383,462	\$396,367	\$414,702	\$423,638	\$431,667	\$444,742	\$24,476	5.8%
	Ohio as percent of U.S.	3.10%	3.02%	2.91%	2.90%	2.83%	2.86%	2.83%	2.81%	2.82%	2.82%	2.80%	-0.30%	
	Concentration ratio - Ohio::U.S.	0.84	0.84	0.83	0.84	0.83	0.86	0.85	0.83	0.83	0.83	0.82	-0.02	
721	Accommodation: Ohio	\$1,913	\$1,817	\$1,766	\$1,780	\$1,701	\$1,499	\$1,583	\$1,672	\$1,739	\$1,872	\$1,904	-\$9	-0.5%
	U.S.	\$119,637	\$119,856	\$122,281	\$124,597	\$120,316	\$106,640	\$111,689	\$119,254	\$121,390	\$126,938	\$128,247	\$8,610	7.2%
	Ohio as percent of U.S.	1.60%	1.52%	1.44%	1.43%	1.41%	1.41%	1.42%	1.40%	1.43%	1.47%	1.48%	-0.11%	
	Concentration ratio - Ohio::U.S.	0.43	0.42	0.41	0.41	0.41	0.42	0.42	0.41	0.42	0.44	0.43	0.00	
722	Food svcs. & drinking places: Ohio	\$11,123	\$10,923	\$10,742	\$10,628	\$10,056	\$9,481	\$9,649	\$9,986	\$10,192	\$10,305	\$10,566	-\$557	-5.0%
	U.S.	\$300,634	\$301,889	\$307,973	\$303,764	\$294,376	\$276,822	\$284,688	\$295,461	\$302,263	\$304,753	\$316,527	\$15,893	5.3%
	Ohio as percent of U.S.	3.70%	3.62%	3.49%	3.50%	3.42%	3.42%	3.39%	3.38%	3.37%	3.38%	3.34%	-0.36%	
	Concentration ratio - Ohio::U.S.	1.00	1.00	0.99	1.01	1.00	1.03	1.02	1.00	0.99	1.00	0.98	-0.03	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A12: Comparing Ohio and U.S. GDP by Industry - Government, 2004-2014

2007 NAICS	Industry Title	Dollar figures in millions										Nominal Net Change	
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		2014
<u>Government in Current Dollars</u>													
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	-0.28%
92, 491*	Government, all levels: Ohio	\$52,677	\$54,243	\$55,826	\$57,795	\$59,827	\$60,780	\$63,609	\$63,599	\$65,122	\$65,332	\$66,432	
	U.S.	\$1,579,006	\$1,656,161	\$1,735,901	\$1,818,761	\$1,910,419	\$1,967,136	\$2,033,265	\$2,057,563	\$2,083,695	\$2,110,187	\$2,159,675	
	Ohio as percent of U.S.	3.34%	3.28%	3.22%	3.18%	3.13%	3.09%	3.13%	3.09%	3.13%	3.10%	3.08%	-0.26%
	Concentration ratio - Ohio::U.S.	0.90	0.91	0.92	0.92	0.93	0.93	0.94	0.91	0.92	0.92	0.90	0.00
92f,	Federal govt. total GDP: Ohio	\$11,541	\$11,923	\$12,180	\$12,449	\$12,937	\$13,387	\$14,262	\$14,386	\$14,406	\$14,184	\$14,542	
491*	U.S.	\$455,736	\$479,085	\$500,692	\$515,865	\$541,269	\$565,346	\$596,531	\$604,359	\$604,596	\$593,990	\$603,073	
	Ohio as percent of U.S.	2.53%	2.49%	2.43%	2.41%	2.39%	2.37%	2.39%	2.38%	2.38%	2.39%	2.41%	-0.12%
	Concentration ratio - Ohio::U.S.	0.69	0.69	0.70	0.70	0.71	0.71	0.72	0.70	0.70	0.71	0.71	0.02
92fc &	Federal civilian (inc. Postal Service): Ohio	\$8,084	\$8,293	\$8,567	\$8,894	\$9,089	\$9,293	\$10,045	\$10,096	\$10,076	\$9,888	\$10,305	
491*	U.S.	\$295,146	\$305,230	\$318,108	\$330,674	\$342,133	\$357,381	\$381,372	\$387,947	\$388,894	\$384,174	\$396,954	
	Ohio as percent of U.S.	2.74%	2.72%	2.69%	2.69%	2.66%	2.60%	2.63%	2.60%	2.59%	2.57%	2.60%	-0.14%
	Concentration ratio - Ohio::U.S.	0.74	0.76	0.77	0.78	0.79	0.78	0.79	0.77	0.76	0.76	0.76	0.02
92811	Federal military: Ohio	\$3,457	\$3,630	\$3,613	\$3,555	\$3,848	\$4,094	\$4,217	\$4,290	\$4,330	\$4,296	\$4,237	
	U.S.	\$160,590	\$173,855	\$182,584	\$185,191	\$199,136	\$207,965	\$215,159	\$216,412	\$215,702	\$209,816	\$206,119	
	Ohio as percent of U.S.	2.15%	2.09%	1.98%	1.92%	1.93%	1.97%	1.96%	1.98%	2.01%	2.05%	2.06%	-0.10%
	Concentration ratio - Ohio::U.S.	0.58	0.58	0.57	0.56	0.57	0.59	0.59	0.59	0.59	0.61	0.60	0.02
92sl	State & local: Ohio	\$41,137	\$42,319	\$43,646	\$45,346	\$46,890	\$47,393	\$49,348	\$49,213	\$50,716	\$51,148	\$51,890	
	U.S.	\$1,123,269	\$1,177,075	\$1,235,210	\$1,302,894	\$1,369,152	\$1,401,790	\$1,436,733	\$1,453,205	\$1,479,099	\$1,516,197	\$1,556,602	
	Ohio as percent of U.S.	3.66%	3.60%	3.53%	3.48%	3.42%	3.38%	3.43%	3.39%	3.43%	3.37%	3.33%	-0.33%
	Concentration ratio - Ohio::U.S.	0.99	1.00	1.01	1.01	1.01	1.01	1.03	1.00	1.01	1.00	0.98	-0.02

Note: * - 491 - the U.S. Postal Service. Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A12: Comparing Ohio and U.S. GDP by Industry - Government, 2004-2014

		Dollar figures in millions, standardized on 2009											Real Net Change	
2007		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Numeric	Percent
NAICS	Industry Title													
Government in Constant Dollars														
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$26,288	5.2%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$1,880,218	13.7%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	-0.28%	
92, 491*	Government, all levels: Ohio	\$63,102	\$62,384	\$61,651	\$61,244	\$61,349	\$60,780	\$61,854	\$60,681	\$61,170	\$59,999	\$59,566	-\$3,536	-5.6%
	U.S.	\$1,888,235	\$1,899,233	\$1,911,720	\$1,922,307	\$1,955,390	\$1,967,136	\$1,976,585	\$1,962,467	\$1,957,662	\$1,940,519	\$1,939,684	\$51,449	2.7%
	Ohio as percent of U.S.	3.34%	3.28%	3.22%	3.19%	3.14%	3.09%	3.13%	3.09%	3.12%	3.09%	3.07%	-0.27%	
	Concentration ratio - Ohio::U.S.	0.90	0.91	0.92	0.92	0.92	0.93	0.94	0.91	0.92	0.91	0.90	-0.01	
92f,	Federal govt. total GDP: Ohio	\$13,499	\$13,271	\$13,084	\$12,877	\$13,069	\$13,387	\$13,789	\$13,616	\$13,547	\$13,154	\$13,198	-\$301	-2.2%
491*	U.S.	\$533,651	\$533,155	\$537,100	\$532,620	\$545,686	\$565,346	\$577,189	\$572,667	\$568,721	\$551,710	\$548,405	\$14,754	2.8%
	Ohio as percent of U.S.	2.53%	2.49%	2.44%	2.42%	2.39%	2.37%	2.39%	2.38%	2.38%	2.38%	2.41%	-0.12%	
	Concentration ratio - Ohio::U.S.	0.68	0.69	0.69	0.70	0.70	0.71	0.72	0.70	0.70	0.71	0.70	0.02	
92fc &	Federal civilian (inc. Postal Service): Ohio	\$9,393	\$9,237	\$9,258	\$9,267	\$9,261	\$9,293	\$9,681	\$9,502	\$9,460	\$9,082	\$9,244	-\$149	-1.6%
491*	U.S.	\$342,935	\$339,950	\$343,770	\$344,545	\$348,603	\$357,381	\$367,565	\$365,137	\$365,136	\$352,869	\$356,069	\$13,134	3.8%
	Ohio as percent of U.S.	2.74%	2.72%	2.69%	2.69%	2.66%	2.60%	2.63%	2.60%	2.59%	2.57%	2.60%	-0.14%	
	Concentration ratio - Ohio::U.S.	0.74	0.75	0.77	0.78	0.78	0.78	0.79	0.77	0.76	0.76	0.76	0.02	
92811	Federal military: Ohio	\$4,106	\$4,034	\$3,826	\$3,610	\$3,808	\$4,094	\$4,108	\$4,114	\$4,087	\$4,072	\$3,954	-\$152	-3.7%
	U.S.	\$190,716	\$193,205	\$193,330	\$188,075	\$197,083	\$207,965	\$209,624	\$207,530	\$203,585	\$198,841	\$192,336	\$1,620	0.8%
	Ohio as percent of U.S.	2.15%	2.09%	1.98%	1.92%	1.93%	1.97%	1.96%	1.98%	2.01%	2.05%	2.06%	-0.10%	
	Concentration ratio - Ohio::U.S.	0.58	0.58	0.56	0.55	0.57	0.59	0.59	0.58	0.59	0.61	0.60	0.02	
92sl	State & local: Ohio	\$49,606	\$49,118	\$48,575	\$48,382	\$48,287	\$47,393	\$48,064	\$47,064	\$47,622	\$46,846	\$46,366	-\$3,240	-6.5%
	U.S.	\$1,354,528	\$1,366,180	\$1,374,720	\$1,390,140	\$1,409,934	\$1,401,790	\$1,399,351	\$1,389,752	\$1,388,872	\$1,388,672	\$1,390,908	\$36,380	2.7%
	Ohio as percent of U.S.	3.66%	3.60%	3.53%	3.48%	3.42%	3.38%	3.43%	3.39%	3.43%	3.37%	3.33%	-0.33%	
	Concentration ratio - Ohio::U.S.	0.99	1.00	1.00	1.00	1.00	1.01	1.03	1.00	1.01	1.00	0.98	-0.02	

Note: * - 491 - the U.S. Postal Service. Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A13: Comparing Ohio and U.S. GDP by Industry - Infrastructure, Trade, Other Services, 2004-2015

		Dollar figures in millions												Nominal Net Change
2007 NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
<u>Infrastructure, Trade, Other Services in Current Dollars</u>														
11-92	Total GDP: Ohio	\$450,842	\$468,197	\$482,227	\$494,917	\$493,813	\$477,902	\$494,736	\$521,870	\$544,552	\$558,969	\$588,827	\$608,109	
	U.S.	\$12,206,995	\$13,022,458	\$13,781,347	\$14,391,149	\$14,626,598	\$14,320,114	\$14,859,772	\$15,406,002	\$16,041,240	\$16,548,794	\$17,233,139	\$17,830,307	
	Ohio as percent of U.S.	3.69%	3.60%	3.50%	3.44%	3.38%	3.34%	3.33%	3.39%	3.39%	3.38%	3.42%	3.41%	-0.28%
22	Utilities: Ohio	\$6,960	\$6,825	\$7,736	\$8,779	\$8,923	\$9,357	\$9,770	\$9,797	\$12,705	\$12,842	\$12,461	\$13,301	
	U.S.	\$202,685	\$201,352	\$229,998	\$235,074	\$237,514	\$250,785	\$266,986	\$272,036	\$262,852	\$270,541	\$280,809	\$288,333	
	Ohio as percent of U.S.	3.43%	3.39%	3.36%	3.73%	3.76%	3.73%	3.66%	3.60%	4.83%	4.75%	4.44%	4.61%	1.18%
	Concentration ratio - Ohio::U.S.	0.93	0.94	0.96	1.09	1.11	1.12	1.10	1.06	1.42	1.41	1.30	1.35	0.42
23	Construction: Ohio	\$18,259	\$18,916	\$18,744	\$18,541	\$17,174	\$16,189	\$15,468	\$16,608	\$18,140	\$19,233	\$20,702	\$21,665	
	U.S.	\$587,529	\$654,105	\$698,228	\$714,988	\$652,984	\$577,295	\$541,617	\$546,614	\$583,646	\$619,869	\$664,001	\$716,917	
	Ohio as percent of U.S.	3.11%	2.89%	2.68%	2.59%	2.63%	2.80%	2.86%	3.04%	3.11%	3.10%	3.12%	3.02%	-0.09%
	Concentration ratio - Ohio::U.S.	0.84	0.80	0.77	0.75	0.78	0.84	0.86	0.90	0.92	0.92	0.91	0.89	0.04
42	Wholesale trade: Ohio	\$25,567	\$27,605	\$29,827	\$30,888	\$31,572	\$29,103	\$30,422	\$31,290	\$32,831	\$34,353	\$35,861	\$37,163	
	U.S.	\$703,487	\$759,368	\$815,675	\$860,843	\$877,814	\$822,846	\$868,469	\$907,257	\$962,526	\$1,002,223	\$1,044,476	\$1,080,429	
	Ohio as percent of U.S.	3.63%	3.64%	3.66%	3.59%	3.60%	3.54%	3.50%	3.45%	3.41%	3.43%	3.43%	3.44%	-0.19%
	Concentration ratio - Ohio::U.S.	0.98	1.01	1.05	1.04	1.07	1.06	1.05	1.02	1.00	1.01	1.00	1.01	0.02
44-45	Retail trade: Ohio	\$31,776	\$32,664	\$31,886	\$31,654	\$30,606	\$30,247	\$30,690	\$31,763	\$32,773	\$34,531	\$35,438	\$36,733	
	U.S.	\$802,663	\$848,767	\$878,064	\$877,606	\$856,111	\$842,134	\$868,800	\$891,689	\$932,618	\$967,577	\$997,759	\$1,049,698	
	Ohio as percent of U.S.	3.96%	3.85%	3.63%	3.61%	3.58%	3.59%	3.53%	3.56%	3.51%	3.57%	3.55%	3.50%	-0.46%
	Concentration ratio - Ohio::U.S.	1.07	1.07	1.04	1.05	1.06	1.08	1.06	1.05	1.04	1.06	1.04	1.03	-0.05
81	Other svcs.: Ohio	\$10,831	\$10,789	\$10,977	\$10,924	\$10,664	\$10,423	\$10,533	\$10,852	\$11,415	\$11,633	\$12,167	\$12,723	
	U.S.	\$298,477	\$311,721	\$325,716	\$330,527	\$330,843	\$329,510	\$332,405	\$338,892	\$355,366	\$363,089	\$381,597	\$400,020	
	Ohio as percent of U.S.	3.63%	3.46%	3.37%	3.31%	3.22%	3.16%	3.17%	3.20%	3.21%	3.20%	3.19%	3.18%	-0.45%
	Concentration ratio - Ohio::U.S.	0.98	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	-0.05

		Dollar figures in millions, standardized on 2009												Real Net Change	
2007 NAICS	Industry Title	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Numeric	Percent
<u>Infrastructure, Trade, Other Services in Constant Dollars</u>															
11-92	Total GDP: Ohio	\$508,628	\$513,235	\$513,645	\$512,740	\$502,597	\$477,902	\$488,134	\$503,464	\$512,793	\$517,687	\$534,916	\$544,360	\$35,732	7.0%
	U.S.	\$13,772,782	\$14,211,385	\$14,593,536	\$14,798,367	\$14,718,301	\$14,320,114	\$14,628,165	\$14,833,679	\$15,126,279	\$15,317,174	\$15,653,000	\$16,023,115	\$2,250,333	16.3%
	Ohio as percent of U.S.	3.69%	3.61%	3.52%	3.46%	3.41%	3.34%	3.34%	3.39%	3.39%	3.38%	3.42%	3.40%	-0.30%	
22	Utilities: Ohio	\$9,177	\$8,495	\$8,885	\$9,984	\$10,130	\$9,357	\$10,043	\$10,007	\$13,383	\$13,095	\$11,748	\$11,582	\$2,405	26.2%
	U.S.	\$267,227	\$250,612	\$264,153	\$267,359	\$269,647	\$250,785	\$274,430	\$277,859	\$276,868	\$275,867	\$264,745	\$250,961	-\$16,266	-6.1%
	Ohio as percent of U.S.	3.43%	3.39%	3.36%	3.73%	3.76%	3.73%	3.66%	3.60%	4.83%	4.75%	4.44%	4.62%	1.18%	
	Concentration ratio - Ohio::U.S.	0.93	0.94	0.96	1.08	1.10	1.12	1.10	1.06	1.43	1.40	1.30	1.36	0.43	
23	Construction: Ohio	\$23,943	\$22,347	\$20,226	\$18,804	\$17,416	\$16,189	\$15,753	\$16,669	\$17,691	\$18,123	\$18,381	\$18,709	-\$5,234	-21.9%
	U.S.	\$770,455	\$772,756	\$753,462	\$725,127	\$662,195	\$577,296	\$551,604	\$548,635	\$569,172	\$584,092	\$589,584	\$619,120	-\$151,335	-19.6%
	Ohio as percent of U.S.	3.11%	2.89%	2.68%	2.59%	2.63%	2.80%	2.86%	3.04%	3.11%	3.10%	3.12%	3.02%	-0.09%	
	Concentration ratio - Ohio::U.S.	0.84	0.80	0.76	0.75	0.77	0.84	0.86	0.90	0.92	0.92	0.91	0.89	0.05	
42	Wholesale trade: Ohio	\$30,738	\$32,343	\$33,764	\$34,248	\$33,934	\$29,103	\$29,717	\$29,868	\$30,394	\$31,513	\$32,621	\$33,630	\$2,892	9.4%
	U.S.	\$845,765	\$889,683	\$923,355	\$954,483	\$943,484	\$822,846	\$848,342	\$866,037	\$891,096	\$919,374	\$950,114	\$977,631	\$131,866	15.6%
	Ohio as percent of U.S.	3.63%	3.64%	3.64%	3.59%	3.60%	3.54%	3.50%	3.45%	3.41%	3.43%	3.43%	3.44%	-0.19%	
	Concentration ratio - Ohio::U.S.	0.98	1.01	1.04	1.04	1.05	1.06	1.05	1.02	1.01	1.01	1.00	1.01	0.03	
44-45	Retail trade: Ohio	\$35,451	\$35,600	\$33,766	\$32,612	\$30,974	\$30,247	\$30,456	\$30,902	\$31,050	\$32,395	\$32,822	\$33,493	-\$1,958	-5.5%
	U.S.	\$895,472	\$925,069	\$929,828	\$904,183	\$866,402	\$842,134	\$862,167	\$867,510	\$883,589	\$907,733	\$924,086	\$957,130	\$61,658	6.9%
	Ohio as percent of U.S.	3.96%	3.85%	3.63%	3.61%	3.58%	3.59%	3.53%	3.56%	3.51%	3.57%	3.55%	3.50%	-0.46%	
	Concentration ratio - Ohio::U.S.	1.07	1.07	1.03	1.04	1.05	1.08	1.06	1.05	1.04	1.06	1.04	1.03	-0.04	
81	Other svcs.: Ohio	\$13,329	\$12,758	\$12,473	\$11,928	\$11,199	\$10,423	\$10,264	\$10,334	\$10,587	\$10,493	\$10,702	\$10,809	-\$2,520	-18.9%
	U.S.	\$367,325	\$368,624	\$370,121	\$360,889	\$347,433	\$329,510	\$323,921	\$322,696	\$329,598	\$327,519	\$335,628	\$339,865	-\$27,460	-7.5%
	Ohio as percent of U.S.	3.63%	3.46%	3.37%	3.31%	3.22%	3.16%	3.17%	3.20%	3.21%	3.20%	3.19%	3.18%	-0.45%	
	Concentration ratio - Ohio::U.S.	0.98	0.96	0.96	0.95	0.94	0.95	0.95	0.94	0.95	0.95	0.93	0.94	-0.05	

Source: U.S. BEA (2016). Prepared by: Office of Research, Ohio Development Services Agency. Phone 614/466-2116 (DL, 6/16).

Table A14: Ohio's GDP by Industry - Sorted by 2014 Concentration Ratio

2007 NAICS Codes	Industry Titles	Concentration Ratio 2014 ¹	GDP 2014 ¹	Percent Change 2004-14 ²	2007 NAICS Codes	Industry Titles	Concentration Ratio 2014 ¹	GDP 2014 ¹	Percent Change 2004-14 ²
11-92	Total	1.00	\$588,827	5.2%	81	Other svcs., exc. government	0.93	\$12,167	-19.7%
331	Primary metals	2.80	\$5,708	-8.3%	624	Social assistance	0.93	\$3,483	20.8%
3361-3	Motor vehicles, bodies, trailers & parts	2.53	\$12,128	-24.4%	23	Construction	0.91	\$20,702	-23.2%
324	Petroleum & coal products	2.49	\$14,481	178.6%	92, 491	Government	0.90	\$66,432	-5.6%
326	Plastic & rubber products	2.32	\$5,941	-14.8%	487-8, 492	Other transportation & support activities	0.89	\$3,427	-21.0%
332	Fabricated metal products	2.25	\$11,234	-13.0%	71	Arts, entertainment & recreation	0.89	\$5,248	21.5%
335	Electrical eqpt. & appliances	2.10	\$3,860	-26.7%	321	Wood products	0.86	\$841	-25.1%
327	Nonmetallic mineral products	2.00	\$3,171	-14.1%	531	Real estate	0.85	\$59,833	14.3%
336	Transportation eqpt.	1.87	\$16,963	-19.1%	53	Real estate, rental & leasing	0.85	\$65,045	14.1%
55	Management of companies & enterprises	1.81	\$20,869	38.4%	711-2	Performing arts, museums & related activities	0.84	\$2,687	8.1%
333	Machinery	1.64	\$8,451	9.7%	72	Accommodation & food svcs.	0.82	\$13,658	-4.4%
31 & 32p	Nondurable goods	1.50	\$49,770	9.7%	532-3	Rental & leasing svcs. & lessors of intangible assets	0.81	\$5,212	12.0%
493	Warehousing & storage	1.49	\$2,595	72.8%	5415	Computer systems design & related svcs.	0.77	\$6,526	78.9%
31-33	Manufacturing	1.47	\$105,626	-3.4%	92fc, 491	Civilian (inc. Postal Service)	0.76	\$10,305	-1.6%
32p & 33	Durable goods	1.45	\$55,856	-11.4%	61	Educational svcs.	0.76	\$4,988	2.2%
521-2	Federal Reserve banks, credit intermediation, etc.	1.45	\$24,178	-6.3%	339	Miscellaneous mfg.	0.74	\$2,037	-1.0%
323	Printing & related support activities	1.42	\$1,858	-23.2%	511	Publishing (inc. software, exc. Internet)	0.74	\$5,316	5.8%
311-2	Food, beverage & tobacco products	1.39	\$11,616	9.7%	5412-4, 5416-9	Other professional, scientific & technical svcs.	0.73	\$18,087	11.8%
484	Truck transportation	1.38	\$6,376	1.7%	54	Professional, scientific & technical svcs.	0.73	\$29,557	12.4%
524	Insurance carriers & related activities	1.35	\$20,772	43.6%	111-2	Crop & animal production (farms)	0.71	\$4,302	39.0%
622-3	Hospitals & nursing & residential care facilities	1.35	\$24,195	11.2%	92fc, fm, 491	Federal government	0.71	\$14,542	-2.2%
22	Utilities	1.30	\$12,461	28.0%	212	Mining, exc. oil & gas	0.67	\$1,850	4.9%
562	Waste management & remediation svcs.	1.19	\$1,751	-1.9%	5411	Legal svcs.	0.65	\$4,944	-29.9%
52	Finance & insurance	1.18	\$49,211	13.1%	11	Agriculture, forestry, fishing, etc.	0.64	\$4,745	37.6%
11, 21, 23, 33	Private goods producing industries	1.17	\$137,742	-3.4%	92811 (fm)	Military	0.60	\$4,237	-3.7%
62	Health care & social assistance	1.17	\$49,193	16.0%	481	Air transportation	0.59	\$1,700	-2.3%
3364-9	Other transportation eqpt.	1.13	\$4,835	1.1%	313-4	Textile & textile product mills	0.59	\$348	-20.8%
322	Paper	1.11	\$2,104	-36.2%	515, 517	Broadcasting & telecommunications	0.57	\$8,008	35.5%
325	Chemicals	1.08	\$13,280	-9.6%	51	Information	0.54	\$15,266	14.4%
337	Furniture & related products	1.08	\$929	-47.6%	525	Funds, trusts & other financial vehicles	0.52	\$722	261.5%
621	Ambulatory health care svcs.	1.07	\$21,515	21.1%	485	Transit & ground passenger transportation	0.47	\$529	-9.1%
56	Administrative & waste svcs.	1.06	\$19,057	32.7%	518, 519	Data prcsng., hosting, other info. (inc. Internet)	0.46	\$1,384	-24.3%
561	Administrative & support svcs.	1.05	\$17,306	37.1%	721	Accommodation	0.43	\$2,107	-0.5%
44-45	Retail trade	1.04	\$35,438	-7.4%	21	Mining	0.43	\$6,670	96.4%
11-81*	Private industries*	1.01	\$522,396	6.7%	523	Securities, commodity contracts, investments	0.42	\$3,539	8.2%
42	Wholesale trade	1.00	\$35,861	6.1%	211	Oil & gas extraction	0.38	\$3,934	181.6%
482	Rail transportation	1.00	\$1,587	-5.7%	315-6	Apparel, leather & allied products	0.38	\$140	-18.4%
722	Food svcs. & drinking places	0.98	\$11,551	-5.0%	213	Support activities for mining	0.37	\$885	172.2%
92sl	State & local	0.98	\$51,890	-6.5%	113-5	Forestry, fishing & related activities	0.34	\$443	29.8%
22, 42-81*	Private service providing industries*	0.97	\$384,654	10.6%	486	Pipeline transportation	0.33	\$291	36.1%
48-49*	Transportation & warehousing*	0.96	\$16,635	3.6%	334	Computer & electronic products	0.29	\$2,661	65.2%
713	Amusements, gambling & recreation	0.95	\$2,561	39.9%	483	Water transportation	0.21	\$130	94.2%
					512	Motion pictures & sound recordings	0.14	\$558	-17.5%

Notes: 1 - based on current dollars; 2 - based on chained dollars standardized on 2009; * - excludes Postal Service (NAICS code 491); *italicized* - mildly concentrated in Ohio; **bold** - concentrated in Ohio. Abbreviations used: eqpt. - equipment; exc. - excluding; fc - federal civilian; fm - federal military; inc. - including; info. - information; p - part; prcsng. - processing; sl - state & local; svcs. - services.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 6/16).

Table A15: Ohio's GDP by Industry - Sorted by Percentage Change, 2004-2014

2007 NAICS Codes	Industry Titles	Percent Change 2004-14 ²	GDP 2014 ¹	Concentra- tion Ratio 2014 ¹	2007 NAICS Codes	Industry Titles	Percent Change 2004-14 ²	GDP 2014 ¹	Concentra- tion Ratio 2014 ¹
11-92	Total	5.2%	\$588,827	1.00	212	Mining, exc. oil & gas	4.9%	\$1,850	0.67
525	Funds, trusts & other financial vehicles	261.5%	\$722	0.52	48-49*	Transportation & warehousing*	3.6%	\$16,635	0.96
211	Oil & gas extraction	181.6%	\$3,934	0.38	61	Educational svcs.	2.2%	\$4,988	0.76
324	Petroleum & coal products	178.6%	\$14,481	2.49	484	Truck transportation	1.7%	\$6,376	1.38
213	Support activities for mining	172.2%	\$885	0.37	3364-9	Other transportation eqpt.	1.1%	\$4,835	1.13
21	Mining	96.4%	\$6,670	0.43	721	Accommodation	-0.5%	\$2,107	0.43
483	Water transportation	94.2%	\$130	0.21	339	Miscellaneous mfg.	-1.0%	\$2,037	0.74
5415	Computer systems design & related svcs.	78.9%	\$6,526	0.77	92fc, 491	Civilian (inc. Postal Service)	-1.6%	\$10,305	0.76
493	Warehousing & storage	72.8%	\$2,595	1.49	562	Waste management & remediation svcs.	-1.9%	\$1,751	1.19
334	Computer & electronic products	65.2%	\$2,661	0.29	92fc, fm, 491	Federal government	-2.2%	\$14,542	0.71
524	Insurance carriers & related activities	43.6%	\$20,772	1.35	481	Air transportation	-2.3%	\$1,700	0.59
713	Amusements, gambling & recreation	39.9%	\$2,561	0.95	31-33	Manufacturing	-3.4%	\$105,626	1.47
111-2	Crop & animal production (farms)	39.0%	\$4,302	0.71	11, 21, 23, 33	Private goods producing industries	-3.4%	\$137,742	1.17
55	Management of companies & enterprises	38.4%	\$20,869	1.81	92811 (fm)	Military	-3.7%	\$4,237	0.60
11	Agriculture, forestry, fishing, etc.	37.6%	\$4,745	0.64	72	Accommodation & food svcs.	-4.4%	\$13,658	0.82
561	Administrative & support svcs.	37.1%	\$17,306	1.05	722	Food svcs. & drinking places	-5.0%	\$11,551	0.98
486	Pipeline transportation	36.1%	\$291	0.33	92, 491	Government	-5.6%	\$66,432	0.90
515, 517	Broadcasting & telecommunications	35.5%	\$8,008	0.57	482	Rail transportation	-5.7%	\$1,587	1.00
56	Administrative & waste svcs.	32.7%	\$19,057	1.06	521-2	Federal Reserve banks, credit intermediation, etc.	-6.3%	\$24,178	1.45
113-5	Forestry, fishing & related activities	29.8%	\$443	0.34	92sl	State & local	-6.5%	\$51,890	0.98
22	Utilities	28.0%	\$12,461	1.30	44-45	Retail trade	-7.4%	\$35,438	1.04
71	Arts, entertainment & recreation	21.5%	\$5,248	0.89	331	Primary metals	-8.3%	\$5,708	2.80
621	Ambulatory health care svcs.	21.1%	\$21,515	1.07	485	Transit & ground passenger transportation	-9.1%	\$529	0.47
624	Social assistance	20.8%	\$3,483	0.93	325	Chemicals	-9.6%	\$13,280	1.08
62	Health care & social assistance	16.0%	\$49,193	1.17	32p & 33	Durable goods	-11.4%	\$55,856	1.45
51	Information	14.4%	\$15,266	0.54	332	Fabricated metal products	-13.0%	\$11,234	2.25
531	Real estate	14.3%	\$59,833	0.85	327	Nonmetallic mineral products	-14.1%	\$3,171	2.00
53	Real estate, rental & leasing	14.1%	\$65,045	0.85	326	Plastic & rubber products	-14.8%	\$5,941	2.32
52	Finance & insurance	13.1%	\$49,211	1.18	512	Motion pictures & sound recordings	-17.5%	\$558	0.14
54	Professional, scientific & technical svcs.	12.4%	\$29,557	0.73	315-6	Apparel, leather & allied products	-18.4%	\$140	0.38
532-3	Rental & leasing svcs. & lessors of intangible assets	12.0%	\$5,212	0.81	336	Transportation eqpt.	-19.1%	\$16,963	1.87
5412-4, 5416-9	Other professional, scientific & technical svcs.	11.8%	\$18,087	0.73	81	Other svcs., exc. government	-19.7%	\$12,167	0.93
622-3	Hospitals & nursing & residential care facilities	11.2%	\$24,195	1.35	313-4	Textile & textile product mills	-20.8%	\$348	0.59
22, 42-81*	Private service providing industries*	10.6%	\$384,654	0.97	487-8, 492	Other transportation & support activities	-21.0%	\$3,427	0.89
333	Machinery	9.7%	\$8,451	1.64	23	Construction	-23.2%	\$20,702	0.91
311-2	Food, beverage & tobacco products	9.7%	\$11,616	1.39	323	Printing & related support activities	-23.2%	\$1,858	1.42
31 & 32p	Nondurable goods	9.7%	\$49,770	1.50	518, 519	Data prcsng., hosting, other info. (inc. Internet)	-24.3%	\$1,384	0.46
523	Securities, commodity contracts, investments	8.2%	\$3,539	0.42	3361-3	Motor vehicles, bodies, trailers & parts	-24.4%	\$12,128	2.53
711-2	Performing arts, museums & related activities	8.1%	\$2,687	0.84	321	Wood products	-25.1%	\$841	0.86
11-81*	Private industries*	6.7%	\$522,396	1.01	335	Electrical eqpt. & appliances	-26.7%	\$3,860	2.10
42	Wholesale trade	6.1%	\$35,861	1.00	5411	Legal svcs.	-29.9%	\$4,944	0.65
511	Publishing (inc. software, exc. Internet)	5.8%	\$5,316	0.74	322	Paper	-36.2%	\$2,104	1.11
					337	Furniture & related products	-47.6%	\$929	1.08

Notes: 1 - based on current dollars; 2 - based on chained dollars standardized on 2009; * - excludes Postal Service (NAICS code 491); *italicized* - mildly concentrated in Ohio; **bold** - concentrated in Ohio.
Abbreviations used: eqpt. - equipment; exc. - excluding; fc - federal civilian; fm - federal military; inc. - including; info. - information; p - part; prcsng. - processing; sl - state & local; svcs. - services.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 6/16).

Table A16: Ohio's GDP by Industry - Sorted by Size in 2014

2007 NAICS Codes	Industry Titles	GDP 2014 ¹	Percent Change 2004-14 ²	Concentration Ratio 2014 ¹	2007 NAICS Codes	Industry Titles	GDP 2014 ¹	Percent Change 2004-14 ²	Concentration Ratio 2014 ¹
11-92	Total	\$588,827	5.2%	1.00	5415	Computer systems design & related svcs.	\$6,526	78.9%	0.77
11-81*	Private industries*	\$522,396	6.7%	1.01	484	Truck transportation	\$6,376	1.7%	1.38
22, 42-81*	Private service providing industries*	\$384,654	10.6%	0.97	326	Plastic & rubber products	\$5,941	-14.8%	2.32
11, 21, 23, 33	Private goods producing industries	\$137,742	-3.4%	1.17	331	Primary metals	\$5,708	-8.3%	2.80
31-33	Manufacturing	\$105,626	-3.4%	1.47	511	Publishing (inc. software, exc. Internet)	\$5,316	5.8%	0.74
92, 491	Government	\$66,432	-5.6%	0.90	71	Arts, entertainment & recreation	\$5,248	21.5%	0.89
53	Real estate, rental & leasing	\$65,045	14.1%	0.85	532-3	Rental & leasing svcs. & lessors of intangible assets	\$5,212	12.0%	0.81
531	Real estate	\$59,833	14.3%	0.85	61	Educational svcs.	\$4,988	2.2%	0.76
32p & 33	Durable goods	\$55,856	-11.4%	1.45	5411	Legal svcs.	\$4,944	-29.9%	0.65
92sl	State & local	\$51,890	-6.5%	0.98	3364-9	Other transportation eqpt.	\$4,835	1.1%	1.13
31 & 32p	Nondurable goods	\$49,770	9.7%	1.50	11	Agriculture, forestry, fishing, etc.	\$4,745	37.6%	0.64
52	Finance & insurance	\$49,211	13.1%	1.18	111-2	Crop & animal production (farms)	\$4,302	39.0%	0.71
62	Health care & social assistance	\$49,193	16.0%	1.17	92811 (fm)	Military	\$4,237	-3.7%	0.60
42	Wholesale trade	\$35,861	6.1%	1.00	211	Oil & gas extraction	\$3,934	181.6%	0.38
44-45	Retail trade	\$35,438	-7.4%	1.04	335	Electrical eqpt. & appliances	\$3,860	-26.7%	2.10
54	Professional, scientific & technical svcs.	\$29,557	12.4%	0.73	523	Securities, commodity contracts, investments	\$3,539	8.2%	0.42
622-3	Hospitals & nursing & residential care facilities	\$24,195	11.2%	1.35	624	Social assistance	\$3,483	20.8%	0.93
521-2	Federal Reserve banks, credit intermediation, etc.	\$24,178	-6.3%	1.45	487-8, 492	Other transportation & support activities	\$3,427	-21.0%	0.89
621	Ambulatory health care svcs.	\$21,515	21.1%	1.07	327	Nonmetallic mineral products	\$3,171	-14.1%	2.00
55	Management of companies & enterprises	\$20,869	38.4%	1.81	711-2	Performing arts, museums & related activities	\$2,687	8.1%	0.84
524	Insurance carriers & related activities	\$20,772	43.6%	1.35	334	Computer & electronic products	\$2,661	65.2%	0.29
23	Construction	\$20,702	-23.2%	0.91	493	Warehousing & storage	\$2,595	72.8%	1.49
56	Administrative & waste svcs.	\$19,057	32.7%	1.06	713	Amusements, gambling & recreation	\$2,561	39.9%	0.95
5412-4, 5416-9	Other professional, scientific & technical svcs.	\$18,087	11.8%	0.73	721	Accommodation	\$2,107	-0.5%	0.43
561	Administrative & support svcs.	\$17,306	37.1%	1.05	322	Paper	\$2,104	-36.2%	1.11
336	Transportation eqpt.	\$16,963	-19.1%	1.87	339	Miscellaneous mfg.	\$2,037	-1.0%	0.74
48-49*	Transportation & warehousing*	\$16,635	3.6%	0.96	323	Printing & related support activities	\$1,858	-23.2%	1.42
51	Information	\$15,266	14.4%	0.54	212	Mining, exc. oil & gas	\$1,850	4.9%	0.67
92fc, fm, 491	Federal government	\$14,542	-2.2%	0.71	562	Waste management & remediation svcs.	\$1,751	-1.9%	1.19
324	Petroleum & coal products	\$14,481	178.6%	2.49	481	Air transportation	\$1,700	-2.3%	0.59
72	Accommodation & food svcs.	\$13,658	-4.4%	0.82	482	Rail transportation	\$1,587	-5.7%	1.00
325	Chemicals	\$13,280	-9.6%	1.08	518, 519	Data prcsng., hosting, other info. (inc. Internet)	\$1,384	-24.3%	0.46
22	Utilities	\$12,461	28.0%	1.30	337	Furniture & related products	\$929	-47.6%	1.08
81	Other svcs., exc. government	\$12,167	-19.7%	0.93	213	Support activities for mining	\$885	172.2%	0.37
3361-3	Motor vehicles, bodies, trailers & parts	\$12,128	-24.4%	2.53	321	Wood products	\$841	-25.1%	0.86
311-2	Food, beverage & tobacco products	\$11,616	9.7%	1.39	525	Funds, trusts & other financial vehicles	\$722	261.5%	0.52
722	Food svcs. & drinking places	\$11,551	-5.0%	0.98	512	Motion pictures & sound recordings	\$558	-17.5%	0.14
332	Fabricated metal products	\$11,234	-13.0%	2.25	485	Transit & ground passenger transportation	\$529	-9.1%	0.47
92fc, 491	Civilian (inc. Postal Service)	\$10,305	-1.6%	0.76	113-5	Forestry, fishing & related activities	\$443	29.8%	0.34
333	Machinery	\$8,451	9.7%	1.64	313-4	Textile & textile product mills	\$348	-20.8%	0.59
515, 517	Broadcasting & telecommunications	\$8,008	35.5%	0.57	486	Pipeline transportation	\$291	36.1%	0.33
21	Mining	\$6,670	96.4%	0.43	315-6	Apparel, leather & allied products	\$140	-18.4%	0.38
					483	Water transportation	\$130	94.2%	0.21

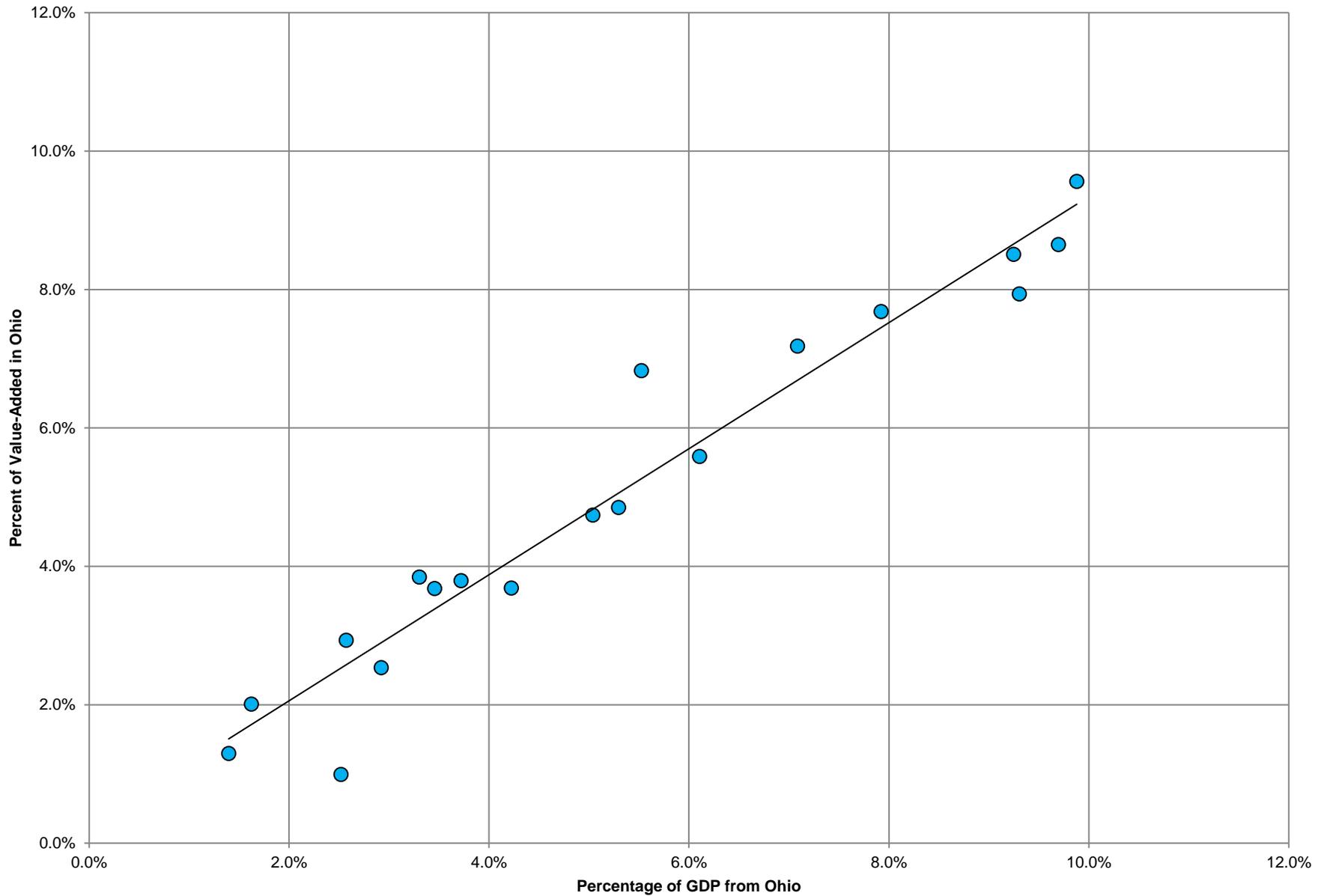
Notes: 1 - based on current dollars; 2 - based on chained dollars standardized on 2009; * - excludes Postal Service (NAICS code 491); *italicized* - mildly concentrated in Ohio; **bold** - concentrated in Ohio.

Abbreviations used: eqpt. - equipment; exc. - excluding; fc - federal civilian; fm - federal military; inc. - including; p - part; sl - state & local; svcs. - services.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 6/16).

Comparing U.S. Percentages of Manufacturing Value-Added and GDP from Ohio, 2014



Sources: U.S. BEA and U.S. Census Bureau

Table A17: Value-Added and GDP in Manufacturing Industries in Ohio and the U.S., 2014

2012 NAICS Code	Industry Title	Value Added (millions)			GDP (millions)		
		Ohio	U.S.	Ohio as Percent of U.S.	Ohio	U.S.	Ohio as Percent of U.S.
321	Wood products	\$1,038.6	\$40,403.1	2.57%	\$841	\$28,687	2.93%
327	Nonmetallic mineral products	\$3,529.7	\$63,895.3	5.52%	\$3,171	\$46,432	6.83%
331	Primary metals	\$8,929.7	\$90,388.4	9.88%	\$5,708	\$59,698	9.56%
332	Fabricated metal products	\$15,257.9	\$192,563.6	7.92%	\$11,234	\$146,233	7.68%
333	Machinery	\$11,962.1	\$195,939.0	6.11%	\$8,451	\$151,207	5.59%
334	Computer & electronic products	\$4,460.7	\$177,114.6	2.52%	\$2,661	\$267,964	0.99%
335	Electrical eqpt., appliances, & components	\$4,345.1	\$61,323.8	7.09%	\$3,860	\$53,747	7.18%
3361-3	Motor vehicles, bodies, trailers & parts	\$15,841.9	\$163,404.5	9.69%	\$12,128	\$140,240	8.65%
3364-9	Other transportation eqpt.	\$5,397.0	\$163,446.1	3.30%	\$4,835	\$125,744	3.85%
337	Furniture & related products	\$1,262.2	\$36,533.0	3.46%	\$929	\$25,251	3.68%
339	Miscellaneous	\$2,916.5	\$99,838.1	2.92%	\$2,037	\$80,290	2.54%
311-2	Food, beverage & tobacco products	\$16,774.8	\$332,867.1	5.04%	\$11,616	\$245,013	4.74%
313-4	Textile & textile product mills	\$376.4	\$23,212.2	1.62%	\$348	\$17,310	2.01%
315-6	Apparel, leather & allied products	\$116.2	\$8,328.3	1.40%	\$140	\$10,802	1.30%
322	Paper	\$3,182.5	\$85,553.4	3.72%	\$2,104	\$55,456	3.79%
323	Printing & related support activities	\$2,577.7	\$48,665.6	5.30%	\$1,858	\$38,293	4.85%
324	Petroleum & coal products	\$8,931.7	\$96,578.7	9.25%	\$14,481	\$170,173	8.51%
325	Chemicals	\$16,129.1	\$382,007.3	4.22%	\$13,280	\$360,317	3.69%
326	Plastic & rubber products	\$10,071.0	\$108,237.6	9.30%	\$5,941	\$74,858	7.94%

Sources: U.S. Bureau of the Census (2016a), U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 614-466-2116 (DL, 6/16).

Table A18: Value-Added in Manufacturing by Industry in Ohio and the U.S., 2014

2012 NAICS Code	Industry Title	Value Added (millions)		Ohio	
		Ohio	U.S.	Percent of U.S.	Apparent Rank [^]
31-33	All manufacturing	\$133,100.9	\$2,400,062.9	5.55%	4th
32p-33	Durable Goods	\$74,941.3	\$1,284,849.5	5.83%	n.a.
321	Wood products	\$1,038.6	\$40,403.1	2.57%	18th
3211	Sawmills & wood preservation	\$144.9	\$11,372.6	1.27%	25th
3212	Veneer, plywood, & engineered wood products	\$214.1	\$8,331.4	2.57%	17th
3219	Other wood products	\$679.6	\$20,699.1	3.28%	11th
327	Nonmetallic mineral products	\$3,529.7	\$63,895.3	5.52%	3rd
3271	Clay & refractory products	\$624.0	\$4,888.0	12.77%	1st
3272	Glass & glass products	\$1,023.2	\$14,186.5	7.21%	4th
3273	Cement & concrete products	\$755.7	\$25,453.2	2.97%	6th
3274	Lime & gypsum products	\$154.3	\$4,086.8	3.77%	13th
3279	Other nonmetallic mineral products	\$972.6	\$15,280.8	6.36%	5th
331	Primary metals	\$8,929.7	\$90,388.4	9.88%	3rd
3311	Iron & steel mills & ferroalloys	\$4,093.7	\$34,659.1	11.81%	3rd
3312	Steel products from purchased steel	\$1,051.2	\$8,488.6	12.38%	3rd
3313	Alumina & aluminum products & processing	\$492.7	\$11,990.2	4.11%	7th
3314	Nonferrous metal (exc. aluminum) products & processing	\$924.1	\$16,569.7	5.58%	7th
3315	Foundries	\$2,368.0	\$18,680.8	12.68%	1st
332	Fabricated metal products	\$15,257.9	\$192,563.6	7.92%	3rd
3321	Forging & stamping	\$1,946.7	\$15,907.3	12.24%	1st
3322	Cutlery & handtools	\$785.5	\$6,397.6	12.28%	2nd
3323	Architectural & structural metals	\$2,102.3	\$40,816.6	5.15%	4th
3324	Boilers, tanks, & shipping containers	\$1,363.4	\$15,754.5	8.65%	2nd
3325	Hardware	\$336.9	\$4,202.5	8.02%	4th
3326	Spring & wire products	\$283.1	\$4,411.3	6.42%	5th
3327	Machine shops; turned products; & screws, nuts, & bolts	\$3,407.5	\$43,814.4	7.78%	4th

Table A18: Value-Added in Manufacturing by Industry in Ohio and the U.S., 2014

2012 NAICS Code	Industry Title	Value Added (millions)		Ohio	
		Ohio	U.S.	Percent of U.S.	Apparent Rank^
3328	Coating, engraving, heat treating, & allied activities	\$1,756.5	\$17,144.8	10.25%	2nd
3329	Other fabricated metal products	\$3,276.0	\$44,114.5	7.43%	2nd
333	Machinery	\$11,962.1	\$195,939.0	6.11%	5th
3331	Agriculture, construction, & mining machinery	\$1,019.0	\$50,250.8	2.03%	14th
3332	Industrial machinery	\$1,305.6	\$17,808.6	7.33%	2nd
3333	Commercial & service industry machinery	\$825.0	\$13,340.6	6.18%	3rd
3334	Ventilation, heating, air-conditioning, & commercial refrigeration eqpt.	\$1,167.5	\$21,178.1	5.51%	5th
3335	Metalworking machinery	\$2,189.2	\$19,044.4	11.50%	2nd
3336	Engine, turbine, & power transmission eqpt.	\$813.0	\$20,798.0	3.91%	10th
3339	Other general purpose machinery	\$4,642.7	\$53,518.5	8.67%	2nd
334	Computer & electronic products	\$4,460.7	\$177,114.6	2.52%	13th
3341	Computer & peripheral eqpt.	\$135.4	\$13,358.7	1.01%	13th
3342	Communications eqpt.	\$190.4	\$21,959.1	0.87%	18th
3343	Audio & video eqpt.	\$16.0	\$1,909.6	0.84%	13th
3344	Semiconductors & other electronic components	\$621.3	\$47,030.3	1.32%	18th
3345	Navigational, measuring, electromedical, & control instruments	\$3,474.2	\$91,180.9	3.81%	8th
3346	Mfg. & reproducing magnetic & optical media	\$23.5	\$1,676.0	1.40%	13th
335	Electrical eqpt., appliances, & components	\$4,345.1	\$61,323.8	7.09%	2nd
3351	Electric lighting eqpt.	\$273.4	\$6,884.8	3.97%	7th
3352	Household appliances	\$2,199.5	\$9,162.6	24.00%	1st
3353	Electrical eqpt.	\$959.5	\$19,922.3	4.82%	6th
3359	Other electrical eqpt. & components	\$912.8	\$25,354.0	3.60%	12th
336	Transportation eqpt.	\$21,238.9	\$326,850.5	6.50%	6th
3361	Motor vehicles	\$5,963.6	\$70,244.5	8.49%	4th
3362	Motor vehicle bodies & trailers	\$479.2	\$13,664.0	3.51%	6th
3363	Motor vehicle parts	\$9,399.1	\$79,496.0	11.82%	2nd

Table A18: Value-Added in Manufacturing by Industry in Ohio and the U.S., 2014

2012 NAICS Code	Industry Title	Value Added (millions)		Ohio	
		Ohio	U.S.	Percent of U.S.	Apparent Rank^
3364	Aerospace products & parts	\$5,193.8	\$129,760.0	4.00%	7th
3365	Railroad rolling stock	\$63.5	\$7,103.7	0.89%	6th
3366	Ship & boat building	\$14.6	\$19,835.6	0.07%	23rd
3369	Other transportation eqpt.	\$125.1	\$6,746.8	1.85%	9th
337	Furniture & related products	\$1,262.2	\$36,533.0	3.46%	11th
3371	Household & institutional furniture & kitchen cabinets	\$808.0	\$18,240.7	4.43%	6th
3372	Office furniture (inc. fixtures)	\$298.7	\$12,926.5	2.31%	15th
3379	Other furniture related products	\$155.5	\$5,365.8	2.90%	12th
339	Miscellaneous	\$2,916.5	\$99,838.1	2.92%	12th
3391	Medical eqpt. & supplies	\$1,382.5	\$62,587.8	2.21%	18th
3399	Other miscellaneous	\$1,533.9	\$37,250.4	4.12%	9th
31-32p	Non-durable goods	\$58,159.5	\$1,115,213.4	5.22%	n.a.
311	Food	\$14,377.9	\$274,956.9	5.23%	4th
3111	Animal food	\$1,135.7	\$17,492.8	6.49%	4th
3112	Grain & oilseed milling	\$1,176.9	\$23,665.1	4.97%	5th
3113	Sugar & confectionery products	\$238.6	\$15,322.8	1.56%	14th
3114	Fruit & vegetable preserving & specialty foods	\$4,029.7	\$32,276.1	12.49%	2nd
3115	Dairy products	\$1,637.8	\$30,888.6	5.30%	5th
3116	Animal slaughtering & processing	\$1,582.3	\$61,421.7	2.58%	17th
3117	Seafood products preparation & packaging	L	\$5,042.4	0.00%	n.a.
3118	Bakeries & tortilla	\$2,044.1	\$38,842.5	5.26%	6th
3119	Other foods	\$2,532.7	\$50,004.9	5.06%	5th
312	Beverage & tobacco products	\$2,396.8	\$87,673.4	2.73%	10th
3121	Beverages	\$2,396.8	\$57,910.2	4.14%	5th
3122	Tobacco products	\$0.0	\$29,763.2	0.00%	n.a.
313	Textile mills	\$120.7	\$12,736.7	0.95%	17th

Table A18: Value-Added in Manufacturing by Industry in Ohio and the U.S., 2014

2012 NAICS Code	Industry Title	Value Added (millions)		Ohio	
		Ohio	U.S.	Percent of U.S.	Apparent Rank^
3131	Fiber, yarn, & thread mills	\$1.6	\$2,411.3	0.07%	16th
3132	Fabric mills	\$56.9	\$7,024.3	0.81%	18th
3133	Textile & fabric finishing & fabric coating mills	\$62.2	\$3,301.0	1.89%	12th
314	Textile products mills	\$255.7	\$10,475.5	2.44%	12th
3141	Textile furnishings mills	\$87.1	\$5,071.1	1.72%	11th
3149	Other textile products mills	\$168.7	\$5,404.4	3.12%	10th
315	Apparel	\$32.7	\$6,285.4	0.52%	19th
3151	Apparel knitting mills	\$0.0	\$982.4	0.00%	n.a.
3152	Cut & sew apparel	\$24.9	\$4,729.7	0.53%	16th
3159	Apparel accessories & other apparel	\$7.8	\$573.3	1.36%	9th
316	Leather & allied products	\$83.5	\$2,042.9	4.09%	8th
3161	Leather & hide tanning & finishing*	\$9.9	\$341.1	2.91%	3rd
3162	Footwear	\$0.0	\$934.2	0.00%	n.a.
3169	Other leather & allied products	\$73.6	\$767.6	9.59%	2nd
322	Paper	\$3,182.5	\$85,553.4	3.72%	9th
3221	Pulp, paper, & paperboard mills	\$705.7	\$43,749.4	1.61%	23rd
3222	Converted paper products	\$2,476.9	\$41,804.0	5.92%	5th
323	Printing & related support activities	\$2,577.7	\$48,665.6	5.30%	6th
3231	Printing & related support activities	\$2,577.7	\$48,665.6	5.30%	6th
324	Petroleum & coal products	\$8,931.7	\$96,578.7	9.25%	3rd
3241	Petroleum & coal products	\$8,931.7	\$96,578.7	9.25%	3rd
325	Chemicals	\$16,129.1	\$382,007.3	4.22%	7th
3251	Basic chemicals	\$3,839.8	\$102,110.1	3.76%	5th
3252	Resin, synthetic rubber, & artificial synthetic fibers & filaments	\$1,706.2	\$35,826.2	4.76%	4th
3253	Pesticide, fertilizer, & other agricultural chemicals	\$767.8	\$19,732.1	3.89%	9th
3254	Pharmaceuticals & medicines	\$1,197.6	\$136,975.0	0.87%	17th

Table A18: Value-Added in Manufacturing by Industry in Ohio and the U.S., 2014

2012 NAICS Code	Industry Title	Value Added (millions)		Ohio	
		Ohio	U.S.	Percent of U.S.	Apparent Rank [^]
3255	Paints, coatings, & adhesives	\$2,674.4	\$17,889.4	14.95%	1st
3256	Soaps, cleaning compounds, & toilet preparations	\$4,883.3	\$48,041.0	10.16%	1st
3259	Other chemical products & preparations	\$1,060.0	\$21,433.6	4.95%	6th
326	Plastic & rubber products	\$10,071.0	\$108,237.6	9.30%	1st
3261	Plastics products	\$7,647.8	\$89,172.3	8.58%	1st
3262	Rubber products	\$2,423.3	\$19,065.3	12.71%	1st

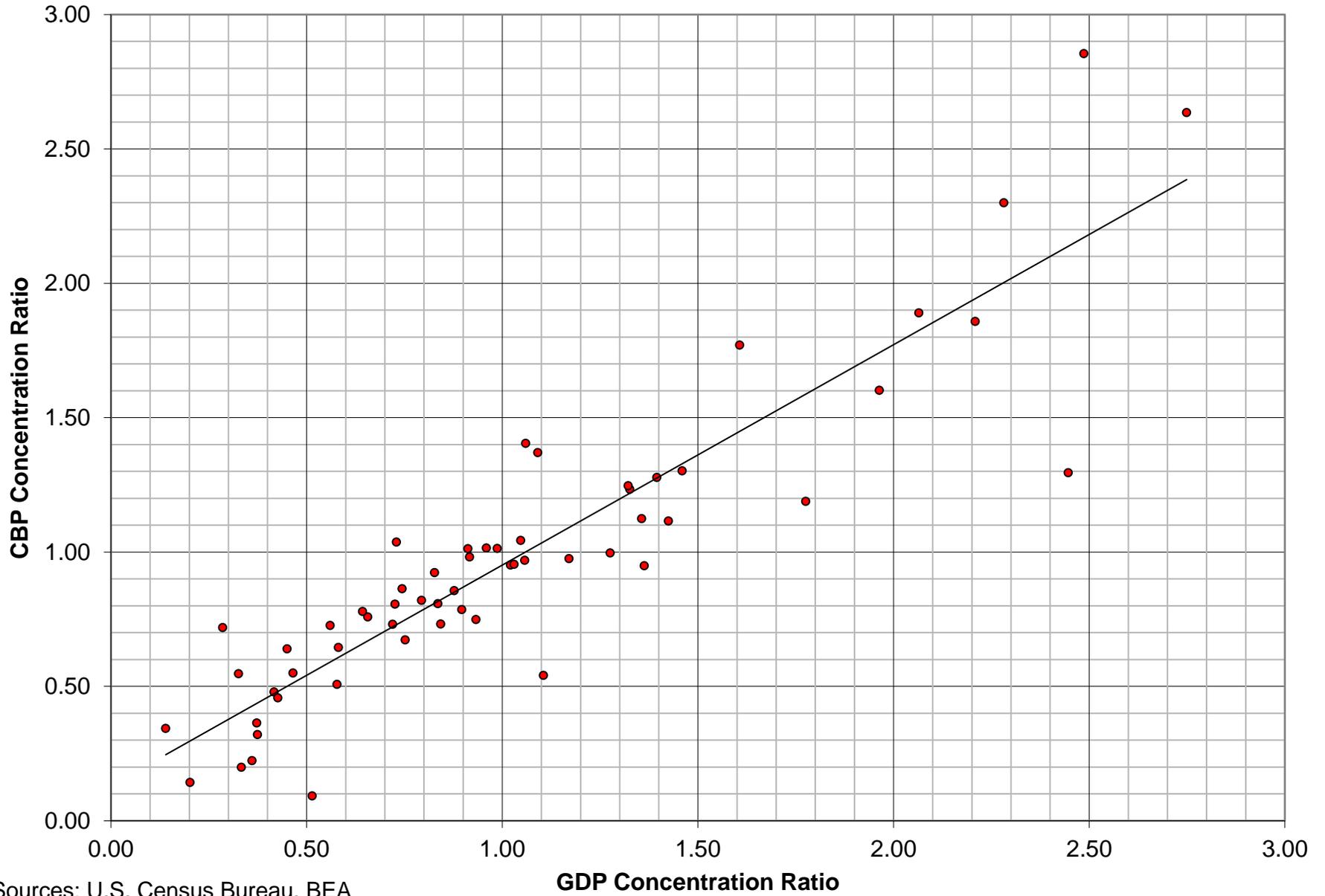
Notes: ^ - Ranks are apparent because data for some states are suppressed to maintain confidentiality; this is more likely to be a problem for industry groups (4-digit NAICS codes) with smaller percentages of the U.S. total; * - Ohio figures are estimates; D - suppressed to maintain confidentiality; exc. - except; inc. - including; L - less than \$50,000; n.a. - not available or not applicable; p - part.

Sources: U.S. Census Bureau (2016a).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 614-466-2116 (DL, 6/16).

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The Association of GDP and CBP Concentration Ratios in Ohio, 2014



Sources: U.S. Census Bureau, BEA

**Table A19: Ohio::U.S. GDP and County Business Patterns Concentration Ratios
(GDP in millions of current dollars, except concentration ratio)**

2007 NAICS Codes	Industry Titles	2014 GDP [^]			2014 CBP Employment ^ˆ		
		(current, in millions)		Ohio::U.S. Concentration Ratio*	Ohio::U.S. Concentration Ratio*		
		Ohio	U.S.		Ohio	U.S.	
11-81	Private industries*	\$516,507	\$14,850,026	1.00	4,636,844	121,079,879	1.00
113-5	Forestry, fishing & related activities	\$443	\$38,226	0.33	1,193	156,363	0.20
211	Oil & gas extraction	\$3,934	\$302,151	0.37	1,691	137,839	0.32
212	Mining, except oil & gas	\$1,850	\$81,040	0.66	5,747	197,873	0.76
213	Support activities for mining	\$885	\$70,564	0.36	3,622	423,259	0.22
23	Construction	\$20,702	\$664,001	0.90	171,719	5,705,146	0.79
321	Wood products mfg.	\$841	\$28,687	0.84	10,242	365,402	0.73
327	Nonmetallic mineral products mfg.	\$3,171	\$46,432	1.96	22,041	359,425	1.60
331	Primary metals mfg.	\$5,708	\$59,698	2.75	39,793	394,367	2.63
332	Fabricated metal products mfg.	\$11,234	\$146,233	2.21	101,439	1,425,859	1.86
333	Machinery mfg.	\$8,451	\$151,207	1.61	72,035	1,062,688	1.77
334	Computer & electronic products mfg.	\$2,661	\$267,964	0.29	22,569	820,002	0.72
335	Electrical equipment & appliances mfg.	\$3,860	\$53,747	2.06	24,350	336,512	1.89
3361-3	Motor vehicles, bodies, trailers & parts mfg.	\$12,128	\$140,240	2.49	88,675	811,071	2.85
3364-9	Other transportation equipment mfg.	\$4,835	\$125,744	1.11	12,598	607,827	0.54
337	Furniture & related products mfg.	\$929	\$25,251	1.06	13,154	354,492	0.97
339	Miscellaneous mfg.	\$2,037	\$80,290	0.73	21,475	540,995	1.04
311-2	Food, beverage & tobacco products	\$11,616	\$245,013	1.36	58,527	1,610,175	0.95
313-4	Textile & textile product mills mfg.	\$348	\$17,310	0.58	4,223	217,278	0.51
315-6	Apparel, leather & allied products	\$140	\$10,802	0.37	1,837	131,809	0.36
322	Paper mfg.	\$2,104	\$55,456	1.09	18,460	351,976	1.37
323	Printing & related support activities	\$1,858	\$38,293	1.40	22,442	458,838	1.28
324	Petroleum & coal products mfg.	\$14,481	\$170,173	2.45	5,053	101,905	1.29
325	Chemical mfg.	\$13,280	\$360,317	1.06	40,344	750,005	1.40
326	Plastics & rubber products mfg.	\$5,941	\$74,858	2.28	63,710	723,625	2.30
22	Utilities	\$12,461	\$280,809	1.28	24,334	637,840	1.00
42	Wholesale trade	\$35,861	\$1,044,476	0.99	231,383	5,966,747	1.01
44-45	Retail trade	\$35,438	\$997,759	1.02	560,265	15,372,632	0.95
481	Air transportation	\$1,700	\$84,044	0.58	10,585	428,799	0.64
483	Water transportation	\$130	\$18,513	0.20	374	68,450	0.14
484	Truck transportation	\$6,376	\$135,143	1.36	59,939	1,392,607	1.12
485	Transit & ground passenger transportation	\$529	\$32,673	0.47	10,097	479,780	0.55
486	Pipeline transportation	\$291	\$25,650	0.33	1,126	53,748	0.55
487-8, 492	Other transportation & support activities	\$3,427	\$112,310	0.88	40,088	1,222,401	0.86
493	Warehousing & storage	\$2,595	\$51,103	1.46	37,939	760,982	1.30
511	Publishing (inc. software, exc. Internet)	\$5,316	\$210,588	0.73	26,973	873,673	0.81
512	Motion pictures & sound recordings	\$558	\$114,607	0.14	5,335	405,464	0.34
515, 517	Broadcasting & telecommunications	\$8,008	\$411,141	0.56	36,465	1,310,454	0.73

**Table A19: Ohio::U.S. GDP and County Business Patterns Concentration Ratios
(GDP in millions of current dollars, except concentration ratio)**

2007 NAICS Codes	Industry Titles	2014 GDP [^]			2014 CBP Employment [~]		
		(current, in millions)		Ohio::U.S. Concentra- tion Ratio*	Ohio		Ohio::U.S. Concentra- tion Ratio*
		Ohio	U.S.		Ohio	U.S.	
518, 519	Data prcsng., hosting, other info. (inc. Internet)	\$1,384	\$88,408	0.45	18,973	774,939	0.64
521-2	Federal Reserve, credit intermediation, & related srvcs.	\$24,178	\$488,004	1.42	119,972	2,810,067	1.11
523	Securities, commodity contracts, investments	\$3,539	\$244,193	0.42	16,366	891,942	0.48
524	Insurance carriers & related activities	\$20,772	\$450,336	1.33	111,887	2,369,373	1.23
525	Funds, trusts & other financial vehicles	\$722	\$40,356	0.51	26	7,331	0.09
531	Real estate	\$59,833	\$2,058,953	0.84	46,313	1,496,575	0.81
532-3	Rental & leasing srvcs., leasing intangible assets	\$5,212	\$188,729	0.79	16,488	524,797	0.82
5411	Legal srvcs.	\$4,944	\$221,091	0.64	34,289	1,150,517	0.78
5415	Computer systems design & related srvcs.	\$6,526	\$249,456	0.75	42,362	1,643,024	0.67
5412-4, 6-9	Other professional, scientific & technical srvcs.	\$18,087	\$722,426	0.72	163,052	5,826,033	0.73
55	Management of companies & enterprises	\$20,869	\$337,950	1.78	147,299	3,235,958	1.19
561	Administrative & support srvcs.	\$17,306	\$483,023	1.03	372,682	10,200,517	0.95
562	Waste management & remediation srvcs.	\$1,751	\$43,012	1.17	14,146	378,807	0.98
61	Educational srvcs.	\$4,988	\$192,772	0.74	117,751	3,562,364	0.86
621	Ambulatory health care srvcs.	\$21,515	\$590,771	1.05	268,390	6,721,047	1.04
622-3	Hospitals & nursing & residential care facilities	\$24,195	\$526,301	1.32	439,655	9,212,573	1.25
624	Social assistance	\$3,483	\$109,796	0.91	113,465	2,928,353	1.01
711-2	Performing arts, museums & related activities	\$2,687	\$93,436	0.83	21,840	617,554	0.92
713	Amusements, gambling & recreation	\$2,561	\$78,915	0.93	44,533	1,552,567	0.75
721	Accommodation	\$2,107	\$141,939	0.43	34,977	1,998,716	0.46
722	Food srvcs. & drinking places	\$11,551	\$346,048	0.96	419,276	10,793,212	1.01
81	Other srvcs., except government	\$12,167	\$381,597	0.92	200,893	5,347,121	0.98

Notes: ^ - includes the self-employed with no employees; * - these figures exclude farms, rail transportation and government services; ~ - all County Business Patterns (CBP) figures should be regarded as estimates of the number of employees; 367 in Ohio were not classified by industry, while 18,184 were unclassified across the U.S.; consequently industry figures will not sum to totals.

Abbreviations used: mfg. - manufacturing; n.a. - not available; srvcs. - services.

Sources: U.S. Bureau of the Census (2016b), U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 6/16).

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
-----	Total (exc. farms, railroads & the U.S. Postal Service)	4,636,844	121,079,879	1.00
Goods producing groups (exc. farms)				
1131	Timber tract operations	10	3,024	0.08
1132	Forest nurseries & gathering forest products	16	1,510	0.28
1133	Logging	356	49,649	0.19
1141	Fishing	4	5,977	0.02
1142	Hunting & trapping	20	1,490	0.35
1151	Crop production support activities	395	65,085	0.16
1152	Animal production support activities	376	19,137	0.51
1153	Forestry support activities	16	10,491	0.04
211111	Crude petroleum & natural gas	1,505	126,666	0.31
211112	Natural gas liquid	186	11,173	0.43
2121	Coal mining	2,897	76,572	0.99
2122	Metal ore mining	9	41,926	0.01
2123	Nonmetallic mineral mining & quarrying	2,841	79,375	0.93
213111	Drilling oil & gas wells	895	102,734	0.23
213112	Supporting oil & gas operations	2,509	307,777	0.21
213113	Supporting coal mining	156	6,374	0.64
213114	Supporting metal mining	5	3,790	0.03
213115	Supporting non-metallic minerals	57	2,584	0.58
2361	Residential building construction	14,934	598,399	0.65
2362	Nonresidential building construction	21,911	582,575	0.98
2371	Utility system construction	12,840	532,842	0.63
2372	Land subdivision	456	24,675	0.48

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentration Ratio
2373	Highway, street & bridge construction	8,214	259,667	0.83
2379	Other heavy & civil engineering	3,060	81,674	0.98
2381	Foundation, structure, & building exterior contractors	22,486	709,071	0.83
2382	Building eqpt. contractors	57,126	1,738,546	0.86
2383	Building finishing contractors	17,496	663,447	0.69
2389	Other specialty trade contractors	13,196	514,250	0.67
31-33 32p & 33	Manufacturing Durable goods			
3211	Sawmills & wood preservation	1,351	79,898	0.44
3212	Veneer, plywood & engineered wood product mfg.	1,253	68,321	0.48
3219	Other wood product mfg.	7,638	217,183	0.92
3271	Clay product & refractory mfg.	4,723	33,272	3.71
3272	Glass & glass product mfg.	6,373	85,772	1.94
3273	Cement & concrete product mfg.	4,895	154,916	0.83
3274	Lime & gypsum product mfg.	703	13,263	1.38
3279	Other nonmetallic mineral product mfg.	5,347	72,202	1.93
3311	Iron & steel mills & ferroalloy mfg.	11,912	101,291	3.07
3312	Steel product mfg. from purchased steel	5,818	48,844	3.11
3313	Alumina & aluminum production & processing	2,930	56,964	1.34
3314	Nonferrous (exc. aluminum) production & processing	4,610	62,153	1.94
3315	Foundries	14,523	125,115	3.03
3321	Forging & stamping	12,047	113,976	2.76
3322	Cutlery & handtool mfg.	3,919	34,970	2.93
3323	Architectural & structural metals mfg.	15,402	332,388	1.21
3324	Boiler, tank & shipping container mfg.	6,440	91,143	1.85
3325	Hardware mfg.	1,649	26,241	1.64

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
3326	Spring & wire product mfg.	2,394	38,972	1.60
3327	Machine shops, turn products, screw, nut & bolt mfg.	30,069	390,638	2.01
3328	Coating, engrave, heat treating & other activity	10,934	128,638	2.22
3329	Other fabricated metal product mfg.	18,585	268,893	1.80
3331	Agricultural, construction & mining machinery mfg.	5,895	216,969	0.71
3332	Industrial machinery mfg.	7,883	101,028	2.04
3333	Commercial & service industry machinery mfg.	4,058	76,136	1.39
3334	HVAC & commercial refrigeration eqpt. mfg.	6,551	127,782	1.34
3335	Metalworking machinery mfg.	17,574	146,630	3.13
3336	Engine, turbine & power transmission eqpt. mfg.	4,756	102,016	1.22
3339	Other general purpose machinery mfg.	25,318	292,127	2.26
3341	Computer & peripheral eqpt. mfg.	1,029	43,305	0.62
3342	Communications eqpt. mfg.	1,088	98,375	0.29
3343	Audio & video eqpt. mfg.	138	9,451	0.38
3344	Semiconductor & other electronic component mfg.	5,592	271,390	0.54
3345	Navigation, measuring, medical, control instruments mfg.	14,509	385,797	0.98
3346	Mfg. & reproducing magnetic & optical media	213	11,684	0.48
3351	Electric lighting eqpt. mfg.	1,510	41,925	0.94
3352	Household appliance mfg.	10,968	47,551	6.02
3353	Electrical eqpt. mfg.	5,881	117,228	1.31
3359	Other electrical eqpt. & component mfg.	5,991	129,808	1.21
3361	Motor vehicle mfg.	17,968	170,550	2.75
3362	Motor vehicle body & trailer mfg.	5,166	128,465	1.05
3363	Motor vehicle parts mfg.	65,541	512,056	3.34
3364	Aerospace product & parts mfg.	10,842	406,449	0.70
3365	Railroad rolling stock mfg.	571	30,612	0.49

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
3366	Ship & boat building	163	138,687	0.03
3369	Other transportation eqpt. mfg.	1,022	32,079	0.83
3371	Household & institutional furniture & kitchen cabinet mfg.	8,735	214,598	1.06
3372	Office furniture (including fixtures) mfg.	3,619	108,493	0.87
3379	Other furniture related product mfg.	800	31,401	0.67
3391	Medical eqpt. & supplies mfg.	9,629	281,734	0.89
3399	Other miscellaneous mfg.	11,846	259,261	1.19
31 & 32p	Nondurable goods			
3111	Animal food mfg.	2,140	47,411	1.18
3112	Grain & oilseed milling	2,265	56,774	1.04
3113	Sugar & confectionery product mfg.	3,211	75,166	1.12
3114	Fruit & vegetable preserving & specialty food mfg.	10,865	158,177	1.79
3115	Dairy product mfg.	5,124	137,327	0.97
3116	Animal slaughtering & processing	10,223	468,224	0.57
3117	Seafood product preparation & packaging	3	32,180	0.00
3118	Bakeries & tortilla mfg.	11,341	280,416	1.06
3119	Other food mfg.	8,612	183,308	1.23
3121	Beverage mfg.	4,743	156,635	0.79
3122	Tobacco mfg.	0	14,557	0.00
3131	Fiber, yarn & thread mills	19	25,131	0.02
3132	Fabric mills	579	49,812	0.30
3133	Textile, fabric finishing, fabric coating mills	572	29,207	0.51
3141	Textile furnishings mills	899	53,855	0.44
3149	Other textile product mills	2,154	59,273	0.95
3151	Apparel knitting mills	0	12,248	0.00
3152	Cut & sew apparel mfg.	524	86,149	0.16
3159	Apparel accessories & other apparel mfg.	124	7,974	0.41

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentration Ratio
3161	Leather & hide tanning & finishing	29	3,379	0.22
3162	Footwear mfg.	2	11,414	0.00
3169	Other leather & allied product mfg.	1,158	10,645	2.84
3221	Pulp, paper & paperboard mills	2,760	106,618	0.68
3222	Converted paper product mfg.	15,700	245,358	1.67
32311	Printing	20,660	431,124	1.25
32312	Support activities for printing	1,782	27,714	1.68
32411	Petroleum refineries	2,020	63,601	0.83
32412	Asphalt paving mfg., roof shingles, etc.	1,651	23,329	1.85
32419	Other petroleum & coal products	1,382	14,975	2.41
3251	Basic chemical mfg.	8,405	160,039	1.37
3252	Resin, synthetic rubber, artificial & synthetic fibers, filling mfg.	5,991	95,122	1.64
3253	Pesticide, fertilizer & other agricultural chemical mfg.	1,106	28,719	1.01
3254	Pharmaceutical & medicine mfg.	4,473	236,046	0.49
3255	Paint, coating & adhesive mfg.	7,489	56,631	3.45
3256	Soap, cleaners & toilet preparation mfg.	7,200	95,194	1.98
3259	Other chemical product & preparation mfg.	5,680	78,254	1.90
3261	Plastics product mfg.	48,591	593,847	2.14
3262	Rubber product mfg.	15,119	129,778	3.04
Service-providing groups				
2211	Electric power generation, transmission & distribution	19,617	509,685	1.01
2212	Natural gas distribution	3,601	85,532	1.10
2213	Water, sewage & other systems	1,116	42,623	0.68
4231	Motor vehicles, parts & supply merchant whsle.	18,888	376,472	1.31
4232	Furniture & home furnishing merchant whsle.	5,367	148,018	0.95

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
4233	Lumber & other construction materials merchant whsle.	7,836	207,179	0.99
4234	Professional & commercial equip & supp merchant whsle.	23,659	654,835	0.94
4235	Metal & mineral (exc. petroleum) merchant whsle.	10,069	153,376	1.71
4236	Appliances, electrical & electronic goods merchant whsle.	15,531	520,720	0.78
4237	Hardware, plumb & heating eqpt. & supplies merchant whsle.	10,993	229,035	1.25
4238	Machinery, eqpt. & supplies merchant whsle.	35,298	756,128	1.22
4239	Miscellaneous durable goods merchant whsle.	14,654	336,991	1.14
4241	Paper & paper product merchant whsle.	6,319	147,105	1.12
4242	Drugs & druggists' sundries merchant whsle.	7,389	298,391	0.65
4243	Apparel, piece goods & notions merchant whsle.	3,999	201,655	0.52
4244	Grocery & related product merchant whsle.	27,772	787,210	0.92
4245	Farm product raw material merchant whsle.	2,301	62,932	0.95
4246	Chemical & allied products merchant whsle.	9,233	156,501	1.54
4247	Petroleum & petroleum products merchant whsle.	2,963	103,148	0.75
4248	Beer, wine, distilled alcoholic beverage merchant whsle.	5,921	193,686	0.80
4249	Miscellaneous nondurable goods merchant whsle.	10,552	338,339	0.81
42511	Business to business electronic markets	107	1,990	1.40
42512	Wholesale trade agents & brokers	12,532	293,036	1.12
4411	Automobile dealers	47,821	1,194,758	1.05
4412	Other motor vehicle dealers	4,359	133,490	0.85
4413	Automotive parts, accessories & tire stores	20,456	508,892	1.05
4421	Furniture stores	6,922	198,220	0.91
4422	Home furnishings stores	6,331	230,853	0.72
443141	Household appliance stores	2,499	61,582	1.06
443142	Electronics stores	10,779	348,220	0.81

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
4441	Building material & supplies dealers	42,890	1,121,394	1.00
4442	Lawn & garden eqpt. & supplies stores	6,022	144,334	1.09
4451	Grocery stores	89,372	2,705,418	0.86
4452	Specialty food stores	5,044	153,500	0.86
4453	Beer, wine & liquor stores	3,829	157,910	0.63
44611	Pharmacies & drug stores	29,586	703,757	1.10
44612	Cosmetics, beauty supplies & perfume stores	4,512	130,989	0.90
44613	Optical goods stores	2,417	77,874	0.81
44619	Other health & personal care stores	4,243	108,064	1.03
44711	Gasoline stations with convenience stores	29,341	756,076	1.01
44719	Other gasoline stores	5,381	148,008	0.95
4481	Clothing stores	38,375	1,380,936	0.73
4482	Shoe stores	6,350	224,093	0.74
4483	Jewelry, luggage & leather goods stores	4,428	131,024	0.88
4511	Sporting goods, hobby, musical instrument stores	15,977	458,483	0.91
4512	Book, periodical & music stores	2,735	101,190	0.71
4521	Department stores	38,150	1,033,269	0.96
4529	Other general merchandise stores	73,571	1,803,014	1.07
4531	Florists	2,868	61,170	1.22
4532	Office supplies, stationery & gift stores	8,569	239,636	0.93
4533	Used merchandise stores	7,718	194,021	1.04
4539	Other miscellaneous store retailers	9,167	255,730	0.94
4541	Electronic shopping & mail-order houses	22,415	397,444	1.47
4542	Vending machine operators	2,546	34,710	1.92
4543	Direct selling establishments	5,592	174,573	0.84
4811	Scheduled air transportation	5,403	428,799	0.33
4812	Nonscheduled air transportation	5,370	36,314	3.86

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
4831	Deep sea, coastal & Great Lakes water transportation	339	46,914	0.19
4832	Inland water transportation	35	21,536	0.04
4841	General freight trucking	43,441	915,363	1.24
4842	Specialized freight trucking	16,498	477,244	0.90
4851	Urban transit systems	253	51,851	0.13
4852	Interurban & rural bus transportation	176	13,917	0.33
4853	Taxi & limousine service	1,101	76,354	0.38
4854	School & employee bus transportation	4,662	219,233	0.56
4855	Charter bus industry	1,146	33,027	0.91
4859	Other transit & ground passenger transportation	2,759	85,398	0.84
4861	Pipeline transportation of crude oil	347	12,315	0.74
4862	Pipeline transportation of natural gas	586	34,569	0.44
4869	Other pipeline transportation	193	6,864	0.73
4871	Scenic & sightseeing transportation, land	112	10,319	0.28
4872	Scenic & sightseeing transportation, water	55	12,740	0.11
4879	Scenic & sightseeing transportation, other	10	2,253	0.11
4881	Air transportation support activities	3,199	175,406	0.48
4882	Rail transportation support activities	2,113	36,648	1.51
4883	Water transportation support activities	833	100,161	0.22
4884	Road transportation support activities	3,517	89,888	1.02
4885	Freight transportation arrangement	9,240	238,310	1.01
4889	Other transportation support activities	977	16,160	1.58
4921	Couriers	18,926	504,456	0.98
4922	Local messengers & local delivery	1,107	36,060	0.80
49311	General warehousing & storage	33,657	650,533	1.35
49312	Refrigerated warehousing & storage	955	44,162	0.56
49313	Farm products	118	6,713	0.46
49319	Other warehousing & storage	3,209	59,574	1.41

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
5111	Newspaper, periodical, book, database publishers	19,619	431,427	1.19
5112	Software publishers	7,354	442,246	0.43
5121	Motion picture & video industries	5,140	377,987	0.36
5122	Sound recording industries	195	27,477	0.19
5151	Radio & television broadcasting (exc. Internet)	6,294	213,724	0.77
5152	Cable & other subscription programming (exc. Internet)	158	53,406	0.08
5171	Wired telecommunications carriers	22,610	751,325	0.79
5172	Wireless telecommunications carriers (exc. satellite)	6,092	226,860	0.70
5174	Satellite communications	64	8,270	0.20
5179	Other telecommunications	1,247	56,869	0.57
5182	Data processing, hosting & related services^	12,141	526,302	0.60
51911	News syndicates	246	6,754	0.95
51912	Libraries & archives	281	27,136	0.27
51913	Internet publishing, broadcasting & web search portals	3,032	199,656	0.40
51919	All other information services	3,273	15,091	5.66
5211	Monetary authorities - central bank^	994	18,788	1.38
5221	Depository credit intermediation	87,654	1,968,413	1.16
5222	Nondepository credit intermediation	21,879	558,957	1.02
5223	Activities related to credit intermediation	9,445	263,909	0.93
5231	Security & commodity contracts intermediation & brokerage	8,442	402,027	0.55
5232	Securities & commodity exchanges	0	6,195	0.00
5239	Other financial investment activities	7,924	483,720	0.43
5241	Insurance carriers	77,670	1,438,763	1.41
5242	Agencies & other insurance related activities	34,217	930,610	0.96
52591	Open end investment funds	8	1,127	0.19
52599	Other financial vehicles	18	6,204	0.08

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
5311	Lessors of real estate	21,168	564,116	0.98
5312	Offices of real estate agents & brokers	5,751	276,848	0.54
5313	Activities related to real estate	19,394	655,611	0.77
5321	Automotive eqpt. rental & leasing	5,268	146,601	0.94
5322	Consumer goods rental	5,604	145,968	1.00
5323	General rental centers	738	18,407	1.05
5324	Commercial, industrial eqpt. rental & leasing	4,016	180,694	0.58
5331	Lessors of other nonfinancial intangible asset^	862	33,127	0.68
5411	Legal services	34,289	1,070,999	0.84
5412	Accounting, tax preparation, bookkeeping, payroll services	37,911	1,422,405	0.70
5413	Architectural, engineering & related services	41,215	1,415,410	0.76
5414	Specialized design services	3,932	108,134	0.95
5415	Computer systems design & related services	42,362	1,643,024	0.67
5416	Management, scientific & technical consulting services	26,864	1,150,769	0.61
5417	Scientific research & development services	16,917	670,562	0.66
5418	Advertising & related services	11,095	467,994	0.62
5419	Other professional, scientific, technical service	25,118	590,759	1.11
551111	Bank holding companies	131	9,230	0.37
551112	Other holding companies	3,634	98,182	0.97
551114	Corporate & subsidiary managing offices	143,534	3,128,546	1.20
5611	Office administrative services	16,460	430,762	1.00
5612	Facilities support services	6,437	246,652	0.68
5613	Employment services	209,099	5,604,288	0.97
5614	Business support services	29,532	763,837	1.01

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
5615	Travel arrangement & reservation services	4,195	231,916	0.47
5616	Investigation & security services	21,772	895,007	0.64
5617	Services to buildings & dwellings	72,532	1,763,438	1.07
5619	Other support services	12,655	264,617	1.25
5621	Waste collection	7,359	196,560	0.98
5622	Waste treatment & disposal	2,357	51,801	1.19
5629	Remediation & other waste management services	4,430	130,446	0.89
6111	Elementary & secondary schools	35,732	969,814	0.96
6112	Junior colleges	3,808	83,426	1.19
6113	Colleges, universities & professional schools	62,028	1,843,968	0.88
6114	Business schools & computer & management training	1,586	59,611	0.69
6115	Technical & trade schools	3,716	112,084	0.87
6116	Other schools & instruction	9,316	388,514	0.63
6117	Educational support services	1,565	104,947	0.39
6211	Offices of physicians	92,802	2,331,373	1.04
6212	Offices of dentists	31,488	897,220	0.92
6213	Offices of other health practitioners	30,819	811,118	0.99
6214	Outpatient care centers	29,228	834,376	0.91
6215	Medical & diagnostic laboratories	6,601	251,476	0.69
6216	Home health care services	65,394	1,305,059	1.31
6219	Other ambulatory health care services	12,058	290,425	1.08
6221	General medical & surgical hospitals	255,696	5,248,790	1.27
6222	Psychiatric & substance abuse hospitals	5,542	234,359	0.62
6223	Other specialty hospitals	9,177	292,422	0.82

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
6231	Nursing care facilities	92,065	1,685,634	1.43
6232	Residential mental retardation, health facilities	32,061	741,735	1.13
6233	Community care facilities for the elderly	41,791	876,749	1.24
6239	Other residential care facilities	3,323	132,884	0.65
6241	Individual & family services	54,263	1,546,884	0.92
6242	Community, emergency & other relief services	6,379	180,153	0.92
6243	Vocational rehabilitation services	20,847	332,341	1.64
6244	Child day care services	31,976	868,975	0.96
7111	Performing arts companies	3,050	121,781	0.65
7112	Spectator sports	7,821	127,820	1.60
7113	Promoters of entertainment events	3,724	158,422	0.61
7114	Agents, managers for artists & other public figures	288	20,089	0.37
7115	Independent artists, writers & performers	677	46,144	0.38
71211	Museums	3,725	91,966	1.06
71212	Historical sites	455	10,239	1.16
71213	Zoos & gardens	1,903	34,362	1.45
71219	Nature parks, etc.	197	6,731	0.76
7131	Amusement parks & arcades	3,738	182,296	0.54
7132	Gambling industries	2,248	153,419	0.38
7139	Other amusement & recreation industries	38,547	1,216,852	0.83
7211	Traveler accommodation	33,825	1,944,172	0.45
7212	RV parks & recreational camps	685	42,569	0.42
7213	Rooming & boarding houses	467	11,975	1.02
7223	Special food services	25,905	729,989	0.93
7224	Drinking places (alcoholic beverages)	12,585	362,248	0.91
7225	Restaurants & other eating places	380,786	9,700,975	1.02

Table A20: Group or Sub-group Employment Concentration Ratios Based on 2014 CBP Employment*

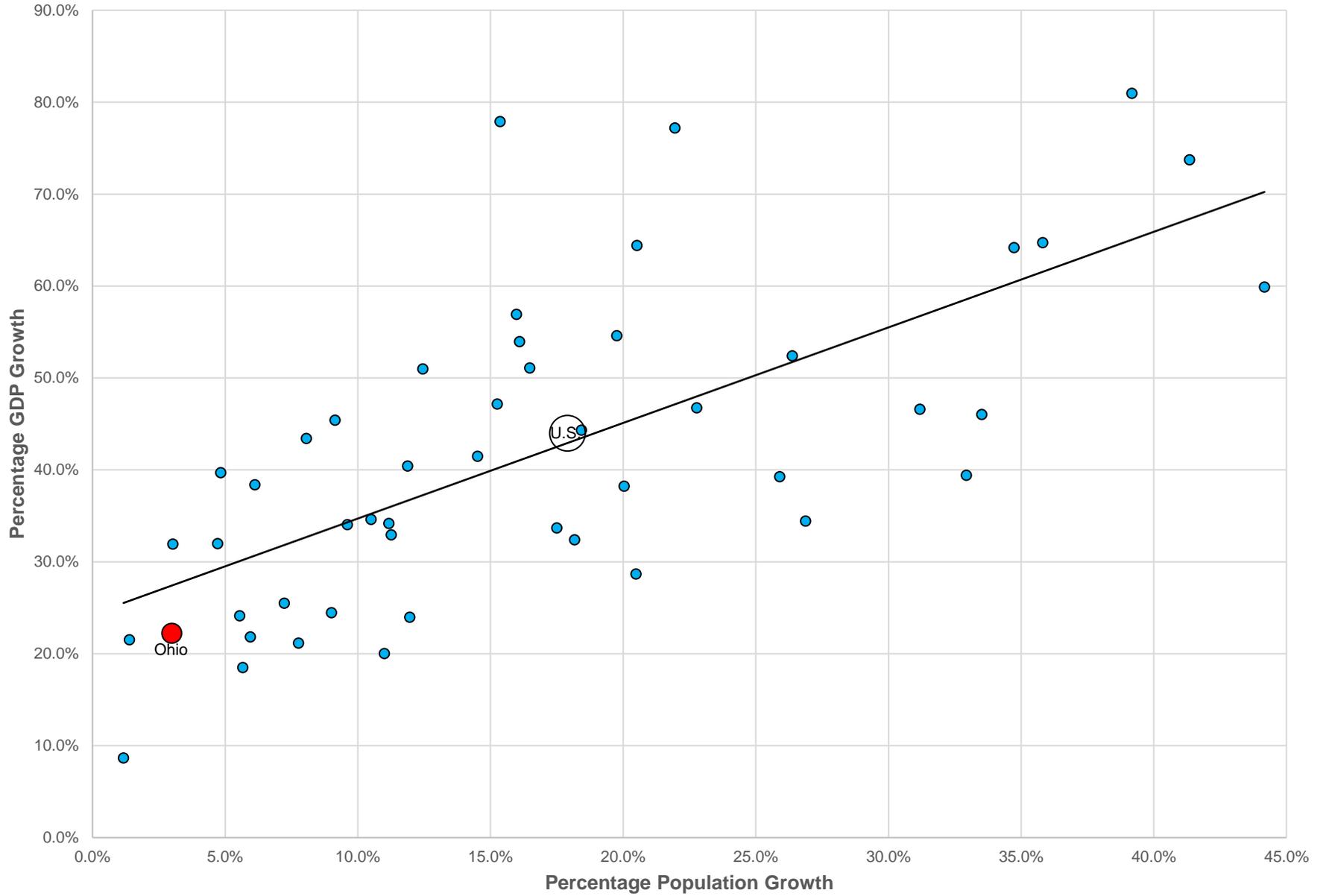
2012 NAICS Code	Industry Titles	Ohio	U.S.	Ohio::U.S. Concentra- tion Ratio
8111	Automotive repair & maintenance	29,813	850,716	0.92
8112	Electronic & precision eqpt. repair & maintenance	3,448	98,725	0.91
8113	Commercial eqpt. (exc. auto & electric) repair & maintenance	9,322	209,091	1.16
8114	Personal & household goods repair & maintenance	2,011	68,071	0.77
8121	Personal care services	28,174	658,790	1.12
8122	Death care services	7,289	139,346	1.37
8123	Drycleaning & laundry services	10,263	288,703	0.93
8129	Other personal services	8,292	278,154	0.78
8131	Religious organizations	65,183	1,684,958	1.01
8132	Grantmaking & giving services	5,381	183,254	0.77
8133	Social advocacy organizations	3,717	160,995	0.60
8134	Civic & social organizations	11,833	235,099	1.31
8139	Business, labor, political, like organizations	16,167	491,219	0.86

Notes: * - all County Business Patterns (CBP) figures should be regarded as estimates, and may not sum to totals for that reason; ^ - no further details are available. Abbreviations used: exc. - except; mfg. - manufacturing; mgt. - management; whsle. - wholesale.

Source: U.S. Bureau of the Census (2016b).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 7/16).

Population Growth Rate and Aggregate GDP Growth Rate, 1997-2015



Source: U.S. BEA

Note: Nevada & N. Dakota not shown

Table A21: GDP and Population in Ohio and the U.S., 1997-2015

Variable	Area	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP (in billions, standardized on 2009)	U.S.	\$11,128.9	\$11,607.6	\$12,150.9	\$12,625.3	\$12,743.6	\$12,970.9	\$13,303.9	\$13,772.8	\$14,211.4	\$14,593.5	\$14,798.4	\$14,718.3	\$14,320.1
	Ohio	\$445.4	\$460.9	\$471.1	\$480.9	\$475.1	\$486.1	\$494.3	\$508.6	\$513.2	\$513.6	\$512.7	\$502.6	\$477.9
Per Capita GDP (standardized on 2009)	U.S.	\$40,818	\$42,079	\$43,545	\$44,745	\$44,719	\$45,097	\$45,858	\$47,037	\$48,090	\$48,909	\$49,126	\$48,401	\$46,680
	Ohio	\$39,495	\$40,746	\$41,559	\$42,320	\$41,723	\$42,613	\$43,223	\$44,413	\$44,772	\$44,738	\$44,584	\$43,646	\$41,453
Absolute GDP - Indexed	U.S.	100.0	104.3	109.2	113.4	114.5	116.6	119.5	123.8	127.7	131.1	133.0	132.3	128.7
Per Capita GDP - Indexed	U.S.	100.0	103.1	106.7	109.6	109.6	110.5	112.3	115.2	117.8	119.8	120.4	118.6	114.4
Absolute GDP - Indexed	Ohio	100.0	103.5	105.8	108.0	106.7	109.1	111.0	114.2	115.2	115.3	115.1	112.8	107.3
Per Capita GDP - Indexed	Ohio	100.0	103.2	105.2	107.2	105.6	107.9	109.4	112.5	113.4	113.3	112.9	110.5	105.0

Variable	Area	2010	2011	2012	2013	2014	2015*
GDP (in billions, standardized on 2009)	U.S.	\$14,628.2	\$14,833.7	\$15,126.3	\$15,317.2	\$15,653.0	\$16,023.1
	Ohio	\$488.1	\$503.5	\$512.8	\$517.7	\$534.9	\$544.4
Per Capita GDP (standardized on 2009)	U.S.	\$47,287	\$47,586	\$48,156	\$48,396	\$49,091	\$49,844
	Ohio	\$42,299	\$43,610	\$44,394	\$44,736	\$46,137	\$46,867
Absolute GDP - Indexed	U.S.	131.4	133.3	135.9	137.6	140.7	144.0
Per Capita GDP - Indexed	U.S.	115.8	116.6	118.0	118.6	120.3	122.1
Absolute GDP - Indexed	Ohio	109.6	113.0	115.1	116.2	120.1	122.2
Per Capita GDP - Indexed	Ohio	107.1	110.4	112.4	113.3	116.8	118.7

Variable	Area	Net Change: '97-'07		Net Change: '07-'09		Net Change: '09-'15*		Net Change: '97-'15*	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
GDP (in billions, standardized on 2009)	U.S.	\$3,669.5	33.0%	-\$478.3	-3.2%	\$1,703.0	11.9%	\$4,894.3	44.0%
	Ohio	\$67.3	15.1%	-\$34.8	-6.8%	\$66.5	13.9%	\$99.0	22.2%
Per Capita GDP (standardized on 2009)	U.S.	\$8,308.0	20.4%	-\$2,446.0	-5.0%	\$3,164.0	6.8%	\$9,026.0	22.1%
	Ohio	\$5,089.0	12.9%	-\$3,131.0	-7.0%	\$5,414.0	13.1%	\$7,372.0	18.7%
Absolute GDP - Indexed	U.S.	33.0		-4.3		15.3		44.0	
Per Capita GDP - Indexed	U.S.	20.4		-6.0		7.8		22.1	
Absolute GDP - Indexed	Ohio	15.1		-7.8		14.9		22.2	
Per Capita GDP - Indexed	Ohio	12.9		-7.9		13.7		18.7	

Note: * - 2015 GDP figures are preliminary, while those for earlier years may be revised. Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 7/16).

Table A22: Growth and Industry Concentration in Ohio's Economy, 1997-2014

2007 NAICS Codes	Major Industry Titles	Ohio			U.S.			1997 Ohio::U.S. Concentration Ratio ¹
		1997 Value (in millions) ¹	1997 Percent of the Economy ¹	Real Growth to 2014 ²	1997 Value (in millions) ¹	1997 Percent of the Economy ¹	Real Growth to 2014 ²	
11-92	Total	\$342,183	100.00%	20.1%	\$8,549,209	100.00%	40.7%	1.00
<u>Slower-Growing/Declining Industries² Not Concentrated in Ohio</u>			<u>21.82%</u>	<u>-4.5%</u>		<u>26.51%</u>	<u>5.2%</u>	<u>0.82</u>
92sl	State & local government	\$30,050	8.78%	-3.2%	\$759,673	8.89%	14.9%	0.99
23	Construction	\$13,174	3.85%	-30.8%	\$340,697	3.99%	-14.2%	0.97
81	Other svcs., exc. government	\$8,690	2.54%	-24.6%	\$230,792	2.70%	-10.9%	0.94
92fc, 491	Federal civilian (inc. Postal Service)	\$6,259	1.83%	-4.1%	\$217,826	2.55%	6.2%	0.72
532-3	Rental & leasing svcs. & lessors of intangible assets	\$3,524	1.03%	11.8%	\$106,817	1.25%	33.6%	0.82
5411	Legal svcs.	\$3,038	0.89%	-26.1%	\$107,127	1.25%	-6.3%	0.71
92811	Military	\$2,568	0.75%	-4.4%	\$112,314	1.31%	6.3%	0.57
713	Amusements, gambling & recreation	\$1,413	0.41%	27.1%	\$43,239	0.51%	28.0%	0.82
721	Accommodation	\$1,258	0.37%	6.1%	\$70,555	0.83%	27.5%	0.45
324	Petroleum & coal products	\$1,154	0.34%	379.5%	\$47,975	0.56%	35.5%	0.60
321	Wood products	\$923	0.27%	-25.2%	\$26,866	0.31%	-12.4%	0.86
212	Mining, exc. oil & gas	\$744	0.22%	-4.3%	\$26,485	0.31%	17.7%	0.70
481	Air transportation	\$713	0.21%	20.5%	\$53,142	0.62%	-20.1%	0.34
313-4	Textile & textile product mills	\$368	0.11%	-20.4%	\$27,443	0.32%	-47.0%	0.34
211	Oil & gas extraction	\$336	0.10%	173.1%	\$55,158	0.65%	27.8%	0.15
315-6	Apparel, leather & allied products	\$239	0.07%	-36.0%	\$25,236	0.30%	-53.5%	0.24
485	Transit & ground passenger transportation	\$224	0.07%	26.1%	\$15,059	0.18%	16.2%	0.37
<u>Slower-Growing/Declining Industries² Concentrated in Ohio</u>			<u>37.33%</u>	<u>3.4%</u>		<u>27.90%</u>	<u>19.9%</u>	<u>1.34</u>
44-45	Retail trade	\$24,809	7.25%	15.8%	\$588,376	6.88%	37.5%	1.05
622-3	Hospitals & nursing & residential care facilities	\$11,233	3.28%	23.0%	\$218,802	2.56%	37.4%	1.28
332	Fabricated metal products	\$9,609	2.81%	-17.4%	\$110,517	1.29%	-6.5%	2.17
331	Primary metals	\$8,294	2.42%	-33.8%	\$48,164	0.56%	19.3%	4.30
325	Chemical	\$7,918	2.31%	-4.6%	\$174,914	2.05%	17.2%	1.13
22	Utilities	\$7,731	2.26%	-2.0%	\$172,141	2.01%	-0.8%	1.12
333	Machinery	\$6,876	2.01%	-5.3%	\$102,552	1.20%	13.6%	1.68
311-2	Food, beverage & tobacco products	\$6,554	1.92%	5.1%	\$136,109	1.59%	6.8%	1.20
55	Management of companies & enterprises	\$6,220	1.82%	68.8%	\$126,705	1.48%	34.2%	1.23
722	Food svcs. & drinking places	\$6,128	1.79%	10.1%	\$150,708	1.76%	34.1%	1.02
326	Plastics & rubber products	\$5,714	1.67%	-17.3%	\$58,008	0.68%	2.6%	2.46
335	Electrical eqpt. & appliances	\$4,362	1.27%	-29.3%	\$47,096	0.55%	-8.8%	2.31
484	Truck transportation	\$3,940	1.15%	11.3%	\$77,411	0.91%	20.1%	1.27
327	Nonmetallic mineral products	\$3,559	1.04%	-35.8%	\$39,954	0.47%	-16.3%	2.23

Table A22: Growth and Industry Concentration in Ohio's Economy, 1997-2014

2007 NAICS Codes	Major Industry Titles	Ohio			U.S.			1997 Ohio::U.S. Concentration Ratio ¹
		1997 Value (in millions) ¹	1997 Per- cent of the Economy ¹	Real Growth to 2014 ²	1997 Value (in millions) ¹	1997 Per- cent of the Economy ¹	Real Growth to 2014 ²	
<u>Slower-Growing/Declining Industries² Concentrated in Ohio (continued)</u>								
322	Paper	\$2,694	0.79%	-50.7%	\$55,592	0.65%	-37.0%	1.21
3364-9	Other transportation eqpt.	\$2,605	0.76%	12.4%	\$62,702	0.73%	21.4%	1.04
487-8, 492	Other transportation & support activities	\$2,265	0.66%	-16.0%	\$55,869	0.65%	11.6%	1.01
339	Miscellaneous mfg.	\$2,158	0.63%	-16.1%	\$52,507	0.61%	36.0%	1.03
323	Printing & related support activities	\$2,010	0.59%	-5.1%	\$37,472	0.44%	4.9%	1.34
337	Furniture & related products	\$1,276	0.37%	-45.1%	\$28,024	0.33%	-32.1%	1.14
562	Waste management & remediation svcs.	\$972	0.28%	14.8%	\$21,935	0.26%	25.0%	1.11
482	Rail transportation	\$824	0.24%	-1.2%	\$20,036	0.23%	18.5%	1.03
<u>Faster-Growing Industries² Not Concentrated in Ohio</u>								
			<u>27.05%</u>	<u>52.8%</u>		<u>35.21%</u>	<u>77.3%</u>	<u>0.77</u>
531	Real estate	\$31,672	9.26%	29.2%	\$937,699	10.97%	50.1%	0.84
5412-4, 6-9	Other professional, scientific & technical svcs.	\$9,955	2.91%	21.4%	\$320,886	3.75%	50.4%	0.78
621	Ambulatory health care svcs.	\$9,795	2.86%	54.2%	\$251,234	2.94%	65.1%	0.97
521-2	Federal Reserve banks, credit intermediation, etc.	\$8,030	2.35%	157.9%	\$234,130	2.74%	78.6%	0.86
561	Administrative & support svcs.	\$7,723	2.26%	68.6%	\$193,590	2.26%	87.7%	1.00
515, 517	Broadcasting & telecommunications	\$6,271	1.83%	66.0%	\$227,369	2.66%	135.1%	0.69
334	Computer & electronic products	\$2,948	0.86%	398.4%	\$196,320	2.30%	653.2%	0.38
511	Publishing (inc. software, exc. Internet)	\$2,867	0.84%	49.5%	\$97,634	1.14%	73.8%	0.73
111-2	Crop & animal production (farms)	\$2,538	0.74%	39.3%	\$88,136	1.03%	65.2%	0.72
5415	Computer systems design & related svcs.	\$2,371	0.69%	181.5%	\$75,259	0.88%	239.1%	0.79
61	Educational svcs.	\$2,201	0.64%	18.7%	\$71,750	0.84%	40.7%	0.77
523	Securities, commodity contracts, investments	\$1,740	0.51%	76.1%	\$120,282	1.41%	75.8%	0.36
624	Social assistance	\$1,220	0.36%	65.0%	\$39,403	0.46%	61.0%	0.77
711-2	Performing arts, museums & related activities	\$1,134	0.33%	35.9%	\$37,136	0.43%	44.3%	0.76
518, 519	Data prcsng., hosting, other info. (inc. Internet)	\$1,053	0.31%	31.2%	\$30,314	0.35%	191.2%	0.87
512	Motion pictures & sound recordings	\$425	0.12%	2.4%	\$40,399	0.47%	121.6%	0.26
113-5	Forestry, fishing & related activities	\$232	0.07%	65.2%	\$20,660	0.24%	59.8%	0.28
483	Water transportation	\$218	0.06%	-29.8%	\$6,613	0.08%	227.1%	0.82
213	Support activities for mining	\$93	0.03%	457.5%	\$13,501	0.16%	205.5%	0.17
525	Funds, trusts & other financial vehicles	\$81	0.02%	705.4%	\$7,455	0.09%	392.9%	0.27
486	Pipeline transportation	\$74	0.02%	223.9%	\$6,925	0.08%	206.1%	0.27

Table A22: Growth and Industry Concentration in Ohio's Economy, 1997-2014

2007 NAICS Codes	Major Industry Titles	Ohio			U.S.			1997 Ohio::U.S. Concentration Ratio ¹
		1997 Value (in millions) ¹	1997 Per- cent of the Economy ¹	Real Growth to 2014 ²	1997 Value (in millions) ¹	1997 Per- cent of the Economy ¹	Real Growth to 2014 ²	
<u>Faster-Growing Industries² Concentrated in Ohio</u>								
42	Wholesale trade	\$21,229	6.20%	31.4%	\$530,163	6.20%	53.2%	1.00
3361-3	Motor vehicles, bodies, trailers & parts	\$15,220	4.45%	5.2%	\$112,638	1.32%	64.3%	3.38
524	Insurance carriers & related activities	\$9,753	2.85%	61.4%	\$216,715	2.53%	57.5%	1.12
493	Warehousing & storage	\$914	0.27%	175.7%	\$20,997	0.25%	136.4%	1.09

Notes: 1 - in or based on current dollars, but components may not sum to totals due to rounding; 2 - based on national industry change figures after adjusting for inflation; grouped on slower or faster than the national average of 40.7 percent.

Abbreviations used: eqpt. - equipment; exc. - except; inc. - including; info. - information; mfg. - manufacturing; prcsng. - processing; srvcs. - services.

Source: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 7/16).

Table A23: Percentage Changes in Ohio and U.S. GDP by Industry, 1997-2014 (chained 2009 dollars)

2007 NAICS Codes	Industry Titles	U.S.			Ohio		
		Real GDP (millions)		Percent Change 1997-2014	Real GDP (millions)		Percent Change 1997-2014
		1997	2014		1997	2014	
11-92	Total	\$11,128,850	\$15,653,000	40.7%	\$445,400	\$534,916	20.1%
111-2	Crop & animal production (farms)	\$71,152	\$117,575	65.2%	\$2,049	\$2,855	39.3%
113-5	Forestry, fishing & related activities	\$20,254	\$32,376	59.8%	\$227	\$375	65.2%
211	Oil & gas extraction	\$173,312	\$221,513	27.8%	\$1,056	\$2,884	173.1%
212	Mining, exc. oil & gas	\$62,245	\$73,280	17.7%	\$1,749	\$1,673	-4.3%
213	Support activities for mining	\$21,235	\$64,867	205.5%	\$146	\$814	457.5%
23	Construction	\$686,763	\$589,564	-14.2%	\$26,555	\$18,381	-30.8%
321	Wood products	\$24,640	\$21,590	-12.4%	\$846	\$633	-25.2%
327	Nonmetallic mineral products	\$51,390	\$43,007	-16.3%	\$4,577	\$2,937	-35.8%
331	Primary metals	\$41,187	\$49,116	19.3%	\$7,092	\$4,696	-33.8%
332	Fabricated metal products	\$155,293	\$145,224	-6.5%	\$13,501	\$11,157	-17.4%
333	Machinery	\$124,312	\$141,280	13.6%	\$8,335	\$7,896	-5.3%
334	Computer & electronic products	\$37,920	\$285,602	653.2%	\$569	\$2,836	398.4%
335	Electrical eqpt. & appliances	\$55,983	\$51,042	-8.8%	\$5,185	\$3,666	-29.3%
3361-3	Motor vehicles, bodies, trailers & parts	\$88,996	\$146,253	64.3%	\$12,026	\$12,648	5.2%
3364-9	Other transportation eqpt.	\$94,959	\$115,278	21.4%	\$3,945	\$4,433	12.4%
337	Furniture & related products	\$36,987	\$25,124	-32.1%	\$1,684	\$924	-45.1%
339	Miscellaneous mfg.	\$56,684	\$77,083	36.0%	\$2,330	\$1,955	-16.1%
311-2	Food, beverage & tobacco products	\$204,950	\$218,906	6.8%	\$9,870	\$10,378	5.1%
313-4	Textile & textile product mills	\$29,964	\$15,883	-47.0%	\$402	\$320	-20.4%
315-6	Apparel, leather & allied products	\$23,411	\$10,892	-53.5%	\$222	\$142	-36.0%
322	Paper	\$80,020	\$50,388	-37.0%	\$3,877	\$1,912	-50.7%
323	Printing & related support activities	\$38,808	\$40,720	4.9%	\$2,082	\$1,976	-5.1%
324	Petroleum & coal products	\$73,328	\$99,393	35.5%	\$1,764	\$8,458	379.5%
325	Chemical	\$250,793	\$293,876	17.2%	\$11,353	\$10,831	-4.6%
326	Plastics & rubber products	\$69,511	\$71,342	2.6%	\$6,848	\$5,662	-17.3%
22	Utilities	\$266,917	\$264,745	-0.8%	\$11,987	\$11,748	-2.0%
42	Wholesale trade	\$620,136	\$950,114	53.2%	\$24,831	\$32,621	31.4%
44-45	Retail trade	\$672,016	\$924,086	37.5%	\$28,335	\$32,822	15.8%
481	Air transportation	\$82,668	\$66,058	-20.1%	\$1,109	\$1,336	20.5%

Table A23: Percentage Changes in Ohio and U.S. GDP by Industry, 1997-2014 (chained 2009 dollars)

2007 NAICS Codes	Industry Titles	U.S.			Ohio		
		Real GDP (millions)		Percent Change 1997-2014	Real GDP (millions)		Percent Change 1997-2014
		1997	2014		1997	2014	
482	Rail transportation	\$31,602	\$37,433	18.5%	\$1,299	\$1,284	-1.2%
483	Water transportation	\$5,813	\$19,015	227.1%	\$191	\$134	-29.8%
484	Truck transportation	\$107,604	\$129,190	20.1%	\$5,477	\$6,095	11.3%
485	Transit & ground passenger transportation	\$23,910	\$27,776	16.2%	\$356	\$449	26.1%
486	Pipeline transportation	\$6,607	\$20,221	206.1%	\$71	\$230	223.9%
487-8, 492	Other transportation & support activities	\$79,852	\$89,100	11.6%	\$3,238	\$2,719	-16.0%
493	Warehousing & storage	\$25,472	\$60,214	136.4%	\$1,109	\$3,058	175.7%
511	Publishing (inc. software, exc. Internet)	\$119,511	\$207,753	73.8%	\$3,509	\$5,245	49.5%
512	Motion pictures & sound recordings	\$50,561	\$112,038	121.6%	\$532	\$545	2.4%
515, 517	Broadcasting & telecommunications	\$175,948	\$413,622	135.1%	\$4,853	\$8,057	66.0%
518, 519	Data prcsng., hosting, other info. (inc. Internet)	\$32,145	\$93,597	191.2%	\$1,117	\$1,465	31.2%
521-2	Federal Reserve banks, credit intermediation, etc.	\$220,425	\$393,581	78.6%	\$7,560	\$19,500	157.9%
523	Securities, commodity contracts, investments	\$101,179	\$177,904	75.8%	\$1,464	\$2,578	76.1%
524	Insurance carriers & related activities	\$259,197	\$408,302	57.5%	\$11,665	\$18,833	61.4%
525	Funds, trusts & other financial vehicles	\$8,404	\$41,421	392.9%	\$92	\$741	705.4%
531	Real estate	\$1,276,640	\$1,916,693	50.1%	\$43,120	\$55,699	29.2%
532-3	Rental & leasing svcs. & lessors of intangible assets	\$137,911	\$184,224	33.6%	\$4,550	\$5,088	11.8%
5411	Legal svcs.	\$191,860	\$179,854	-6.3%	\$5,442	\$4,022	-26.1%
5415	Computer systems design & related svcs.	\$74,967	\$254,215	239.1%	\$2,362	\$6,650	181.5%
5412-4, 6-9	Other professional, scientific & technical svcs.	\$451,676	\$679,367	50.4%	\$14,012	\$17,009	21.4%
55	Management of companies & enterprises	\$249,953	\$335,393	34.2%	\$12,271	\$20,711	68.8%
561	Administrative & support svcs.	\$248,413	\$466,283	87.7%	\$9,910	\$16,706	68.6%
562	Waste management & remediation svcs.	\$30,448	\$38,071	25.0%	\$1,350	\$1,550	14.8%
61	Educational svcs.	\$118,958	\$167,361	40.7%	\$3,648	\$4,330	18.7%
621	Ambulatory health care svcs.	\$337,525	\$557,090	65.1%	\$13,159	\$20,288	54.2%
622-3	Hospitals & nursing & residential care facilities	\$354,221	\$486,763	37.4%	\$18,186	\$22,377	23.0%
624	Social assistance	\$60,773	\$97,869	61.0%	\$1,882	\$3,105	65.0%
711-2	Performing arts, museums & related activities	\$60,131	\$86,781	44.3%	\$1,836	\$2,496	35.9%
713	Amusements, gambling & recreation	\$58,691	\$75,133	28.0%	\$1,918	\$2,438	27.1%
721	Accommodation	\$100,602	\$128,247	27.5%	\$1,794	\$1,904	6.1%
722	Food svcs. & drinking places	\$236,123	\$316,527	34.1%	\$9,601	\$10,566	10.1%

Table A23: Percentage Changes in Ohio and U.S. GDP by Industry, 1997-2014 (chained 2009 dollars)

2007 NAICS Codes	Industry Titles	U.S.			Ohio		
		Real GDP (millions)		Percent Change 1997-2014	Real GDP (millions)		Percent Change 1997-2014
		1997	2014		1997	2014	
81	Other srvcs., exc. government	\$376,826	\$335,628	-10.9%	\$14,188	\$10,702	-24.6%
92fc, 491	Federal civilian (inc. Postal Service)	\$335,364	\$356,069	6.2%	\$9,637	\$9,244	-4.1%
92811	Military	\$180,956	\$192,336	6.3%	\$4,138	\$3,954	-4.4%
92sl	State & local government	\$1,210,508	\$1,390,908	14.9%	\$47,883	\$46,366	-3.2%

Notes: * - exc. - except; inc. - including; info. - information; mfg. - manufacturing; prcsng. - processing; srvcs. - services; figures do not sum to totals due to rounding and/or different inflators or deflators used for different industries.

Sources: U.S. BEA (2016).

Prepared by: Office of Research, Ohio Development Services Agency. Telephone 800/848-1300, or 614/466-2116 (DL, 7/16).

NOTES

- 1 The choice of start and end points for a period can affect how changes during that time are viewed. What looks like a trend with one set of points for one time period may appear as a random fluctuation with another set of points for another, overlapping time period. This is particularly true when the time periods are short. Furthermore, initial figures usually are revised when additional information becomes available later. Interpretations of trends often change as a consequence. (Appelbaum, 2011, has a more detailed discussion.) Caution is warranted.
- 2 Algeria's rank reflects its much larger population – 39,542,000 – as well as its level of economic development. On the other hand, the UAE has a rapidly growing economy well along in development; however, about 85 percent of its estimated 9,157,000 people are immigrants, with about 50 percent from South Asia alone (U.S. CIA, 2016). All national GDP figures are based on Purchasing Power Parity (PPP). The CIA also offers figures based on Official Exchange Rates (OER). It prefers the PPP over OER figures for comparing the economic strengths and well-being of countries because the latter are subject to international and domestic financial forces not capturing the value of domestic output. It describes PPP estimates for developed countries as quite reliable: its 2015 PPP and OER figures for the U.S. are \$17.95 trillion, and the BEA's figure is \$17.83 trillion – different, but the smaller is 99.3 percent of the larger. However, it cautions users that PPP estimates for developing countries are often rough approximations for one reason or another: some countries do not formally participate in the World Bank's PPP project, or there may be a relative lack of comparable price information between the U.S. and another country. (What are the prices in America for oxcarts and non-U.S. military equipment?) Most GDP estimates for developing countries extrapolate from PPP numbers published by the United Nations International Comparison Program and by University of Pennsylvania Professors Summers and Heston and their colleagues. See the CIA and OECD (2016) websites for more details.
- 3 Table A17 and the related graph on page 104 illustrate the very strong association between the percentages of GDP and value-added (VA – essentially the value of shipments minus the costs of labor and materials) coming from Ohio for the 19 major manufacturing industries and clusters used by the BEA. The association is so strong because GDP calculations start with the Census Bureau's VA estimates; they differ a bit because the BEA subtracts additional costs such as purchased services, which may vary by industry. The strength of this association means that the VA percentages calculated *for manufacturing industry groups*, shown in Table A18, are very good proxies for percentages of GDP. Similarly, and more widely applicable, table A19 and the related graph on page 112 show the association between concentration ratios based on the private sector GDP and corresponding County Business Patterns (CBP) employment figures (farms and railroads are excluded from both). The strength of this association means CBP concentration ratios *for industry groups* shown in Table A20 generally are good proxies

for GDP data. VA and CBP data specify our understanding of sectors and major industries concentrated in Ohio, and may point to groups that are exceptions in sectors and major industries not concentrated here. More specific (*i.e.*, 6-digit) industry data are available from CBP and the quinquennial Census of Manufactures, but space limitations, data suppression and timeliness issues usually preclude their use herein.

- 4 The engines-turbines-power transmission group includes all diesel engines (333618) – even those for motor vehicles – but otherwise excludes motor vehicle parts.
- 5 Examples of support activities include fee or contract-based exploring, drilling, coring, testing and/or making geological observations independently from the companies extracting the material.
- 6 The rise in construction activity from 1997 through 1999 also is consistent with the rising number of building permits during the same years (U.S. BEA, 2016; U.S. Bureau of the Census, n.d.).
- 7 Rail and water transportation services carry some passengers, but the Association of American Railroads (2016) emphasizes moving freight. CBP data for water transportation show most are employed in moving cargo (U.S. Bureau of the Census, 2016b). In contrast, commuter rail and ship-based sightseeing services are classified in other transportation industries (Office of Management and Budget, 2007).
- 8 CBP data show most people employed in air transportation are employed on the passenger side of the industry, not moving freight (U.S. Bureau of the Census, 2016b).
- 9 The BEA treats “other transportation and support activities” as a residual category including airport operations, air traffic control, crating-packing-cargo handling, arranging freight transportation, port operations, sightseeing and scenic travel regardless of mode, towing, and navigational, courier and railroad car services – among other things (Office of Management and Budget, 2007).
- 10 The BEA imputes the rental value of owner-occupied housing, treating homeowners as businesses paying rent to themselves. Therefore, homeowners contribute to the real estate industry’s GDP even if not employed by the industry. In addition, like businesses, homeowners’ property taxes paid to state and local governments are included as part of taxes on production and imports for the real estate industry (U.S. BEA, 2016).
- 11 Managing offices differ from holding companies. The latter hold an equity interest to control or influence company management, but do not manage specific company establishments (Office of Management and Budget, 2007).

- 12 Full-time equivalent (FTE) employment with Ohio state and local governments was estimated to be 587,547 in 2012 according to the latest Census of Governments. Of that number, 42.3 percent worked for independent local school districts, 23.1 percent worked for the state, 14.4 percent worked for counties, 13.8 percent worked for municipalities, 3.6 percent worked in special districts, and 2.8 percent worked for townships. If the 71,276 FTE state-level education employees are added to the 248,486 FTE independent school district employees, then an estimated 54.4 percent of all state and local government employment in Ohio is part of education. (Some county and municipality data are missing, but the problem is not large enough to substantially change the conclusion.) Most of the remaining FTE employees worked in hospitals and other health establishments, law and public safety (corrections, judicial, legal, police and firefighters), public welfare/social insurance, transportation-related services, various utilities, and general administration (U.S. Bureau of the Census, 2014a).
- 13 The motor vehicle industry also is concentrated in Indiana and Michigan. However, Arizona, Florida and Nevada are more dependent on the tourism-related leisure and hospitality sectors; they also were hit hard when the housing bubble burst and local construction activity fell (U.S. BEA, 2016).
- 14 The motor vehicle industry in Ohio may be at or near production capacity. Initial figures for 2015 show a 1.5 percent increase from 2014 in light vehicle assemblies in Ohio; however, assemblies in the first six months of 2016 are down 1.2 percent from the first six months of 2015 (Automotive News, 2016).
- 15 The chart covers all aspects of each economy at the most detailed levels available from the BEA. The exceptions are five outliers, usually where growth was extreme or differences in magnitude between Ohio and the nation as a whole were very large. Extreme growth characterized manufacturing computer and electronic products (NAICS 334) – about 400 percent in Ohio, but more than 650 percent across the nation. Similarly, funds, trust and other financial services (525) grew more than 700 percent in Ohio and over 380 percent in the U.S.; mining support activities (213) rose about 460 percent in Ohio and more than 200 percent nationally; coal and petroleum products manufacturing (324) rose 380 percent here, but less than 40 percent nationally. On the other hand, U.S. water transportation services rose more than 220 percent but contracted by more than 20 percent in Ohio. All of these changes and differences are remarkable, but the collective contribution of the five amounted to 3.2 and 3.3 percent of Ohio’s and America’s respective GDP totals in 2014 (U.S. BEA, 2016).
- 16 Economic forecasts, though, are often imprecise due to any number of factors. These include, but are not limited to: the impact of technological advances and unforeseeable events, limited data, an incomplete understanding of the economy, and assumptions about the economy that may not be entirely justified. This imprecision also means that recessions are difficult to predict.

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