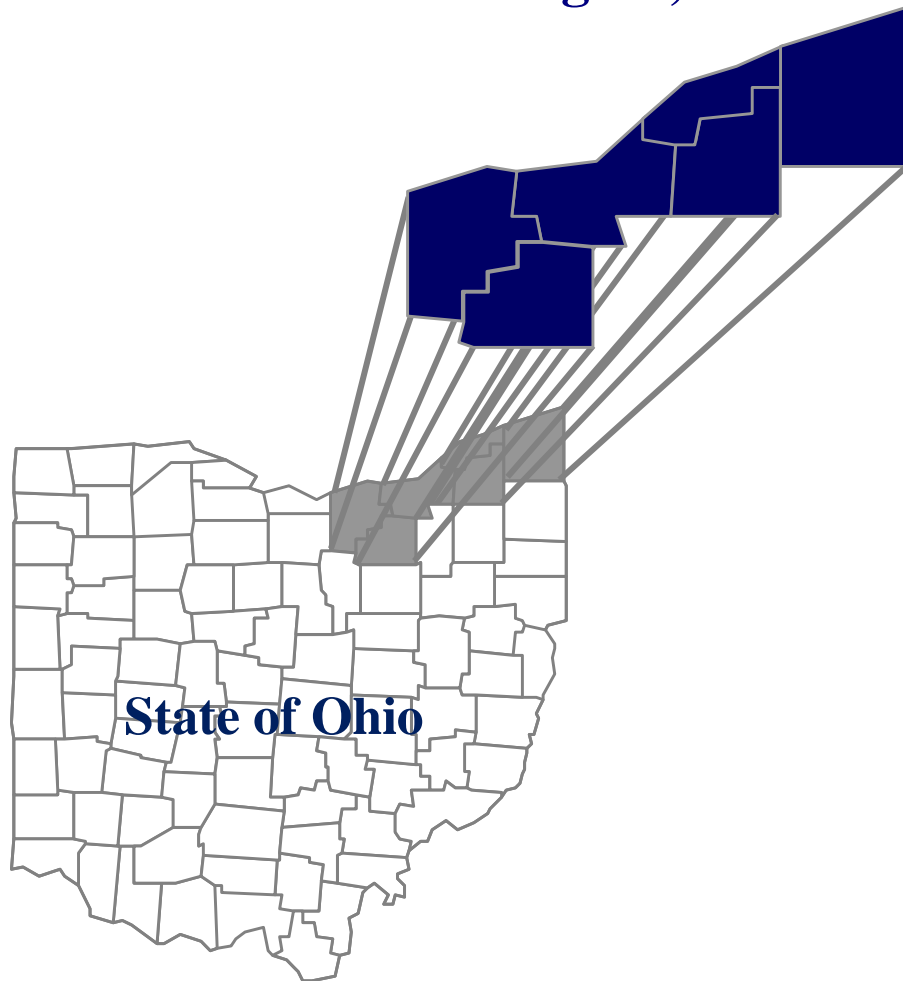


**The Economic Impact  
of the Member Hospitals  
of The Center for Health Affairs  
on the State of Ohio and  
the Northeast Ohio Region, 2015**



**The Center for Health Affairs**  
*The Leading Advocate for Northeast Ohio Hospitals*  
1226 Huron Road East  
Cleveland, Ohio 44115

**June 2016**

The Economic Impact of the Member Hospitals  
of The Center for Health Affairs on the State of Ohio and the Northeast Ohio Region, 2015

A Study Commissioned by:

The Center for Health Affairs

To Measure the Impact of the Northeast Ohio Member Hospitals  
of The Center for Health Affairs  
on the State of Ohio and the Northeast Ohio Region including  
Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina Counties

Study completed by:

Dr. Gerald A. Doeksen  
Regents Professor and Director

and

Cheryl F. St. Clair  
Associate Director and Associate State Extension Specialist

National Center for Rural Health Works  
Oklahoma State University

The Center for Health Affairs  
*The Leading Advocate for Northeast Ohio Hospitals*  
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## EXECUTIVE SUMMARY

The economic impact of the member hospitals of The Center for Health Affairs shows that the member hospitals have a significant impact on the Northeast Ohio Region economy and the State of Ohio economy. This study, “The Economic Impact of the Member Hospitals of The Center for Health Affairs on the State of Ohio and the Northeast Ohio Region, 2015” was commissioned by The Center for Health Affairs and conducted by Dr. Gerald A. Doeksen, Regents Professor and Director, and Cheryl F. St. Clair, Associate State Extension Specialist and Associate Director, of the National Center for Rural Health Works, Oklahoma State University.

Using a computer program developed specifically for the health care industry, Dr. Doeksen analyzed not only the direct economic contribution of hospitals, but also calculated how many jobs and how much payroll plus benefits (labor income) are created as a secondary effect. The jobs and labor income generated in other businesses are measured with employment and labor income multipliers derived specifically for the State of Ohio and for the Northeast Ohio Region.

**United States Health Trends.** *The health care sector is an extremely fast-growing sector in the United States, and based on the current demographics, there is every reason to expect this trend to continue.* Several highlights from the national data are:

- In 1970, health care services as a share of the national gross domestic product (GDP) were 6.9 percent and increased to 17.5 percent in 2014;
- Per capita health expenditures increased from \$355 in 1970 to \$9,523 in 2014;
- Employment in the health sector increased 385.9 percent from 1970 to 2014; and
- Annual increases in employment from 2000 to 2014 ranged from 1.7 percent to 2.7 percent.

Health care expenditures are projected to increase to 18.5 percent of gross domestic product (GDP) in 2020 and to 19.6 percent in 2024. Per capita health care expenditures are projected to increase to \$12,741 in 2020 and to \$15,618 in 2024. Total health expenditures are projected to increase to over \$4.3 trillion in 2020 and to \$5.4 trillion in 2024.

**State of Ohio Health Trends.** Health data from County Business Patterns (U.S. Census Bureau) for the State of Ohio are presented. From 2004 through 2014, the state health services employment grew 16.3 percent compared to a loss in employment for all state industries of 2.6 percent. During this same time period, state health services payroll increased 48.4 percent compared to an increase of 25.4 percent in payroll for all state industries. In 2004, state health services employment comprised 14.8 percent of the total state employment and increased to 17.7 percent in 2014. In 2004, health services payroll comprised 14.6 percent of the total state payroll and increased to 17.3 percent in 2014. From 2004 through 2014, growth in state hospital employment was 14.0 percent while growth in state hospital payroll was 60.8 percent.

From Bureau of Economic Analysis data, comparing the state health care and social assistance sector to the other state industry sectors in 2013, the state health care and social assistance sector (which includes hospitals) accounted for 862,624 full- and part-time employees or 14.9 percent of the private employment in Ohio. In 2014, the state health care and social assistance sector accounted for 870,216 full- and part-time employment or 14.8 percent of the private employment in Ohio. In both years, the state health care and social assistance sector was the largest private employer in the state based on the number of employees. In both years, the second largest employer in the state was the manufacturing sector.

In 2013, the state health care and social assistance sector accounted for \$45.0 billion in earnings or 15.6 percent of private earnings in Ohio. In 2014, the health care and social assistance sector accounted for \$46.3 billion in earnings or 15.3 percent of private earnings in Ohio. In both 2013 and 2014, the state health care and social assistance sector was the second largest sector in the state based on private earnings. In both years, the largest earnings sector in the state was the manufacturing sector.

**Northeast Ohio Region Health Trends.** The Northeast Ohio Region includes the six counties of Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina counties and includes all the member hospitals of The Center for Health Affairs. From Bureau of Economic Analysis data, the emphasis on manufacturing has significantly decreased in the Northeast Ohio Region and the emphasis on services, which includes health care, has become much more dominant from 1990 to 2014.

According to the U.S. Census Bureau, from 1990 to 2000, population increased by 2.2 percent in the Northeast Ohio Region and increased 4.7 percent in the state, as compared to the national population increase of 13.2 percent. From 2000 to 2010, population decreased in the Northeast Ohio Region by 3.2 percent and increased in the state 1.6 percent and increased nationally 9.7 percent. From 2010 to 2014, the population decreased in the region by 0.7 percent, increased for the state 0.1 percent and increased for the nation 3.3 percent.

From the population projections provided by the U.S. Census Bureau and the Ohio Department of Development, from 2010 to 2040, the population of the Northeast Ohio Region is projected to decrease 5.3 percent, the state's population is projected to increase 1.2 percent, and the nation's population is projected to increase 23.1 percent. This same trend applies to all the population projections.

From County Business Patterns data (U.S. Census Bureau), from 2004 through 2014, the region's health services sector employment grew 18.5 percent compared to the total region employment decreasing 4.2 percent. The region's health services sector employment accounted for 15.8 percent of the total employment for all region industries in 2004 and increased to 19.5 percent in 2014. During the same time period, the region's health services sector payroll experienced an increase of 56.3 percent compared to a 22.1 percent increase in payroll for all region industries. The region's health services payroll accounted for 15.1 percent of the total region payroll in 2004 and increased to 19.3 percent in 2014.

From the Bureau of Economic Analysis data, the region's health care and social assistance sector accounted for 189,958 full- and part-time employees or 16.1 percent of private employment in 2013 and accounted for 189,194 full- and part-time employees or 15.9 percent of private employment in 2014. The region's health care and social assistance sector was the largest employment sector for both years; the second largest sector was manufacturing.

From the same source, the region's health care and social assistance sector accounted for \$10.5 billion in earnings or 16.5 percent of private earnings in 2013 and accounted for \$10.6 billion or 16.1 percent of private earnings in 2014. Both sources demonstrate trends of increasing employment and income for the region's health care and social assistance sector. The region's health care and social assistance sector was the largest private sector in 2013 and the second largest sector in 2014. For 2013, manufacturing was the second largest and for 2014, manufacturing was the largest private sector.

**The Impact on the Northeast Ohio Region Economy, 2015.** The majority of the economic impact of the member hospitals occurred in the Northeast Ohio Region. The impact of the member hospitals on employment in the Northeast Ohio Region in 2015 was:

- 81,836 direct employment impact from the member hospitals' operations
- 4,347 direct employment impact from hospital construction activities
- 81,360 secondary employment impact created in other businesses and industries
- 167,543 total employment impact from hospital operations and construction

The total employment impact of the member hospitals was over 167,543 jobs and the labor income (payroll and benefits) derived from these jobs also impacted the Northeast Ohio Region economy. The impact from labor income in 2015 was:

- \$6.8 billion labor income paid to employees from the operations of the member hospitals
- \$228.0 million labor income paid to hospital construction workers from capital improvement projects
- \$4.5 billion paid in secondary labor income in other businesses and industries
- \$11.5 billion in total labor income impact from hospital operations and construction
- \$3.6 billion of total labor income impact spent on retail sales
- \$205.3 million paid in state sales tax from retail spending

**The Impact on the State of Ohio Economy, 2015.** The member hospitals employed a significant number of employees and generated many construction jobs from their capital



improvement projects in the State of Ohio. To further illustrate the state employment impact, the number of secondary jobs generated in the economy was calculated based on employment multipliers from a computer model. The impact on employment in 2015 was:

- 81,836 direct employment impact from the member hospitals' operations
- 4,347 direct employment impact from hospital construction activities
- 94,541 secondary employment impact created in other businesses and industries
- 180,724 total employment impact from hospital operations and construction

The total employment impact of the member hospitals was over 180,700 jobs and the labor income (payroll and benefits) derived from these jobs also impacted the State of Ohio economy. The impact from labor income in 2015 was:

- \$6.8 billion labor income paid to employees from the operations of the member hospitals
- \$228.0 million labor income paid to hospital construction workers
- \$7.3 billion paid in secondary labor income in other businesses and industries
- \$14.3 billion in total labor income impact from hospital operations and construction
- \$4.8 billion of total labor income impact spent on retail sales
- \$275.5 million paid in state sales tax from retail spending

**Contributions to Charity Care and Community.** The member hospitals of The Center for Health Affairs contribute significantly to the economy through charity care and community benefits. *The annual amount of charity care and community benefits contributed by member hospitals in the Northeast Ohio Region is over \$1.8 billion in 2015.* This is a significant amount of money and indicates the overwhelming commitment of the member hospitals to serve the poor, uninsured, and underinsured, and other community health needs in Northeast Ohio.

The hospital franchise fee is paid to the State of Ohio by the member hospitals and is used as part of the State Medicaid matching funds. The total collected from Northeast Ohio Region hospitals during the 2015 year was \$120.0 million. The hospital franchise fees are used as dollars to match federal Medicaid funds. The hospital franchise fees greatly benefit the Medicaid recipients. Combining the charity care and community benefits and the hospital franchise fees yields total contributions of the member hospitals of nearly \$2.0 billion. This is a huge community contribution from the member hospitals.

**The Economic Importance of Net Patient Revenues from Outside the Northeast Ohio Region.** The survey data provided total hospital net patient revenues of \$11.1 billion for all member hospitals. Data also were provided that approximately \$1.9 billion of the hospital net patient revenues were generated by patients coming from outside the Northeast Ohio Region.

This represented 16.9 percent of the total hospital net patient revenues. *Health care services paid for by patients outside the Northeast Ohio Region are substantial and make the member hospitals of the Northeast Ohio Region an export industry.*

**The Impact on County, State, and Federal Taxes.** Although some of the member hospitals are tax-exempt entities, all of the member hospitals generate many dollars worth of taxes from secondary operations and construction activities, as well as from the spending of the direct and secondary employees. The impacts on taxes were:

- \$347.2 million in County residential property taxes
- \$369.5 million in State income taxes
- \$275.5 million State sales taxes
- \$60.5 million in State motor vehicle fuel taxes
- \$55.8 million in State other consumption taxes
- \$2.5 billion in Federal income taxes

These total \$3.7 billion dollars annually. In summary, the member hospitals, through their economic activities, generate significant County, State, and Federal taxes.

**Summary.** As the State of Ohio and Northeast Ohio Region leaders continue to consider their economic priorities and look for ways to create more jobs, they should keep in mind the importance of the health services provided by the member hospitals. This study shows that these member hospitals do much more than just provide medical services. The employment and labor income generated by these member hospitals and the ripple effect in other businesses throughout the economy are enormous.

The study clearly demonstrates that the member hospitals of The Center for Health Affairs are major players in the future economic development in the State of Ohio and the Northeast Ohio Region. Economic development agencies, business groups, and local government leaders must play a more active role in promoting the health sector as a key partner and primary sector in generating new economic opportunities.

## INTRODUCTION

Across the Northeast Ohio Region including Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina Counties in the State of Ohio, *hospitals and hospital systems provide access to vital health care services 24 hours a day, seven days a week, 365 days a year. However, the role hospitals and hospital systems play as major contributors to the Northeast Ohio regional economy and the State of Ohio economy is often overlooked.* The member hospitals of The Center for Health Affairs train and employ physicians and other health care workers, resulting in significant and direct contributions to the fiscal health of the State of Ohio and the Northeast Ohio Region. Additionally, the economic contributions of hospitals result in a significant number of jobs created in other businesses and industries. The objective of this report is to measure the economic impact of the member hospitals of The Center for Health Affairs on the economy of the State of Ohio and the economy of the Northeast Ohio Region. More specifically, the report will:

1. Review economic trends of the health care industry for the United States, the State of Ohio, and the Northeast Ohio Region;
2. Present statistics of the member hospitals of The Center for Health Affairs including total hospital revenues generated by patients coming from outside the Northeast Ohio Region, charity care and community benefits, and hospital franchise fees;
3. Measure the economic impact of the operating activities and the construction activities of the member hospitals on the economies of the State of Ohio and the Northeast Ohio Region;
4. Estimate the amount of selected county, state, and federal taxes paid by the employees and secondary employees of the member hospitals and by the hospital construction employees and secondary employees.

## TRENDS IN THE HEALTH CARE INDUSTRY

### National Trends

*The health care sector is an extremely fast-growing sector in the United States, and based on the current demographics, there is every reason to expect this trend to continue.* Data in **Table 1** provide selected expenditure and employment data for the United States. Several highlights from the national data are:

- In 1970, health care services as a share of the national gross domestic product (GDP) were 6.9 percent and increased to 17.5 percent in 2014;
- Per capita health expenditures increased from \$355 in 1970 to \$9,523 in 2014;
- Employment in the health sector increased 385.9 percent from 1970 to 2014; and
- Annual increases in employment from 2000 to 2014 ranged from 1.7 percent to 2.7 percent, with an average of 2.6 percent.

The U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, also projects that health care expenditures will account for 18.5 percent of GDP by 2020 and increase to 19.6 percent of GDP in 2024. Per capita health care expenditures are projected to increase to \$12,741 in 2020 and to \$15,618 in 2024. Total health expenditures are projected to increase to over \$5.4 trillion in 2024.

**Figure 1** illustrates 2014 health expenditures by percent of GDP and by type of health service. Health services represented 17.5 percent of national GDP in 2014. The largest category of health services was hospital care, representing 32.2 percent of the total and the second largest category was physician services with 26.4 percent of the total.

**Table 1**  
**United States Health Expenditures and Employment Data**  
**1970-2014; Projected for 2018-2024**

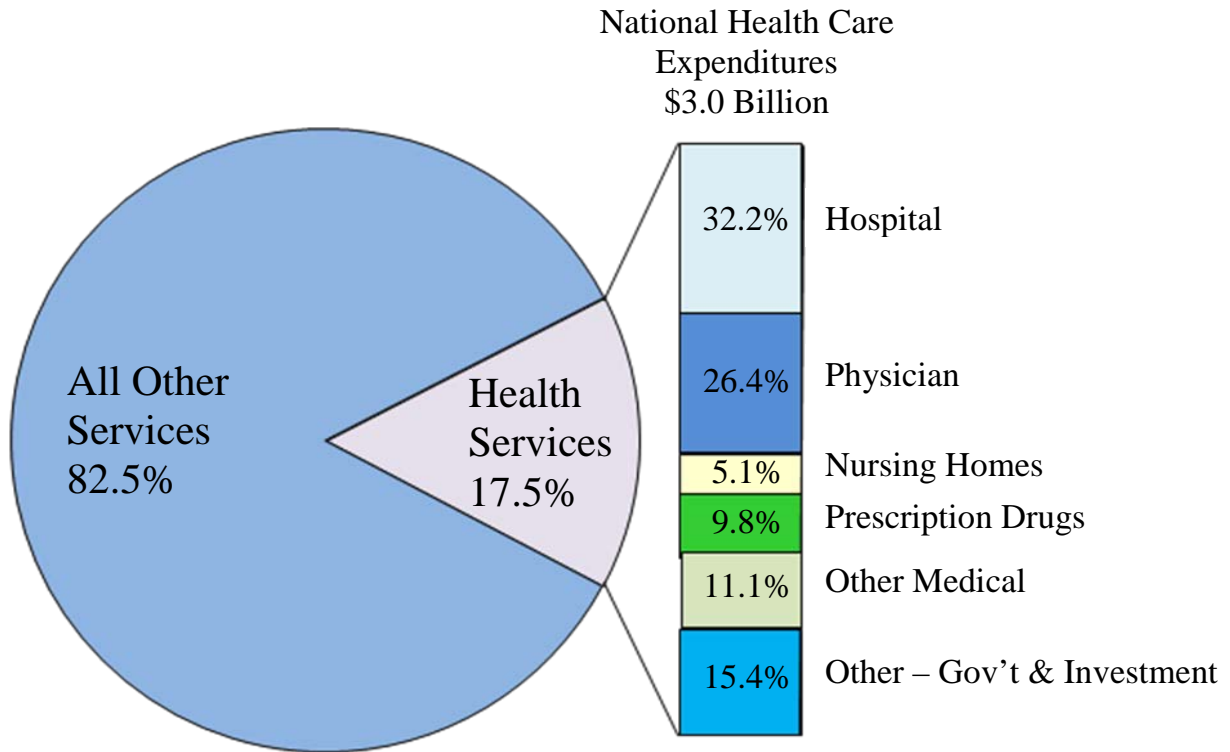
Year	Total Health Expenditures (\$Billions)	Per Capita Health Expenditures (\$)	Health as % of GDP (%)	Health Sector Employment (000)	Avg Annual Increase in Employment (%)
<b>Historical</b>					
1970	\$74.6	\$355	6.9%	3,052 <sup>a</sup>	
1980	255.3	1,108	8.9%	5,278 <sup>a</sup>	7.3%
1990	721.4	2,843	12.1%	8,211 <sup>a</sup>	5.6%
2000	1,369.7	4,857	13.3%	10,858 <sup>a</sup>	3.2%
2010	2,595.7	8,402	17.3%	13,894 <sup>b</sup>	2.7%
2011	2,696.6	8,666	17.4%	14,128 <sup>b</sup>	1.7%
2012	2,799.0	8,927	17.3%	14,397 <sup>b</sup>	1.9%
2013	2,897.9	9,115	17.3%	14,555 <sup>b</sup>	1.6%
2014	3,031.3	9,523	17.5%	14,831 <sup>b</sup>	1.9%
				Avg Annual Increase 2000 to 2014	2.6%
<b>Projections</b>					
2016	3,785.5	11,499	18.1%		
2020	4,273.8	12,741	18.5%		
2022	4,825.4	14,129	19.1%		
2024	5,425.1	15,618	19.6%		

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics ([www.bls.gov](http://www.bls.gov) [May 2016]); U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, National Health Expenditures 1960-2014 and National Health Expenditure Projections 2018-2024 (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-reports/NationalHealthExpendData/NationalHealthAccountsProjected.html> [May 2016]).

<sup>a</sup> Based on Standard Industrial Classification (SIC) codes for health sector employment.

<sup>b</sup> Based on North American Industrial Classification System (NAICS) for health sector employment.

**Figure 1**  
**National Health Expenditures as a Percent of Gross Domestic Product**  
**and by Health Service Type, 2014**



SOURCE: U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, National Health Expenditures 2014 (<http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>) [May 2016].

## Ohio Trends

Health data for the State of Ohio are presented. Two secondary data sources are utilized to illustrate trends and the magnitude of the importance of the health sector in Ohio. These sources use different definitions and thus cannot be directly compared to each other. However, both sources demonstrate the growth and importance of the health sector to the Ohio economy.

Data in **Tables 2** and **3** are from the U. S. Census Bureau, County Business Patterns, and illustrate how health services are growing over time in the State of Ohio. From 2004 through 2014, the health services employment grew 16.3 percent compared to a loss in employment for all industries in the state of 2.6 percent. During this same time period, health services payroll increased 48.4 percent compared to an increase of 25.4 percent in payroll for all industries in the state. In 2004, health services employment comprised 14.8 percent of the total state employment and increased to 17.7 percent in 2014. In 2004, health services payroll comprised 14.6 percent of the total state payroll and increased to 17.3 percent in 2014.

Hospital employment and payroll data are presented in **Table 3** for the State of Ohio. From 2004 through 2014, growth in hospital employment was 14.0 percent while growth in hospital payroll was 60.8 percent. The average salary increased by 41.0 percent.

Data in **Tables 4** and **5** are from the U. S. Department of Commerce, Bureau of Economic Analysis, for 2013 and 2014. This data source has a broader definition of employment than County Business Patterns. These tables demonstrate the importance of the health care and social assistance sector as compared to the other industries in the state's economy. In 2013, the health care and social assistance sector (which includes hospitals) accounted for 862,624 full- and part-time employees or 14.9 percent of the private nonfarm employment in Ohio and in

**Table 2**  
**Health Services<sup>1,2</sup> and Total Industries<sup>2</sup> Employment and Payroll for the State of Ohio**

Year	Employment			Payroll (\$1,000s)		
	Health Services	Percent of All	All Industries	Health Services	Percent of All	All Industries
2004	706,108	14.8%	4,762,205	23,715,778	14.6%	162,559,634
2005	715,021	15.0%	4,762,618	24,680,904	14.7%	168,350,499
2006	730,349	15.1%	4,825,510	25,960,929	14.7%	176,074,839
2007	755,841	15.8%	4,782,141	27,831,403	15.4%	180,992,383
2008	766,608	16.2%	4,728,416	29,253,682	16.1%	182,093,270
2009	779,678	17.5%	4,460,553	30,442,601	17.7%	171,930,795
2010	789,118	18.1%	4,352,481	30,930,057	17.7%	174,515,811
2011	797,437	18.0%	4,432,849	32,363,251	17.8%	182,110,083
2012	809,204	17.8%	4,548,143	33,780,651	17.7%	191,069,504
2013	815,279	17.8%	4,587,136	34,320,070	17.5%	195,630,962
2014	821,510	17.7%	4,636,844	35,194,750	17.3%	203,868,114
% Change from 2004 to 2014	16.3%		-2.6%	48.4%		25.4%

SOURCE: U.S. Census Bureau, County Business Patterns (www.census.gov [June 2016]).

<sup>1</sup> Health services is defined as the Health Care and Social Assistance NAICS sector. This sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

<sup>2</sup> Data are excluded for self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).



**Table 3**  
**County Business Patterns Hospital Statistics**  
**for the State of Ohio, 2004-2014**

Year	No. of Hospitals	No. of Employees	Payroll (\$1,000s)	Avg. Payroll (\$1,000s)	Avg. Salary (\$)
2004	249	237,174	9,265,647	37,211	39,067
2005	228	238,636	9,593,279	42,076	40,200
2006	233	243,513	10,287,500	44,152	42,246
2007	246	253,693	11,571,778	47,040	45,613
2008	241	261,002	12,401,282	51,458	47,514
2009	241	266,068	12,716,962	52,767	47,796
2010	232	264,613	12,721,185	54,833	48,075
2011	242	268,328	13,637,414	56,353	50,824
2012	251	271,073	14,523,534	57,863	53,578
2013	259	271,524	14,650,439	56,565	53,956
2014	250	270,415	14,895,306	59,581	55,083
% Change from 2004 to 2014	0.4%	14.0%	60.8%	60.1%	41.0%

SOURCE: U.S. Census Bureau, County Business Patterns ([www.census.gov](http://www.census.gov) [June 2016]).

**Table 4**  
**Full- and Part-Time Employment by Type and Major Industry<sup>1</sup>**  
**for the State of Ohio, 2013 and 2014**

	2013			2014		
	No. of Jobs	% of Total	% of Private	No. of Jobs	% of Total	% of Private
<b>Ttl FT/PT Empl</b>	<u>6,658,437</u>	<u>100.0%</u>		<u>6,753,002</u>	<u>100.0%</u>	
Wage/salary empl	5,372,015	80.7%		5,450,130	80.7%	
Proprietors' empl	<u>1,286,422</u>	<u>19.3%</u>		<u>1,302,872</u>	<u>19.3%</u>	
Farm prop empl	68,169	1.0%		67,747	1.0%	
Nonfarm prop empl <sup>2</sup>	<u>1,218,253</u>	<u>18.3%</u>		<u>1,235,125</u>	<u>18.3%</u>	
<b>By Industry</b>						
Farm empl	84,250	1.3%		80,308	1.2%	
Nonfarm empl	<u>6,574,187</u>	<u>98.7%</u>		<u>6,672,694</u>	<u>98.8%</u>	
Private nonfarm empl	<u>5,777,897</u>	<u>87.9%</u>	<u>100.0%</u>	<u>5,876,751</u>	<u>88.1%</u>	<u>100.0%</u>
For/fshng/related	14,382		0.2%	14,770		0.3%
Mining	36,211		0.6%	40,166		0.7%
Utilities	19,690		0.3%	19,203		0.3%
Construction	313,980		5.4%	325,700		5.5%
<b>Manufacturing</b>	<b>692,133</b>		<b>12.0%</b>	<b>706,083</b>		<b>12.0%</b>
Wholesale trade	247,597		4.3%	252,640		4.3%
<b>Retail trade</b>	<b>682,726</b>		<b>11.8%</b>	<b>687,340</b>		<b>11.7%</b>
Transp/wrshng	229,012		4.0%	236,617		4.0%
Information	90,995		1.6%	88,503		1.5%
Finance/ins	331,825		5.7%	331,030		5.6%
RE/rental/leasing	220,500		3.8%	222,777		3.8%
Prof/sci/tech svcs	373,478		6.5%	378,993		6.4%
Mgmt cos/entrprses	137,078		2.4%	142,383		2.4%
Admin/waste svcs	412,854		7.1%	425,469		7.2%
Educ svcs	146,055		2.5%	150,064		2.6%
<b>Hlth care/soc asst</b>	<b>862,624</b>		<b>14.9%</b>	<b>870,216</b>		<b>14.8%</b>
Arts/entrtnmnt/recre	133,429		2.3%	136,628		2.3%
Accomdtn/food svcs	473,656		8.2%	480,357		8.2%
Other (not pub adm)	<u>359,672</u>		<u>6.2%</u>	<u>367,812</u>		<u>6.3%</u>
Govt/govt entrprses	<u>796,290</u>	<u>12.1%</u>		<u>795,943</u>	<u>11.9%</u>	

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>Based on the North American Industry Classification System (NAICS).

<sup>2</sup>Excludes limited partners.

**Table 5**  
**Personal Income by Major Source and Industry<sup>1</sup>**  
**in the State of Ohio, 2013 and 2014**

	2013			2014		
	Income (\$1,000s)	% of Total	% of Private	Income (\$1,000s)	% of Total	% of Private
<b>Earnings by Place of Work</b>	<u>345,177,890</u>	<u>100.0%</u>		<u>358,460,105</u>	<u>100.0%</u>	
Wage & salary disbursements	244,408,798	70.8%		255,253,794	71.2%	
Proprietors' income <sup>2</sup>	38,144,310	11.1%		39,285,127	11.0%	
Other earnings	<u>62,624,782</u>	<u>18.1%</u>		<u>63,921,184</u>	<u>17.8%</u>	
<b>Earnings by Industry</b>						
Farm earnings	3,122,148	0.9%		2,313,664	0.6%	
Nonfarm earnings	<u>342,055,742</u>	<u>99.1%</u>		<u>356,146,441</u>	<u>99.4%</u>	
Private nonfarm earnings	<u>288,115,201</u>	<u>84.2%</u>	<u>100.0%</u>	<u>301,431,392</u>	<u>84.6%</u>	<u>100.0%</u>
Forestry, fishing, related, & other	393,886		0.1%	430,797		0.1%
Mining	1,911,737		0.7%	2,249,896		0.7%
Utilities	2,465,626		0.9%	2,479,669		0.8%
Construction	17,270,875		6.0%	18,836,647		6.2%
<b>Manufacturing</b>	<b>50,128,441</b>		<b>17.4%</b>	<b>52,490,575</b>		<b>17.4%</b>
Wholesale trade	18,669,186		6.5%	19,654,612		6.5%
Retail trade	20,777,902		7.2%	21,342,077		7.1%
Transportation & warehousing	12,144,125		4.2%	12,649,691		4.2%
Information	6,356,447		2.2%	6,333,651		2.1%
Finance & insurance	19,449,422		6.8%	20,291,025		6.7%
Real estate, rental & leasing	8,221,840		2.9%	8,474,661		2.8%
<b>Prof, scientific &amp; techn services</b>	<b>25,108,947</b>		<b>8.7%</b>	<b>26,180,957</b>		<b>8.7%</b>
Mgmt of companies & enterprises	16,425,960		5.7%	17,354,019		5.8%
Administration & waste services	14,256,134		4.9%	15,210,756		5.0%
Educational services	4,667,203		1.6%	4,880,377		1.6%
<b>Health care &amp; soc asst</b>	<b>44,998,065</b>		<b>15.6%</b>	<b>46,262,788</b>		<b>15.3%</b>
Arts, entertainment, & recreation	3,552,254		1.2%	3,836,823		1.3%
Accommodations & food services	9,638,624		3.3%	10,141,755		3.4%
Other services, not public admin	<u>11,678,527</u>		<u>4.1%</u>	<u>12,330,616</u>		<u>4.1%</u>
Govt & govt enterprises	<u>53,940,541</u>	<u>15.8%</u>		<u>54,715,049</u>	<u>15.4%</u>	

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification Industry (NAICS).

<sup>2</sup> Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

2014, the health care and social assistance sector accounted for 870,216 full- and part-time employment or 14.8 percent of the private nonfarm employment in Ohio (**Table 4**). In both 2013 and 2014, the health care and social assistance sector was the largest private nonfarm employer in the state. In both years, the second largest employer in the state was the manufacturing sector and the third largest sector, retail trade.

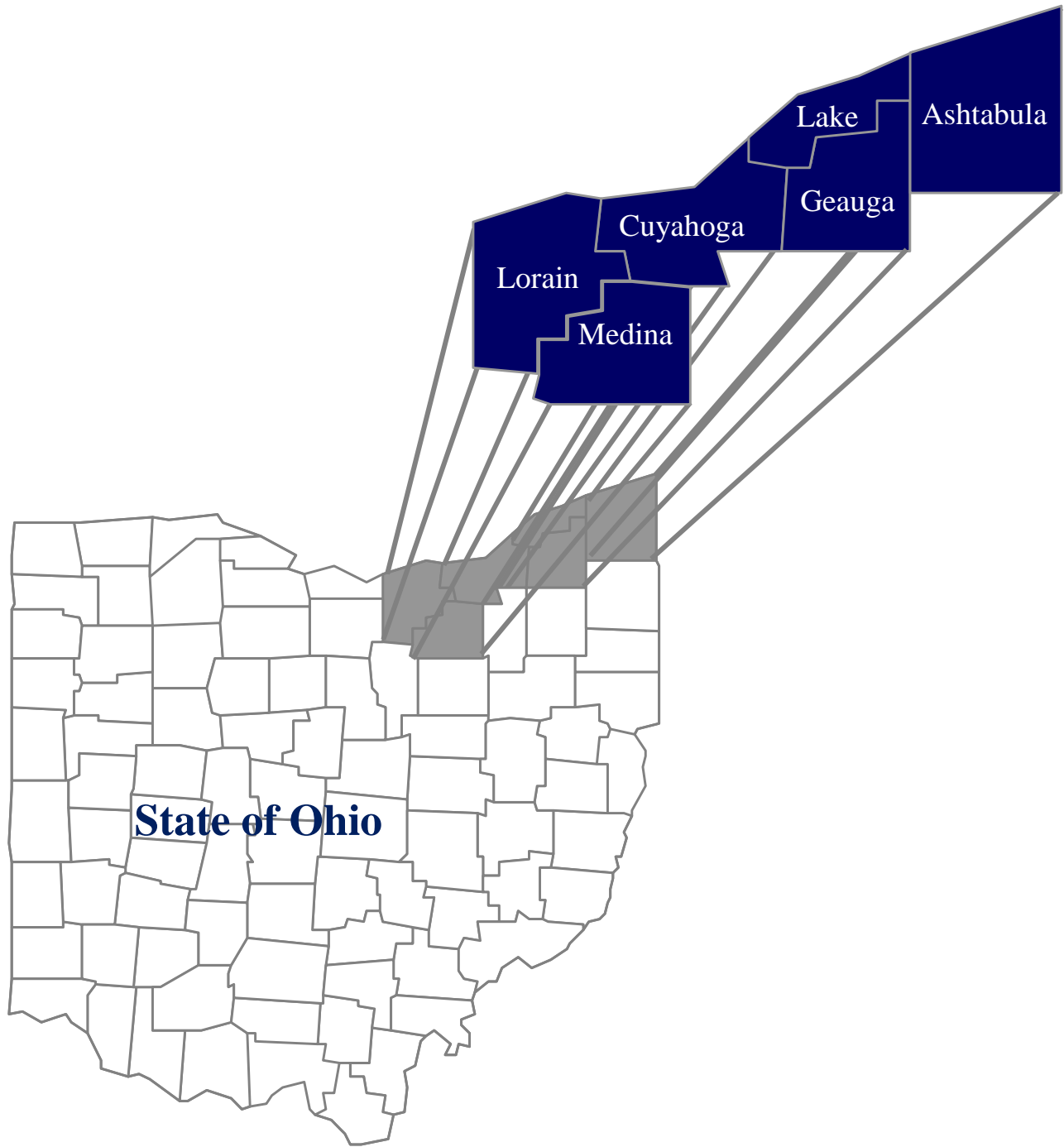
In 2013, the health care and social assistance sector accounted for \$45.0 billion in earnings or 15.6 percent of private nonfarm earnings in Ohio, and in 2014, the health care and social assistance sector accounted for \$46.3 billion in earnings or 15.3 percent of private earnings in Ohio (**Table 5**). In both 2013 and 2014, the health care and social assistance sector was the second largest sector in the state based on private nonfarm earnings. In both years, the largest earnings sector in the state was the manufacturing sector. The third largest sector was professional, scientific and technical services.

## Northeast Ohio Region Trends

The Northeast Ohio Region includes the six counties of Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina Counties depicted in **Figure 2**. The Northeast Ohio Region includes the member hospitals of The Center for Health Affairs.

The emphasis on manufacturing has significantly decreased in the Northeast Ohio Region and the emphasis on services, including health care, has become much more dominant. Data in **Table 6** clearly exemplify the changing economy in the Northeast Ohio Region. *The data definitions have changed from the Standard Industrial Classification (SIC) system for 1990 and 2000 data to the North American Industry Classification System (NAICS) for the 2010 and 2014 data. Therefore, the overall trends are relevant but the actual numbers and percentages may not be totally accurate since the definitions of the industries are not exactly the same.* From 1990 to 2014, manufacturing as a percent of the private employment dropped from 22.5 percent to 11.5 percent. The retail trade sector decreased from 18.5 percent of total private employment in 1990 to 10.5 percent in 2014. During this same time period, services increased from 32.8 percent of private nonfarm employment services to 54.1 percent. The data source does not provide specific information on health employment or hospital employment; these are included in the private nonfarm employment category of “services.” *Note that only the trends should be considered in this data; the 2010 and 2014 data have different definitions of what is included in each industry and, therefore, 2010 and 2014 data will not totally match the data for 1990 and 2000.*

Data in **Table 7** reflect the population trends for the Northeast Ohio Region, the State of Ohio, and the United States from 1990 to 2040. From 1990 to 2000, population increased by 2.2 percent in the Northeast Ohio Region and increased 4.7 percent in the state, as compared to the



**Figure 2**  
Northeast Ohio Region of the Member Hospitals  
of The Center for Health Affairs  
in Relation to the State of Ohio

**Table 6**  
**Full- and Part-Time Employment by Type and Major Industry**  
**for the Northeast Ohio Region,<sup>1</sup> 1990, 2000, 2010, and 2014**

	1990			2000			2010			2014		
	No. of Jobs	% of Total	% of Private	No. of Jobs	% of Total	% of Private	No. of Jobs	% of Total	% of Private	No. of Jobs	% of Total	% of Private
<b>Total FT &amp; PT empl</b>	<u>1,246,778</u>	<u>100.0%</u>		<u>1,389,004</u>	<u>100.0%</u>		<u>1,281,881</u>	<u>100.0%</u>		<u>1,339,952</u>	<u>100.0%</u>	
Wage & salary empl	1,107,714	88.8%		1,215,683	87.5%		1,045,498	81.6%		1,087,433	81.2%	
Proprietors' empl	<u>139,064</u>	<u>11.2%</u>		<u>173,321</u>	<u>12.5%</u>		<u>236,383</u>	<u>18.4%</u>		<u>252,519</u>	<u>18.8%</u>	
<b>By Industry</b>												
Farm empl	7,212	0.6%		7,763	0.6%		5,670	0.4%		5,352	0.4%	
Nonfarm empl	<u>1,239,566</u>	<u>99.4%</u>		<u>1,381,241</u>	<u>99.4%</u>		<u>1,276,211</u>	<u>99.6%</u>		<u>1,334,600</u>	<u>99.6%</u>	
Private nonfarm empl	<u>1,093,108</u>	88.2%	<u>100.0%</u>	<u>1,227,539</u>	88.9%	<u>100.0%</u>	<u>1,125,419</u>	88.2%	<u>100.0%</u>	<u>1,192,230</u>	89.3%	<u>100.0%</u>
Ag, reltd, mining	10,091		0.9%	12,047		1.0%	4,241		0.4%	5,857		0.5%
Construction	55,528		5.1%	67,676		5.5%	55,626		4.9%	60,754		5.1%
<b>Manufacturing</b>	<b>246,284</b>		<b>22.5%</b>	<b>225,295</b>		<b>18.4%</b>	<b>127,605</b>		<b>11.3%</b>	<b>137,144</b>		<b>11.5%</b>
Transp/utilities	53,641		4.9%	57,163		4.7%	39,566		3.5%	41,601		3.5%
Wholesale trade	71,589		6.5%	78,089		6.4%	53,134		4.7%	54,795		4.6%
<b>Retail trade</b>	<b>201,950</b>		<b>18.5%</b>	<b>221,659</b>		<b>18.1%</b>	<b>122,510</b>		<b>10.9%</b>	<b>124,652</b>		<b>10.5%</b>
Fnance/ins/real est	95,227		8.7%	121,925		9.9%	120,301		10.7%	122,775		10.3%
Services <sup>2,3</sup>	<u>358,798</u>		<u>32.8%</u>	<u>443,685</u>		<u>36.1%</u>	<u>602,436</u>		<u>53.5%</u>	<u>644,652</u>		<u>54.1%</u>
Govt & govt entrprs	<u>146,458</u>	<u>11.8%</u>		<u>153,702</u>	<u>11.1%</u>		<u>150,792</u>	<u>11.8%</u>		<u>142,370</u>	<u>10.7%</u>	

Source: 1990 and 2000 data based on Standard Industrial Classification (SIC) system and 2010 and 2014 data based on North American Industry Classification System (NAICS), U. S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [June 2016]).

<sup>1</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>2</sup> For 1990 and 2000, the data are based on the Standard Industrial Classification (SIC) system and the services include establishments primarily engaged in providing a wide variety of services for individuals, business and government establishments, and other organizations; hotels and other lodging places; establishments providing personal, business, repair, and amusement services; health, legal, engineering, and other professional services; educational institutions; membership organizations, and other miscellaneous services, are included. Establishments which provide specialized services closely allied to activities covered in other divisions are classified in such divisions.

<sup>3</sup> For 2010 and 2014, the data are based on the North American Industry Classification System (NAICS) and the services include information, professional, scientific, and technical services, management of companies and enterprises, administrative and waste management services, educational services, health care and social assistance, arts, entertainment, and recreation, accommodation and food services, and other services, except public administration.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

**Table 7**  
**Population and Population Projections**  
**for the Northeast Ohio Region<sup>\*</sup>, the State of Ohio, and the United States, 1990-2040**

Population Category	Northeast Ohio Region	State of Ohio	United States
1990 Census	2,202,069	10,847,115	248,709,873
2000 Census	2,250,871	11,353,140	281,421,906
2010 Census	2,178,737	11,536,504	308,745,538
2014 Estimate	2,162,773	11,594,163	318,857,056
2020 Projection	2,127,790	11,574,870	334,503,000
2025 Projection	2,108,690	11,598,670	347,335,000
2030 Projection	2,092,590	11,615,100	359,402,000
2040 Projection	2,063,410	11,679,010	380,219,000
Percent Change 1990 to 2000 Census	2.2%	4.7%	13.2%
Percent Change 2000 to 2010 Census	-3.2%	1.6%	9.7%
Percent Change 2010 to 2014 Census	-0.7%	0.5%	3.3%
<b>Percent Change 2010 Census to Projection Years</b>			
Percent Change from 2010 to 2020	-2.3%	0.3%	8.3%
Percent Change from 2010 to 2025	-3.2%	0.5%	12.5%
Percent Change from 2010 to 2030	-4.0%	0.7%	16.4%
Percent Change from 2010 to 2040	-5.3%	1.2%	23.1%

SOURCE: Census populations and estimates, U.S. Census Bureau ([www.census.gov](http://www.census.gov) [December 2015]); Ohio Department of Development, population projections ([www.development.ohio.gov](http://www.development.ohio.gov) [December 2015]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.



national population increase of 13.2 percent. From 2000 to 2010, population decreased in the Northeast Ohio Region by 3.2 percent and increased in the state 1.6 percent and increased nationally 9.7 percent. According to the population projections, the Northeast Ohio Region is projected to decrease in population from 2010 to 2040 while the State of Ohio and the U.S. are projected to increase population.

Data relative to the health sector for the Northeast Ohio Region are provided in the next four tables. These sources use different definitions and thus cannot be directly compared with each other. However, both sources demonstrate the importance of the health sector and hospitals on the Northeast Ohio Region economy.

Data in **Table 8** are from the U. S. Census Bureau, County Business Patterns, and illustrate how the health sector is growing over time in the Northeast Ohio Region. From 2004 through 2014, the health services sector employment grew 18.5 percent compared to the total area employment decreasing 4.2 percent. The health services sector employment accounted for 15.8 percent of the total employment for all industries in 2004 and increased to 19.5 percent in 2014. During the same time period, the health services sector payroll for the Northeast Ohio Region experienced an increase of 56.3 percent compared to a 22.1 percent increase in payroll for all industries. The health services payroll accounted for 15.1 percent of the total region payroll in 2004 and increased to 19.3 percent in 2014. No county specific data for hospitals was available from County Business Patterns.

**Table 8**  
**Employment and Payroll for Health Services and All Industries**  
**for the Northeast Ohio Region\***  
**with Comparison to the State of Ohio, 2004-2014**

Year	<i>Employment</i>			
	NE Ohio Region		NE Ohio Region	State of Ohio
	Health Services <sup>1,2</sup>	All Industries <sup>2</sup>	Health as a % of All Industries	
2004	154,517	979,786	15.8%	14.8%
2005	159,143	987,989	16.1%	15.0%
2006	160,769	993,276	16.2%	15.1%
2007	169,009	990,553	17.1%	15.8%
2008	170,645	976,544	17.5%	16.2%
2009	172,884	921,370	18.8%	17.5%
2010	177,153	894,317	19.8%	18.1%
2011	179,592	914,608	19.6%	18.0%
2012	185,206	931,136	19.9%	17.8%
2013	182,838	940,029	19.5%	17.8%
2014	183,034	938,708	19.5%	17.7%
% Change '04 to '14	18.5%	-4.2%		
Year	<i>Payroll (\$1,000s)</i>			
	NE Ohio Region		NE Ohio Region	State of Ohio
	Health Services <sup>1,2</sup>	All Industries <sup>2</sup>	Health as a % of All Industries	
2004	5,457,068	36,217,865	15.1%	14.6%
2005	5,747,950	37,946,051	15.1%	14.7%
2006	6,004,211	39,313,710	15.3%	14.7%
2007	6,656,421	40,480,550	16.4%	15.4%
2008	6,881,828	40,071,521	17.2%	16.1%
2009	7,192,939	38,110,017	18.9%	17.7%
2010	7,514,382	38,752,861	19.4%	17.7%
2011	8,115,059	40,698,193	19.9%	17.8%
2012	8,346,942	42,119,847	19.8%	17.7%
2013	8,431,875	43,345,101	19.5%	17.5%
2014	8,528,930	44,226,877	19.3%	17.3%
% Change '04 to '14	56.3%	22.1%		

SOURCE: County Business Patterns, U.S. Census Bureau (www.census.gov [June 2016]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>1</sup> Health services is defined as the Health Care and Social Assistance North American Industry Classification System (NAICS) sector. This sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

<sup>2</sup> Data are excluded for self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).

Data in **Tables 9** and **10** are from the Bureau of Economic Analysis. The data demonstrate the importance of the health care and social assistance sector as compared to other industries in the economy of the Northeast Ohio Region. The health care and social assistance sector in the Northeast Ohio Region accounted for 189,958 full- and part-time employees or 16.1 percent of private nonfarm employment in 2013 and accounted for 189,194 full- and part-time employees or 15.9 percent of private nonfarm employment in 2014 (**Table 9**). The health care and social assistance sector was the largest sector both years and manufacturing was the second largest sector and retail trade the third largest sector. The health care and social assistance sector accounted for \$10.5 billion in earnings or 16.5 percent of private nonfarm earnings in 2013 and accounted for \$10.6 billion or 16.1 percent of private nonfarm earnings in 2014 (**Table 10**). The health care and social assistance sector was the largest sector in 2013, with manufacturing second and professional, scientific and technical services third. The health care and social assistance sector was the second largest sector in 2014, with manufacturing first and professional, scientific and technical services third. Both sources demonstrate trends of increasing employment and income for the health care and social assistance sector.

**Table 9**  
**Full- and Part-Time Employment by Type and Major Industry<sup>1</sup>**  
**in the Northeast Ohio Region<sup>2</sup> in the State of Ohio, 2013 and 2014**

	2013			2014		
	No. of Jobs	% of Total	% of Private	No. of Jobs	% of Total	% of Private
<b>Total FT &amp; PT Employment</b>	<u>1,330,494</u>	<u>100.0%</u>		<u>1,339,952</u>	<u>100.0%</u>	
Wage/salary employment	1,081,183	81.3%		1,087,433	81.2%	
Proprietors' employmnt	<u>249,311</u>	<u>18.7%</u>		<u>252,519</u>	<u>18.8%</u>	
Farm prop employmnt	3,564	1.4%		3,543	1.4%	
Nonfarm prop employmnt <sup>2</sup>	<u>245,747</u>	<u>98.6%</u>		<u>248,976</u>	<u>98.6%</u>	
<b>By Industry</b>						
Farm employment	5,879	0.4%		5,352	0.4%	
Nonfarm employment	<u>1,324,615</u>	<u>99.6%</u>		<u>1,334,600</u>	<u>99.6%</u>	
Private nonfarm empl	<u>1,182,609</u>	<u>89.3%</u>	<u>100.0%</u>	<u>1,192,230</u>	<u>89.3%</u>	<u>100.0%</u>
For/fshng/related/other	2,487		0.2%	2,648		0.2%
Mining	2,976		0.3%	3,209		0.3%
Utilities	3,719		0.3%	3,692		0.3%
Construction	59,346		5.0%	60,754		5.1%
<b>Manufacturing</b>	<b>136,102</b>		<b>11.5%</b>	<b>137,144</b>		<b>11.5%</b>
Wholesale trade	53,975		4.6%	54,795		4.6%
<b>Retail trade</b>	<b>124,768</b>		<b>10.6%</b>	<b>124,652</b>		<b>10.5%</b>
Transp/wrhsng	37,357		3.2%	37,909		3.2%
Information	18,917		1.6%	18,520		1.6%
Finance & insurance	73,000		6.2%	72,246		6.1%
RE/rental/leasing	49,948		4.2%	50,529		4.2%
Prof/sci/tech svcs	86,417		7.3%	87,309		7.3%
Mgmt of cos/entrprses	28,837		2.4%	28,662		2.4%
Admin/waste services	86,910		7.3%	89,136		7.5%
Educational services	39,319		3.3%	40,329		3.4%
<b>Health care &amp; soc asst</b>	<b>189,958</b>		<b>16.1%</b>	<b>189,194</b>		<b>15.9%</b>
Arts/entrtnmnt/recrtn	29,519		2.5%	29,990		2.5%
Accom/food services	88,012		7.4%	89,210		7.5%
Other, excpt pub admin	<u>71,042</u>		<u>6.0%</u>	<u>72,302</u>		<u>6.1%</u>
Govt & govt enterprises	<u>142,006</u>	<u>10.7%</u>		<u>142,370</u>	<u>10.7%</u>	

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification System (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

Highlighted cells were estimated based on regional trends in order to show area totals compared to the state; original data were excluded to avoid disclosure of confidential information.

**Table 10**  
**Personal Income by Major Source and Industry<sup>1</sup>**  
**in the Northeast Ohio Region<sup>2</sup> in the State of Ohio, 2013 and 2014**

	2013			2014		
	Income (\$1,000s)	% of Total	% of Private	Income (\$1,000s)	% of Total	% of Private
<b>Earnings by Place of Work</b>	<u>73,981,347</u>	<u>100.0%</u>		<u>76,377,079</u>	<u>100.0%</u>	
Wage & salary disbursements	52,790,140	71.4%		54,618,573	71.5%	
Proprietors' income <sup>3</sup>	12,996,394	17.6%		13,180,068	17.3%	
Other earnings	<u>8,194,813</u>	<u>11.1%</u>		<u>8,578,438</u>	<u>11.2%</u>	
<b>Earnings by Industry</b>						
Farm earnings	124,034	0.2%		112,148	0.1%	
Nonfarm earnings	<u>73,857,313</u>	<u>99.8%</u>		<u>76,264,931</u>	<u>99.9%</u>	
Private nonfarm earnings	<u>63,627,970</u>	<u>86.1%</u>	<u>100.0%</u>	<u>65,794,597</u>	<u>86.3%</u>	<u>100.0%</u>
For/fishng/related/other	127,968		0.2%	133,226		0.2%
Mining	428,435		0.7%	476,145		0.7%
Utilities	417,123		0.7%	412,561		0.6%
Construction	3,296,501		5.2%	3,492,001		5.3%
<b>Manufacturing</b>	<b>10,302,161</b>		<b>16.2%</b>	<b>10,687,049</b>		<b>16.2%</b>
Wholesale trade	4,350,453		6.8%	4,566,726		6.9%
Retail trade	3,924,076		6.2%	3,975,549		6.0%
Transp/wrhsng	2,013,820		3.2%	2,044,398		3.1%
Information	1,292,713		2.0%	1,318,428		2.0%
Finance & insurance	4,708,106		7.4%	4,865,524		7.4%
RE/rental/leasing	2,316,505		3.6%	2,361,359		3.6%
<b>Prof/sci/techn services</b>	<b>6,555,826</b>		<b>10.3%</b>	<b>6,757,042</b>		<b>10.3%</b>
Mgmt of cos/enterprises	3,511,461		5.5%	3,565,981		5.4%
Admin/waste services	3,079,441		4.8%	3,347,517		5.1%
Educational services	1,414,982		2.2%	1,479,085		2.2%
<b>Health care &amp; soc asst</b>	<b>10,498,701</b>		<b>16.5%</b>	<b>10,598,594</b>		<b>16.1%</b>
Arts, entertainment, & rec	1,123,820		1.8%	1,250,522		1.9%
Accomm/food services	1,919,238		3.0%	2,018,615		3.1%
Other services, not pub admin	<u>2,346,640</u>		<u>3.7%</u>	<u>2,444,275</u>		<u>3.7%</u>
Govt & govt enterprises	<u>10,229,343</u>	<u>13.9%</u>		<u>10,470,334</u>	<u>13.7%</u>	

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification Industry (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells were estimated based on county and regional trends in order to show the six county region totals compared to the state; original data were excluded to avoid disclosure of confidential information.

## STATISTICS OF THE MEMBER HOSPITALS

The economic impact of the member hospitals of The Center for Health Affairs is significant, as measured by employment, payroll, and capital investment. To derive exact numbers, The Center for Health Affairs conducted a detailed survey of all member hospitals during 2015. Member hospitals were requested to provide data for the latest fiscal year for employment and payroll and the capital investment for 2014, 2015, 2016, and 2017. The member hospitals include the following hospitals and hospital systems:

1. Ashtabula County Medical Center
2. Cleveland Clinic Health System
3. Lake Health
4. Mercy Allen Hospital
5. Mercy Regional Medical Center
6. Southwest General Health Center
7. St. John Medical Center
8. St. Vincent Charity Medical Center
9. The MetroHealth System
10. University Hospitals Health System, Inc.
11. Cleveland Veterans Affairs Medical Center

Aggregated member hospital survey results are presented in **Table 11**. The member hospitals represent a total of 9,851 hospital beds in 2015. Employment includes total full- and part-time employees, as well as contractual employees. Total employment for all member hospitals was 81,836 for 2015. Labor income includes the total of all wages and salaries and benefits of the employees of the member hospitals and the labor income for any contractual

**Table 11**  
**Direct Economic Activity of Member Hospitals**  
**of The Center for Health Affairs, 2015**

<b>Operations</b>		
Hospital Beds		9,851
Employment <sup>1</sup>		81,836
Income <sup>2</sup>		\$6,778,070,883
Average Annual Salary with Benefits		\$82,825
<b>Construction</b>		
2014 Construction Activities		\$646,352,644
2015 Construction Activities Estimated		\$705,188,740
2016 Construction Activities Projected		\$887,572,090
2017 Construction Activities Projected		\$825,505,834
Avg Annual Construction Activities		\$766,154,827
<b>Estimated Employment and Labor Income from Construction Activities 2014-2017</b>		
	<i>Estimated</i>	<i>Estimated</i>
	<i>Employment</i>	<i>Labor Income</i>
2014 Construction Activities	3,984	\$208,996,656
2015 Construction Activities	4,347	\$228,039,273
2016 Construction Activities	5,471	\$287,003,189
2017 Construction Activities	5,089	\$266,963,851
Avg Annual Construction Activities	4,723	\$247,750,742
<b>Total Net Patient Revenues</b>		<b>\$11,098,585,525</b>
<b>Hospital Revenues from outside the Northeast Ohio Region<sup>3</sup></b>		
Revenue from Patients Outside Region		\$1,872,404,831
% of Total Net Patient Revenues		16.9%
<b>Charity Care and Community Benefits<sup>3</sup></b>		
Community Benefits		\$1,816,018,709
Hospital Franchise Fee		<u>\$119,793,117</u>
Combined Total		<u>\$1,935,811,826</u>

SOURCE: Local data provided through survey of member hospitals/hospital systems by The Center for Health Affairs, 2015.

Construction employment and labor income estimates derived from IMPLAN data, IMPLAN Group LLC.

<sup>1</sup> Employment is defined as total full- and part-time employees, including contractual employment.

<sup>2</sup> Labor income is defined as the total of wages, salaries, and benefits, plus any contractual labor expenses.

<sup>3</sup> These data do not include VA Medical Center; since it does not serve the general public and does not have these data.

employees. The total labor income for the member hospitals for 2015 was nearly \$6.8 billion. This represents an average annual salary per hospital employee of \$82,825.

Data were also collected relative to capital expenditures for construction activities. Since construction expenditures can vary year by year, data were collected for four fiscal years, 2014, 2015, 2016 and 2017. ***The results in Table 11 document that hospitals invest each year to improve and maintain their physical plants. The impacts of these investments on the region and state economies are often overlooked. The member hospitals invested \$646.4 million in 2014, \$705.2 million in 2015 and \$887.6 million in 2016.*** Projections for 2017 construction activities were \$825.5 million. The average annual construction expenditure for the four years was \$766.2 million.

IMPLAN data for the most current year available (2014) were utilized to estimate the construction employment and construction labor income for each year of construction. For 2014 construction, employment was estimated to be 3,984 construction employees with labor income of \$209.0 million. The average annual salary from construction activities provided by IMPLAN was \$52,459. For 2015 construction, employment was estimated to be 4,347 construction employees with labor income of \$228.0 million. The estimated employment and labor income are also provided for the construction projection years, 2016 and 2017. The average annual construction of \$766.2 million generates an annual average construction employment of 4,723 and annual average construction labor income of \$247.8 million.

The survey data provided total hospital net patient revenues of \$11.1 billion for all member hospitals. Member hospitals also provided that approximately \$1.9 billion of the hospital net patient revenues are generated from patients coming from outside the six county region in Northeast Ohio. This represents 16.9 percent of total net patient revenues.



The member hospitals of The Center for Health Affairs contribute significantly to the economy through charity care and community benefits. Charity care includes charity care at cost as well as unreimbursed costs from Medicaid and other means-tested government programs. Community benefits include community health improvement services and community benefit operations; health professions education, subsidized health services, research, and cash and in-kind contributions to community groups. ***The annual amount of charity care and community benefits contributed by member hospitals in the Northeast Ohio Region, as reported to the IRS on Form 990 Schedule H, is over \$1.8 billion.*** This is a significant amount of money and indicates the overwhelming commitment of the member hospitals to serve the poor, uninsured, and underinsured, and other community health needs in Northeast Ohio.

The hospital franchise fee is paid to the State of Ohio by the member hospitals and is used as part of the State Medicaid matching funds. The total collected from Northeast Ohio Region hospitals during the 2015 year was \$119.8 million. The hospital franchise fees are used as dollars to match federal Medicaid funds. The hospital franchise fees greatly benefit the Medicaid recipients. Combining the community benefits and the hospital franchise fees yields total contributions of the member hospitals of \$1.9 billion. This is a huge community contribution from the member hospitals of The Center for Health Affairs.

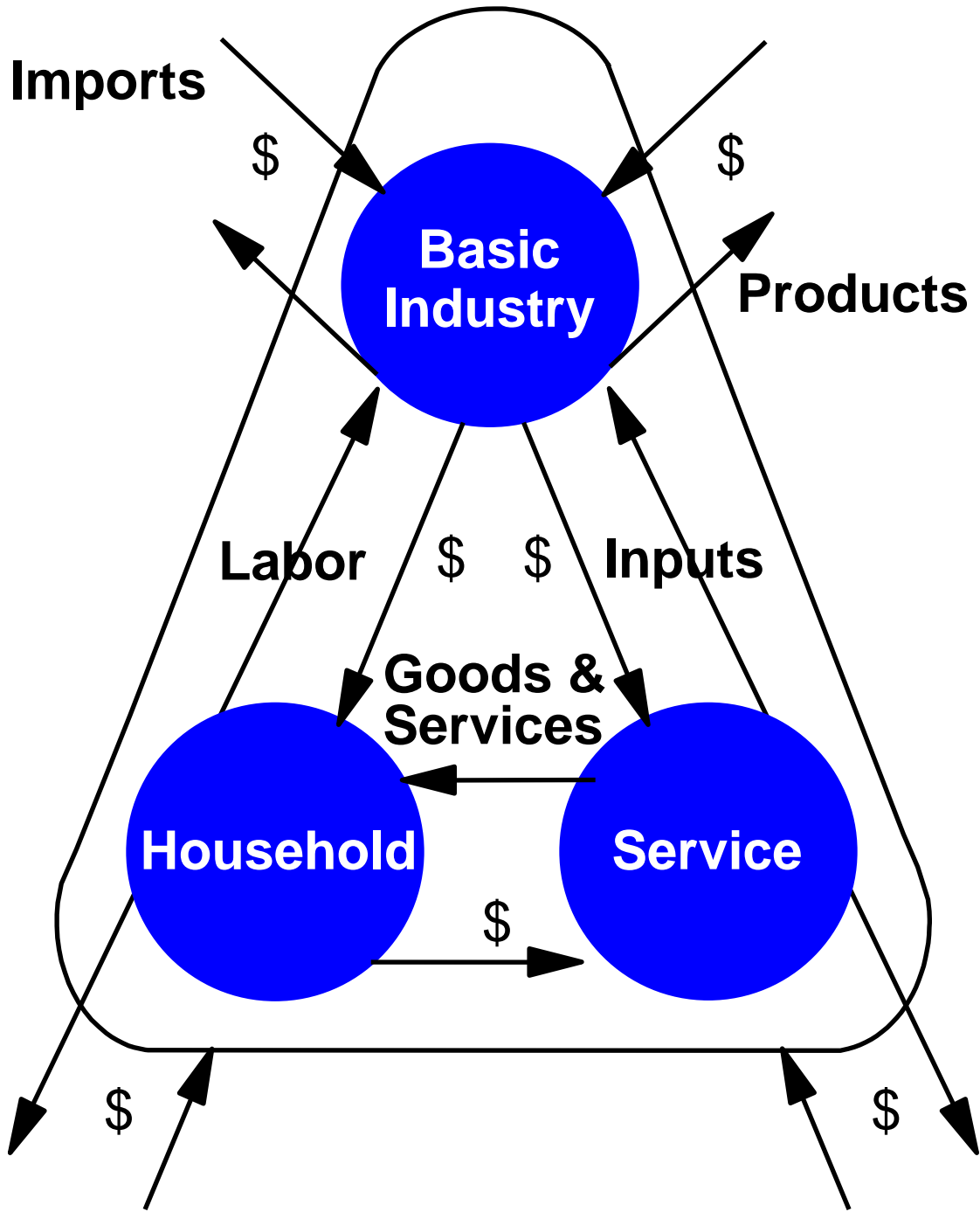
## THE IMPACTS OF THE MEMBER HOSPITALS

As presented in the previous section, *the direct economic impacts of the member hospitals are significant, as measured by their employment and labor income and construction activities*. However, this does not tell the complete story as secondary economic impacts are created when the hospitals and their employees spend money and when hospital construction companies and their employees spend money. These secondary benefits are measured by multipliers using an input-output model and data from IMPLAN, a model that is widely used by economists and other academics across the United States. The model and data are further discussed in **Appendix A**.

### **The Multiplier Effect**

To further explain the concept of a multiplier, consider, for instance, the closing of a hospital. The hospital no longer pays employees, and dollars going to these households will stop. Likewise, the hospital cannot purchase goods from other businesses, and the dollars flowing to those other businesses will stop. As a result, household income and revenues for other businesses in the economy will be decreased. Since earnings would decrease, households and businesses decrease their purchases of goods and services from other businesses. This in turn, decreases the purchases of labor and inputs. Thus, the change in the economic base works its way throughout the entire economy.

A measure is needed that yields the effects created by an increase or decrease in economic activity. In economics, this measure is called the multiplier effect. An employment multiplier of 2.0 indicates that if one job is created by a new industry, 1.0 additional jobs are created in other sectors due to business and household spending. The model calculates employment, labor income, and output multipliers (**Figure 3**).



**Figure 3**  
**Economic System of a County, Region, or State**

## THE IMPACTS OF THE MEMBER HOSPITALS ON THE ECONOMY OF THE NORTHEAST OHIO REGION

This section measures the impacts of the member hospitals of The Center for Health Affairs on the Northeast Ohio Region. The member hospitals create employment from their operating activities and from their construction activities. Employment and labor income from operating activities were derived from the survey. Employment and labor income from construction activities were estimated from capital investment data provided by the survey. The employment and labor income impacts of the member hospitals on the economy of the Northeast Ohio Region are presented in **Tables 12** and **13**. The counties included in the Northeast Ohio Region are presented in **Figure 2**.

### **The Employment Impact on the Economy of the Northeast Ohio Region**

The employment impact of the member hospitals on the Northeast Ohio Region is presented in **Table 12**. In 2015, the operating activities of the member hospitals generated 81,836 jobs in the Northeast Ohio Region. The region hospital employment multiplier was 1.94. An additional 76,926 secondary jobs were created in other businesses in the area for a total employment impact of 158,762 jobs due to the operating activities of the member hospitals. The region hospital construction employment multiplier is 2.02, resulting in total employment impact of 8,781 from hospital construction activities in the region. *In 2015, combining the operating and construction activities of the member hospitals resulted in a total employment impact of 167,543 jobs on the economy of the Northeast Ohio Region.* **Table 12** also illustrates the employment impact for the four years of construction data provided and the average for the four years of construction expenditures, utilizing the current IMPLAN coefficients and multipliers.

**Table 12**  
**Total Employment Impact of Member Hospitals**  
**of The Center for Health Affairs**  
**on the Economy of the Northeast Ohio Region\***

	Direct Employment	Multiplier	Secondary Employment Impact	Total Employment Impact
<b>FOR 2015</b>				
Operations	81,836	1.94	76,926	158,762
2015 Construction	<u>4,347</u>	2.02	<u>4,434</u>	<u>8,781</u>
<b>Totals</b>	<b><u>86,183</u></b>		<b><u>81,360</u></b>	<b><u>167,543</u></b>
<b>FOR ALL YEARS OF CONSTRUCTION</b>				
2014 Construction	3,984	2.02	4,064	8,048
2015 Construction	4,347	2.02	4,434	8,781
2016 Construction	5,471	2.02	5,580	11,051
2017 Construction	5,089	2.02	5,191	10,280
4-Yr. Avg Construction	4,723	2.02	4,817	9,540

Source: Employment for hospitals from survey of the member hospitals of The Center for Health Affairs, 2015; employment for construction estimated from IMPLAN data and current IMPLAN multipliers, IMPLAN Group, LLC.

\* Northeast Ohio Region includes Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina Counties.

### **The Labor Income Impact on the Economy of the Northeast Ohio Region**

The labor income impact of the member hospitals of The Center for Health Affairs on the economy of the Northeast Ohio Region is presented in **Table 13**. The direct labor income impact of the member hospitals was \$6.8 billion from operating activities and \$228.0 million from construction activities. The region hospital labor income multiplier was 1.63, resulting in total labor income impact of \$11.0 billion from operating activities. The region hospital construction labor income multiplier was 1.79, resulting in total labor income impact of \$408.2 million from construction activities. *In 2015, the total labor income impact was \$11.5 billion on the economy of the Northeast Ohio Region, resulting in retail sales impact of \$3.6 billion and state sales tax impact of \$205.3 million from the 5.75% state sales tax.* **Table 13** also illustrates the employment impacts, as well as retail sales impact and state sales tax impact for the four years of construction and the average for the four years of construction expenditures, utilizing the current IMPLAN coefficients and multipliers.

**Table 13**  
**Total Income Impact of Member Hospitals**  
**of The Center for Health Affairs**  
**on the Economy of the Northeast Ohio Region\***

	Direct Income	Multiplier	Secondary Income Impact	Total Income Impact
<b>FOR 2015</b>				
Operations	\$6,778,070,883	1.63	\$4,270,184,656	\$11,048,255,539
Construction	<u>\$228,039,273</u>	1.79	<u>\$180,151,026</u>	<u>\$408,190,299</u>
<b>Totals</b>	<b><u>\$7,006,110,156</u></b>		<b><u>\$4,450,335,682</u></b>	<b><u>\$11,456,445,838</u></b>
			Retail Sales Impact	5.75% State Sales Tax Impact
<b>FOR 2015</b>				
Operations			\$3,383,694,977	\$194,562,461
Construction			<u>\$187,149,479</u>	<u>\$10,761,095</u>
<b>Totals</b>			<b><u>\$3,570,844,456</u></b>	<b><u>\$205,323,556</u></b>
	Direct Income	Multiplier	Secondary Income Impact	Total Income Impact
<b>FOR ALL YEARS OF CONSTRUCTION</b>				
2014 Construction	\$208,996,656	1.79	\$165,107,358	\$374,104,014
2015 Construction	\$228,039,273	1.79	\$180,151,026	\$408,190,299
2016 Construction	\$287,003,189	1.79	\$226,732,519	\$513,735,708
2017 Construction	\$266,963,851	1.79	\$210,901,442	\$477,865,293
4-Yr. Avg Construction	\$247,750,742	1.79	\$195,723,086	\$443,473,829
			Retail Sales Impact	5.75% State Sales Tax Impact
<b>FOR ALL YEARS OF CONSTRUCTION</b>				
2014 Construction			\$114,575,000	\$6,588,063
2015 Construction			\$125,014,439	\$7,188,330
2016 Construction			\$157,339,313	\$9,047,010
2017 Construction			\$146,353,457	\$8,415,324
4-Yr. Avg Construction			\$135,820,552	\$7,809,682

Source: Labor income for hospitals from survey of the member hospitals of The Center for Health Affairs, 2015; Labor income for construction estimated from IMPLAN data and current IMPLAN multipliers, IMPLAN Group, LLC.; retail sales capture ratio and retail sales tax rates, Ohio Department of Taxation (<http://tax.ohio.gov/> [January 2016]) and BEA data ([www.bea.gov](http://www.bea.gov) [January 2016]).

\* Northeast Ohio Region includes Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina Counties.

## **THE IMPACTS OF THE MEMBER HOSPITALS ON THE ECONOMY OF THE STATE OF OHIO**

The difference between the region impacts and the state impacts is that the region multipliers measure economic activities generated only in the Northeast Ohio Region, while the state multipliers measure economic activities generated in the entire state. Thus, the multipliers and local retail sales capture ratios are slightly smaller for the Northeast Ohio Region than the State of Ohio. The fact that the region multipliers are only slightly smaller than the state multipliers indicates that most of the economic activities generated by the member hospitals occur in the economy of the Northeast Ohio Region.

### **The Employment Impact on the Economy of the State of Ohio**

The employment impact of the member hospitals of The Center for Health Affairs on the economy of the State of Ohio is presented in **Table 14**. From the hospital statistics, the member hospitals had 81,836 full- and part-time employees in 2015. The state hospital employment multiplier was 2.10; this means that for every job in the hospital sector, another 1.10 jobs were created in other businesses in the State of Ohio. Thus, secondary employment created by the member hospitals equals 90,020. *In total, the member hospitals generated 171,856 jobs throughout the State of Ohio due to operating activities.*

For 2015, the construction activities resulted in an estimated 4,347 jobs. These construction jobs worked directly on hospital construction activities. However, these construction companies and construction workers also have secondary impacts that were measured by multipliers. The construction multiplier for the State of Ohio was 2.04. Thus, 4,521 secondary jobs were created in other businesses due to the construction activities of the member hospitals. *For 2015, total jobs created by hospital construction activities were 8,868. In 2015, combined operating and construction activities of the member hospitals created 180,724 jobs*



*in the State of Ohio.* **Table 14** also illustrates the employment impacts of construction for the four years of construction expenditure data and the average of the four years of construction. The IMPLAN coefficients for estimated the employment and the employment multipliers are based on the current year IMPLAN data.

**Table 14**  
**Total Employment Impact of Member Hospitals**  
**of The Center for Health Affairs**  
**on the Economy of the State of Ohio**

	Direct Employment	Multiplier	Secondary Employment Impact	Total Employment Impact
<b>FOR 2015</b>				
Operations	81,836	2.10	90,020	171,856
Construction	<u>4,347</u>	2.04	<u>4,521</u>	<u>8,868</u>
<b>Totals</b>	<b><u>86,183</u></b>		<b><u>94,541</u></b>	<b><u>180,724</u></b>
<b>FOR ALL YEARS OF CONSTRUCTION</b>				
2014 Construction	3,984	2.04	4,143	8,127
2015 Construction	4,347	2.04	4,521	8,868
2016 Construction	5,471	2.04	5,690	11,161
2017 Construction	5,089	2.04	5,293	10,382
4-Yr. Avg Construction	4,723	2.04	4,912	9,635

Source: Employment for hospitals from survey of the member hospitals of The Center for Health Affairs, 2015; employment for construction estimated from IMPLAN data and current IMPLAN multipliers, IMPLAN Group, LLC.

## **The Labor Income Impact on the Economy of the State of Ohio**

Data on the labor income impact of the member hospitals are presented in **Table 15**.

From the survey, total labor income from the operating activities of the member hospitals was estimated to be nearly \$6.8 billion in 2015. Using the state hospital labor income multiplier of 2.05, the member hospitals generated income in other businesses of \$7.1 billion. ***In 2015, the total labor income impact of the hospitals from operating activities was \$13.9 billion on the economy of the State of Ohio.***

Labor income generated directly by construction workers engaged in hospital construction activities was estimated at \$228.0 million. Applying the state construction labor income multiplier of 1.90, hospital construction activities were estimated to generate \$205.2 million in labor income in other businesses. ***In 2015, the total labor income impact generated from hospital construction activities was \$433.3 million in the State of Ohio.***

***In 2015, combined operating and construction activities of the member hospitals generated \$14.3 billion in annual labor income impact in the State of Ohio. The total labor income impact of \$14.3 billion generated retail sales impact of \$4.8 billion, resulting in \$275.5 million in state sales tax impact from the 5.75% state sales tax.***

**Table 15**  
**Total Income Impact of Member Hospitals**  
**of The Center for Health Affairs**  
**on the Economy of the State of Ohio**

	Direct Income	Multiplier	Secondary Income Impact	Total Income Impact
<b>FOR 2015</b>				
Operations	\$6,778,070,883	2.05	\$7,116,974,426	\$13,895,045,309
Construction	<u>\$228,039,273</u>	1.90	<u>\$205,235,346</u>	<u>\$433,274,619</u>
<b>Totals</b>	<b><u>\$7,006,110,156</u></b>		<b><u>\$7,322,209,772</u></b>	<b><u>\$14,328,319,928</u></b>
			Retail Sales Impact	5.75% State Sales Tax Impact
<b>FOR 2015</b>				
Operations			\$4,578,127,051	\$263,242,305
Construction			<u>\$212,613,744</u>	<u>\$12,225,290</u>
<b>Totals</b>			<b><u>\$4,790,740,795</u></b>	<b><u>\$275,467,595</u></b>
	Direct Income	Multiplier	Secondary Income Impact	Total Income Impact
<b>FOR ALL YEARS OF CONSTRUCTION</b>				
2014 Construction	\$208,996,656	1.90	\$188,096,990	\$397,093,646
2015 Construction	\$228,039,273	1.90	\$205,235,346	\$433,274,619
2016 Construction	\$287,003,189	1.90	\$258,302,870	\$545,306,059
2017 Construction	\$266,963,851	1.90	\$240,267,466	\$507,231,317
4-Yr. Avg Construction	\$247,750,742	1.90	\$222,975,668	\$470,726,410
			Retail Sales Impact	5.75% State Sales Tax Impact
<b>FOR ALL YEARS OF CONSTRUCTION</b>				
2014 Construction			\$130,834,058	\$7,522,958
2015 Construction			\$142,754,932	\$8,208,409
2016 Construction			\$179,666,951	\$10,330,850
2017 Construction			\$167,122,119	\$9,609,522
4-Yr. Avg Construction			\$155,094,515	\$8,917,935

Source: Labor income for hospitals from survey of the member hospitals of The Center for Health Affairs, 2015; Labor income for construction estimated from IMPLAN data and current IMPLAN multipliers, IMPLAN Group, LLC.; retail sales capture ratio and retail sales tax rates, Ohio Department of Taxation (<http://tax.ohio.gov/> [January 2016]) and BEA data ([www.bea.gov](http://www.bea.gov) [January 2016]).

## **The Economic Importance of Revenues from Outside the Northeast Ohio Region**

The survey data provided total hospital net patient revenues of \$11.1 billion for all member hospitals. Data also were provided that approximately \$1.9 billion of the hospital revenues were generated by patients coming from outside the Northeast Ohio Region. This represented 16.9 percent of the total net patient revenues.

Family members and visitors often accompany patients and stay in local hotels and eat at local restaurants and purchase other goods and services while in the Northeast Ohio Region. In economics, this is known as export base theory; a region's exports are key to achieving local economic growth and viability. *Health care services paid for by patients outside the Northeast Ohio Region are substantial and make the member hospitals of the Northeast Ohio Region an export industry. The total of approximately \$1.9 billion comes from patients from outside the Northeast Ohio Region. This amount is significant.*

This economic study does not include the economic impact of the patients' family and visitors as they visit the patients in Northeast Ohio and spend money locally. Another study of patients would have to be conducted to estimate the number of family and visitors and their expenditure patterns. The fact that the revenues for health care services from patients outside the region total nearly \$1.9 billion indicates that the family and visitor spending would be extremely large.

## **THE IMPACT ON SELECTED COUNTY, STATE, AND FEDERAL TAXES**

Although some of the member hospitals of The Center for Health Affairs are tax-exempt entities, these hospitals generated many dollars of taxes in other businesses from secondary operations and construction activities, as well as from the spending of the direct and secondary employees. Data in **Table 16** summarizes select county, state, and federal taxes generated by the direct and secondary employment of the member hospitals. These select taxes totaled \$3.7 billion annually, including \$347.2 million in county residential property taxes, \$761.3 million in selected state taxes, and \$2.5 billion in federal income taxes. Tax data were not directly available, thus estimates were made using the best available estimation procedures. The estimation assumptions are discussed below.

### **Impact of County Residential Property Taxes**

The amount of county residential property taxes paid by the employees of the member hospitals was not available. Data were available from the Ohio Department of Taxation to estimate the Northeast Ohio Region average residential property tax paid per employee. Data were available for the residential property valuations for each of the six counties in the Northeast Ohio region. The average net property tax rate for residential property for the State of Ohio was applied to the region's residential total property valuations to determine the average residential property tax revenues paid per employee for the Northeast Ohio Region. *The average rate paid per employee was applied to the direct and secondary employees from hospital operations and to the direct and secondary employees from construction activities for a total of county residential property tax impact of \$347.2 million (Table 16).*

**Table 16**  
**Summary of Selected Taxes Generated Annually**  
**by Member Hospital Operations and Construction Employment Impacts, 2015**

Type of Tax	Estimated Taxes	Taxes by Categories
<b>County Residential Property Taxes</b>		
County Residential Property Taxes	<u>\$347,197,958</u>	
<b>Total Selected County Taxes</b>		\$347,197,958
<b>State Taxes</b>		
State Income Taxes	\$369,495,948	
State Sales Taxes	\$275,467,595	
State Motor Vehicle Fuel Taxes	\$60,542,540	
State Other Consumption Taxes <sup>1</sup>	<u>\$55,843,716</u>	
<b>Total Selected State Taxes</b>		\$761,349,799
<b>Federal Taxes</b>		
Federal Income Taxes	<u>\$2,544,954,967</u>	
<b>Total Selected Federal Taxes</b>		<u>\$2,544,954,967</u>
<b>Total of All Selected Taxes</b>	<b><u>\$3,653,502,724</u></b>	<b><u>\$3,653,502,724</u></b>

SOURCE: State and federal withholding provided by local survey of member hospitals, The Center for Health Affairs, 2015; All other state tax information for FY 2015, Ohio Department of Taxation (<http://www.obm.ohio.gov/> [January 2016]); Employment, U.S. Department of Commerce, Bureau of Economic Analysis ([www.bea.gov](http://www.bea.gov) [January 2016]).

<sup>1</sup> Other consumption taxes include state cigarette and tobacco taxes and state alcoholic beverage taxes.

### **Impact of State Income Taxes**

State withholding taxes were provided by The Center for Health Affairs for the member hospitals. The estimated state income taxes were based on the assumption that withholding taxes were equal to the state income taxes owed. Based on the state withholding for the member hospitals, the percent of the total labor income was calculated and then applied to the secondary labor income and the direct and secondary construction labor income. The total state income tax impact from both operations and construction was estimated to be nearly \$369.5 million (**Table 16**).

### **Impact of State Sales Taxes**

State sales taxes were calculated for both the operations and construction labor income impact. The total labor income impact on the State of Ohio from both hospital operations and hospital construction was \$14.3 billion. The state retail sales capture ratio was applied and retail sales impact was \$4.8 billion, which generated 5.75 percent state sales tax impact of \$275.5 million. The \$275.5 million in state sales tax impact includes the estimated state sales taxes paid by the direct and secondary employees of the member hospitals and by the direct and secondary construction employees (**Table 16**).

### **Impact of State Motor Vehicle Fuel Taxes**

Another state tax which generated a large amount of state revenue was the state motor vehicle fuel tax. The state average amount spent per employee was estimated. The estimate was then multiplied times the number of direct and secondary employees from both hospital operations and hospital construction to derive an estimated total tax of \$60.5 million.



### **Impact of State Other Consumption Taxes**

Other consumption taxes included state cigarette and tobacco product taxes and state alcoholic beverage taxes. The state average tax paid per employee was estimated. The state average tax paid per employee was then multiplied by the total number of direct and secondary employees of the member hospitals from both operations and construction for an estimated total of \$55.8 million.

### **Impact of Federal Income Taxes**

Federal withholding taxes were provided by The Center for Health Affairs for the member hospitals. The estimated federal income taxes were based on the assumption that withholding taxes were equal to the federal income taxes. Based on the federal withholding for the member hospitals, the percent of the total labor income was calculated and applied to the secondary labor income and the direct and secondary construction labor income. The total federal income tax impact from both operations and construction was estimated to be \$2.5 billion (**Table 16**).

### **Summary of Taxes**

The analysis of selected taxes clearly demonstrates that the member hospitals, whether non-profit or profit facilities, generate a huge amount of taxes of an estimated \$3.7 billion per year. With future economic development, the amount of state taxes generated will only increase and further demonstrates the economic importance of healthcare on the economies of the State of Ohio and the Northeast Ohio Region.

## **SUMMARY**

In summary, the member hospitals act as an economic engine and generate huge impacts. Economic developers frequently seek manufacturing and high technology industries that will create new jobs. The activities of the member hospitals are attracting these industries and must be recognized as a large contributor to the economy and viability of the counties, the Northeast Ohio Region, and the State of Ohio. Policies should be adopted to enhance and encourage the positive impacts generated by the member hospitals to ensure continued expansion of economic growth for the counties, the Northeast Ohio Region, and the State of Ohio.

# **Appendix A**

**IMPLAN Software and Data  
from IMPLAN Group, LLC:**

**Model and Data Used  
to Derive Multipliers**

**APPENDIX A**  
**IMPLAN Software and Data from IMPLAN Group, LLC:**  
**Model and Data Used to Derive Multipliers**

**A Review of Input-Output Analysis**

Input-output (I/O) (Miernyk, 1965) was designed to analyze the transactions among the industries in an economy. These models are largely based on the work of Wassily Leontief (1936). Detailed I/O analysis captures the indirect and induced interrelated circular behavior of the economy. For example, an increase in the demand for health services requires more equipment, more labor, and more supplies, which, in turn, requires more labor to produce the supplies, etc. By simultaneously accounting for structural interaction between sectors and industries, I/O analysis gives expression to the general economic equilibrium system. The analysis utilizes assumptions based on linear and fixed coefficients and limited substitutions among inputs and outputs. The analysis also assumes that average and marginal I/O coefficients are equal.

Nonetheless, the framework has been widely accepted and used. I/O analysis is useful when carefully executed and interpreted in defining the structure of an area, the interdependencies among industries, and forecasting economic outcomes.

The I/O model coefficients describe the structural interdependence of an economy. From the coefficients, various predictive devices can be computed, which can be useful in analyzing economic changes in a state, an area or a county. Multipliers indicate the relationship between some observed change in the economy and the total change in economic activity created throughout the economy.

The basis of IMPLAN was developed by the U. S. Forest Service to construct input/output accounts and models. The complexity of this type of modeling had hindered practitioners from constructing models specific to a community requesting an analysis. The University of Minnesota utilized the U.S. Forest Service model to further develop the methodology and expand the data sources to form the model known as IMPLAN. The founders of IMPLAN, Scott Lindall and Doug Olson, joined the University of Minnesota in 1984 and, as an outgrowth of their work with the University of Minnesota, entered into a technology transfer agreement with the University of Minnesota that allowed them to form Minnesota IMPLAN Group, Inc. (MIG).

In 2013 Minnesota IMPLAN Group, Inc. was purchased by IMPLAN Group, LLC and relocated to:

IMPLAN Group, LLC  
16740 Birkdale Commons Parkway Suite 206  
Huntersville, NC 28078

Support hours are 8 am – 7 pm Eastern time and can be reached by email at [info@implan.com](mailto:info@implan.com) or by phone at 651-439-4421 or 704-727-4141

## **IMPLAN Software and Data**

At first, IMPLAN focused on database development and provided data that could be used in the Forest Service version of the software. In 1995, IMPLAN took on the task of writing a new version of the IMPLAN software from scratch that extended the previous Forest Service version by creating an entirely new modeling system – an extension of input-output accounts and resulting Social Accounting Matrices (SAM) multipliers. Version 2 of the new IMPLAN software became available in May of 1999. The latest development of the software is now available, IMPLAN Version 3 Software System, the new economic impact assessment software system.

With IMPLAN Version 3 software, the packaging of products has changed. Version 3 utilizes 2007 or later data. When data are ordered, the data cost plus shipping are the only costs. Version 3.0 software and the new IMPLAN appliance are included in the cost of the data. There are no additional fees to upgrade to IMPLAN Version 3.0. Data files are licensed to an individual user. Version 2 is no longer compatible with 2008 and later data sets.

Version 3 allows the user to do much more detailed analyses. Users can continue to create detailed economic impact estimates. Version 3.0 takes the analysis further, providing a new method for estimating regional imports and exports is being implemented - a trade model. IMPLAN can construct a model for any state, region, area, county, or zip code area in the United States by using available national, state, county, and zip code level data. Impact analysis can be performed once a regional input/output model is constructed.

## **IMPLAN Multipliers**

Five different sets of multipliers are estimated by IMPLAN, corresponding to five measures of regional economic activity. These are: total industry output, personal income, total income, value added, and employment. Two types of multipliers are generated. Type I multipliers measure the impact in terms of direct and indirect effects. Direct impacts are the changes in the activities of the focus industry or firm, such as the closing of a hospital. The focus business changes its purchases of inputs as a result of the direct impacts. This produces indirect impacts in other business sectors. However, the total impact of a change in the economy consists of direct, indirect, and induced changes. Both the direct and indirect impacts change the flow of dollars to the households. Subsequently, the households alter their consumption accordingly. The effect of the changes in household consumption on businesses in a community is referred to as an induced effect. To measure the total impact, a Type II (or Type SAM) multiplier is used. The Type II multiplier compares direct, indirect, and induced effects with the direct effects generated by a change in final demand (the sum of direct, indirect, and induced divided by direct).

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## **APPENDIX B**

**Detailed Data  
for the Six Counties, the Northeast Ohio Region,  
and the State of Ohio**

## Appendix B

### Detailed Data for the Six Counties, the Northeast Ohio Region, and the State of Ohio

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**Appendix B, Table 22** BEA Data - Personal Income (\$1,000s) for the Six Counties, the Northeast Ohio Region, and the State of Ohio, 2013

**Appendix B, Table 23** BEA Data - Personal Income by Major Source and Industry (\$1,000s) for the Six Counties, the Northeast Ohio Region, and the State of Ohio, 2014

**Appendix B, Table 1a**  
**Population and Population Projections**  
**for the Six Counties, the Northeast Ohio Region,\* and the State of Ohio, 1990-2040**

Population Category	Ashtabula County	Cuyahoga County	Geauga County	Lake County
1990 Census	99,821	1,412,140	81,129	215,499
2000 Census	102,728	1,393,978	90,895	227,511
2010 Census	101,497	1,280,122	93,389	230,041
2014 Estimates	99,175	1,259,828	94,295	229,230
2020 Projection	101,230	1,209,550	93,510	228,600
2025 Projection	100,880	1,179,030	94,270	228,320
2030 Projection	100,130	1,154,210	94,930	228,380
2040 Projection	98,610	1,113,950	94,710	228,060
Percent Change 1990 to 2000	2.9%	-1.3%	12.0%	5.6%
Percent Change 2000 to 2010	-1.2%	-8.2%	2.7%	1.1%
Percent Change 2010 to 2014	-2.3%	-1.6%	1.0%	-0.4%
<b>Percent Change from 2010 Census to Projection Years</b>				
Percent Change from 2010 to 2020	-0.3%	-5.5%	0.1%	-0.6%
Percent Change from 2010 to 2025	-0.6%	-7.9%	0.9%	-0.7%
Percent Change from 2010 to 2030	-1.3%	-9.8%	1.7%	-0.7%
Percent Change from 2010 to 2040	-2.8%	-13.0%	1.4%	-0.9%

SOURCE: Census and estimates populations, U.S. Census Bureau ([www.census.gov](http://www.census.gov) [December 2015]); Ohio Department of Development, population projections ([www.development.ohio.gov](http://www.development.ohio.gov) [December 2015]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

**Appendix B, Table 1b**  
**Population and Population Projections**  
**for the Six Counties,\* the Northeast Ohio Region,\* and the State of Ohio, 1990-2040**

Population Category	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
1990 Census	271,126	122,354	2,202,069	10,847,115
2000 Census	284,664	151,095	2,250,871	11,353,140
2010 Census	301,356	172,332	2,178,737	11,536,504
2014 Estimates	304,216	176,029	2,162,773	11,594,163
2020 Projection	310,230	184,670	2,127,790	11,574,870
2025 Projection	315,760	190,430	2,108,690	11,598,670
2030 Projection	320,430	194,510	2,092,590	11,615,100
2040 Projection	328,190	199,890	2,063,410	11,679,010
Percent Change 1990 to 2000	5.0%	23.5%	2.2%	4.7%
Percent Change 2000 to 2010	5.9%	14.1%	-3.2%	1.6%
Percent Change 2010 to 2014	0.9%	2.1%	-0.7%	0.1%
<b>Percent Change from 2010 Census to Projection Years</b>				
Percent Change from 2010 to 2020	2.9%	7.2%	-2.3%	0.3%
Percent Change from 2010 to 2025	4.8%	10.5%	-3.2%	0.5%
Percent Change from 2010 to 2030	6.3%	12.9%	-4.0%	0.7%
Percent Change from 2010 to 2040	8.9%	16.0%	-5.3%	1.2%

SOURCE: Census and estimates populations, U.S. Census Bureau ([www.census.gov](http://www.census.gov) [December 2015]); Ohio Department of Development, population projections ([www.development.ohio.gov](http://www.development.ohio.gov) [December 2015]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

**Appendix B, Table 2a**  
**County Business Patterns - Health Services<sup>1,2</sup> and All Services<sup>2</sup> Employment**  
**for the Six Counties, the Northeast Ohio Region,\* and the State of Ohio, 2004-2014**

	Ashtabula County	Cuyahoga County	Geauga County	Lake County
<b>Health Services Employment</b>				
2004	5,181	117,081	3,629	10,516
2005	5,351	119,879	3,949	10,881
2006	5,258	121,204	3,703	10,983
2007	5,669	127,503	5,016	10,816
2008	5,738	129,814	3,877	10,961
2009	5,776	131,299	3,851	10,955
2010	5,929	134,913	4,069	10,890
2011	5,858	136,661	4,071	11,346
2012	5,582	142,580	4,119	11,360
2013	5,581	140,231	4,172	11,266
2014	5,250	141,315	4,433	10,986
<b>All Services Employment</b>				
2004	28,283	689,876	28,869	91,178
2005	28,191	698,567	30,429	90,430
2006	27,325	700,036	31,051	91,183
2007	27,143	695,161	33,703	92,226
2008	26,405	682,823	34,303	91,961
2009	24,629	648,495	31,094	85,877
2010	24,159	629,692	29,824	82,878
2011	24,659	646,638	27,533	83,423
2012	25,211	657,780	27,662	84,894
2013	24,877	667,847	27,828	85,433
2014	24,606	664,773	28,158	86,124

SOURCE: County Business Patterns, U.S. Census Bureau (www.census.gov [June 2016]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>1</sup>Health services is defined as the Health Care and Social Assistance North American Industry Classification System (NAICS) sector. This sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

<sup>2</sup>Data are excluded for self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).

**Appendix B, Table 2b**  
**County Business Patterns - Health Services<sup>1,2</sup> and All Services<sup>2</sup> Employment**  
**for the Six Counties, the Northeast Ohio Region,\* and the State of Ohio, 2004-2014**

	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
<b>Health Services Employment</b>				
2004	12,626	5,484	154,517	706,108
2005	12,588	6,495	159,143	715,021
2006	13,089	6,532	160,769	730,349
2007	13,377	6,628	169,009	755,841
2008	13,484	6,771	170,645	766,608
2009	13,799	7,204	172,884	779,678
2010	14,062	7,290	177,153	789,118
2011	14,261	7,395	179,592	797,437
2012	14,068	7,497	185,206	809,204
2013	14,328	7,260	182,838	815,279
2014	14,216	6,834	183,034	821,510
<b>All Services Employment</b>				
2004	89,869	51,711	979,786	4,762,205
2005	88,227	52,145	987,989	4,762,618
2006	89,641	54,040	993,276	4,825,510
2007	88,584	53,736	990,553	4,782,141
2008	87,898	53,154	976,544	4,728,416
2009	80,588	50,687	921,370	4,460,553
2010	78,424	49,340	894,317	4,352,481
2011	80,961	51,394	914,608	4,432,849
2012	83,584	52,005	931,136	4,548,143
2013	83,106	50,938	940,029	4,587,136
2014	84,068	50,979	938,708	4,636,844

SOURCE: County Business Patterns, U.S. Census Bureau (www.census.gov [June 2016]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>1</sup>Health services is defined as the Health Care and Social Assistance North American Industry Classification System (NAICS) sector. This sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

<sup>2</sup>Data are excluded for self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).

**Appendix B, Table 3a**  
**County Business Patterns - Health Services<sup>1,2</sup> and All Services<sup>2</sup> Payroll (\$1000s)**  
**for the Six Counties, the Northeast Ohio Region,\* and the State of Ohio, 2004-2014**

	Ashtabula County	Cuyahoga County	Geauga County	Lake County
<b>Health Services Payroll</b>				
2004	133,022	4,355,640	95,422	318,738
2005	138,961	4,565,007	107,771	330,966
2006	138,272	4,777,870	113,620	347,285
2007	152,600	5,312,883	187,421	357,486
2008	156,323	5,538,415	159,067	368,188
2009	187,724	5,775,655	157,179	365,261
2010	191,980	6,074,751	160,479	382,839
2011	194,584	6,568,515	182,779	403,262
2012	165,850	6,823,382	166,031	406,572
2013	168,261	6,864,242	168,085	418,084
2014	170,873	6,962,513	179,378	390,842
<b>All Services Payroll</b>				
2004	738,311	27,042,488	928,364	2,992,026
2005	752,535	28,482,503	1,017,235	3,064,068
2006	745,881	29,613,107	1,067,808	3,130,472
2007	764,549	30,383,591	1,219,420	3,337,906
2008	784,801	29,874,408	1,247,724	3,404,083
2009	755,164	28,748,873	1,115,213	3,171,379
2010	766,158	29,144,310	1,141,677	3,233,919
2011	808,556	30,527,605	1,104,331	3,509,189
2012	814,348	31,649,377	1,116,586	3,520,300
2013	827,541	32,660,617	1,143,451	3,543,213
2014	841,850	33,123,486	1,165,780	3,722,542

SOURCE: County Business Patterns, U.S. Census Bureau ([www.census.gov](http://www.census.gov) [June 2016]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>1</sup>Health services is defined as the Health Care and Social Assistance North American Industry Classification System (NAICS) sector. This sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

<sup>2</sup>Data are excluded for self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).

**Appendix B, Table 3b**  
**County Business Patterns - Health Services<sup>1,2</sup> and All Services<sup>2</sup> Payroll (\$1000s)**  
**for the Six Counties, the Northeast Ohio Region,\* and the State of Ohio, 2004-2014**

	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
<b>Health Services Payroll</b>				
2004	412,901	141,345	5,457,068	23,715,778
2005	419,365	185,880	5,747,950	24,680,904
2006	437,007	190,157	6,004,211	25,960,929
2007	442,588	203,443	6,656,421	27,831,403
2008	453,630	206,205	6,881,828	29,253,682
2009	489,899	217,221	7,192,939	30,442,601
2010	490,880	213,453	7,514,382	30,930,057
2011	539,019	226,900	8,115,059	32,363,251
2012	544,396	240,711	8,346,942	33,780,651
2013	589,676	223,527	8,431,875	34,320,070
2014	595,175	230,149	8,528,930	35,194,750
<b>All Services Payroll</b>				
2004	2,906,547	1,610,129	36,217,865	162,559,634
2005	2,937,205	1,692,505	37,946,051	168,350,499
2006	2,997,286	1,759,156	39,313,710	176,074,839
2007	2,973,419	1,801,665	40,480,550	180,992,383
2008	2,940,908	1,819,597	40,071,521	182,093,270
2009	2,644,891	1,674,497	38,110,017	171,930,795
2010	2,727,426	1,739,371	38,752,861	174,515,811
2011	2,940,743	1,807,769	40,698,193	182,110,083
2012	3,104,659	1,914,577	42,119,847	191,069,504
2013	3,215,634	1,954,645	43,345,101	195,630,962
2014	3,344,659	2,028,560	44,226,877	203,868,114

SOURCE: County Business Patterns, U.S. Census Bureau ([www.census.gov](http://www.census.gov) [June 2016]).

\* Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>1</sup>Health services is defined as the Health Care and Social Assistance North American Industry Classification System (NAICS) sector. This sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

<sup>2</sup>Data are excluded for self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).

**Appendix B, Table 4**  
**BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for Ashtabula County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>48,142</u>	<u>48,344</u>	<u>47,607</u>	<u>47,452</u>	<u>47,024</u>	<u>44,585</u>	<u>44,450</u>	<u>45,251</u>	<u>45,211</u>	<u>45,447</u>	<u>45,423</u>
Wage/salary empl	35,808	35,668	34,874	34,401	33,830	31,306	31,409	32,232	32,305	32,310	32,106
Proprietors' empl	<u>12,334</u>	<u>12,676</u>	<u>12,733</u>	<u>13,051</u>	<u>13,194</u>	<u>13,279</u>	<u>13,041</u>	<u>13,019</u>	<u>12,906</u>	<u>13,137</u>	<u>13,317</u>
Farm prop empl	1,114	1,077	1,027	990	981	977	988	990	978	985	979
Nonfarm prop empl <sup>2</sup>	<u>11,220</u>	<u>11,599</u>	<u>11,706</u>	<u>12,061</u>	<u>12,213</u>	<u>12,302</u>	<u>12,053</u>	<u>12,029</u>	<u>11,928</u>	<u>12,152</u>	<u>12,338</u>
<b>By Industry</b>											
Farm empl	1,291	1,263	1,242	1,246	1,168	1,177	1,183	1,182	1,259	1,216	1,159
Nonfarm empl	<u>46,851</u>	<u>47,081</u>	<u>46,365</u>	<u>46,206</u>	<u>45,856</u>	<u>43,408</u>	<u>43,267</u>	<u>44,069</u>	<u>43,952</u>	<u>44,231</u>	<u>44,264</u>
Private empl	<u>41,003</u>	<u>41,438</u>	<u>40,757</u>	<u>40,557</u>	<u>40,370</u>	<u>38,024</u>	<u>37,989</u>	<u>38,915</u>	<u>38,966</u>	<u>39,377</u>	<u>39,441</u>
For/fshng/related	180	195	187	201	211	212	215	236	280	282	296
Mining	138	142	181	198	264	253	288	230	316	474	541
Utilities	271	259	252	255	275	263	267	267	255	249	199
Construction	3,336	3,544	3,387	3,393	3,229	3,122	2,978	3,026	2,973	3,117	3,088
Manufacturing	8,809	8,876	8,667	8,065	7,913	6,550	6,676	6,876	7,000	7,016	7,398
Wholesale trade	1,005	996	963	993	973	851	814	892	807	725	898
Retail trade	5,893	5,989	5,996	5,932	5,703	5,375	5,171	5,243	5,180	5,062	4,910
Transp/wrshng	1,283	1,364	1,484	1,567	1,544	1,575	1,491	1,472	1,458	1,429	1,516
Information	589	548	533	521	502	456	456	455	412	382	377
Finance/ins	1,193	1,086	1,093	1,150	1,194	1,242	1,272	1,265	1,238	1,302	1,303
RE/rental/leasing	1,503	1,519	1,475	1,466	1,437	1,409	1,438	1,445	1,394	1,425	1,425
Prof/sci/tech svcs	1,352	1,301	1,338	1,385	1,369	1,309	1,351	1,344	1,268	1,302	1,493
Mgmt cos/entrprses	131	138	207	227	295	195	191	129	130	212	133
Admin/waste svcs	2,265	2,167	1,890	1,878	1,933	1,942	2,146	2,730	2,821	2,954	2,374
Educ svcs	498	549	505	466	479	487	502	502	491	514	531
<b>Hlth care/soc asst</b>	<b>5,634</b>	<b>5,763</b>	<b>5,864</b>	<b>6,187</b>	<b>6,348</b>	<b>6,356</b>	<b>6,318</b>	<b>6,221</b>	<b>6,247</b>	<b>6,155</b>	<b>6,108</b>
Arts/entrtnmnt/recre	698	739	730	697	747	683	678	670	691	711	719
Accomdtn/food svcs	3,399	3,462	3,190	3,154	3,038	2,884	2,903	3,049	3,138	3,247	3,243
Other (not pub adm)	<u>2,826</u>	<u>2,801</u>	<u>2,815</u>	<u>2,822</u>	<u>2,916</u>	<u>2,860</u>	<u>2,834</u>	<u>2,863</u>	<u>2,867</u>	<u>2,819</u>	<u>2,889</u>
Govt/govt entrprses	<u>5,848</u>	<u>5,643</u>	<u>5,608</u>	<u>5,649</u>	<u>5,486</u>	<u>5,384</u>	<u>5,278</u>	<u>5,154</u>	<u>4,986</u>	<u>4,854</u>	<u>4,823</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.



**Appendix B, Table 5**  
**BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for Cuyahoga County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>914,198</u>	<u>910,819</u>	<u>917,247</u>	<u>920,662</u>	<u>909,586</u>	<u>876,382</u>	<u>867,277</u>	<u>878,147</u>	<u>892,180</u>	<u>901,933</u>	<u>906,767</u>
Wage/salary empl	796,367	788,750	791,474	787,767	773,491	734,788	725,707	729,536	744,918	751,909	754,888
Proprietors' empl	<u>117,831</u>	<u>122,069</u>	<u>125,773</u>	<u>132,895</u>	<u>136,095</u>	<u>141,594</u>	<u>141,570</u>	<u>148,611</u>	<u>147,262</u>	<u>150,024</u>	<u>151,879</u>
Farm prop empl	113	106	99	92	93	92	93	93	94	97	96
Nonfarm prop empl <sup>2</sup>	<u>117,718</u>	<u>121,963</u>	<u>125,674</u>	<u>132,803</u>	<u>136,002</u>	<u>141,502</u>	<u>141,477</u>	<u>148,518</u>	<u>147,168</u>	<u>149,927</u>	<u>151,783</u>
<b>By Industry</b>											
Farm empl	298	279	277	280	218	213	200	187	217	198	175
Nonfarm empl	<u>913,900</u>	<u>910,540</u>	<u>916,970</u>	<u>920,382</u>	<u>909,368</u>	<u>876,169</u>	<u>867,077</u>	<u>877,960</u>	<u>891,963</u>	<u>901,735</u>	<u>906,592</u>
Private empl	<u>805,787</u>	<u>804,785</u>	<u>811,233</u>	<u>813,334</u>	<u>802,591</u>	<u>771,299</u>	<u>763,552</u>	<u>778,081</u>	<u>794,479</u>	<u>804,884</u>	<u>809,359</u>
For/fshng/related	599	614	611	550	678	698	725	750	774	799	823
Mining	452	459	569	548	629	638	697	611	894	1,019	1,057
Utilities	1,599	1,567	1,595	1,656	1,689	1,571	1,484	1,490	1,477	1,530	1,552
Construction	36,526	35,977	35,667	35,825	34,678	31,676	29,876	30,191	30,580	31,644	32,026
Manufacturing	91,057	88,583	87,715	84,329	81,301	70,465	69,215	71,264	72,601	72,810	72,537
Wholesale trade	44,653	44,716	45,816	45,114	43,615	40,480	39,469	38,383	39,302	38,835	38,993
Retail trade	84,693	81,336	79,593	78,732	77,316	73,718	71,391	71,928	72,452	73,216	73,235
Transp/wrhsng	28,039	28,094	28,376	28,927	27,991	25,954	25,358	25,617	26,046	26,620	26,617
Information	19,045	18,657	18,222	18,127	17,713	16,391	15,734	15,555	15,475	15,615	15,241
Finance/ins	65,902	61,224	60,852	61,388	60,062	60,693	58,653	60,079	58,663	58,572	57,761
RE/rental/leasing	31,689	32,585	31,998	32,348	32,325	31,943	32,385	33,508	33,588	34,222	34,638
Prof/sci/tech svcs	63,505	65,245	66,716	68,860	69,309	65,032	63,268	64,753	65,778	67,835	68,449
Mgmt cos/entrprses	14,561	18,761	19,966	18,856	18,872	17,925	17,234	19,886	22,453	23,001	22,807
Admin/waste svcs	57,966	59,315	60,227	61,263	58,332	53,799	55,961	58,733	61,332	61,390	63,502
Educ svcs	27,286	28,309	28,676	28,910	29,407	31,363	31,684	30,889	30,865	30,074	30,833
<b>Hlth care/soc asst</b>	<b>119,743</b>	<b>121,326</b>	<b>125,117</b>	<b>128,445</b>	<b>130,484</b>	<b>133,575</b>	<b>136,466</b>	<b>137,595</b>	<b>141,153</b>	<b>143,391</b>	<b>143,232</b>
Arts/entrtnmnt/recre	17,088	17,180	17,283	17,946	17,803	18,038	17,803	17,889	19,903	21,308	21,629
Accomdatn/food svcs	55,864	56,283	57,662	56,709	55,618	53,474	53,060	54,129	55,400	57,530	58,182
Other (not pub adm)	<u>45,520</u>	<u>44,554</u>	<u>44,572</u>	<u>44,801</u>	<u>44,769</u>	<u>43,866</u>	<u>43,089</u>	<u>44,831</u>	<u>45,743</u>	<u>45,473</u>	<u>46,245</u>
Govt/govt entrprses	<u>108,113</u>	<u>105,755</u>	<u>105,737</u>	<u>107,048</u>	<u>106,777</u>	<u>104,870</u>	<u>103,525</u>	<u>99,879</u>	<u>97,484</u>	<u>96,851</u>	<u>97,233</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

**Appendix B, Table 6**  
**BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for Geauga County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>49,736</u>	<u>51,759</u>	<u>52,510</u>	<u>52,741</u>	<u>52,713</u>	<u>50,424</u>	<u>49,737</u>	<u>49,944</u>	<u>51,149</u>	<u>52,461</u>	<u>53,226</u>
Wage/salary empl	35,885	37,293	37,867	37,551	37,126	34,533	34,109	34,053	35,047	35,642	36,137
Proprietors' empl	<u>13,851</u>	<u>14,466</u>	<u>14,643</u>	<u>15,190</u>	<u>15,587</u>	<u>15,891</u>	<u>15,628</u>	<u>15,891</u>	<u>16,102</u>	<u>16,819</u>	<u>17,089</u>
Farm prop empl	828	806	774	752	762	774	798	817	828	835	831
Nonfarm prop empl <sup>2</sup>	<u>13,023</u>	<u>13,660</u>	<u>13,869</u>	<u>14,438</u>	<u>14,825</u>	<u>15,117</u>	<u>14,830</u>	<u>15,074</u>	<u>15,274</u>	<u>15,984</u>	<u>16,258</u>
<b>By Industry</b>											
Farm empl	983	960	944	945	919	960	995	1,026	1,155	1,103	1,041
Nonfarm empl	<u>48,753</u>	<u>50,799</u>	<u>51,566</u>	<u>51,796</u>	<u>51,794</u>	<u>49,464</u>	<u>48,742</u>	<u>48,918</u>	<u>49,994</u>	<u>51,358</u>	<u>52,185</u>
Private empl	<u>44,425</u>	<u>46,413</u>	<u>47,132</u>	<u>47,355</u>	<u>47,328</u>	<u>44,930</u>	<u>44,137</u>	<u>44,324</u>	<u>45,534</u>	<u>46,945</u>	<u>47,761</u>
For/fshng/related	570	611	608	609	608	545	543	622	674	630	688
Mining	129	138	155	203	203	299	311	349	413	513	519
Utilities	14	10	11	9	15	13	14	12	13	11	12
Construction	5,612	6,289	6,212	6,114	6,041	5,627	5,349	5,460	5,776	6,010	6,261
Manufacturing	9,863	10,331	10,545	9,813	9,665	8,121	7,666	7,499	7,555	7,810	8,035
Wholesale trade	2,113	2,136	2,369	2,353	2,211	2,053	2,043	2,044	2,268	2,391	2,351
Retail trade	4,463	4,890	5,318	5,491	5,548	5,454	5,333	5,393	5,512	5,602	5,743
Transp/wrshng	950	1,006	1,015	1,080	1,001	992	1,003	1,017	1,038	1,024	1,037
Information	347	337	295	291	279	290	282	307	299	305	294
Finance/ins	1,195	1,276	1,303	1,423	1,514	1,656	1,593	1,643	1,619	1,589	1,581
RE/rental/leasing	1,629	1,693	1,702	1,853	1,828	1,588	1,644	1,717	1,712	1,660	1,684
Prof/sci/tech svcs	2,258	2,296	2,414	2,378	2,349	2,378	2,373	2,343	2,441	2,593	2,592
Mgmt cos/entrprses	269	275	273	244	243	280	292	154	133	173	259
Admin/waste svcs	3,308	3,190	3,198	3,252	3,233	3,249	3,254	3,295	3,362	3,646	3,523
Educ svcs	873	933	894	931	925	971	961	925	948	990	1,020
<b>Hlth care/soc asst</b>	<b>3,592</b>	<b>3,904</b>	<b>3,577</b>	<b>4,016</b>	<b>4,382</b>	<b>4,418</b>	<b>4,582</b>	<b>4,550</b>	<b>4,681</b>	<b>4,813</b>	<b>4,720</b>
Arts/entrtmnt/recre	1,162	1,138	1,079	1,088	1,132	1,030	1,074	1,115	1,100	1,112	1,122
Accomdtn/food svcs	2,788	2,744	2,901	2,755	2,704	2,646	2,579	2,532	2,577	2,589	2,745
Other (not pub adm)	<u>3,290</u>	<u>3,216</u>	<u>3,263</u>	<u>3,452</u>	<u>3,350</u>	<u>3,320</u>	<u>3,241</u>	<u>3,347</u>	<u>3,413</u>	<u>3,484</u>	<u>3,575</u>
Govt/govt entrprses	<u>4,328</u>	<u>4,386</u>	<u>4,434</u>	<u>4,441</u>	<u>4,466</u>	<u>4,534</u>	<u>4,605</u>	<u>4,594</u>	<u>4,460</u>	<u>4,413</u>	<u>4,424</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information due to less than 10 jobs.

Appendix B, Table 7

BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for Lake County, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>122,511</u>	<u>124,339</u>	<u>124,273</u>	<u>126,112</u>	<u>125,156</u>	<u>118,583</u>	<u>116,811</u>	<u>118,865</u>	<u>119,018</u>	<u>118,902</u>	<u>120,004</u>
Wage/salary empl	104,944	105,954	105,395	106,277	105,413	98,769	97,298	98,560	99,065	98,609	99,445
Proprietors' empl	<u>17,567</u>	<u>18,385</u>	<u>18,878</u>	<u>19,835</u>	<u>19,743</u>	<u>19,814</u>	<u>19,513</u>	<u>20,305</u>	<u>19,953</u>	<u>20,293</u>	<u>20,559</u>
Farm prop empl	244	228	211	194	188	182	178	172	167	169	168
Nonfarm prop empl <sup>2</sup>	<u>17,323</u>	<u>18,157</u>	<u>18,667</u>	<u>19,641</u>	<u>19,555</u>	<u>19,632</u>	<u>19,335</u>	<u>20,133</u>	<u>19,786</u>	<u>20,124</u>	<u>20,391</u>
<b>By Industry</b>											
Farm empl	1,141	1,096	1,136	1,206	879	877	809	755	964	824	679
Nonfarm empl	<u>121,370</u>	<u>123,243</u>	<u>123,137</u>	<u>124,906</u>	<u>124,277</u>	<u>117,706</u>	<u>116,002</u>	<u>118,110</u>	<u>118,054</u>	<u>118,078</u>	<u>119,325</u>
Private empl	<u>108,114</u>	<u>109,948</u>	<u>109,978</u>	<u>111,905</u>	<u>111,075</u>	<u>104,597</u>	<u>102,948</u>	<u>105,378</u>	<u>105,596</u>	<u>105,867</u>	<u>107,118</u>
For/fshng/related	312	314	315	334	349	357	356	357	354	361	413
Mining	136	137	141	182	307	342	365	403	402	403	470
Utilities	1,709	1,743	1,564	1,779	1,749	1,647	1,361	1,328	1,273	1,216	1,197
Construction	7,565	7,552	7,098	7,136	6,604	5,949	5,784	6,201	5,960	6,105	6,285
Manufacturing	21,991	22,007	22,000	22,374	22,084	19,226	19,164	20,094	21,088	21,201	21,652
Wholesale trade	4,643	5,023	5,175	5,231	5,289	4,868	4,400	4,482	4,257	4,356	4,647
Retail trade	16,690	16,953	16,932	16,781	16,759	15,799	14,711	14,567	14,744	14,762	14,703
Transp/wrhsng	1,473	1,510	1,571	1,591	1,611	1,443	1,554	1,656	1,743	1,835	1,864
Information	1,078	1,032	1,086	1,065	1,090	984	1,145	1,124	1,113	901	925
Finance/ins	3,231	3,368	3,397	3,691	3,880	4,099	3,996	4,265	3,987	3,733	3,728
RE/rental/leasing	3,761	4,173	4,129	3,972	3,823	3,814	3,923	4,080	3,943	4,101	4,155
Prof/sci/tech svcs	6,202	5,969	5,813	5,940	5,846	5,419	5,315	5,296	5,192	5,222	5,279
Mgmt cos/entrprses	1,113	1,257	1,078	1,105	1,054	1,076	1,120	1,169	1,172	1,094	1,131
Admin/waste svcs	6,569	6,618	7,086	7,437	7,672	6,769	7,039	7,082	6,797	6,903	7,248
Educ svcs	1,902	2,056	2,268	2,384	2,493	2,515	2,664	2,682	2,720	2,704	2,693
<b>Hlth care/soc asst</b>	<b>11,338</b>	<b>11,605</b>	<b>11,609</b>	<b>12,091</b>	<b>12,009</b>	<b>12,355</b>	<b>12,590</b>	<b>12,699</b>	<b>12,732</b>	<b>12,455</b>	<b>12,162</b>
Arts/entrtmnt/recre	2,072	2,063	2,074	2,086	2,105	1,991	1,977	2,128	2,123	2,077	2,085
Accomdtn/food svcs	9,507	9,694	9,669	9,676	9,610	9,320	9,066	9,249	9,383	9,845	9,799
Other (not pub adm)	<u>6,822</u>	<u>6,874</u>	<u>6,973</u>	<u>7,050</u>	<u>6,741</u>	<u>6,624</u>	<u>6,418</u>	<u>6,516</u>	<u>6,613</u>	<u>6,593</u>	<u>6,682</u>
Govt/govt entrprses	<u>13,256</u>	<u>13,295</u>	<u>13,159</u>	<u>13,001</u>	<u>13,202</u>	<u>13,109</u>	<u>13,054</u>	<u>12,732</u>	<u>12,458</u>	<u>12,211</u>	<u>12,207</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Appendix B, Table 8

BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for Lorain County, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>129,283</u>	<u>129,931</u>	<u>130,385</u>	<u>130,275</u>	<u>129,002</u>	<u>122,947</u>	<u>121,760</u>	<u>124,935</u>	<u>125,933</u>	<u>127,054</u>	<u>128,655</u>
Wage/salary empl	107,759	107,292	107,202	106,004	104,639	98,445	97,276	99,138	100,550	100,808	102,072
Proprietors' empl	<u>21,524</u>	<u>22,639</u>	<u>23,183</u>	<u>24,271</u>	<u>24,363</u>	<u>24,502</u>	<u>24,484</u>	<u>25,797</u>	<u>25,383</u>	<u>26,246</u>	<u>26,583</u>
Farm prop empl	838	811	776	752	732	713	705	690	664	673	669
Nonfarm prop empl <sup>2</sup>	<u>20,686</u>	<u>21,828</u>	<u>22,407</u>	<u>23,519</u>	<u>23,631</u>	<u>23,789</u>	<u>23,779</u>	<u>25,107</u>	<u>24,719</u>	<u>25,573</u>	<u>25,914</u>
<b>By Industry</b>											
Farm empl	1,675	1,692	1,797	1,962	1,549	1,526	1,435	1,354	1,560	1,410	1,245
Nonfarm empl	<u>127,608</u>	<u>128,239</u>	<u>128,588</u>	<u>128,313</u>	<u>127,453</u>	<u>121,421</u>	<u>120,325</u>	<u>123,581</u>	<u>124,373</u>	<u>125,644</u>	<u>127,410</u>
Private empl	<u>110,693</u>	<u>111,689</u>	<u>111,824</u>	<u>111,690</u>	<u>110,903</u>	<u>104,773</u>	<u>103,784</u>	<u>107,225</u>	<u>108,061</u>	<u>109,462</u>	<u>111,237</u>
For/fshng/related	126	141	141	148	173	136	142	140	151	150	155
Mining	94	97	99	112	105	120	126	128	146	166	199
Utilities	409	400	392	381	393	397	360	366	367	337	322
Construction	9,011	9,101	8,717	8,414	7,662	6,658	6,312	6,474	6,622	6,743	7,090
Manufacturing	21,872	21,709	20,660	20,158	19,586	16,461	16,074	16,629	17,635	17,899	18,078
Wholesale trade	3,251	3,331	3,452	3,446	3,475	3,330	3,407	3,713	3,760	3,935	4,118
Retail trade	16,444	16,457	16,665	16,762	16,290	15,710	15,321	15,483	15,425	15,388	15,361
Transp/wrhsng	2,988	2,941	2,937	3,073	2,921	2,678	2,652	2,763	2,950	3,078	3,318
Information	1,617	1,670	1,668	1,597	1,345	1,218	1,219	1,184	1,110	1,100	1,054
Finance/ins	3,349	3,291	3,308	3,532	3,694	4,107	3,978	4,254	4,212	4,531	4,597
RE/rental/leasing	4,137	4,486	4,513	4,673	4,464	4,200	4,357	4,475	4,383	4,545	4,623
Prof/sci/tech svcs	4,271	4,503	4,712	5,087	5,057	4,921	4,858	4,884	4,782	4,870	4,915
Mgmt cos/entrprs	427	447	779	792	883	803	867	1,735	1,614	1,363	1,343
Admin/waste svcs	6,636	6,737	6,945	6,790	7,834	7,554	7,230	7,837	7,008	7,205	7,579
Educ svcs	3,130	3,353	3,507	3,641	3,672	3,789	3,842	3,946	3,844	3,912	4,040
<b>Hlth care/soc asst</b>	<b>13,784</b>	<b>13,828</b>	<b>14,102</b>	<b>14,262</b>	<b>14,591</b>	<b>14,583</b>	<b>14,884</b>	<b>14,715</b>	<b>15,019</b>	<b>14,884</b>	<b>14,790</b>
Arts/entrtrmnt/recr	2,474	2,485	2,434	2,377	2,310	2,360	2,448	2,456	2,517	2,537	2,553
Accomdtn/food svcs	8,513	8,719	8,914	8,588	8,733	8,344	8,320	8,452	8,679	8,920	9,096
Other (not pub adm)	<u>8,160</u>	<u>7,993</u>	<u>7,879</u>	<u>7,857</u>	<u>7,715</u>	<u>7,404</u>	<u>7,387</u>	<u>7,591</u>	<u>7,837</u>	<u>7,899</u>	<u>8,006</u>
Govt/govt entrprs	<u>16,915</u>	<u>16,550</u>	<u>16,764</u>	<u>16,623</u>	<u>16,550</u>	<u>16,648</u>	<u>16,541</u>	<u>16,356</u>	<u>16,312</u>	<u>16,182</u>	<u>16,173</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

**Appendix B, Table 9**  
**BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for Medina County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>79,609</u>	<u>82,286</u>	<u>83,473</u>	<u>85,219</u>	<u>84,984</u>	<u>82,551</u>	<u>81,846</u>	<u>83,125</u>	<u>83,990</u>	<u>84,697</u>	<u>85,877</u>
Wage/salary empl	60,907	62,532	63,338	64,213	63,449	60,401	59,699	60,485	61,784	61,905	62,785
Proprietors' empl	<u>18,702</u>	<u>19,754</u>	<u>20,135</u>	<u>21,006</u>	<u>21,535</u>	<u>22,150</u>	<u>22,147</u>	<u>22,640</u>	<u>22,206</u>	<u>22,792</u>	<u>23,092</u>
Farm prop empl	978	926	863	810	804	799	807	809	797	805	800
Nonfarm prop empl <sup>2</sup>	<u>17,724</u>	<u>18,828</u>	<u>19,272</u>	<u>20,196</u>	<u>20,731</u>	<u>21,351</u>	<u>21,340</u>	<u>21,831</u>	<u>21,409</u>	<u>21,987</u>	<u>22,292</u>
<b>By Industry</b>											
Farm empl	1,281	1,193	1,120	1,056	1,001	1,029	1,048	1,063	1,191	1,128	1,053
Nonfarm empl	<u>78,328</u>	<u>81,093</u>	<u>82,353</u>	<u>84,163</u>	<u>83,983</u>	<u>81,522</u>	<u>80,798</u>	<u>82,062</u>	<u>82,799</u>	<u>83,569</u>	<u>84,824</u>
Private empl	70,596	73,307	74,444	76,061	75,871	73,497	73,009	74,571	75,329	76,074	77,314
For/fshng/related	177	169	148	152	182	185	178	173	245	265	273
Mining	173	196	217	226	264	259	295	239	322	401	423
Utilities	350	347	347	399	420	223	285	319	349	376	410
Construction	6,459	6,811	6,263	6,247	6,029	5,770	5,327	5,537	5,708	5,727	6,004
Manufacturing	10,033	10,261	10,445	10,470	10,156	8,725	8,810	9,307	9,363	9,366	9,444
Wholesale trade	3,579	3,612	3,599	3,133	3,005	2,971	3,001	3,360	3,594	3,733	3,788
Retail trade	9,863	10,334	10,722	11,126	10,842	10,754	10,583	10,919	11,129	10,738	10,700
Transp/wrhsng	2,929	3,470	3,689	4,144	4,160	3,899	3,737	3,380	3,406	3,371	3,557
Information	816	848	854	832	810	704	744	620	603	614	629
Finance/ins	2,473	2,599	2,603	2,746	2,931	3,359	3,205	3,495	3,387	3,273	3,276
RE/rental/leasing	3,089	3,437	3,640	3,671	3,611	3,701	3,857	3,911	3,791	3,995	4,004
Prof/sci/tech svcs	4,179	4,252	4,357	4,587	4,453	4,321	4,404	4,653	4,545	4,595	4,581
Mgmt cos/entrprses	2,511	2,571	2,680	2,673	2,848	2,694	2,759	2,742	2,886	2,994	2,989
Admin/waste svcs	5,509	5,140	5,090	5,160	5,498	5,308	5,046	4,878	4,728	4,812	4,910
Educ svcs	762	868	865	874	946	962	1,029	1,015	1,012	1,125	1,212
<b>Hlth care/soc asst</b>	<b>6,590</b>	<b>6,746</b>	<b>7,110</b>	<b>7,312</b>	<b>7,619</b>	<b>7,837</b>	<b>8,007</b>	<b>8,008</b>	<b>8,292</b>	<b>8,260</b>	<b>8,182</b>
Arts/entrtnmnt/recr	1,869	2,022	1,982	1,981	2,051	1,919	1,874	1,818	1,766	1,774	1,882
Accomdtn/food svcs	4,958	5,274	5,410	5,753	5,551	5,399	5,440	5,661	5,574	5,881	6,145
Other (not pub adm)	<u>4,277</u>	<u>4,350</u>	<u>4,423</u>	<u>4,575</u>	<u>4,495</u>	<u>4,507</u>	<u>4,428</u>	<u>4,536</u>	<u>4,629</u>	<u>4,774</u>	<u>4,905</u>
Govt/govt entrprses	<u>7,732</u>	<u>7,786</u>	<u>7,909</u>	<u>8,102</u>	<u>8,112</u>	<u>8,025</u>	<u>7,789</u>	<u>7,491</u>	<u>7,470</u>	<u>7,495</u>	<u>7,510</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Appendix B, Table 10

BEA Data - Full-Time and Part-Time Employment<sup>1</sup>, for the Northeast Ohio Region,\* 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>1,343,479</u>	<u>1,347,478</u>	<u>1,355,495</u>	<u>1,362,461</u>	<u>1,348,465</u>	<u>1,295,472</u>	<u>1,281,881</u>	<u>1,300,267</u>	<u>1,317,481</u>	<u>1,330,494</u>	<u>1,339,952</u>
Wage/salary empl	1,141,670	1,137,489	1,140,150	1,136,213	1,117,948	1,058,242	1,045,498	1,054,004	1,073,669	1,081,183	1,087,433
Proprietors' empl	<u>201,809</u>	<u>209,989</u>	<u>215,345</u>	<u>226,248</u>	<u>230,517</u>	<u>237,230</u>	<u>236,383</u>	<u>246,263</u>	<u>243,812</u>	<u>249,311</u>	<u>252,519</u>
Farm prop empl	4,115	3,954	3,750	3,590	3,560	3,537	3,569	3,571	3,528	3,564	3,543
Nonfarm prop empl <sup>2</sup>	<u>197,694</u>	<u>206,035</u>	<u>211,595</u>	<u>222,658</u>	<u>226,957</u>	<u>233,693</u>	<u>232,814</u>	<u>242,692</u>	<u>240,284</u>	<u>245,747</u>	<u>248,976</u>
<b>By Industry</b>											
Farm empl	6,669	6,483	6,516	6,695	5,734	5,782	5,670	5,567	6,346	5,879	5,352
Nonfarm empl	<u>1,336,810</u>	<u>1,340,995</u>	<u>1,348,979</u>	<u>1,355,766</u>	<u>1,342,731</u>	<u>1,289,690</u>	<u>1,276,211</u>	<u>1,294,700</u>	<u>1,311,135</u>	<u>1,324,615</u>	<u>1,334,600</u>
Private empl	<u>1,180,618</u>	<u>1,187,580</u>	<u>1,195,368</u>	<u>1,200,902</u>	<u>1,188,138</u>	<u>1,137,120</u>	<u>1,125,419</u>	<u>1,148,494</u>	<u>1,167,965</u>	<u>1,182,609</u>	<u>1,192,230</u>
For/fshng/related	1,964	2,044	2,010	1,994	2,201	2,133	2,159	2,278	2,478	2,487	2,648
Mining	1,122	1,169	1,362	1,469	1,772	1,911	2,082	1,960	2,493	2,976	3,209
Utilities	4,352	4,326	4,161	4,479	4,541	4,114	3,771	3,782	3,734	3,719	3,692
Construction	68,509	69,274	67,344	67,129	64,243	58,802	55,626	56,889	57,619	59,346	60,754
Manufacturing	163,625	161,767	160,032	155,209	150,705	129,548	127,605	131,669	135,242	136,102	137,144
Wholesale trade	59,244	59,814	61,374	60,270	58,568	54,553	53,134	52,874	53,988	53,975	54,795
Retail trade	138,046	135,959	135,226	134,824	132,458	126,810	122,510	123,533	124,442	124,768	124,652
Transp/wrshng	37,662	38,385	39,072	40,382	39,228	36,541	35,795	35,905	36,641	37,357	37,909
Information	23,492	23,092	22,658	22,433	21,739	20,043	19,580	19,245	19,012	18,917	18,520
Finance/ins	77,343	72,844	72,556	73,930	73,275	75,156	72,697	75,001	73,106	73,000	72,246
RE/rental/leasing	45,808	47,893	47,457	47,983	47,488	46,655	47,604	49,136	48,811	49,948	50,529
Prof/sci/tech svcs	81,767	83,566	85,350	88,237	88,383	83,380	81,569	83,273	84,006	86,417	87,309
Mgmt cos/entrprses	19,012	23,449	24,983	23,897	24,195	22,973	22,463	25,815	28,388	28,837	28,662
Admin/waste svcs	82,253	83,167	84,436	85,780	84,502	78,621	80,676	84,555	86,048	86,910	89,136
Educ svcs	34,451	36,068	36,715	37,206	37,922	40,087	40,682	39,959	39,880	39,319	40,329
<b>Hlth care/soc asst</b>	<b>160,681</b>	<b>163,172</b>	<b>167,379</b>	<b>172,313</b>	<b>175,433</b>	<b>179,124</b>	<b>182,847</b>	<b>183,788</b>	<b>188,124</b>	<b>189,958</b>	<b>189,194</b>
Arts/entrtnmnt/recr	25,363	25,627	25,582	26,175	26,148	26,021	25,854	26,076	28,100	29,519	29,990
Accomm/food svcs	85,029	86,176	87,746	86,635	85,254	82,067	81,368	83,072	84,751	88,012	89,210
Other (not pub adm)	<u>70,895</u>	<u>69,788</u>	<u>69,925</u>	<u>70,557</u>	<u>69,986</u>	<u>68,581</u>	<u>67,397</u>	<u>69,684</u>	<u>71,102</u>	<u>71,042</u>	<u>72,302</u>
Govt/govt entrprses	<u>156,192</u>	<u>153,415</u>	<u>153,611</u>	<u>154,864</u>	<u>154,593</u>	<u>152,570</u>	<u>150,792</u>	<u>146,206</u>	<u>143,170</u>	<u>142,006</u>	<u>142,370</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.<sup>2</sup>Excludes limited partners.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Appendix B, Table 11

BEA Data - Full-Time and Part-Time Employment<sup>1</sup> for the State of Ohio, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Ttl FT/PT Empl</b>	<u>6,660,870</u>	<u>6,706,652</u>	<u>6,745,465</u>	<u>6,797,683</u>	<u>6,731,253</u>	<u>6,465,575</u>	<u>6,400,241</u>	<u>6,503,477</u>	<u>6,584,375</u>	<u>6,658,437</u>	<u>6,753,002</u>
Wage/salary empl	5,583,386	5,588,308	5,599,652	5,597,110	5,524,882	5,232,886	5,168,965	5,228,768	5,319,551	5,372,015	5,450,130
Proprietors' empl	<u>1,077,484</u>	<u>1,118,344</u>	<u>1,145,813</u>	<u>1,200,573</u>	<u>1,206,371</u>	<u>1,232,689</u>	<u>1,231,276</u>	<u>1,274,709</u>	<u>1,264,824</u>	<u>1,286,422</u>	<u>1,302,872</u>
Farm prop empl	70,216	69,221	67,367	66,342	66,224	66,321	67,417	67,970	67,654	68,169	67,747
Nonfarm prop empl <sup>2</sup>	<u>1,007,268</u>	<u>1,049,123</u>	<u>1,078,446</u>	<u>1,134,231</u>	<u>1,140,147</u>	<u>1,166,368</u>	<u>1,163,859</u>	<u>1,206,739</u>	<u>1,197,170</u>	<u>1,218,253</u>	<u>1,235,125</u>
<b>By Industry</b>											
Farm empl	85,170	83,762	82,962	83,500	78,836	79,930	80,764	81,224	87,247	84,250	80,308
Nonfarm empl	<u>6,575,700</u>	<u>6,622,890</u>	<u>6,662,503</u>	<u>6,714,183</u>	<u>6,652,417</u>	<u>6,385,645</u>	<u>6,319,477</u>	<u>6,422,253</u>	<u>6,497,128</u>	<u>6,574,187</u>	<u>6,672,694</u>
Private empl	<u>5,725,163</u>	<u>5,779,864</u>	<u>5,820,329</u>	<u>5,869,530</u>	<u>5,808,522</u>	<u>5,546,575</u>	<u>5,494,434</u>	<u>5,614,711</u>	<u>5,697,868</u>	<u>5,777,897</u>	<u>5,876,751</u>
For/fshng/related	11,227	11,478	11,430	12,275	13,039	13,000	13,052	13,325	14,150	14,382	14,770
Mining	19,427	19,816	21,475	21,946	26,932	27,011	30,419	27,479	34,985	36,211	40,166
Utilities	21,114	21,026	21,507	21,981	22,876	22,166	21,001	20,103	19,981	19,690	19,203
Construction	365,805	372,679	368,684	365,889	348,108	314,913	293,701	302,112	307,638	313,980	325,700
Manufacturing	842,494	833,151	819,537	797,214	762,822	656,266	644,637	664,441	683,429	692,133	706,083
Wholesale trade	252,632	257,899	260,632	260,517	257,195	241,815	236,143	239,676	243,975	247,597	252,640
Retail trade	746,340	741,211	732,482	731,997	710,446	682,785	664,895	675,631	677,058	682,726	687,340
Transp/wrhsng	217,705	229,921	240,057	248,824	242,888	220,826	214,420	220,528	225,213	229,012	236,617
Information	106,343	105,031	103,871	103,358	102,356	96,407	93,405	92,340	90,167	90,995	88,503
Finance/ins	300,344	297,407	300,252	310,825	314,392	325,072	318,056	333,246	330,505	331,825	331,030
RE/rental/leasing	202,476	213,461	213,457	217,822	215,277	210,917	214,675	220,570	216,889	220,500	222,777
Prof/sci/tech svcs	348,568	353,439	362,640	379,288	382,875	369,324	368,070	373,857	369,087	373,478	378,993
Mgmt cos/entrprses	96,998	104,968	108,771	107,567	113,839	112,978	112,166	117,661	132,139	137,078	142,383
Admin/waste svcs	394,208	398,090	406,702	412,257	406,134	373,132	383,033	394,623	403,071	412,854	425,469
Educ svcs	121,528	128,698	134,638	136,865	139,990	143,316	146,877	147,009	145,866	146,055	150,064
<b>Hlth care/soc asst</b>	<b>735,799</b>	<b>750,403</b>	<b>769,488</b>	<b>788,818</b>	<b>808,254</b>	<b>820,011</b>	<b>832,932</b>	<b>843,082</b>	<b>854,102</b>	<b>862,624</b>	<b>870,216</b>
Arts/entrtnmnt/recre	116,411	117,824	117,213	120,634	121,584	119,473	119,616	122,375	128,168	133,429	136,628
Accomm/food svcs	453,279	457,512	462,416	462,847	457,659	443,781	441,171	450,800	460,709	473,656	480,357
Other (not pub adm)	<u>372,465</u>	<u>365,850</u>	<u>365,077</u>	<u>368,606</u>	<u>361,856</u>	<u>353,382</u>	<u>346,165</u>	<u>355,853</u>	<u>360,736</u>	<u>359,672</u>	<u>367,812</u>
Govt/govt entrprses	<u>850,537</u>	<u>843,026</u>	<u>842,174</u>	<u>844,653</u>	<u>843,895</u>	<u>839,070</u>	<u>825,043</u>	<u>807,542</u>	<u>799,260</u>	<u>796,290</u>	<u>795,943</u>

SOURCE: U.S. Department of Commerce, REIS, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of employment for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Excludes limited partners.

**Appendix B, Table 12a**  
**BEA Data - Full- and Part-Time Employment<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2013**

	Ashtabula County	Cuyahoga County	Geauga County	Lake County
<b>Total FT &amp; PT Employment</b>	<u>45,447</u>	<u>901,933</u>	<u>52,461</u>	<u>118,902</u>
Wage & salary employment	32,310	751,909	35,642	98,609
Proprietors' employment	<u>13,137</u>	<u>150,024</u>	<u>16,819</u>	<u>20,293</u>
Farm Proprietors' employment	985	97	835	169
Nonfarm proprietors' employment <sup>3</sup>	<u>12,152</u>	<u>149,927</u>	<u>15,984</u>	<u>20,124</u>
<b>By Industry</b>				
Farm employment	1,216	198	1,103	824
Nonfarm employment	<u>44,231</u>	<u>901,735</u>	<u>51,358</u>	<u>118,078</u>
Private employment	<u>39,377</u>	<u>804,884</u>	<u>46,945</u>	<u>105,867</u>
Forestry, fishing, related & other	282	799	630	361
Mining	474	1,019	513	403
Utilities	249	1,530	11	1,216
Construction	3,117	31,644	6,010	6,105
Manufacturing	7,016	72,810	7,810	21,201
Wholesale trade	725	38,835	2,391	4,356
Retail trade	5,062	73,216	5,602	14,762
Transportation & warehousing	1,429	26,620	1,024	1,835
Information	382	15,615	305	901
Finance & insurance	1,302	58,572	1,589	3,733
Real estate, rental & leasing	1,425	34,222	1,660	4,101
Prof, scientific, & technical svcs	1,302	67,835	2,593	5,222
Mgmt of companies & enterprises	212	23,001	173	1,094
Administrative & waste services	2,954	61,390	3,646	6,903
Educational services	514	30,074	990	2,704
<b>Health care &amp; social assistance</b>	<b>6,155</b>	<b>143,391</b>	<b>4,813</b>	<b>12,455</b>
Arts, entertainment, & recreation	711	21,308	1,112	2,077
Accommodation & food services	3,247	57,530	2,589	9,845
Other svcs, except public admin	<u>2,819</u>	<u>45,473</u>	<u>3,484</u>	<u>6,593</u>
Govt & govt enterprises	<u>4,854</u>	<u>96,851</u>	<u>4,413</u>	<u>12,211</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification System (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Excludes Limited Partners

Highlighted cells were estimated based on trends in order to show area totals compared to the state; original data were excluded to avoid disclosure of confidential information.



**Appendix B, Table 12b**  
**BEA Data - Full- and Part-Time Employment<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2013**

	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
<b>Total FT &amp; PT Employment</b>	<u>127,054</u>	<u>84,697</u>	<u>1,330,494</u>	<u>6,658,437</u>
Wage & salary employment	100,808	61,905	1,081,183	5,372,015
Proprietors' employment	<u>26,246</u>	<u>22,792</u>	<u>249,311</u>	<u>1,286,422</u>
Farm Proprietors' employment	673	805	3,564	68,169
Nonfarm proprietors' employment <sup>3</sup>	<u>25,573</u>	<u>21,987</u>	<u>245,747</u>	<u>1,218,253</u>
<b>By Industry</b>				
Farm employment	1,410	1,128	5,879	84,250
Nonfarm employment	<u>125,644</u>	<u>83,569</u>	<u>1,324,615</u>	<u>6,574,187</u>
Private employment	<u>109,462</u>	<u>76,074</u>	<u>1,182,609</u>	<u>5,777,897</u>
Forestry, fishing, related & other	150	265	2,487	14,382
Mining	166	401	2,976	36,211
Utilities	337	376	3,719	19,690
Construction	6,743	5,727	59,346	313,980
Manufacturing	17,899	9,366	136,102	692,133
Wholesale trade	3,935	3,733	53,975	247,597
Retail trade	15,388	10,738	124,768	682,726
Transportation & warehousing	3,078	3,371	37,357	229,012
Information	1,100	614	18,917	90,995
Finance & insurance	4,531	3,273	73,000	331,825
Real estate, rental & leasing	4,545	3,995	49,948	220,500
Prof, scientific, & technical svcs	4,870	4,595	86,417	373,478
Mgmt of companies & enterprises	1,363	2,994	28,837	137,078
Administrative & waste services	7,205	4,812	86,910	412,854
Educational services	3,912	1,125	39,319	146,055
<b>Health care &amp; social assistance</b>	<b>14,884</b>	<b>8,260</b>	<b>189,958</b>	<b>862,624</b>
Arts, entertainment, & recreation	2,537	1,774	29,519	133,429
Accommodation & food services	8,920	5,881	88,012	473,656
Other svcs, except public admin	<u>7,899</u>	<u>4,774</u>	<u>71,042</u>	<u>359,672</u>
Govt & govt enterprises	<u>16,182</u>	<u>7,495</u>	<u>142,006</u>	<u>796,290</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification System (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup>Excludes Limited Partners

Highlighted cells were estimated based on trends in order to show area totals compared to the state; original data were excluded to avoid disclosure of confidential information.

**Appendix B, Table 13a**  
**BEA Data - Full- and Part-Time Employment<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2014**

	Ashtabula County	Cuyahoga County	Geauga County	Lake County
<b>Total FT &amp; PT Employment</b>	<u>45,423</u>	<u>906,767</u>	<u>53,226</u>	<u>120,004</u>
Wage & salary employment	32,106	754,888	36,137	99,445
Proprietors' employment	<u>13,317</u>	<u>151,879</u>	<u>17,089</u>	<u>20,559</u>
Farm Proprietors' employment	979	96	831	168
Nonfarm proprietors' employment <sup>3</sup>	<u>12,338</u>	<u>151,783</u>	<u>16,258</u>	<u>20,391</u>
<b>By Industry</b>				
Farm employment	1,159	175	1,041	679
Nonfarm employment	<u>44,264</u>	<u>906,592</u>	<u>52,185</u>	<u>119,325</u>
Private employment	<u>39,441</u>	<u>809,359</u>	<u>47,761</u>	<u>107,118</u>
Forestry, fishing, related & other	296	823	688	413
Mining	541	1,057	519	470
Utilities	199	1,552	12	1,197
Construction	3,088	32,026	6,261	6,285
Manufacturing	7,398	72,537	8,035	21,652
Wholesale trade	898	38,993	2,351	4,647
Retail trade	4,910	73,235	5,743	14,703
Transportation & warehousing	1,516	26,617	1,037	1,864
Information	377	15,241	294	925
Finance & insurance	1,303	57,761	1,581	3,728
Real estate, rental & leasing	1,425	34,638	1,684	4,155
Prof, scientific, & technical svcs	1,493	68,449	2,592	5,279
Mgmt of companies & enterprises	133	22,807	259	1,131
Administrative & waste services	2,374	63,502	3,523	7,248
Educational services	531	30,833	1,020	2,693
<b>Health care &amp; social assistance</b>	<b>6,108</b>	<b>143,232</b>	<b>4,720</b>	<b>12,162</b>
Arts, entertainment, & recreation	719	21,629	1,122	2,085
Accommodation & food services	3,243	58,182	2,745	9,799
Other svcs, except public admin	<u>2,889</u>	<u>46,245</u>	<u>3,575</u>	<u>6,682</u>
Govt & govt enterprises	<u>4,823</u>	<u>97,233</u>	<u>4,424</u>	<u>12,207</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification System (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Excludes Limited Partners

Highlighted cells were estimated based on regional trends in order to show area totals compared to the state; original data were excluded to avoid disclosure of confidential information.

**Appendix B, Table 13b**  
**BEA Data - Full- and Part-Time Employment<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2014**

	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
<b>Total FT &amp; PT Employment</b>	<u>128,655</u>	<u>85,877</u>	<u>1,339,952</u>	<u>6,753,002</u>
Wage & salary employment	102,072	62,785	1,087,433	5,450,130
Proprietors' employment	<u>26,583</u>	<u>23,092</u>	<u>252,519</u>	<u>1,302,872</u>
Farm Proprietors' employment	669	800	3,543	67,747
Nonfarm proprietors' employment <sup>3</sup>	<u>25,914</u>	<u>22,292</u>	<u>248,976</u>	<u>1,235,125</u>
<b>By Industry</b>				
Farm employment	1,245	1,053	5,352	80,308
Nonfarm employment	<u>127,410</u>	<u>84,824</u>	<u>1,334,600</u>	<u>6,672,694</u>
Private employment	<u>111,237</u>	<u>77,314</u>	<u>1,192,230</u>	<u>5,876,751</u>
Forestry, fishing, related & other	155	273	2,648	14,770
Mining	199	423	3,209	40,166
Utilities	322	410	3,692	19,203
Construction	7,090	6,004	60,754	325,700
Manufacturing	18,078	9,444	137,144	706,083
Wholesale trade	4,118	3,788	54,795	252,640
Retail trade	15,361	10,700	124,652	687,340
Transportation & warehousing	3,318	3,557	37,909	236,617
Information	1,054	629	18,520	88,503
Finance & insurance	4,597	3,276	72,246	331,030
Real estate, rental & leasing	4,623	4,004	50,529	222,777
Prof, scientific, & technical svcs	4,915	4,581	87,309	378,993
Mgmt of companies & enterprises	1,343	2,989	28,662	142,383
Administrative & waste services	7,579	4,910	89,136	425,469
Educational services	4,040	1,212	40,329	150,064
<b>Health care &amp; social assistance</b>	<b>14,790</b>	<b>8,182</b>	<b>189,194</b>	<b>870,216</b>
Arts, entertainment, & recreation	2,553	1,882	29,990	136,628
Accommodation & food services	9,096	6,145	89,210	480,357
Other svcs, except public admin	<u>8,006</u>	<u>4,905</u>	<u>72,302</u>	<u>367,812</u>
Govt & govt enterprises	<u>16,173</u>	<u>7,510</u>	<u>142,370</u>	<u>795,943</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification System (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Excludes Limited Partners

Highlighted cells were estimated based on regional trends in order to show area totals compared to the state; original data were excluded to avoid disclosure of confidential information.

**Appendix B, Table 14**  
**BEA Data -Personal Income (\$1,000s)<sup>1</sup> for Ashtabula County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Pice of Wrk</b>	<u>1,477,895</u>	<u>1,503,810</u>	<u>1,525,775</u>	<u>1,537,410</u>	<u>1,551,184</u>	<u>1,471,034</u>	<u>1,527,262</u>	<u>1,615,590</u>	<u>1,626,601</u>	<u>1,643,799</u>	<u>1,693,635</u>
Wage & salary	1,034,046	1,048,953	1,054,424	1,073,478	1,090,340	1,034,021	1,056,682	1,104,664	1,118,610	1,131,158	1,171,171
Proprs' inc <sup>2</sup>	150,000	152,949	158,813	147,845	137,818	135,748	152,948	182,536	185,679	177,157	181,622
Other	<u>293,849</u>	<u>301,908</u>	<u>312,538</u>	<u>316,087</u>	<u>323,026</u>	<u>301,265</u>	<u>317,632</u>	<u>328,390</u>	<u>322,312</u>	<u>335,484</u>	<u>340,842</u>
<b>Earnings-Industry</b>											
Farm earnings	9,260	8,215	4,541	8,899	9,123	7,280	12,977	24,489	18,092	16,942	10,671
Nonfarm earnings	<u>1,468,635</u>	<u>1,495,595</u>	<u>1,521,234</u>	<u>1,528,511</u>	<u>1,542,061</u>	<u>1,463,754</u>	<u>1,514,285</u>	<u>1,591,101</u>	<u>1,608,509</u>	<u>1,626,857</u>	<u>1,682,964</u>
Private earnings	<u>1,203,285</u>	<u>1,231,219</u>	<u>1,251,017</u>	<u>1,252,014</u>	<u>1,265,560</u>	<u>1,182,734</u>	<u>1,222,026</u>	<u>1,307,312</u>	<u>1,331,113</u>	<u>1,357,494</u>	<u>1,410,975</u>
For/fshng/rel/other	3,052	3,490	4,186	3,934	3,274	2,827	3,595	3,747	4,850	5,124	5,965
Mining	4,842	5,830	6,984	7,389	7,200	3,676	4,418	4,574	4,907	15,578	21,809
Utilities	23,633	23,808	24,957	25,475	29,013	26,193	27,027	30,104	28,160	27,789	24,336
Construction	91,524	93,560	88,983	85,237	76,235	87,059	88,197	98,303	88,365	94,703	93,169
Manufacturing	433,520	450,038	443,419	426,795	426,291	349,803	383,225	410,524	426,159	422,300	459,587
Wholesale trade	36,248	37,342	39,615	43,859	44,901	37,602	36,686	38,167	35,912	33,564	42,629
Retail trade	115,307	117,819	121,629	124,870	120,877	117,660	116,794	119,516	120,059	120,315	117,483
Transp/wrshng	49,605	53,983	57,671	61,046	60,695	61,214	59,872	63,013	64,112	63,275	68,067
Information	20,129	18,802	18,791	19,080	18,755	18,785	16,897	16,780	16,307	16,559	16,867
Finance/ins	37,116	33,274	34,390	36,270	38,152	34,369	29,355	29,930	31,284	33,748	34,624
RE/rental/leasing	11,092	9,610	10,316	8,514	12,164	13,575	12,804	16,102	19,547	19,503	19,778
Prof/sci/tech svcs	27,105	25,622	27,569	27,648	31,582	31,503	34,708	38,370	38,635	37,804	44,676
Mgmt cos/entrprs	3,795	3,914	7,801	7,965	10,846	9,891	6,226	3,895	3,912	8,262	10,285
Admin/wste svcs	39,911	38,769	31,922	32,073	32,341	31,364	39,508	59,922	66,217	70,415	54,955
Educational svcs	6,290	6,075	6,363	6,281	6,531	6,648	7,108	7,225	7,697	7,807	8,230
<b>Hlth care/soc asst</b>	<b>183,600</b>	<b>190,019</b>	<b>204,656</b>	<b>215,400</b>	<b>228,990</b>	<b>233,339</b>	<b>234,339</b>	<b>238,424</b>	<b>238,531</b>	<b>244,580</b>	<b>246,995</b>
Arts, entrtnmnt/rec	5,397	5,275	5,296	5,057	4,748	4,249	5,127	6,951	7,395	7,861	7,683
Accomdtns/fd svcs	44,822	45,289	43,250	45,043	43,325	42,789	42,517	44,671	49,892	51,364	52,879
Other	<u>66,297</u>	<u>68,700</u>	<u>73,219</u>	<u>70,078</u>	<u>69,640</u>	<u>70,188</u>	<u>73,623</u>	<u>77,094</u>	<u>79,172</u>	<u>76,943</u>	<u>80,958</u>
Govt & govt entrprs	<u>265,350</u>	<u>264,376</u>	<u>270,217</u>	<u>276,497</u>	<u>276,501</u>	<u>281,020</u>	<u>292,259</u>	<u>283,789</u>	<u>277,396</u>	<u>269,363</u>	<u>271,989</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Appendix B, Table 15

BEA Data - Personal Income (\$1,000s)<sup>1</sup> for Cuyahoga County, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Place of Wrk</b>	<u>45,841,643</u>	<u>46,335,841</u>	<u>48,639,290</u>	<u>49,535,910</u>	<u>50,533,054</u>	<u>47,725,956</u>	<u>49,156,166</u>	<u>51,553,435</u>	<u>54,227,711</u>	<u>55,067,812</u>	<u>56,769,221</u>
Wage & salary	33,441,749	33,797,229	35,202,368	36,319,003	36,298,867	34,301,120	35,054,966	36,481,904	38,573,667	39,381,799	40,681,614
Proprs' inc <sup>2</sup>	4,649,202	4,580,731	4,995,465	4,679,567	5,627,799	5,185,262	5,606,488	6,285,147	6,733,263	6,288,782	6,576,665
Other	<u>7,750,692</u>	<u>7,957,881</u>	<u>8,441,457</u>	<u>8,537,340</u>	<u>8,606,388</u>	<u>8,239,574</u>	<u>8,494,712</u>	<u>8,786,384</u>	<u>8,920,781</u>	<u>9,397,231</u>	<u>9,510,942</u>
<b>Earnings-Industry</b>											
Farm earnings	8,311	7,458	5,383	7,402	5,341	5,071	4,110	4,506	4,201	7,056	4,451
Nonfarm earnings	<u>45,833,332</u>	<u>46,328,383</u>	<u>48,633,907</u>	<u>49,528,508</u>	<u>50,527,713</u>	<u>47,720,885</u>	<u>49,152,056</u>	<u>51,548,929</u>	<u>54,223,510</u>	<u>55,060,756</u>	<u>56,764,770</u>
Private earnings	<u>39,196,048</u>	<u>39,608,930</u>	<u>41,793,285</u>	<u>42,393,376</u>	<u>43,191,376</u>	<u>40,369,211</u>	<u>41,529,520</u>	<u>44,048,101</u>	<u>46,816,684</u>	<u>47,653,351</u>	<u>49,145,250</u>
For/fshng/rel/other	68,000	70,540	70,659	64,800	79,500	81,800	85,000	87,900	90,600	93,500	96,400
Mining	120,403	178,939	206,256	193,084	770,560	263,758	400,399	550,635	510,189	364,266	393,990
Utilities	142,979	152,173	162,307	170,191	193,806	175,480	159,294	172,307	167,194	172,947	183,264
Construction	1,977,390	1,934,718	2,001,622	1,973,394	1,900,905	1,747,273	1,685,084	1,801,759	1,934,565	2,053,829	2,134,330
Manufacturing	6,275,666	6,199,033	6,451,562	6,482,878	6,438,935	5,319,482	5,381,858	5,817,438	5,849,704	5,761,556	5,928,890
Wholesale trade	3,082,145	3,214,766	3,503,093	3,626,251	3,549,270	3,207,209	3,297,078	3,244,487	3,351,033	3,310,704	3,439,578
Retail trade	2,426,385	2,341,933	2,360,174	2,432,276	2,274,810	2,194,836	2,233,429	2,323,993	2,366,269	2,418,742	2,455,807
Transp/wrhsng	1,557,840	1,576,817	1,588,901	1,634,718	1,561,111	1,437,156	1,443,228	1,505,120	1,515,566	1,539,134	1,539,489
Information	1,209,081	1,174,502	1,169,476	1,209,646	1,202,161	1,121,588	1,081,336	1,114,518	1,093,258	1,154,856	1,171,873
Finance/ins	4,341,022	4,104,934	4,315,121	4,350,124	4,087,583	4,112,085	4,190,283	4,128,469	4,141,597	4,245,305	4,383,016
RE/rental/leasing	1,073,481	1,030,994	909,512	730,255	801,098	1,005,171	1,289,549	1,646,832	1,962,939	1,972,313	2,003,445
Prof/sci/tech svcs	4,244,245	4,445,744	4,759,038	4,978,341	5,493,303	5,062,882	4,931,611	5,394,553	5,727,021	5,785,974	5,965,568
Mgmt of											
cos/entrprs	1,501,757	1,661,330	1,933,895	1,928,776	1,885,805	1,675,817	1,841,000	2,198,713	2,915,146	2,960,539	2,992,294
Admin/wste svcs	1,661,841	1,772,243	1,907,037	2,065,667	1,990,729	1,757,003	1,891,980	2,125,243	2,330,686	2,330,039	2,547,409
Educational svcs	946,288	942,558	992,871	988,182	1,019,589	1,087,546	1,088,041	1,102,239	1,142,270	1,141,673	1,190,536
<b>Hlth care/soc asst</b>	<b>5,394,844</b>	<b>5,614,384</b>	<b>6,154,463</b>	<b>6,183,028</b>	<b>6,585,560</b>	<b>6,838,741</b>	<b>7,191,727</b>	<b>7,435,228</b>	<b>7,972,636</b>	<b>8,438,816</b>	<b>8,553,708</b>
Arts, entrtnmnt/rec	670,642	687,422	694,968	761,691	814,356	819,743	854,512	787,651	927,028	1,015,084	1,137,815
Accomdtns/fd svcs	1,132,031	1,148,771	1,216,060	1,217,193	1,156,767	1,111,676	1,134,786	1,198,741	1,308,431	1,387,276	1,459,349
Other	<u>1,370,008</u>	<u>1,357,129</u>	<u>1,396,270</u>	<u>1,402,881</u>	<u>1,385,528</u>	<u>1,349,965</u>	<u>1,349,325</u>	<u>1,412,275</u>	<u>1,510,552</u>	<u>1,506,798</u>	<u>1,568,489</u>
Govt & govt entrprs	<u>6,637,284</u>	<u>6,719,453</u>	<u>6,840,622</u>	<u>7,135,132</u>	<u>7,336,337</u>	<u>7,351,674</u>	<u>7,622,536</u>	<u>7,500,828</u>	<u>7,406,826</u>	<u>7,407,405</u>	<u>7,619,520</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Appendix B, Table 16

BEA Data - Personal Income (\$1,000s)<sup>1</sup> for Geauga County, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Pice of Wrk</b>	<u>1,703,488</u>	<u>1,829,486</u>	<u>1,918,254</u>	<u>1,915,922</u>	<u>1,928,423</u>	<u>1,829,817</u>	<u>1,872,881</u>	<u>1,969,808</u>	<u>2,042,753</u>	<u>2,094,830</u>	<u>2,204,753</u>
Wage & salary	1,175,637	1,266,169	1,319,775	1,336,141	1,348,697	1,262,854	1,276,668	1,318,741	1,372,947	1,399,370	1,469,887
Proprs' inc <sup>2</sup>	241,502	252,578	267,312	245,137	236,841	245,864	264,943	309,999	325,497	334,473	362,010
Other	<u>286,349</u>	<u>310,739</u>	<u>331,167</u>	<u>334,644</u>	<u>342,885</u>	<u>321,099</u>	<u>331,270</u>	<u>341,068</u>	<u>344,309</u>	<u>360,987</u>	<u>372,856</u>
<b>Earnings-Industry</b>											
Farm earnings	6,935	6,311	3,029	4,504	4,587	4,469	5,773	14,381	10,512	9,471	14,710
Nonfarm earnings	<u>1,696,553</u>	<u>1,823,175</u>	<u>1,915,225</u>	<u>1,911,418</u>	<u>1,923,836</u>	<u>1,825,348</u>	<u>1,867,108</u>	<u>1,955,427</u>	<u>2,032,241</u>	<u>2,085,359</u>	<u>2,190,043</u>
Private earnings	<u>1,493,147</u>	<u>1,610,970</u>	<u>1,692,720</u>	<u>1,681,014</u>	<u>1,687,060</u>	<u>1,574,021</u>	<u>1,601,937</u>	<u>1,694,707</u>	<u>1,773,915</u>	<u>1,830,082</u>	<u>1,929,757</u>
For/fshng/other	12,084	12,066	15,369	13,976	14,403	11,248	12,350	12,015	12,640	12,780	13,042
Mining	9,200	9,516	6,858	7,181	7,653	7,946	15,856	20,756	26,049	21,836	24,244
Utilities	23	15	46	48	52	46	43	44	43	45	46
Construction	195,087	214,875	218,311	190,745	183,665	167,647	176,360	200,306	226,866	236,819	261,733
Manufacturing	478,269	519,658	537,429	519,541	512,785	446,911	447,969	461,234	457,557	478,437	499,934
Wholesale trade	120,951	125,281	145,103	151,743	155,024	141,019	135,474	138,365	156,016	162,301	163,807
Retail trade	107,315	120,817	137,839	143,672	141,017	139,794	143,007	150,048	157,870	163,395	172,378
Transp/wrshng	41,217	42,650	43,710	48,400	39,412	31,949	32,500	37,482	36,860	37,641	39,850
Information	10,358	10,449	8,332	8,960	9,012	9,423	8,783	9,939	10,079	9,490	10,072
Finance/ins	52,038	58,390	56,222	57,221	55,210	61,209	58,260	55,726	55,731	57,025	57,796
RE/rental/leasing	17,725	15,019	15,931	17,840	23,183	21,091	22,209	25,472	31,666	32,729	37,170
Prof/sci/tech svcs	63,761	75,158	82,613	81,409	91,663	86,929	86,653	89,680	96,674	99,258	100,044
Mgmt cos/entrprs	18,124	20,143	24,054	19,870	23,607	21,458	22,940	11,574	6,764	11,369	16,056
Admin/wste svcs	84,647	84,943	82,834	86,389	83,030	78,165	80,205	111,394	110,124	105,980	118,548
Educational svcs	20,577	21,463	20,591	20,646	23,168	24,382	24,020	24,643	26,502	27,695	28,764
<b>Hlth/soc asst</b>	<b>126,424</b>	<b>145,685</b>	<b>154,886</b>	<b>161,502</b>	<b>173,589</b>	<b>178,141</b>	<b>183,888</b>	<b>187,164</b>	<b>191,561</b>	<b>201,658</b>	<b>205,251</b>
Arts, entrmnt/rec	17,601	16,649	15,180	15,947	15,627	14,429	14,397	14,691	15,245	15,403	15,856
Accomms/fd svcs	38,146	37,392	40,547	39,312	38,230	38,097	37,583	39,119	42,588	42,781	46,975
Other	<u>79,600</u>	<u>80,801</u>	<u>86,865</u>	<u>96,612</u>	<u>96,730</u>	<u>94,137</u>	<u>99,440</u>	<u>105,055</u>	<u>113,080</u>	<u>113,440</u>	<u>118,191</u>
Govt & govt entrprs	<u>203,406</u>	<u>212,205</u>	<u>222,505</u>	<u>230,404</u>	<u>236,776</u>	<u>251,327</u>	<u>265,171</u>	<u>260,720</u>	<u>258,326</u>	<u>255,277</u>	<u>260,286</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information due to less than \$50,000.

Appendix B, Table 17

BEA Data - Personal Income (\$1,000s)<sup>1</sup> for Lake County, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Place of Wrk</b>	<u>4,841,921</u>	<u>5,063,027</u>	<u>5,185,567</u>	<u>5,357,824</u>	<u>5,441,692</u>	<u>5,193,972</u>	<u>5,312,632</u>	<u>5,788,465</u>	<u>5,730,875</u>	<u>5,764,043</u>	<u>5,974,749</u>
Wage & salary	3,595,792	3,748,504	3,809,036	3,991,747	4,023,589	3,802,327	3,882,323	4,243,930	4,196,480	4,191,786	4,356,818
Proprs' inc <sup>2</sup>	326,551	352,262	367,074	321,254	349,094	378,404	386,061	434,108	455,379	465,811	486,581
Other	<u>919,578</u>	<u>962,261</u>	<u>1,009,457</u>	<u>1,044,823</u>	<u>1,069,009</u>	<u>1,013,241</u>	<u>1,044,248</u>	<u>1,110,427</u>	<u>1,079,016</u>	<u>1,106,446</u>	<u>1,131,350</u>
<b>Earnings-Industry</b>											
Farm earnings	38,878	43,658	26,712	35,570	29,233	32,258	29,584	27,013	32,181	32,459	30,437
Nonfarm earnings	<u>4,803,043</u>	<u>5,019,369</u>	<u>5,158,855</u>	<u>5,322,254</u>	<u>5,412,459</u>	<u>5,161,714</u>	<u>5,283,048</u>	<u>5,761,452</u>	<u>5,698,694</u>	<u>5,731,584</u>	<u>5,944,312</u>
Private earnings	<u>4,121,329</u>	<u>4,328,697</u>	<u>4,455,761</u>	<u>4,591,882</u>	<u>4,656,241</u>	<u>4,393,121</u>	<u>4,469,340</u>	<u>4,970,431</u>	<u>4,922,490</u>	<u>4,964,445</u>	<u>5,168,442</u>
For/fshng/other	6,015	6,180	6,124	5,600	6,814	7,068	7,386	7,516	7,801	8,001	8,500
Mining	12,241	11,852	11,566	15,415	22,882	22,672	22,325	30,094	23,772	20,210	28,065
Utilities	153,789	182,514	189,688	216,571	219,027	217,188	165,331	185,488	168,049	177,065	166,254
Construction	297,051	298,084	293,946	276,277	267,157	248,562	275,223	302,167	298,871	309,215	335,732
Manufacturing	1,320,453	1,339,463	1,411,781	1,493,016	1,489,835	1,330,425	1,431,670	1,745,806	1,665,171	1,657,947	1,733,112
Wholesale trade	262,664	296,683	303,150	329,224	352,124	321,384	298,213	313,388	298,429	306,883	335,159
Retail trade	432,969	448,946	453,351	449,689	456,152	435,135	401,517	415,388	424,046	442,294	445,741
Transp/wrshng	51,827	55,442	57,117	57,211	48,018	42,834	48,677	58,204	61,911	66,103	68,770
Information	42,704	39,121	42,511	41,206	42,211	41,853	60,254	64,568	67,845	46,117	52,651
Finance/ins	109,355	127,635	129,835	126,391	127,749	131,665	138,796	130,699	126,132	115,806	118,433
RE/rental/leasing	61,884	60,609	55,897	37,772	42,102	54,630	68,554	99,307	120,117	118,964	123,856
Prof/sci/tech svcs	266,993	291,728	298,888	307,779	310,005	269,833	242,296	245,479	245,332	239,508	245,508
Mgmt cos/entrprs	100,510	108,246	93,105	97,465	95,030	103,339	105,784	110,535	105,523	120,316	145,901
Admin/wste svcs	148,885	155,961	173,318	191,249	207,656	180,411	192,240	207,182	212,799	213,763	234,448
Educational svcs	41,589	43,640	49,311	53,789	58,529	60,242	63,879	64,569	67,579	68,398	70,580
<b>Hlth/soc asst</b>	<b>445,809</b>	<b>483,115</b>	<b>489,178</b>	<b>494,006</b>	<b>519,192</b>	<b>541,878</b>	<b>560,419</b>	<b>580,965</b>	<b>590,065</b>	<b>594,861</b>	<b>582,249</b>
Arts, entrmnt/rec	30,729	29,258	29,212	28,971	29,654	28,375	29,671	31,966	31,921	32,722	33,114
Accomm/fd svcs	147,470	153,501	158,310	160,942	159,150	155,837	153,631	158,123	169,630	175,632	179,405
Other	<u>188,392</u>	<u>196,719</u>	<u>209,473</u>	<u>209,309</u>	<u>202,954</u>	<u>199,790</u>	<u>203,474</u>	<u>218,987</u>	<u>237,497</u>	<u>250,640</u>	<u>260,964</u>
Govt & govt entrprs	<u>681,714</u>	<u>690,672</u>	<u>703,094</u>	<u>730,372</u>	<u>756,218</u>	<u>768,593</u>	<u>813,708</u>	<u>791,021</u>	<u>776,204</u>	<u>767,139</u>	<u>775,870</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

**Appendix B, Table 18**

**BEA Data - Personal Income (\$1,000s)<sup>1</sup> for Lorain County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Pice of Wrk</b>	<u>5,107,151</u>	<u>5,241,251</u>	<u>5,404,483</u>	<u>5,386,255</u>	<u>5,384,235</u>	<u>5,066,543</u>	<u>5,232,722</u>	<u>5,616,299</u>	<u>5,786,748</u>	<u>5,861,079</u>	<u>6,039,182</u>
Wage & salary	3,730,532	3,811,984	3,906,411	3,942,254	3,948,468	3,662,736	3,744,433	4,041,037	4,197,489	4,225,632	4,359,612
Proprs' inc <sup>2</sup>	397,885	418,627	443,333	386,843	364,238	392,289	437,158	470,734	473,601	485,384	509,402
Other	<u>978,734</u>	<u>1,010,640</u>	<u>1,054,739</u>	<u>1,057,158</u>	<u>1,071,529</u>	<u>1,011,518</u>	<u>1,051,131</u>	<u>1,104,528</u>	<u>1,115,658</u>	<u>1,150,063</u>	<u>1,170,168</u>
<b>Earnings-Industry</b>											
Farm earnings	50,294	53,206	40,813	42,026	36,987	38,222	36,364	35,362	43,703	41,938	38,763
Nonfarm earnings	<u>5,056,857</u>	<u>5,188,045</u>	<u>5,363,670</u>	<u>5,344,229</u>	<u>5,347,248</u>	<u>5,028,321</u>	<u>5,196,358</u>	<u>5,580,937</u>	<u>5,743,045</u>	<u>5,819,141</u>	<u>6,000,419</u>
Private earnings	<u>4,118,213</u>	<u>4,234,707</u>	<u>4,383,203</u>	<u>4,343,734</u>	<u>4,309,124</u>	<u>3,975,105</u>	<u>4,089,191</u>	<u>4,478,717</u>	<u>4,651,452</u>	<u>4,743,714</u>	<u>4,914,284</u>
For/fshng/rel/other	1,365	1,484	1,534	1,658	1,728	1,764	1,796	1,941	2,341	2,143	2,346
Mining	3,283	4,173	5,022	4,663	2,161	570	976	1,448	1,317	1,469	3,380
Utilities	34,866	34,271	37,149	36,799	40,039	40,258	37,014	40,910	41,002	39,140	38,522
Construction	357,789	361,833	350,300	329,386	296,762	258,042	251,792	262,283	288,329	299,019	331,345
Manufacturing	1,498,896	1,542,447	1,554,236	1,501,058	1,439,564	1,157,300	1,200,339	1,340,601	1,413,020	1,403,104	1,458,583
Wholesale trade	152,918	162,488	178,205	184,670	195,675	179,918	191,889	235,089	249,364	278,428	307,622
Retail trade	396,771	404,438	422,136	426,789	416,865	416,223	419,667	441,333	455,682	465,720	466,279
Transp/wrshng	114,910	112,372	114,669	122,384	116,585	100,293	99,336	115,567	123,469	131,771	141,433
Information	61,493	64,222	66,656	62,517	49,464	46,097	41,287	44,715	41,606	43,029	41,876
Finance/ins	118,655	116,791	121,904	112,600	112,820	140,309	151,923	131,607	137,055	158,909	170,639
RE/rental/leasing	49,645	47,929	45,093	36,123	42,912	52,269	60,720	72,174	83,576	81,634	84,993
Prof/sci/tech svcs	132,040	149,186	160,120	183,057	200,356	186,529	175,375	187,086	192,514	202,778	200,440
Mgmt of cos/entrprs	31,652	30,879	68,282	73,634	79,285	81,476	89,378	161,525	156,136	144,856	127,783
Admin/wste svcs	148,344	161,538	170,444	171,390	199,289	191,573	190,359	223,279	206,583	223,650	247,705
Educational svcs	97,934	103,148	108,462	115,339	120,654	131,220	133,912	147,272	148,779	152,264	161,514
<b>Hlth care/soc asst</b>	<b>555,642</b>	<b>572,680</b>	<b>601,061</b>	<b>604,899</b>	<b>622,703</b>	<b>630,706</b>	<b>667,945</b>	<b>676,614</b>	<b>682,206</b>	<b>679,075</b>	<b>675,382</b>
Arts, entrtnmnt/rec	30,801	29,462	28,192	25,867	27,599	27,387	27,595	28,050	29,920	30,195	31,145
Accomdtns/fd svcs	124,341	130,442	135,588	137,581	139,268	132,026	132,040	140,387	152,923	156,800	165,025
Other	<u>206,868</u>	<u>204,924</u>	<u>214,150</u>	<u>213,320</u>	<u>205,395</u>	<u>201,145</u>	<u>215,848</u>	<u>226,836</u>	<u>245,630</u>	<u>249,730</u>	<u>258,272</u>
Govt & govt entrprs	<u>938,644</u>	<u>953,338</u>	<u>980,467</u>	<u>1,000,495</u>	<u>1,038,124</u>	<u>1,053,216</u>	<u>1,107,167</u>	<u>1,102,220</u>	<u>1,091,593</u>	<u>1,075,427</u>	<u>1,086,135</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.



**Appendix B, Table 19**  
**BEA Data - Personal Income (\$1,000s)<sup>1</sup> for Medina County, 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Place of Wrk</b>	<u>2,805,466</u>	<u>2,989,281</u>	<u>3,109,376</u>	<u>3,154,086</u>	<u>3,152,110</u>	<u>3,037,635</u>	<u>3,121,805</u>	<u>3,308,536</u>	<u>3,447,346</u>	<u>3,549,784</u>	<u>3,695,539</u>
Wage & salary	2,010,219	2,151,951	2,219,716	2,279,943	2,281,663	2,166,389	2,208,522	2,304,817	2,404,074	2,460,395	2,579,471
Proprs' inc <sup>2</sup>	288,003	298,856	312,160	281,952	272,598	301,723	327,511	399,214	432,051	443,206	462,158
Other	<u>507,244</u>	<u>538,474</u>	<u>577,500</u>	<u>592,191</u>	<u>597,849</u>	<u>569,523</u>	<u>585,772</u>	<u>604,505</u>	<u>611,221</u>	<u>646,183</u>	<u>653,910</u>
<b>Earnings-Industry</b>											
Farm earnings	11,843	14,922	9,719	8,465	7,140	9,154	8,967	18,392	12,272	16,168	13,116
Nonfarm earnings	<u>2,793,623</u>	<u>2,974,359</u>	<u>3,099,657</u>	<u>3,145,621</u>	<u>3,144,970</u>	<u>3,028,481</u>	<u>3,112,838</u>	<u>3,290,144</u>	<u>3,435,074</u>	<u>3,533,616</u>	<u>3,682,423</u>
Private earnings	<u>2,415,906</u>	<u>2,581,315</u>	<u>2,689,162</u>	<u>2,716,258</u>	<u>2,699,325</u>	<u>2,575,133</u>	<u>2,637,232</u>	<u>2,832,734</u>	<u>2,980,427</u>	<u>3,078,884</u>	<u>3,225,889</u>
For/fshng/rel/other	3,359	3,706	3,978	3,749	3,291	2,835	3,239	4,006	5,851	6,420	6,973
Mining	6,625	8,541	8,998	8,921	7,445	4,019	4,470	6,719	6,700	5,076	4,657
Utilities	110	114	118	125	124	126	128	131	134	137	139
Construction	269,807	286,308	279,386	266,439	243,216	242,092	234,186	253,383	280,618	302,916	335,692
Manufacturing	499,021	535,995	555,481	579,053	571,571	497,266	515,466	555,502	574,510	578,817	606,943
Wholesale trade	183,015	192,462	199,320	203,292	204,718	182,333	202,429	221,106	242,679	258,573	277,931
Retail trade	243,058	250,646	265,538	276,851	265,552	263,352	267,713	294,332	313,013	313,610	317,861
Transp/wrshng	135,188	159,787	165,005	170,179	169,881	159,904	157,668	168,362	177,752	175,896	186,789
Information	30,569	29,341	28,645	27,560	27,139	23,873	23,360	20,204	20,463	22,662	25,089
Finance/ins	82,835	92,062	98,961	98,003	93,648	99,758	82,311	85,389	95,765	97,313	101,016
RE/rental/leasing	36,203	36,023	36,870	26,042	28,774	40,035	50,518	77,077	92,790	91,362	92,117
Prof/sci/tech svcs	135,611	142,043	152,262	156,541	161,143	148,583	163,107	187,484	189,041	190,504	200,806
Mgmt cos/entrprs	189,673	235,745	255,498	247,850	249,882	220,715	239,322	247,676	241,724	266,119	273,662
Admin/wste svcs	144,073	132,511	128,339	127,935	136,503	142,077	132,703	127,999	123,127	135,594	144,452
Educational svcs	10,319	11,065	11,281	12,261	13,414	14,061	13,929	14,013	15,414	17,145	19,461
<b>Hlth care/soc asst</b>	<b>240,580</b>	<b>252,351</b>	<b>273,173</b>	<b>276,385</b>	<b>294,771</b>	<b>302,754</b>	<b>312,556</b>	<b>317,708</b>	<b>331,620</b>	<b>339,711</b>	<b>335,009</b>
Arts, entrtnmnt/rec	22,954	23,952	24,601	24,111	24,511	22,765	22,267	22,638	22,803	22,555	24,909
Accomdtns/fd svcs	69,129	71,383	74,752	82,785	83,036	84,057	85,395	92,548	97,866	105,385	114,982
Other	<u>113,777</u>	<u>117,280</u>	<u>126,956</u>	<u>125,247</u>	<u>120,706</u>	<u>124,528</u>	<u>126,465</u>	<u>136,457</u>	<u>148,557</u>	<u>149,089</u>	<u>157,401</u>
Govt & govt entrprs	<u>377,717</u>	<u>393,044</u>	<u>410,495</u>	<u>429,363</u>	<u>445,645</u>	<u>453,348</u>	<u>475,606</u>	<u>457,410</u>	<u>454,647</u>	<u>454,732</u>	<u>456,534</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

**Appendix B, Table 20**  
**BEA Data - Personal Income (\$1,000s)<sup>1</sup> for the Northeast Ohio Region,\* 2004-2014**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings-Place of Wrk</b>	<u>61,777,564</u>	<u>62,962,696</u>	<u>65,782,745</u>	<u>66,887,407</u>	<u>67,990,698</u>	<u>64,324,957</u>	<u>66,223,468</u>	<u>69,852,133</u>	<u>72,862,034</u>	<u>73,981,347</u>	<u>76,377,079</u>
Wage & salary	44,987,975	45,824,790	47,511,730	48,942,566	48,991,624	46,229,447	47,223,594	49,495,093	51,863,267	52,790,140	54,618,573
Proprs' inc <sup>2</sup>	10,736,446	11,081,903	11,726,858	11,882,243	12,010,686	11,456,220	11,824,765	12,275,302	12,393,297	12,996,394	13,180,068
Other	<u>6,053,143</u>	<u>6,056,003</u>	<u>6,544,157</u>	<u>6,062,598</u>	<u>6,988,388</u>	<u>6,639,290</u>	<u>7,175,109</u>	<u>8,081,738</u>	<u>8,605,470</u>	<u>8,194,813</u>	<u>8,578,438</u>
<b>Earnings-Industry</b>											
Farm earnings	125,521	133,770	90,197	106,866	92,411	96,454	97,775	124,143	120,961	124,034	112,148
Nonfarm earnings	<u>61,652,043</u>	<u>62,828,926</u>	<u>65,692,548</u>	<u>66,780,541</u>	<u>67,898,287</u>	<u>64,228,503</u>	<u>66,125,693</u>	<u>69,727,990</u>	<u>72,741,073</u>	<u>73,857,313</u>	<u>76,264,931</u>
Private earnings	<u>52,547,928</u>	<u>53,595,838</u>	<u>56,265,148</u>	<u>56,978,278</u>	<u>57,808,686</u>	<u>54,069,325</u>	<u>55,549,246</u>	<u>59,332,002</u>	<u>62,476,081</u>	<u>63,627,970</u>	<u>65,794,597</u>
For/fshng/rel/other	93,875	97,466	101,850	93,717	109,010	107,542	113,366	117,125	124,083	127,968	133,226
Mining	156,594	218,851	245,684	236,653	817,901	302,641	448,444	614,226	572,934	428,435	476,145
Utilities	355,400	392,895	414,265	449,209	482,061	459,291	388,837	428,984	404,582	417,123	412,561
Construction	3,188,648	3,189,378	3,232,548	3,121,478	2,967,940	2,750,675	2,710,842	2,918,201	3,117,614	3,296,501	3,492,001
Manufacturing	10,505,825	10,586,634	10,953,908	11,002,341	10,878,981	9,101,187	9,360,527	10,331,105	10,386,121	10,302,161	10,687,049
Wholesale trade	3,837,941	4,029,022	4,368,486	4,539,039	4,501,712	4,069,465	4,161,769	4,190,602	4,333,433	4,350,453	4,566,726
Retail trade	3,721,805	3,684,599	3,760,667	3,854,147	3,675,273	3,567,000	3,582,127	3,744,610	3,836,939	3,924,076	3,975,549
Transp/wrhsng	1,950,587	2,001,051	2,027,073	2,093,938	1,995,702	1,833,350	1,841,281	1,947,748	1,979,670	2,013,820	2,044,398
Information	1,374,334	1,336,437	1,334,411	1,368,969	1,348,742	1,261,619	1,231,917	1,270,724	1,249,558	1,292,713	1,318,428
Finance/ins	4,741,021	4,533,086	4,756,433	4,780,609	4,515,162	4,579,395	4,650,928	4,561,820	4,587,564	4,708,106	4,865,524
RE/rental/leasing	1,250,030	1,200,184	1,073,619	856,546	950,233	1,186,771	1,504,354	1,936,964	2,310,635	2,316,505	2,361,359
Prof/sci/tech svcs	4,869,755	5,129,481	5,480,490	5,734,775	6,288,052	5,786,259	5,633,750	6,142,652	6,489,217	6,555,826	6,757,042
Mgmt cos/entrprs	1,845,511	2,060,257	2,382,635	2,375,560	2,344,455	2,112,696	2,304,650	2,733,918	3,429,205	3,511,461	3,565,981
Admin/wste svcs	2,227,701	2,345,965	2,493,894	2,674,703	2,649,548	2,380,593	2,526,995	2,855,019	3,049,536	3,079,441	3,347,517
Educational svcs	1,122,997	1,127,949	1,188,879	1,196,498	1,241,885	1,324,099	1,330,889	1,359,961	1,408,241	1,414,982	1,479,085
<b>Hlth care/soc asst</b>	<b>6,946,899</b>	<b>7,258,234</b>	<b>7,877,417</b>	<b>7,935,220</b>	<b>8,424,805</b>	<b>8,725,559</b>	<b>9,150,874</b>	<b>9,436,103</b>	<b>10,006,619</b>	<b>10,498,701</b>	<b>10,598,594</b>
Arts, entrtnmnt/rec	778,124	792,018	797,449	861,644	916,495	916,948	953,569	891,947	1,034,312	1,123,820	1,250,522
Accomdtns/fd svcs	1,555,939	1,586,778	1,668,507	1,682,856	1,619,776	1,564,482	1,585,952	1,673,589	1,821,330	1,919,238	2,018,615
Other	<u>2,024,942</u>	<u>2,025,553</u>	<u>2,106,933</u>	<u>2,117,447</u>	<u>2,080,953</u>	<u>2,039,753</u>	<u>2,068,175</u>	<u>2,176,704</u>	<u>2,334,488</u>	<u>2,346,640</u>	<u>2,444,275</u>
Govt & govt entrprs	<u>9,104,115</u>	<u>9,233,088</u>	<u>9,427,400</u>	<u>9,802,263</u>	<u>10,089,601</u>	<u>10,159,178</u>	<u>10,576,447</u>	<u>10,395,988</u>	<u>10,264,992</u>	<u>10,229,343</u>	<u>10,470,334</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.

<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

Appendix B, Table 21

BEA Data - Personal Income (\$1,000s)<sup>1</sup> for the State of Ohio, 2004-2014

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Earnings/Place of Wrk</b>	<u>282,666,699</u>	<u>289,639,222</u>	<u>302,193,659</u>	<u>308,079,022</u>	<u>311,667,879</u>	<u>298,634,722</u>	<u>305,786,993</u>	<u>322,556,991</u>	<u>336,142,943</u>	<u>345,177,890</u>	<u>358,460,105</u>
Wage & salary	205,029,425	210,428,781	218,062,958	224,980,743	226,708,681	215,444,735	218,721,328	228,418,124	239,295,918	244,408,798	255,253,794
Proprs' inc <sup>2</sup>	26,772,379	26,538,402	28,380,300	26,445,110	27,439,494	28,126,826	30,214,835	35,377,588	37,273,832	38,144,310	39,285,127
Other	<u>50,864,895</u>	<u>52,672,039</u>	<u>55,750,401</u>	<u>56,653,169</u>	<u>57,519,704</u>	<u>55,063,161</u>	<u>56,850,830</u>	<u>58,761,279</u>	<u>59,573,193</u>	<u>62,624,782</u>	<u>63,921,184</u>
<b>Earnings-Industry</b>											
Farm earnings	1,406,201	1,075,572	921,347	1,123,284	1,330,305	1,617,082	1,606,527	2,958,287	1,952,402	3,122,148	2,313,664
Nonfarm earnings	<u>281,260,498</u>	<u>288,563,650</u>	<u>301,272,312</u>	<u>306,955,738</u>	<u>310,337,574</u>	<u>297,017,640</u>	<u>304,180,466</u>	<u>319,598,704</u>	<u>334,190,541</u>	<u>342,055,742</u>	<u>356,146,441</u>
Private earnings	<u>236,196,035</u>	<u>242,398,187</u>	<u>253,991,016</u>	<u>258,086,699</u>	<u>259,985,808</u>	<u>245,753,020</u>	<u>250,374,941</u>	<u>266,104,686</u>	<u>280,099,283</u>	<u>288,115,201</u>	<u>301,431,392</u>
For/fshng/other	249,333	252,245	285,845	278,207	262,123	254,843	306,604	311,138	384,250	393,886	430,797
Mining	1,112,245	1,301,583	1,407,367	1,404,993	2,335,029	1,452,718	1,776,992	2,239,496	2,339,933	1,911,737	2,249,896
Utilities	1,961,267	2,075,981	2,426,234	2,439,264	2,715,580	2,557,874	2,486,877	2,549,972	2,387,837	2,465,626	2,479,669
Construction	16,769,324	16,965,893	17,459,335	16,956,379	16,009,793	14,677,256	14,174,635	15,206,528	16,539,804	17,270,875	18,836,647
Manufacturing	51,619,168	51,819,323	53,318,904	53,158,287	51,777,716	43,712,974	44,398,655	47,894,335	49,052,069	50,128,441	52,490,575
Wholesale trade	14,804,173	15,572,730	16,461,740	17,237,204	17,497,686	16,101,835	16,337,511	17,300,898	18,133,073	18,669,186	19,654,612
Retail trade	19,688,700	19,550,175	19,825,781	19,933,095	19,349,862	18,808,746	18,981,907	19,721,895	20,310,034	20,777,902	21,342,077
Transp/wrhsng	9,825,574	10,662,790	11,419,525	12,028,084	11,773,799	10,830,877	10,643,658	11,491,730	11,864,092	12,144,125	12,649,691
Information	6,058,555	5,974,089	5,974,250	6,145,350	6,144,962	5,961,726	5,778,063	5,946,953	6,022,364	6,356,447	6,333,651
Finance/ins	16,233,053	16,731,910	17,544,834	17,877,273	17,157,687	17,488,495	17,967,485	18,273,921	18,659,110	19,449,422	20,291,025
RE/rental/leasing	4,554,311	4,355,819	4,076,286	3,368,495	3,624,104	4,346,108	5,176,165	6,584,391	8,135,852	8,221,840	8,474,661
Prof/sci/tech svcs	18,331,239	19,210,020	20,763,393	22,013,494	23,713,928	22,461,155	22,592,688	24,421,715	24,718,649	25,108,947	26,180,957
Mgmt cos/entrprs	9,440,288	10,268,378	11,289,701	11,612,530	11,837,727	11,308,589	11,756,392	12,838,355	15,814,701	16,425,960	17,354,019
Admin/wste svcs	10,374,114	10,944,544	11,592,942	12,130,675	12,338,752	11,440,627	11,793,544	12,769,171	13,650,636	14,256,134	15,210,756
Educational svcs	3,229,383	3,342,433	3,699,938	3,818,926	4,042,157	4,270,625	4,381,413	4,577,088	4,684,178	4,667,203	4,880,377
<b>Hlth/soc asst</b>	<b>31,334,758</b>	<b>32,660,365</b>	<b>34,922,150</b>	<b>35,863,066</b>	<b>38,082,948</b>	<b>39,232,881</b>	<b>40,523,303</b>	<b>41,679,510</b>	<b>43,243,426</b>	<b>44,998,065</b>	<b>46,262,788</b>
Arts, entrmnt/rec	2,625,241	2,619,042	2,731,011	2,808,879	2,812,984	2,745,512	2,836,761	2,835,253	3,224,090	3,552,254	3,836,823
Accomm/fd svcs	7,621,046	7,698,315	7,991,266	8,261,465	8,149,410	7,920,689	8,071,426	8,588,826	9,280,591	9,638,624	10,141,755
Other	<u>10,364,263</u>	<u>10,392,552</u>	<u>10,800,514</u>	<u>10,751,033</u>	<u>10,359,561</u>	<u>10,179,490</u>	<u>10,390,862</u>	<u>10,873,511</u>	<u>11,654,594</u>	<u>11,678,527</u>	<u>12,330,616</u>
Govt & govt entrprs	<u>45,064,463</u>	<u>46,165,463</u>	<u>47,281,296</u>	<u>48,869,039</u>	<u>50,351,766</u>	<u>51,264,620</u>	<u>53,805,525</u>	<u>53,494,018</u>	<u>54,091,258</u>	<u>53,940,541</u>	<u>54,715,049</u>

SOURCE: U.S. Department of Commerce, Regional Economic Information System, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup>The estimates of earnings for 2001-2006 are based on the 2002 North American Industry Classification System (NAICS). The estimates for 2007-2010 are based on the 2007 NAICS. The estimates for 2011 forward are based on the 2012 NAICS.<sup>2</sup>Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells estimated in order to show totals; original data excluded to avoid disclosure of confidential information.

**Appendix B, Table 22a**  
**BEA Data - Personal Income (\$1,000s)<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2013**

	Ashtabula County	Cuyahoga County	Geauga County	Lake County
<b>Earnings by Place of Work</b>	<u>1,643,799</u>	<u>55,067,812</u>	<u>2,094,830</u>	<u>5,764,043</u>
Wage & salary disbursements	1,131,158	39,381,799	1,399,370	4,191,786
Proprietors' income <sup>3</sup>	177,157	6,288,782	334,473	465,811
Other earnings	<u>335,484</u>	<u>9,397,231</u>	<u>360,987</u>	<u>1,106,446</u>
<b>Earnings by Industry</b>				
Farm earnings	16,942	7,056	9,471	32,459
Nonfarm earnings	<u>1,626,857</u>	<u>55,060,756</u>	<u>2,085,359</u>	<u>5,731,584</u>
Private earnings	<u>1,357,494</u>	<u>47,653,351</u>	<u>1,830,082</u>	<u>4,964,445</u>
Forestry, fishing, related, & other	5,124	93,500	12,780	8,001
Mining	15,578	364,266	21,836	20,210
Utilities	27,789	172,947	45	177,065
Construction	94,703	2,053,829	236,819	309,215
Manufacturing	422,300	5,761,556	478,437	1,657,947
Wholesale trade	33,564	3,310,704	162,301	306,883
Retail trade	120,315	2,418,742	163,395	442,294
Transportation & warehousing	63,275	1,539,134	37,641	66,103
Information	16,559	1,154,856	9,490	46,117
Finance & insurance	33,748	4,245,305	57,025	115,806
Real estate, rental & leasing	19,503	1,972,313	32,729	118,964
Prof, scientific & technical services	37,804	5,785,974	99,258	239,508
Mgmt of companies & enterprises	8,262	2,960,539	11,369	120,316
Administration & waste services	70,415	2,330,039	105,980	213,763
Educational services	7,807	1,141,673	27,695	68,398
<b>Health care &amp; social assistance</b>	<b>244,580</b>	<b>8,438,816</b>	<b>201,658</b>	<b>594,861</b>
Arts, entertainment, & recreation	7,861	1,015,084	15,403	32,722
Accommodations & food services	51,364	1,387,276	42,781	175,632
Other services, not public admin	<u>76,943</u>	<u>1,506,798</u>	<u>113,440</u>	<u>250,640</u>
Govt & govt enterprises	<u>269,363</u>	<u>7,407,405</u>	<u>255,277</u>	<u>767,139</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification Industry (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells were estimated based on county and regional trends in order to show the six county region totals compared to the state; original data were excluded to avoid disclosure of confidential information.

**Appendix B, Table 22b**  
**BEA Data - Personal Income (\$1,000s)<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2013**

	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
<b>Earnings by Place of Work</b>	<u>5,861,079</u>	<u>3,549,784</u>	<u>73,981,347</u>	<u>345,177,890</u>
Wage & salary disbursements	4,225,632	2,460,395	52,790,140	244,408,798
Proprietors' income <sup>3</sup>	485,384	443,206	8,194,813	38,144,310
Other earnings	<u>1,150,063</u>	<u>646,183</u>	<u>12,996,394</u>	<u>62,624,782</u>
<b>Earnings by Industry</b>				
Farm earnings	41,938	16,168	124,034	3,122,148
Nonfarm earnings	<u>5,819,141</u>	<u>3,533,616</u>	<u>73,857,313</u>	<u>342,055,742</u>
Private earnings	<u>4,743,714</u>	<u>3,078,884</u>	<u>63,627,970</u>	<u>288,115,201</u>
Forestry, fishing, related, & other	2,143	6,420	127,968	393,886
Mining	1,469	5,076	428,435	1,911,737
Utilities	39,140	137	417,123	2,465,626
Construction	299,019	302,916	3,296,501	17,270,875
Manufacturing	1,403,104	578,817	10,302,161	50,128,441
Wholesale trade	278,428	258,573	4,350,453	18,669,186
Retail trade	465,720	313,610	3,924,076	20,777,902
Transportation & warehousing	131,771	175,896	2,013,820	12,144,125
Information	43,029	22,662	1,292,713	6,356,447
Finance & insurance	158,909	97,313	4,708,106	19,449,422
Real estate, rental & leasing	81,634	91,362	2,316,505	8,221,840
Prof, scientific & technical services	202,778	190,504	6,555,826	25,108,947
Mgmt of companies & enterprises	144,856	266,119	3,511,461	16,425,960
Administration & waste services	223,650	135,594	3,079,441	14,256,134
Educational services	152,264	17,145	1,414,982	4,667,203
<b>Health care &amp; social assistance</b>	<b>679,075</b>	<b>339,711</b>	<b>10,498,701</b>	<b>44,998,065</b>
Arts, entertainment, & recreation	30,195	22,555	1,123,820	3,552,254
Accommodations & food services	156,800	105,385	1,919,238	9,638,624
Other services, not public admin	<u>249,730</u>	<u>149,089</u>	<u>2,346,640</u>	<u>11,678,527</u>
Govt & govt enterprises	<u>1,075,427</u>	<u>454,732</u>	<u>10,229,343</u>	<u>53,940,541</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification Industry (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

Highlighted cells were estimated based on county and regional trends in order to show the six county region totals compared to the state; original data were excluded to avoid disclosure of confidential information.

**Appendix B, Table 23a**  
**BEA Data - Personal Income (\$1,000s)<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2014**

	Ashtabula County	Cuyahoga County	Geauga County	Lake County
<b>Earnings by Place of Work</b>	<u>1,693,635</u>	<u>56,769,221</u>	<u>2,204,753</u>	<u>5,974,749</u>
Wage & salary disbursements	1,171,171	40,681,614	1,469,887	4,356,818
Proprietors' income <sup>3</sup>	181,622	6,576,665	362,010	486,581
Other earnings	<u>340,842</u>	<u>9,510,942</u>	<u>372,856</u>	<u>1,131,350</u>
<b>Earnings by Industry</b>				
Farm earnings	10,671	4,451	14,710	30,437
Nonfarm earnings	<u>1,682,964</u>	<u>56,764,770</u>	<u>2,190,043</u>	<u>5,944,312</u>
Private earnings	<u>1,410,975</u>	<u>49,145,250</u>	<u>1,929,757</u>	<u>5,168,442</u>
Forestry, fishing, related, & other	5,965	96,400	13,042	8,500
Mining	21,809	393,990	24,244	28,065
Utilities	24,336	183,264	46	166,254
Construction	93,169	2,134,330	261,733	335,732
Manufacturing	459,587	5,928,890	499,934	1,733,112
Wholesale trade	42,629	3,439,578	163,807	335,159
Retail trade	117,483	2,455,807	172,378	445,741
Transportation & warehousing	68,067	1,539,489	39,850	68,770
Information	16,867	1,171,873	10,072	52,651
Finance & insurance	34,624	4,383,016	57,796	118,433
Real estate, rental & leasing	19,778	2,003,445	37,170	123,856
Prof, scientific & technical services	44,676	5,965,568	100,044	245,508
Mgmt of companies & enterprises	10,285	2,992,294	16,056	145,901
Administration & waste services	54,955	2,547,409	118,548	234,448
Educational services	8,230	1,190,536	28,764	70,580
<b>Health care &amp; social assistance</b>	<b>246,995</b>	<b>8,553,708</b>	<b>205,251</b>	<b>582,249</b>
Arts, entertainment, & recreation	7,683	1,137,815	15,856	33,114
Accommodations & food services	52,879	1,459,349	46,975	179,405
Other services, not public admin	<u>80,958</u>	<u>1,568,489</u>	<u>118,191</u>	<u>260,964</u>
Govt & govt enterprises	<u>271,989</u>	<u>7,619,520</u>	<u>260,286</u>	<u>775,870</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification Industry (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

<sup>3</sup> Proprietors' income includes the inventory valuation adjustment and capital consumption adjustment.

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**Appendix B, Table 23b**  
**BEA Data - Personal Income (\$1,000s)<sup>1</sup>**  
**for the Six Counties, the Northeast Ohio Region,<sup>2</sup> and the State of Ohio, 2014**

	Lorain County	Medina County	Northeast Ohio Region Total	State of Ohio Total
<b>Earnings by Place of Work</b>	<u>6,039,182</u>	<u>3,695,539</u>	<u>76,377,079</u>	<u>358,460,105</u>
Wage & salary disbursements	4,359,612	2,579,471	54,618,573	255,253,794
Proprietors' income <sup>3</sup>	509,402	462,158	8,578,438	39,285,127
Other earnings	<u>1,170,168</u>	<u>653,910</u>	<u>13,180,068</u>	<u>63,921,184</u>
<b>Earnings by Industry</b>				
Farm earnings	38,763	13,116	112,148	2,313,664
Nonfarm earnings	<u>6,000,419</u>	<u>3,682,423</u>	<u>76,264,931</u>	<u>356,146,441</u>
Private earnings	<u>4,914,284</u>	<u>3,225,889</u>	<u>65,794,597</u>	<u>301,431,392</u>
Forestry, fishing, related, & other	2,346	6,973	133,226	430,797
Mining	3,380	4,657	476,145	2,249,896
Utilities	38,522	139	412,561	2,479,669
Construction	331,345	335,692	3,492,001	18,836,647
Manufacturing	1,458,583	606,943	10,687,049	52,490,575
Wholesale trade	307,622	277,931	4,566,726	19,654,612
Retail trade	466,279	317,861	3,975,549	21,342,077
Transportation & warehousing	141,433	186,789	2,044,398	12,649,691
Information	41,876	25,089	1,318,428	6,333,651
Finance & insurance	170,639	101,016	4,865,524	20,291,025
Real estate, rental & leasing	84,993	92,117	2,361,359	8,474,661
Prof, scientific & technical services	200,440	200,806	6,757,042	26,180,957
Mgmt of companies & enterprises	127,783	273,662	3,565,981	17,354,019
Administration & waste services	247,705	144,452	3,347,517	15,210,756
Educational services	161,514	19,461	1,479,085	4,880,377
<b>Health care &amp; social assistance</b>	<b>675,382</b>	<b>335,009</b>	<b>10,598,594</b>	<b>46,262,788</b>
Arts, entertainment, & recreation	31,145	24,909	1,250,522	3,836,823
Accommodations & food services	165,025	114,982	2,018,615	10,141,755
Other services, not public admin	<u>258,272</u>	<u>157,401</u>	<u>2,444,275</u>	<u>12,330,616</u>
Govt & govt enterprises	<u>1,086,135</u>	<u>456,534</u>	<u>10,470,334</u>	<u>54,715,049</u>

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [December 2015]).

<sup>1</sup> Based on the North American Industry Classification Industry (NAICS).

<sup>2</sup> Northeast Ohio Region includes the following counties: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina.

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