



2020-21 OHIO MANUFACTURING COUNTS

FACTS ABOUT THE ECONOMIC
IMPACT OF OHIO MANUFACTURING

ohiomfg.com

Thank you to our sponsors:



FACTS ABOUT THE ECONOMIC IMPACT OF OHIO MANUFACTURING

Ohio is powered by manufacturing. Ohio manufacturing is responsible for almost **17%** of Ohio's Gross Domestic Product and contributes to the quality of life in Ohio by providing:

- About **700,000** jobs for Ohio workers
- An annual payroll of **\$43 billion**, the highest total annual wages of any Ohio industry sector
- **\$53 billion** in exported products to **211** countries and territories
- A **safer environment** through decreased emissions and increased recycling

Manufacturing is the **largest of the 20 sectors** of Ohio's economy, including government, with **16.60% of total output** in 2018, of which 9.4% were durable goods and 7.2% were non-durable goods.

Ohio's manufacturing sector GDP was **\$112.2 billion** in 2018, ranking it **third** in the nation after California and Texas.

The average annual earnings of Ohio workers on manufacturing payrolls in 2018 were **\$61,500**.

The Ohio Manufacturers' Association has prepared these data to provide Ohioans with an understanding of the importance of manufacturing to the economic future of the state. The data in this publication were the most current available as of May 2020.

For printed copies of this information, contact the OMA at (800) 662-4463 or oma@ohiomfg.com.

© 2020 The Ohio Manufacturers' Association

Ohio Manufacturing and Ohio’s Economy2
 Ohio Manufacturing and Jobs7
 Ohio Manufacturing Earnings and Wages15
 Ohio Manufacturing and the Global Economy.18
 Ohio Manufacturing and the Environment22

GRATEFUL ACKNOWLEDGEMENT TO:

Don Larrick, Demographer, Office of Research, Ohio Development Services Agency

Laura Factor, Assistant Director, Ohio EPA

Cynthia DeWulf, Assistant Chief, Division of Air Pollution Control, Ohio EPA

Jacob Deighton, Environmental Specialist II, Air Quality Evaluation and Planning, Division of Air Pollution Control, Ohio EPA

Lewis Horner, Assistant Bureau Chief, Office of Workforce Development, Ohio Department of Job and Family Services

Ernie Stall, Environmental Specialist 3, Division of Materials and Waste Management, Ohio EPA

Jennifer Van Vlerah, Environmental Manager, Division of Air Pollution Control, Ohio EPA

BIBLIOGRAPHY:

2017 County Business Patterns

The National Association of Manufacturers, 2019 Ohio Manufacturing Facts

Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information

Ohio Development Services Agency, Research Office, Ohio County Indicators, August 2019 (U.S. Bureau of Economic Analysis)

Ohio Development Services Agency, Research Office, Ohio Exports Report 2019, February 2020

Ohio Development Services Agency, Research Office, Ohio Major Employers – Section 1, May 2019

Ohio Development Services Agency, Research Office, Ohio Private Investment Survey, 2017, 2018, 2019, March 2020

Ohio Development Services Agency, Research Office, a State Affiliate of the U.S. Census Bureau, Gross Domestic Product from Ohio, September 2019

Ohio Environmental Protection Agency: multiple sources

Site Selection Magazine, March 2020, <http://siteselection.com/>

State Rankings 2019, 2018, 2017, A Statistical View of America, Editors Kathleen O’Leary Morgan and Scott Morgan

U.S. Bureau of Labor Statistics

OHIO MANUFACTURING AND OHIO'S ECONOMY

Site Selection 2015-2019 Top Ten states (ranked by number of qualifying projects)

FACT:

Ohio has ranked second nationally in the total number of new site selections in the past eight years, bested only by Texas each year. In 2019, Site Selection Magazine ranked Ohio number one in projects per capita (448), followed by Kentucky (164) and Nebraska (70).

To be listed, projects must meet at least one of three criteria:

1. Minimum investment of \$1,000,000, or
2. New square footage of 20,000 or more, or
3. Job creation of 20 or more.

Projects are generally credited to the year first announced.

Manufacturing projects as a percent of all new qualifying Ohio projects

FACT:

Typically, about one-half of Ohio's new site selection projects are manufacturing projects.

2019		2018		2017		2016		2015	
State	# Sites	State	# Sites	State	# Sites	State	# Sites	State	# Sites
TX	859	TX	608	TX	594	TX	642	TX	702
OH	448	OH	454	OH	467	OH	515	OH	517
IL	423	IL	444	IL	419	IL	434	IL	413
GA	296	GA	300	GA	281	NC	289	NC	300
IN	194	KY	228	NC	274	GA	271	KY	285
NC	190	NC	217	CA	262	CA	250	MI	217
VA	171	VA	197	KY	248	KY	231	GA	211
KY	164	CA	190	PA	185	VA	222	PA	202
AL	150	MI	171	VA	164	PA	219	VA	167
MI	142	FL	151	IN	162	MI	184	IN	166

Source: Site Selection Magazine, March 2020, <http://siteselection.com/>

Year	# Manufacturing Projects	# Total Ohio Qualifying Projects	% Manufacturing Projects
2019	243	449	54%
2018	238	434	55%
2017	206	392	53%
2016	240	498	48%
2015	232	469	49%

Source: Ohio Development Services Agency, Research Office, Ohio Private Investment Survey 2017, 2018, 2019, March 2020

*Manufacturing sector
investment projects
2015 – 2019*

Sector	2019	2018	2017	2016	2015
Transportation Equipment	41	39	35	45	40
Machinery	39	23	19	19	34
Rubber & Plastics	33	40	30	30	29
Food & Beverage	30	20	21	33	20
Fabricated Metals	27	33	27	31	34
Chemicals	18	17	23	19	29
Electronics & Appliances	14	18	15	16	11
Miscellaneous	11	9	7	11	12
Primary Metals	10	8	12	6	7
Lumber and Wood	9	4	2	8	3
Paper Products	8	6	8	12	10
Stone, Clay, Glass	7	14	9	10	10
Furniture	3	7	4	4	4
Petroleum	3	1	1	7	2
Printing	3	8	1	3	5
Textiles/ Apparel	1	5	3	2	3

Source: Ohio Development Services Agency, Research Office, Ohio Private Investment Survey, 2017, 2018, 2019, March 2020

FACT:

In 2019, Transportation Equipment and Machinery projects led Ohio's new manufacturing investment projects.

OHIO MANUFACTURING AND OHIO'S ECONOMY

Manufacturing GDP ranking
by state (2016 – 2018
and pre-Great Recession
benchmark year, 2008)

Rank	2018			2017		
	State	Mfg. GDP (billions)	% of U.S.	State	Mfg. GDP (billions)	% of U.S.
1	CA	\$316.8	13.57%	CA	\$300.3	13.38%
2	TX	\$230.4	9.87%	TX	\$226.2	10.08%
3	OH	\$112.2	4.81%	OH	\$107.9	4.81%
4	IL	\$108.4	4.64%	IL	\$103.7	4.62%
5	NC	\$103.6	4.44%	IN	\$102.6	4.57%
6	MI	\$102.3	4.38%	NC	\$102.5	4.57%
7	IN	\$102.1	4.37%	MI	\$99.2	4.29%
8	PA	\$93.8	4.02%	PA	\$87.6	3.91%
9	NY	\$74.6	3.19%	NY	\$72.9	3.25%
10	GA	\$64.6	2.77%	GA	\$61.1	2.72%

Rank	2016			2008		
	State	Mfg. GDP (billions)	% of U.S.	State	Mfg. GDP (billions)	% of U.S.
1	CA	\$289.0	13.28%	CA	\$181.1	11.06%
2	TX	\$225.8	10.38%	TX	\$158.8	9.70%
3	OH	\$106.0	4.87%	OH	\$84.1	5.13%
4	IL	\$100.4	4.62%	IL	\$78.8	4.81%
5	NC	\$99.8	4.59%	NC	\$78.0	4.76%
6	IN	\$98.4	4.52%	PA	\$75.5	4.61%
7	MI	\$93.5	4.30%	NY	\$69.1	4.22%
8	PA	\$85.0	3.91%	IN	\$63.8	3.89%
9	NY	\$71.3	3.28%	MI	\$61.8	3.77%
10	WA	\$58.4	2.69%	WI	\$48.9	2.98%

Total 2018 U.S. Manufacturing GDP: \$2,334.6 (billion)

Source: Ohio Development Services Agency, Research Office, a State Affiliate of the U.S. Census Bureau, Gross Domestic Product from Ohio, September 2019

FACT:

Ohio's manufacturing Gross Domestic Product (GDP) grew more than \$4 billion from 2017 to 2018.

Manufacturing leads Ohio industries in contribution to Gross Domestic Product (initial figures for 2018)

FACT:

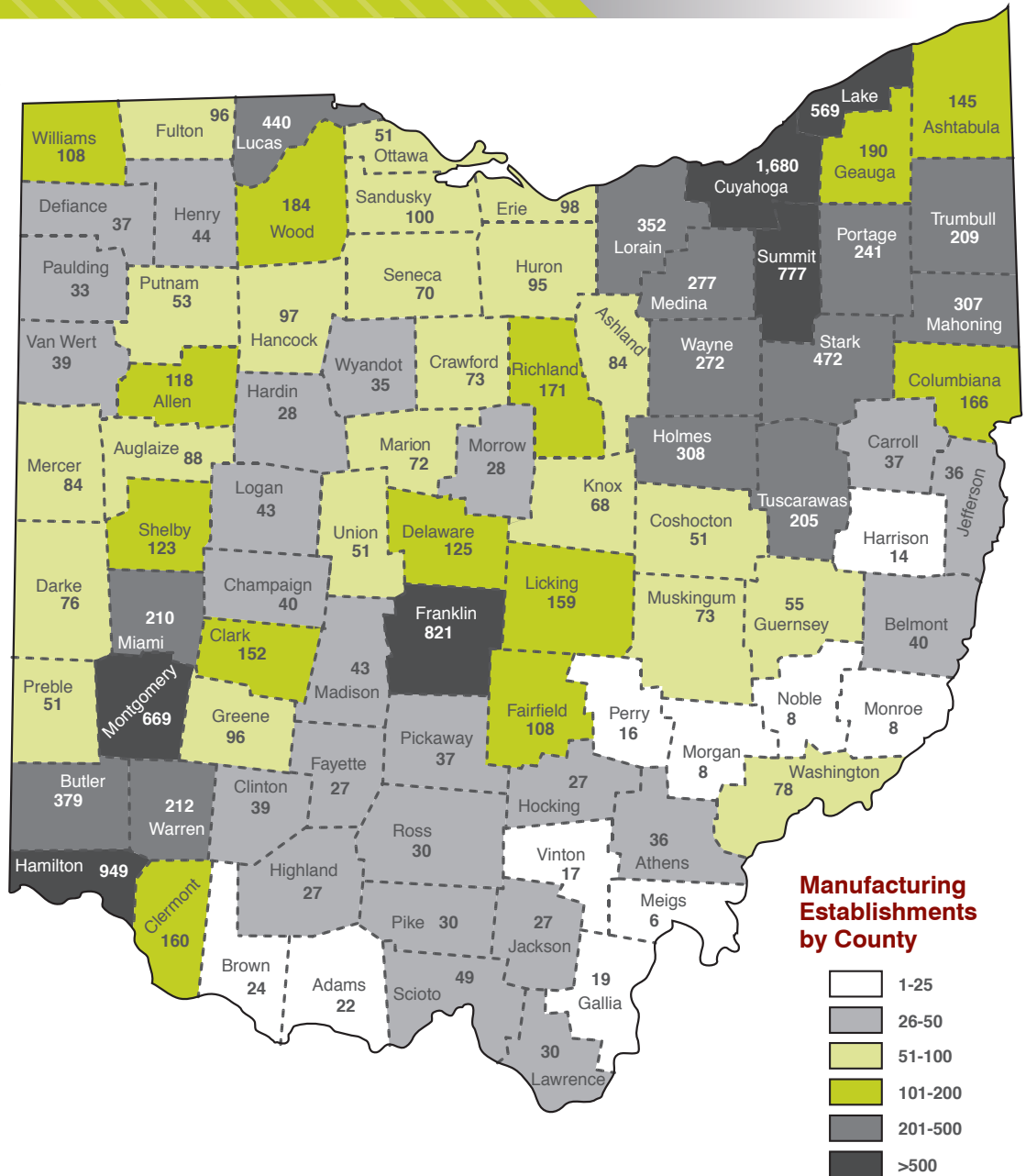
At almost 17%, manufacturing’s contribution to Ohio’s GDP in 2018 continued to be significantly greater than that of any other industry sector.

Industry Sector	\$ Contributed to Ohio GDP (in billions)			% of Ohio GDP		
	2018	2017	2016	2018	2017	2016
Manufacturing	\$112.24	\$107.95	\$106.00	16.60%	16.63%	16.94%
Real estate, rental and leasing	\$74.68	\$71.66	\$68.62	11.04%	11.04%	10.97%
Government	\$74.12	\$71.46	\$69.19	10.67%	11.01%	11.06%
Finance and insurance	\$61.34	\$60.82	\$54.47	9.07%	9.37%	8.71%
Health care and social assistance	\$58.55	\$54.34	\$53.36	8.66%	8.37%	8.53%
Wholesale trade	\$43.09	\$39.53	\$37.87	6.37%	6.09%	6.05%
Retail trade	\$39.68	\$39.16	\$38.13	5.87%	6.03%	6.09%
Professional and technical services	\$34.99	\$31.65	\$32.25	5.17%	4.88%	5.15%
Construction	\$24.93	\$25.65	\$23.26	3.69%	3.95%	3.72%
Transportation & warehousing	\$22.42	\$20.40	\$18.91	3.32%	3.14%	3.02%
Administrative support & waste management	\$21.14	\$20.49	\$20.69	3.13%	3.16%	3.31%
Management	\$21.04	\$21.07	\$20.99	3.11%	3.25%	3.35%
Information	\$18.46	\$16.58	\$17.06	2.73%	2.55%	2.73%
Accommodation and food services	\$16.83	\$15.82	\$15.28	2.49%	2.44%	2.44%
Other	\$14.02	\$14.04	\$13.61	2.07%	2.16%	2.17%
Mining	\$12.89	\$12.74	\$9.78	1.91%	1.96%	1.56%
Utilities	\$10.94	\$11.51	\$11.34	1.62%	1.77%	1.81%
Arts, entertainment & recreation	\$7.90	\$6.00	\$6.44	1.17%	0.92%	1.03%
Education	\$6.22	\$5.25	\$5.17	0.92%	0.81%	0.83%
Agriculture, forestry, fishing & hunting	\$2.68	\$3.02	\$3.30	0.40%	0.46%	0.53%

Source: Ohio Development Services Agency, Research Office, a State Affiliate of the U.S. Census Bureau, Gross Domestic Product from Ohio, September 2019

OHIO MANUFACTURING AND OHIO'S ECONOMY

Manufacturing density in Ohio (2017)



Source: 2017 County Business Patterns

FACT:

Of Ohio's 13,900 manufacturing establishments in 2017, just under 40% were in these six manufacturing-dense counties: Cuyahoga, Hamilton, Franklin, Summit, Montgomery, and Lake. Cuyahoga County had the most manufacturing establishments at 1,680.

Ohio manufacturing:
A leader in U.S.
manufacturing jobs (2019)

FACT:

In 2019, Ohio again ranked third in manufacturing employment nationally, and had 5.5% of all U.S. manufacturing jobs.

Rank	2019			2018		
	State	Manufacturing Employment	% of Total U.S. Mfg. Jobs	State	Manufacturing Employment	% of Total U.S. Mfg. Jobs
1	CA	1,344,200	10.5%	CA	1,322,200	10.3%
2	TX	917,800	7.2%	TX	896,000	7.0%
3	OH	701,500	5.5%	OH	705,700	5.5%
4	MI	628,900	4.9%	MI	625,300	4.9%
5	IL	588,000	4.6%	IL	591,000	4.6%
6	PA	565,100	4.4%	PA	566,200	4.4%
7	IN	536,100	4.2%	IN	535,800	4.2%
8	WI	473,400	3.7%	WI	490,000	3.8%
9	NC	472,300	3.7%	NC	475,000	3.7%
10	NY	437,200	3.4%	NY	445,000	3.5%

Rank	2017			2016		
	State	Manufacturing Employment	% of Total U.S. Mfg. Jobs	State	Manufacturing Employment	% of Total U.S. Mfg. Jobs
1	CA	1,302,300	10.4%	CA	1,282,800	10.5%
2	TX	878,200	7.0%	TX	844,000	6.9%
3	OH	698,900	5.6%	OH	689,700	5.6%
4	MI	607,100	4.8%	MI	596,100	4.9%
5	IL	577,600	4.6%	PA	567,100	4.6%
6	PA	553,000	4.4%	IL	565,400	4.6%
7	IN	534,500	4.3%	IN	519,000	4.2%
8	WI	479,900	3.8%	WI	474,000	3.9%
9	NC	467,500	3.7%	NC	463,000	3.8%
10	NY	435,300	3.5%	NY	443,300	3.6%

Total U.S. Manufacturing Jobs 2019: 12,815,600

Total U.S. Manufacturing Jobs 2018: 12,842,000

Total U.S. Manufacturing Jobs 2017: 12,539,000

Total U.S. Manufacturing Jobs 2016: 12,275,000

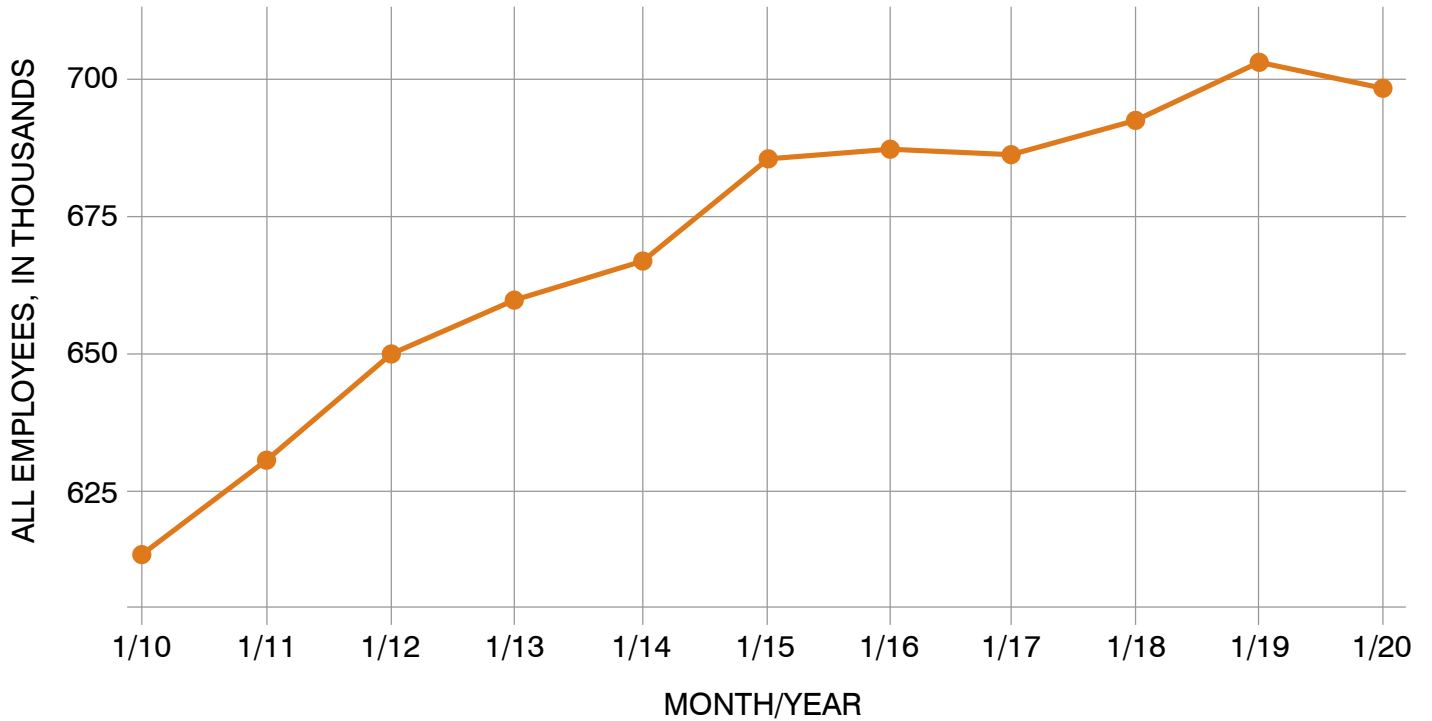
Sources:

State Rankings 2019, 2018, 2017, A Statistical View of America, Editors Kathleen O'Leary Morgan and Scott Morgan

U.S. Bureau of Labor Statistics, Table 3. Employees on nonfarm payrolls, seasonally adjusted, preliminary December 2019, bls.gov/news.release/laus.t03.htm

OHIO MANUFACTURING AND JOBS

Ohio manufacturing jobs 2010-2020 (seasonally adjusted, in thousands)



Source: U.S. Bureau of Labor Statistics, <https://data.bls.gov/timeseries/>

FACT:

Ohio manufacturing jobs have increased even while automation continues to improve manufacturing productivity.

Manufacturing near top of Ohio private sector employment (2018)

Rank	Industry Sector	Employment	% of total Ohio jobs
	Total (covered) Ohio employment	5,559,900	100%
1	Health care and social assistance	814,900	14.7%
2	Government	779,200	14.0%
3	Manufacturing	698,900	12.6%
4	Retail trade	563,200	10.1%
5	Accommodation and food services	485,000	8.7%
6	Administrative, support and waste services	327,400	5.9%
7	Professional and technical services	262,900	4.7%
8	Finance and insurance	244,000	4.4%
9	Wholesale trade	235,000	4.2%
10	Construction	219,300	3.9%
11	Other services	213,700	3.8%
12	Transportation and warehousing	206,900	3.7%
13	Management	140,900	2.5%
14	Education services	121,200	2.2%
15	Arts, entertainment and recreation	81,300	1.5%
16	Information	70,800	1.3%
17	Real estate, rental and leasing	63,900	1.1%
18	Utilities	19,100	0.3%
19	Mining and logging	12,200	0.2%

Source: Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information, Total Wages, Employment and Establishments as Covered Under the Ohio and Federal Unemployment Compensation Laws

FACT:

12.6% of all (unemployment-insurance covered) Ohio workers were employed in manufacturing in 2018, up from 12.4% in 2017. Only the Health Care & Social Assistance and Government sectors had greater employment.

OHIO MANUFACTURING AND JOBS

Ohio's leading manufacturing employers

FACT:

Large, global industrial enterprises employ large numbers of Ohioans; many have Ohio headquarters.

Rank	Company	Ohio Employment Estimate: Headcount	Headquarters	Product
1	Honda Motor Co., Ltd.	15,000	Tokyo, Japan	Motor vehicles
2	General Electric Company	12,000	Boston, MA	Aerospace and electrical equipment
3	Berkshire Hathaway, Inc.	11,800	Omaha, NE	Machinery and fiberglass products
4	Procter & Gamble Company	11,000	Cincinnati, OH	Soaps and consumer goods
5	Whirlpool Corporation	9,350	Benton Harbor, MI	Consumer products
6	Marathon Petroleum Corporation	9,300	Findlay, OH	Petroleum
7	Fiat Chrysler Automobiles N.V.	6,530	Onbekend, The Netherlands	Motor vehicles
8	Ford Motor Company	6,150	Dearborn, MI	Motor vehicles
9	Sherwin-Williams Company	6,100	Cleveland, OH	Paints
10	Crown Equipment Corporation	4,800	New Bremen, OH	Lift trucks
11	Swagelok Company	4,700	Solon, OH	Fluid systems
12	General Motors Corporation	4,600	Detroit, MI	Motor vehicles
13	Nestlé S.A.	3,600	Vevey, Switzerland	Frozen foods
14	Worthington Industries, Inc.	3,570	Worthington, OH	Metal products
15	AK Steel Holding Corporation	3,500	West Chester, OH	Steel
16	Goodyear Tire & Rubber Company	3,300	Akron, OH	Rubber products
17	ArcelorMittal SA	3,100	Luxembourg, Luxembourg	Steel
17	Emerson Electric Co.	3,100	St. Louis, MO	Electrical products
19	Honeywell International Inc.	3,000	Morris Plains, NJ	Aerospace and electrical equipment
20	Parker Hannifin Corporation	2,900	Cleveland, OH	Industrial equipment
21	Lincoln Electric Holdings, Inc.	2,825	Cleveland, OH	Arc welding equipment
22	Owens Corning	2,775	Toledo, OH	Home products
22	TimkenSteel Corporation	2,775	Canton, OH	Steel
24	Bridgestone Corporation	2,650	Tokyo, Japan	Rubber products
25	Eaton Corporation plc	2,385	Dublin, Ireland	Motor vehicle parts

Source: Ohio Development Services Agency, Research Office, Ohio Major Employers – Section 1, May 2019

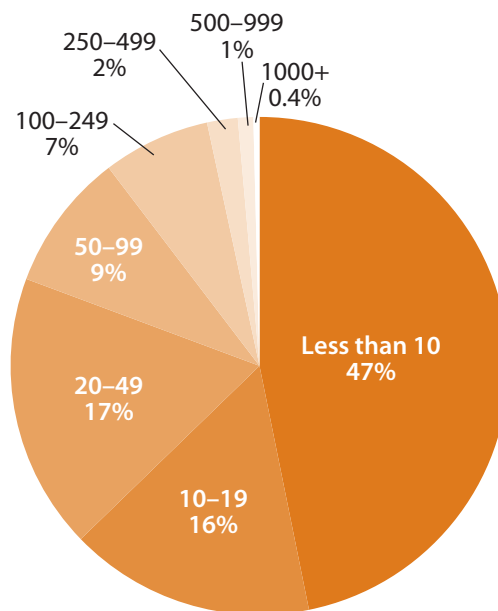
Manufacturing means large and small businesses in Ohio

Number of Ohio manufacturing firms by number of employees

Number of Employees	Number of Firms (2017)	Number of Firms (2016)	Number of Firms (2015)	Number of Firms (2014)
Fewer than 10	6,489	6,510	6,612	6,743
10-19	2,283	2,320	2,314	2,281
20-49	2,370	2,462	2,484	2,495
50-99	1,266	1,246	1,240	1,233
100-249	989	957	994	982
250-499	326	331	322	311
500-999	126	122	121	112
1000+	53	52	52	51
Total	13,902	14,000	14,139	14,208

Source: 2017 County Business Patterns

Distribution of Ohio manufacturing firms by number of employees (2017)



FACT:

Almost 50% of Ohio manufacturing firms employ fewer than 10 people, while 0.4% of firms employ 1,000 or more people.

OHIO MANUFACTURING AND JOBS

Traditional industries continue to be Ohio's manufacturing job producers

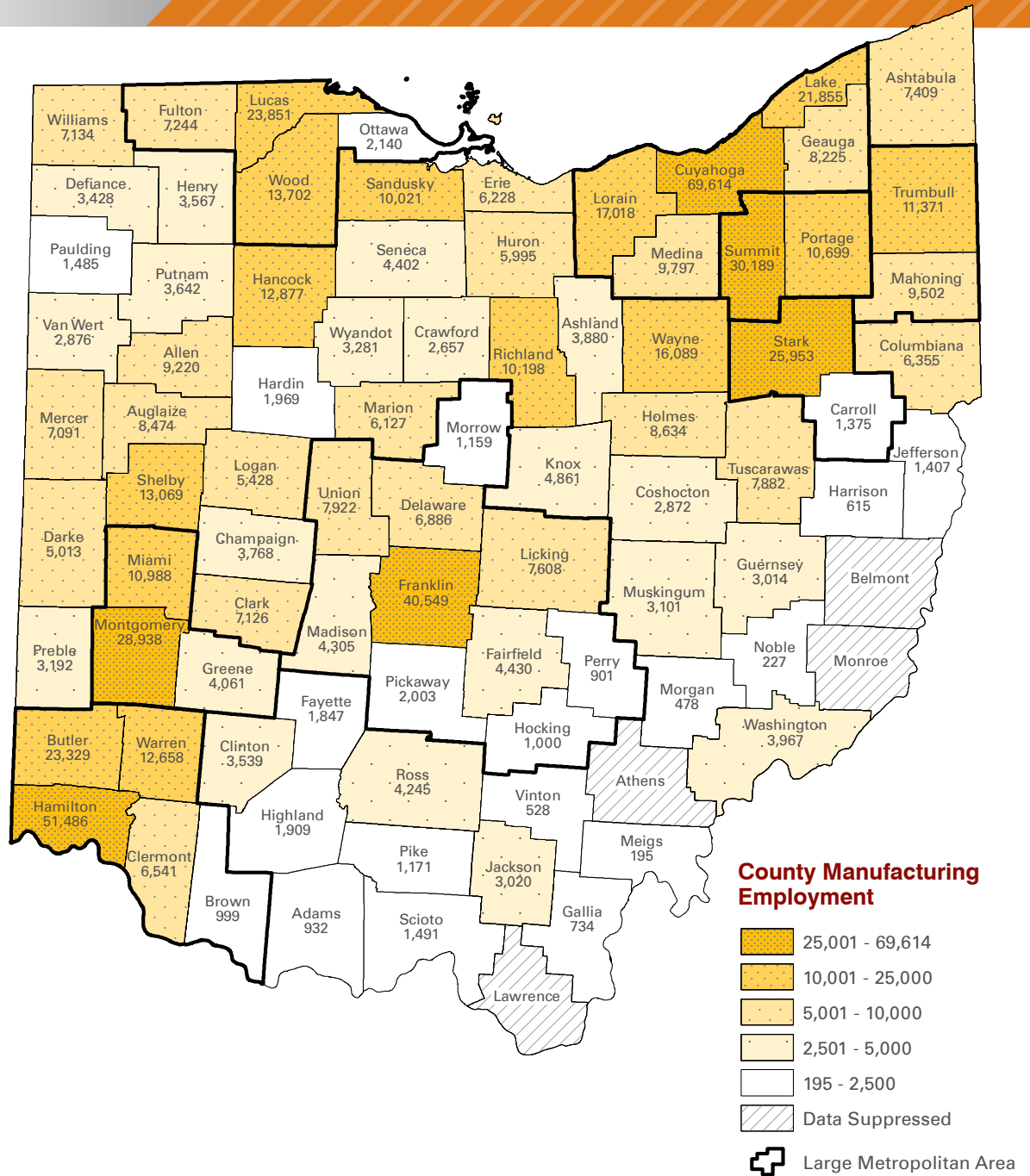
FACT:

Traditional industries are foundational to the state's economy. According to this source, the greatest year-over-year growth from 2017 to 2018 occurred in Fabricated Metal Products manufacturing jobs, up 3%. The biggest job contraction was in Printing and Related Support Activities, by just under 1%.

Manufacturing industry	Number of jobs (2018)	Number of jobs (2017)	Number of jobs (2016)
Durable Goods			
Transportation equipment	128,100	124,500	125,300
Fabricated metal products	102,100	99,000	98,100
Machinery	80,000	77,800	76,900
Primary metals	35,800	35,900	36,800
Nonmetallic mineral products	27,300	27,200	27,100
Electrical equipment & appliances	26,600	26,800	27,400
Computer and Electronic Products	20,900	20,300	20,500
Furniture and related products	16,100	16,100	15,500
Nondurable Goods			
Food manufacturing	61,400	60,700	60,000
Plastics & rubber products	57,900	57,400	56,700
Chemical manufacturing	45,700	44,500	44,300
Printing and Related Support Activities	21,400	21,600	21,600

Source: Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information, Total Wages, Employment and Establishments as Covered Under the Ohio and Federal Unemployment Compensation Laws

Manufacturing employment is 719,343 (2017)



Source: Ohio Development Services Agency, Research Office, Ohio County Indicators, August 2019 (U.S. Bureau of Economic Analysis)

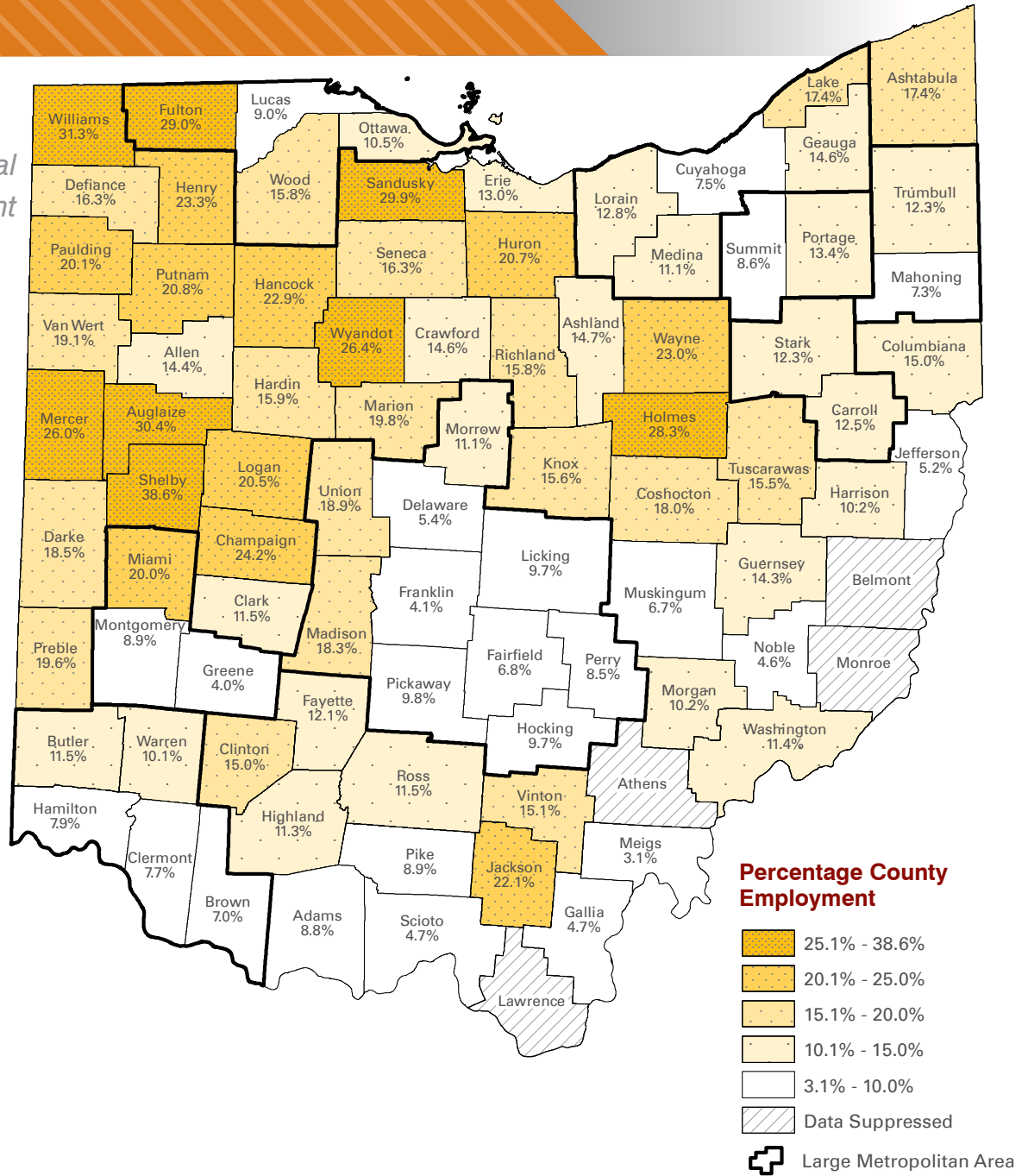
FACT:

According to this source, the state’s manufacturing employment in 2017 was 719,343, which is 4,514 more than in 2016 (714,829). Cuyahoga County continued to have the greatest manufacturing employment at 69,614, but was down from 70,118 in 2016.

Note: Employment estimates are made for full-time and part-time jobs where the jobs are located, not where the job-holders reside. People holding more than one job are counted in each job.

OHIO MANUFACTURING AND JOBS

Manufacturing employment of total county employment is 10.3% (2017)



Source: Ohio Development Services Agency, Research Office, Ohio County Indicators, August 2019 (U.S. Bureau of Economic Analysis)

FACT:

More than one out of every ten of Ohio's workers was employed in manufacturing in 2017. Manufacturing employment as a percentage of total Ohio employment was 10.3%, the same percentage as in 2016. Shelby County had the greatest manufacturing employment density at 38.6%, up from 37.5% in 2016.

Note: Employment estimates are made for full-time and part-time jobs where the jobs are located, not where the job-holders reside. People holding more than one job are counted in each job.

OHIO MANUFACTURING EARNINGS & WAGES

Ohio annual wages by
industry sector (in thousands)
(2018)

Industry sector	Total all wages (in thousands)	Average annual wage
Manufacturing	\$42,976,547	\$61,487
Health care and social assistance	\$38,462,576	\$47,567
Professional and technical services	\$19,872,778	\$75,599
Finance and insurance	\$18,235,962	\$79,496
Wholesale trade	\$16,823,836	\$71,655
Retail trade	\$16,155,825	\$28,654
Management of companies and enterprises	\$15,341,145	\$109,012
Construction	\$13,505,958	\$61,194
Administrative and waste services	\$11,473,905	\$35,214
Transportation and warehousing	\$10,098,146	\$50,610
Accommodation and food services	\$8,192,014	\$16,894
Other services, except public administration	\$5,327,518	\$34,001
Information	\$4,965,523	\$70,006
Educational services	\$3,496,856	\$36,602
Real estate and rental and leasing	\$3,115,686	\$48,565
Arts, entertainment and recreation	\$2,834,974	\$34,664
Utilities	\$1,932,198	\$101,108
Mining, quarrying, and oil & gas extraction	\$869,043	\$73,284
Agriculture, forestry, fishing and hunting	\$589,628	\$35,388

Source: Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information, Total Wages, Employment and Establishments as Covered Under the Ohio and Federal Unemployment Compensation Laws

FACT:

Year after year, Ohio manufacturing leads all industry sectors in total wages.

OHIO MANUFACTURING EARNINGS & WAGES

Average annual earnings within manufacturing subsectors (2018)

NAICS Category	Industry	# of Establishments	# Employees	Total Wages (in thousands)	Average Annual Wage
311	Food manufacturing	1,063	61,441	\$3,225,799	\$52,502
312	Beverage & tobacco product manufacturing	302	9,612	\$464,465	\$48,320
313	Textile mills	54	1,795	\$108,848	\$60,634
314	Textile product mills	203	2,444	\$97,399	\$39,858
315	Apparel manufacturing	78	1,704	\$63,911	\$37,497
316	Leather & allied product manufacturing	39	873	\$36,747	\$42,101
321	Wood product manufacturing	595	12,925	\$557,861	\$43,163
322	Paper manufacturing	328	20,101	\$1,228,972	\$61,139
323	Printing and related support activities	1,174	21,375	\$977,814	\$45,746
324	Petroleum and coal products manufacturing	111	4,692	\$514,425	\$109,629
325	Chemical manufacturing	798	45,680	\$4,053,464	\$88,737
326	Plastics and rubber products manufacturing	860	57,881	\$2,911,435	\$50,301
327	Non-metallic mineral product manufacturing	672	27,301	\$1,651,922	\$60,508
331	Primary metal manufacturing	446	35,764	\$2,480,168	\$69,348
332	Fabricated metal product manufacturing	3,536	102,072	\$5,765,153	\$56,481
333	Machinery manufacturing	1,848	79,907	\$5,175,069	\$64,764
334	Computer and electronic product manufacturing	527	20,872	\$1,448,855	\$69,416
335	Electrical equipment and appliance manufacturing	335	26,604	\$1,594,622	\$59,939
336	Transportation equipment manufacturing	785	128,116	\$8,792,815	\$68,632
337	Furniture and related product manufacturing	723	16,146	\$739,373	\$45,794
339	Miscellaneous manufacturing	934	21,645	\$1,087,430	\$50,240
		15,411	698,950	\$42,976,547	\$61,487

Source: Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information, Total Wages, Employment and Establishments as Covered Under the Ohio and Federal Unemployment Compensation Laws

FACT: In 2018, the average annual wage in manufacturing was \$61,487.

HIGHLIGHTS

FACT:

The leading Ohio industries in terms of number of employees:

NAICS Category	# Employees
336 – Transportation equipment manufacturing	128,116
332 – Fabricated metal product manufacturing	102,072
333 – Machinery manufacturing	79,907
311 – Food manufacturing	61,441
326 – Plastics and rubber products manufacturing	57,881

FACT:

The leading Ohio industries in terms of average annual wages:

NAICS Category	Average annual wage
324 – Petroleum and coal products manufacturing	\$109,629
325 – Chemical manufacturing	\$88,737
334 – Computer and electronic product manufacturing	\$69,416
331 – Primary metal manufacturing	\$69,348
336 – Transportation equipment manufacturing	\$68,632

FACT:

Ohio has a lot of manufacturing establishments in these NAICS categories:

NAICS Category	# of Establishments
332 – Fabricated metal products manufacturing	3,536
333 – Machinery manufacturing	1,848
323 – Printing and related support activities	1,174
311 – Food manufacturing	1,063
339 – Miscellaneous manufacturing	934

Source: Ohio Department of Job and Family Services, Office of Workforce Development, Bureau of Labor Market Information, Total Wages, Employment and Establishments as Covered Under the Ohio and Federal Unemployment Compensation Laws

OHIO MANUFACTURING AND THE GLOBAL ECONOMY

Ohio exports to the world (2019)

FACT:

In 2019, Ohio was again the ninth largest exporting state, with a top export of industrial machinery.

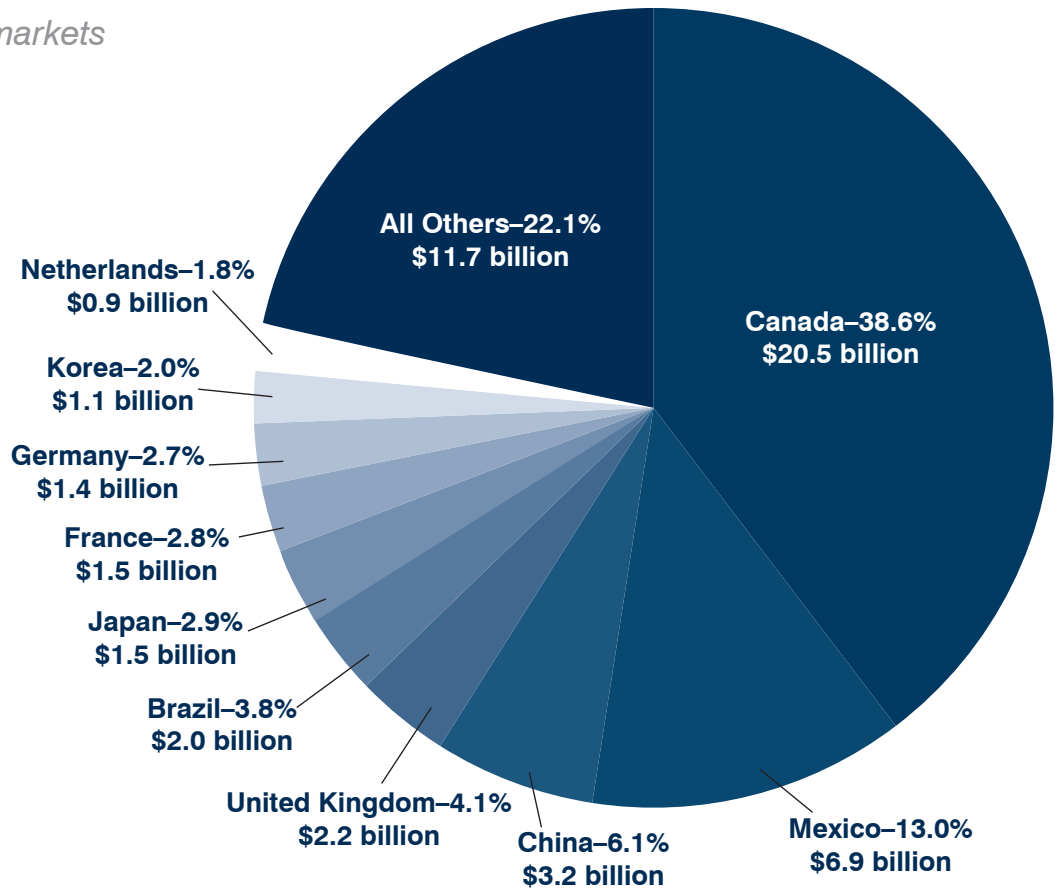
Rank	2019		Top Export
	State	Exports (\$ in billions)	
1	TX	\$331	Mineral fuel, oil, etc.
2	CA	\$173	Electric machinery
3	NY	\$73	Prec. stones; jewelry
4	LA	\$64	Mineral fuel, oil, etc.
5	IL	\$60	Industrial machinery
5	WA	\$60	Aircraft and parts
7	FL	\$56	Electric machinery
8	MI	\$55	Vehicles and parts
9	OH	\$53	Industrial machinery
10	PA	\$43	Mineral fuel, oil, etc.

Rank	2018		Top Export
	State	Exports (\$ in billions)	
1	TX	\$315	Mineral fuel, oil, etc.
2	CA	\$178	Electric machinery
3	NY	\$81	Prec. stones; jewelry
4	WA	\$78	Aircraft and parts
5	LA	\$66	Mineral fuel, oil, etc.
6	IL	\$65	Industrial machinery
7	MI	\$58	Vehicles and parts
8	FL	\$57	Electric machinery
9	OH	\$54	Industrial machinery
10	PA	\$41	Industrial machinery

Rank	2017		Top Export
	State	Exports (\$ in billions)	
1	TX	\$265	Mineral fuel, oil, etc.
2	CA	\$172	Electric machinery
3	NY	\$78	Prec. stones; jewelry
4	WA	\$76	Aircraft and parts
5	IL	\$65	Industrial machinery
6	MI	\$60	Vehicles and parts
7	LA	\$57	Mineral fuel, oil, etc.
8	FL	\$55	Electric machinery
9	OH	\$50	Industrial machinery
10	PA	\$39	Industrial machinery

Source: Ohio Development Services Agency, Research Office, Ohio Exports Report 2019, February 2020

Ohio's Top 10 export markets
(2019)



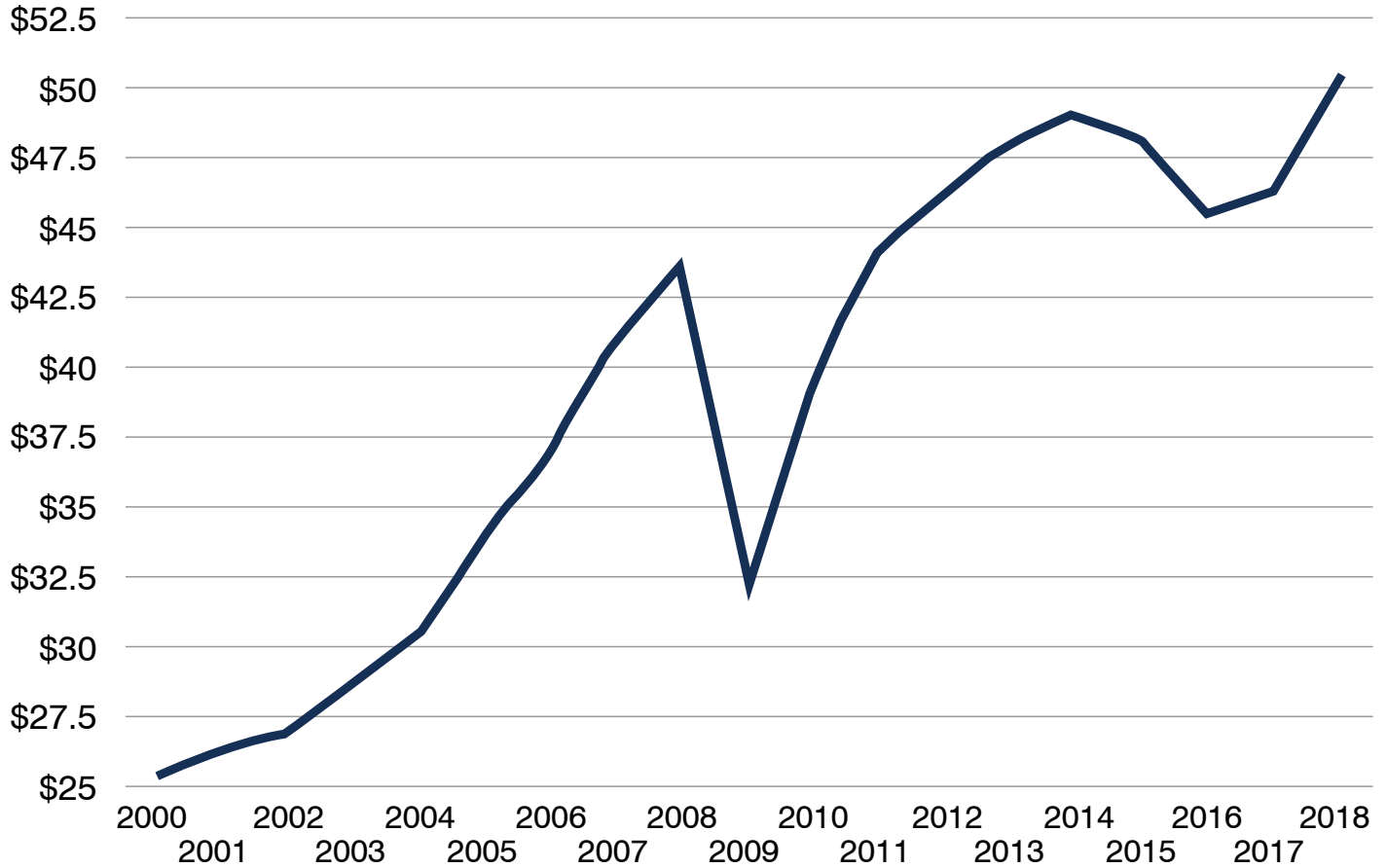
Source: Ohio Development Services Agency, Research Office, Ohio Exports Report 2019, February 2020

FACT:

In 2019, Ohio exported \$53B in goods to 211 countries and territories. This is a decrease of 2.6% from 2018. More than 50% of Ohio's exports go to Canada and Mexico.

OHIO MANUFACTURING AND THE GLOBAL ECONOMY

Ohio's Manufactured Goods Exports (2000-2018) (Dollars in billions)



Source: The National Association of Manufacturers, 2019 Ohio Manufacturing Facts, <https://www.nam.org/state-manufacturing-data/2019-ohio-manufacturing-facts/>

FACT:

The growth in Ohio manufactured goods exports from post Great Recession year 2010 to 2018 was 27.24%.

Top export commodities (2019)

FACT:

Ohio supplies the world with both durable and non-durable goods. These leading exported commodities accounted for 74% – or \$39B – of the state’s total exports of \$53B in 2019.

FACT:

Machinery continued to be Ohio’s leading export in 2019 (\$9.7 billion). Ohio was fourth among the 50 states in this category with 5% of the U.S. total.

Commodities	Exported goods (\$ in billions) 2019	% of Ohio exports 2019	Ohio’s State Ranking 2019	Exported goods (\$ in billions) 2018	% of Ohio exports 2018	Exported goods (\$ in billions) 2017	% of Ohio exports 2017
Machinery (including computers)	\$9.7	18.3%	4	\$9.9	18.2%	\$9.0	18.0%
Vehicles & parts	\$8.8	16.6%	6	\$9.1	16.8%	\$7.6	15.2%
Aircraft, spacecraft & parts	\$5.9	11.2%	9	\$5.2	9.6%	\$4.8	9.6%
Electrical machinery	\$3.2	6.0%	11	\$3.5	6.5%	\$3.4	6.7%
Plastics & articles thereof	\$3.0	5.6%	3	\$3.1	5.7%	\$3.0	6.1%
Optic, photo; medical instruments	\$1.7	3.3%	15	\$1.9	3.4%	\$1.7	3.3%
Perfumery, cosmetic, etc.	\$1.4	2.6%	3	\$1.3	2.4%	\$1.1	2.3%
Iron & steel products	\$1.3	2.5%	4	\$1.4	2.6%	\$1.4	2.7%
Misc. chemical products	\$1.1	2.0%	8	\$1.1	2.0%	\$1.0	NA
Soap, waxes, etc.; dental preparations	\$1.1	2.0%	1	\$1.0	1.8%	\$0.9	NA
Iron & steel	\$0.9	2.5%	5	\$1.1	2.0%	\$1.2	2.3%
Rubber & articles thereof	\$0.9	<2.0%	3	\$1.1	2.0%	\$1.1	2.3%

Source: Ohio Development Services Agency, Research Office, Ohio Exports Report 2019, February 2020

OHIO MANUFACTURING AND THE ENVIRONMENT

Industry leads statewide reduction/recycling of Ohio-generated waste

Year	Tons Reduced/Recycled			Percentage of Total Reduced/Recycled		
	Residential/Commercial	Industrial	Total	Residential/Commercial	Industrial	Total
1990	2,260,000	2,186,000	4,446,000	19.4	38.2	25.6
1995	1,942,000	6,523,000	8,465,000	17.0	42.8	31.7
2000	2,712,535	12,199,869	14,912,404	20.0	65.6	46.3
2005	3,745,758	9,474,260	13,220,018	25.7	56.9	42.3
2010	3,500,240	8,985,171	12,485,411	27.4	51.4	41.3
2015	3,728,582	8,546,359	12,274,941	27.3	53.5	41.4
2018	4,321,847	8,056,035	12,377,882	29.7	50.2	40.5

Source: Ohio Environmental Protection Agency

Note: Ohio EPA attributes some of the year-to-year variations in the industrial recycling rate to changes in economic activity/output. However, year-to-year changes are also due to how many, and which, companies respond to annual surveys.

FACT:

Industry leads the way in solid waste reduction and recycling. Reduction and recycling include source reduction activities, reuse, recycling, composting and incineration. Industry is an enormous consumer of recycled materials, such as metals, glass, paper and plastics; thus, manufacturers are strong advocates for improving recycling systems in Ohio and the U.S.

Each year, Ohio's 52 local solid waste management districts survey businesses in their districts about the amounts and types of materials being recycled. This provides a statewide picture of recycling activities, trends and opportunities. While reporting is voluntary, measuring and reporting recycling efforts is valuable for all of Ohio's audiences.

Ohio EPA offers grants, technical assistance and recognition to businesses that want to increase recycling or develop markets for recycled products.

Ohio EPA has an online platform whereby Ohio businesses can advertise and acquire scrap and by-product materials that might otherwise be destined for disposal in landfills. The **Ohio Materials Marketplace** is a free online platform allowing organizations to connect and find solutions to material reuse and recycling needs, thereby, facilitating the shift towards a circular, closed-loop economy.

Emissions data

¹The 2010 and more recent summarized point source emissions are calculated from information provided to Ohio EPA from Title V and Synthetic Minor permitted facilities. Those two files are posted on the Ohio EPA Emission Inventory System (EIS) website: <http://www.epa.state.oh.us/dapc/aqmp/eiu/eis.aspx>.

The 1980 emissions data are derived from a 1995 Ohio EPA publication, "Emission Trends Report for Stationary Air Contaminant Sources within the State of Ohio 1980-1990."

Percent reductions are calculated based on the formula: $((\text{Old value} - \text{new value}) / \text{Old value}) * 100$

It is difficult to compare the historical figures to the current figures due to changes in how the emissions data are reported.

PM emissions in 1980 accounted for filterable particulate matter only. PM emissions in 2010 and after accounted for filterable and condensable particulate matter. The PM reduction from the 1980 emissions would have been significantly larger if the condensable fraction was inventoried.

Only Volatile Hydrocarbon Compounds (VOCs) were included in the 1980 inventory. Both VOCs and Organic Compounds (OC) were inventoried in 2010 and after. VOCs are a fraction of OCs. For illustration purposes, the 1980 report assumed VOC=OC emissions. The OC reduction from the 1980 emissions would have been significantly larger if the OC emissions were inventoried besides the VOC emissions.

The number of facilities included in EIS varies from 1980 to 2010 and beyond. In 1980, only large emission units were inventoried. In 2010 and after, emission units with greater than one ton for any of the criteria pollutants were inventoried.

	1980 (tons)	2010 (tons)	% reduction 1980:2010	2018 (tons)	% reduction 2010:2018
SO ₂	2,659,612	619,267	77%	115,681	81%
NO _x	690,195	150,891	78%	98,377	35%
Particulate Matter	174,250	66,303	62%	27,866	58%
Organic Compounds	169,515	36,284	79%	35,628	2%
Carbon Monoxide	329,700	243,864	26%	160,284	34%

	1982 (PPB)	2012 (PPB)	% reduction 1982:2012	2019 (PPB)	% reduction 2012:2019
Highest 4 th -high eight-hour ozone concentration in Ohio	115	91	20.9%	72	20.9%
	1983 (PPB)	2012 (PPB)	% reduction 1983:2012	2019 (PPB)	% reduction 2012:2019
Highest annual average Sulphur dioxide (SO ₂) concentration in Ohio	24.07	5.25	78.2%	1.81	65.5%
	2000 μ/m ³	2012 μ/m ³	% reduction 2000: 2012	2019 μ/m ³	% reduction 2012:2019
Highest annual average Particulate Matter (2.5 μ or smaller) concentration in Ohio	19.7	12.31	37.5%	11.93	3.1%

Source: Ohio Environmental Protection Agency

FACT:

Manufacturers have invested billions of dollars in environmental control technologies and more efficient processes, which has significantly reduced emissions.¹

OHIO MANUFACTURING AND THE ENVIRONMENT

Toxic releases to the environment (millions of pounds per year): multi-year trend for core chemicals at base years 1988 and 2001, all industries

Year	Total air emissions	Surface water discharges	Total underground injection	Total on-site releases to land	Total on- and off-site disposal or other releases
<i>1988 core chemicals</i>					
1988	104,527,630	1,047,455	11,538,544	29,291,941	189,716,989
1999	37,664,651	458,895	12,077,836	19,036,238	113,749,510
2014	14,914,256	180,686	5,321,927	9,562,936	51,599,527
2015	13,588,808	227,786	5,248,999	9,176,050	49,554,584
2016	15,427,726	141,097	5,404,594	7,412,245	47,915,855
2017	13,941,383	169,848	6,159,408	18,091,894	58,292,726
2018	14,310,946	143,483	7,167,366	10,169,940	54,167,108
% change 1988-2018	-86.31	-86.30	-37.88	-65.28	-71.45
% change 1999-2018	-62.00	-68.73	-40.66	-46.58	-52.38

<i>2001 core chemicals</i>					
2001	119,894,999	10,006,806	31,985,954	66,020,183	282,121,623
2014	46,362,469	6,898,981	16,188,049	21,665,375	114,847,455
2015	37,277,407	7,444,780	18,539,317	20,997,223	106,264,956
2016	32,618,308	6,983,870	17,598,832	18,280,008	96,439,507
2017	35,769,344	6,887,300	15,908,324	30,407,168	111,350,737
2018	36,621,052	6,817,394	17,338,122	24,941,622	112,644,460
% change 2001-2018	-69.46	-31.87	-45.79	-62.22	-60.07

Source: Ohio Environmental Protection Agency

Note: U.S. EPA requires an annual Toxic Release Inventory from facilities. Chemicals in the annual inventory are added or delisted in any year. Thus, base year core chemical amounts vary.

FACT:

Ohio manufacturers have contributed significantly to reducing toxic releases to the environment.



**The mission of
The Ohio Manufacturers'
Association is to protect and
grow Ohio manufacturing.**

For more information about the services and activities of the OMA, contact us at **(800) 662-4463** or **oma@ohiomfg.com** or visit **ohiomfg.com**.

The Ohio Manufacturers' Association
33 N. High Street, 6th floor
Columbus, Ohio 43215

(800) 662-4463
oma@ohiomfg.com
ohiomfg.com

