

2024 OHIO MANUFACTURING COUNTS

Facts About the Economic Impact of Ohio Manufacturing



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FACTS ABOUT THE ECONOMIC IMPACT OF OHIO MANUFACTURING

Ohio is a manufacturing powerhouse for America and the rest of the world. The sector is responsible for **17.5%** of Ohio's (all private industries) Gross Domestic Product (2022) and contributes to the state's quality of life by providing:

- An annual payroll of **\$48 billion**, the highest total annual wages of any Ohio industry sector;
- **\$56.8 billion** in exported products to **212** countries and territories; and
- A **cleaner environment** through decreased emissions and increased recycling.

Manufacturing is the **largest of Ohio's 20 economic sectors**, including government, with **15.7% of total output** in 2022.

As of November 2022, Ohio was **third in the nation** in total manufacturing employees, at roughly 689,900 – trailing only California and Texas, both of which have considerably larger populations than Ohio.

As of Q3 2023, Ohio's manufacturing GDP was **\$133.16 billion**, making it **fourth in the nation**, trailing only California, Texas, and Illinois, according to the U.S. Bureau of Economic Analysis.

In 2022, durable goods manufacturing accounted for 53% (\$68.3 billion) of all production, while nondurable goods made up 47% (\$61.1 billion) of production.

The average annual earnings of Ohio workers on manufacturing payrolls in 2022 were **\$70,000**.¹ The average hourly earnings of all Ohio manufacturing employees were **\$31.38** as of November 2023.²

The Ohio Manufacturers' Association prepares this publication to help Ohioans understand the importance of manufacturing to the state's economic future. The data in this publication were the most current available as of December 2023.

Contact the OMA at **(800) 662-4463** or oma@ohiomfg.com.

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¹ U.S. Bureau of Labor Statistics, One Screen Data Search

² U.S. Bureau of Labor Statistics and the Federal Reserve Bank of St. Louis



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OHIO MANUFACTURING AND OHIO'S ECONOMY



Manufacturing Gross Domestic Product (GDP) ranking by state (2020 – Q3 2023)

FACT:

As of Q3 2023, Ohio's manufacturing GDP exceeded \$133 billion, according to data published by the U.S. Bureau of Economic Analysis.

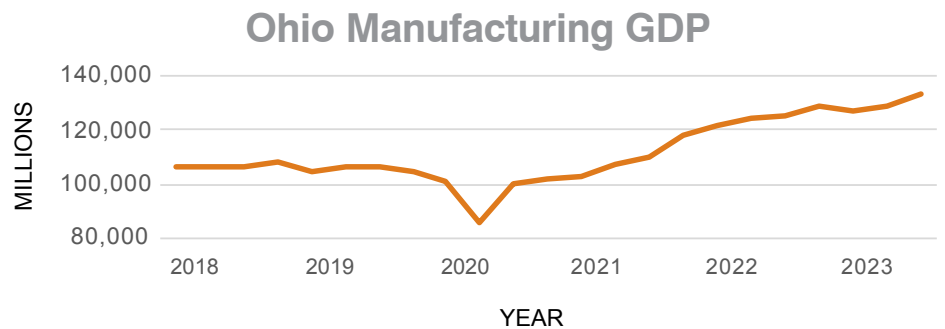
Total U.S. Manufacturing GDP (\$ in billions):

2023 (as of Q3) - \$2,853.1
 2022 - \$2,793.7
 2021 - \$2,496.8
 2020 - \$2,241.8

Source: Bureau of Economic Analysis, U.S. Department of Commerce

Rank	2023 (as of Q3)			2022		
	State	Mfg. GDP (\$ in billions)	% of U.S.	State	Mfg. GDP (\$ in billions)	% of U.S.
1	CA	\$423.2	14.83%	CA	\$423.7	15.17%
2	TX	\$303.3	10.63%	TX	\$265.4	9.50%
3	IL	\$135.5	4.75%	IL	\$133.5	4.78%
4	OH	\$133.2	4.67%	OH	\$129.4	4.63%
5	IN	\$129.6	4.10%	IN	\$117.1	4.19%
6	PA	\$111.8	4.54%	PA	\$116.3	4.16%
7	MI	\$109.4	3.92%	MI	\$112.1	4.01%
8	NC	\$105.4	3.83%	NC	\$110.5	3.96%
9	NY	\$85.3	2.99%	NY	\$83.7	3.00%
10	FL	\$79.1	2.77%	GA	\$73.8	2.64%

Rank	2021			2020		
	State	Mfg. GDP (\$ in billions)	% of U.S.	State	Mfg. GDP (\$ in billions)	% of U.S.
1	CA	\$394.8	15.81%	CA	\$353.6	15.77%
2	TX	\$227.0	9.09%	TX	\$197.7	8.82%
3	OH	\$114.8	4.60%	IL	\$102.9	4.59%
4	IL	\$114.7	4.59%	OH	\$102.6	4.58%
5	IN	\$104.7	4.19%	NC	\$95.5	4.26%
6	NC	\$102.3	4.10%	IN	\$92.1	4.11%
7	PA	\$101.9	4.08%	PA	\$91.0	4.06%
8	MI	\$101.3	4.06%	MI	\$90.7	4.05%
9	NY	\$75.2	3.01%	NY	\$69.4	3.10%
10	WI	\$66.3	2.66%	WI	\$60.1	2.68%



U.S. Bureau of Economic Analysis



Manufacturing leads Ohio private industries in contribution to Gross Domestic Product (GDP) (2022)

FACT:

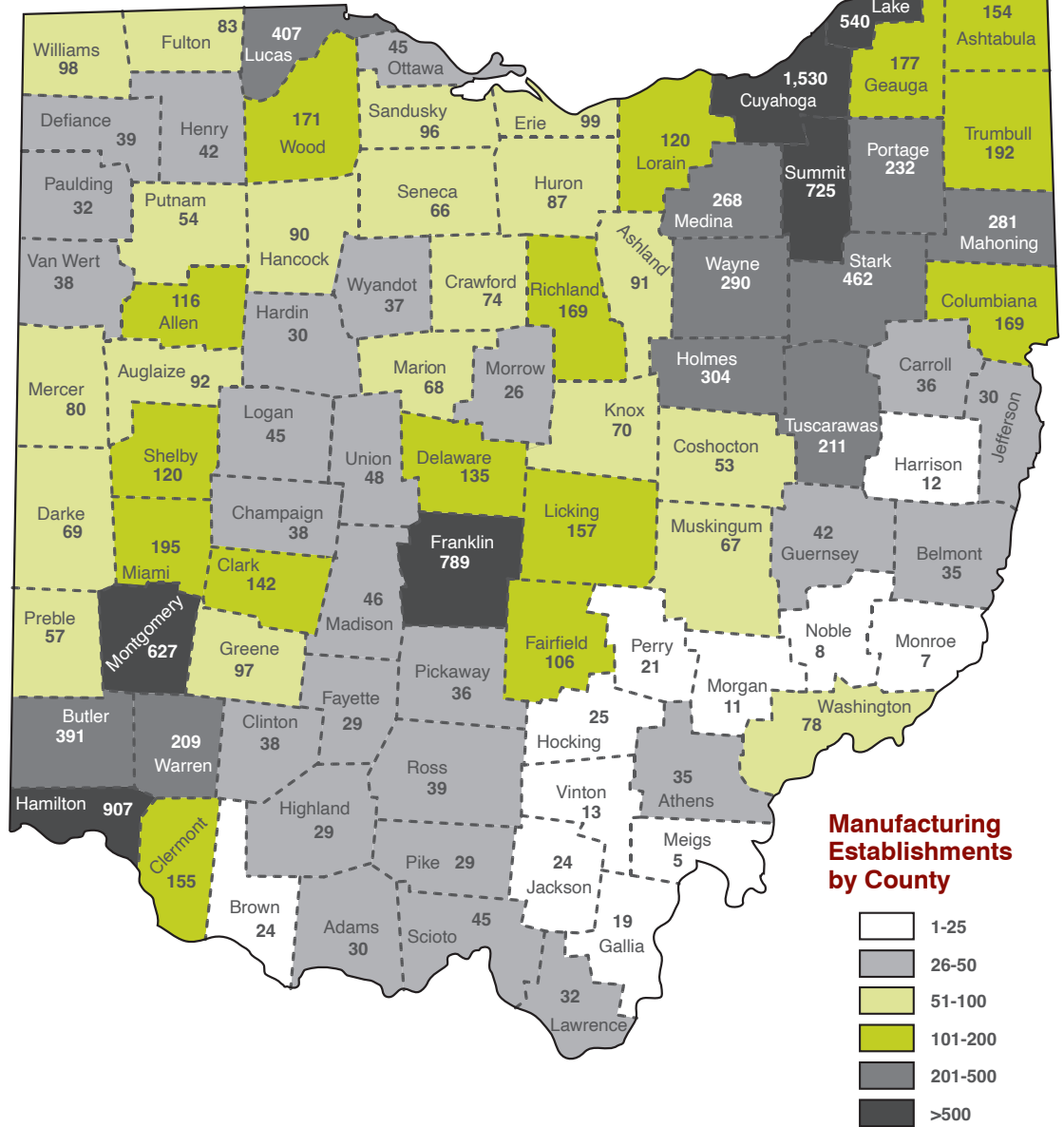
At 17.5%, manufacturing’s contribution to Ohio’s GDP in 2022 (among all private industries) continued to be significantly greater than that of any other industry sector.

Industry	\$ Contributed to Ohio GDP (\$ in millions)	% of Ohio GDP
All private industries	\$740,765.1	
Manufacturing	\$129,434.7	17.5%
Finance and insurance	\$99,846.0	13.5%
Real estate, rental, and leasing	\$83,592.0	11.3%
Health care and social assistance	\$68,562.8	9.3%
Wholesale trade	\$53,657.9	7.2%
Retail trade	\$50,108.9	6.8%
Professional, scientific, and technical services	\$43,463.0	5.9%
Construction	\$30,055.9	4.1%
Transportation and warehousing	\$28,969.8	3.9%
Administrative support and waste management services	\$25,611.4	3.5%
Management of companies and enterprises	\$24,030.1	3.2%
Accommodation and food services	\$21,845.9	2.9%
Information	\$20,542.3	2.8%
Other (except government)	\$16,479.7	2.2%
Utilities	\$13,756.5	1.9%
Agriculture, forestry, fishing, and hunting	\$8,407.3	1.1%
Arts, entertainment, and recreation	\$8,056.5	1.1%
Mining, quarrying, and oil and gas extraction	\$7,891.0	1.1%
Educational services	\$6,453.7	0.9%

Source: U.S. Department of Commerce, Bureau of Economic Analysis

OHIO MANUFACTURING AND OHIO'S ECONOMY

Manufacturing density in Ohio (2021)



Source: U.S. Census 2021 County Business Patterns

FACT:

Of Ohio's 13,369 manufacturing establishments in 2021, almost 40% were in these six manufacturing-dense counties: Cuyahoga, Hamilton, Franklin, Summit, Montgomery, and Lake. Cuyahoga County had the most manufacturing establishments at 1,530.



Manufacturing projects as a percent of all new qualifying Ohio investment projects

FACTS:

Typically, about half of Ohio’s new qualifying projects are manufacturing projects.

The 2022 announced manufacturing projects were expected to result in 20,378 new jobs.

Year	# Manufacturing Projects in Ohio	# Total Ohio Qualifying Projects	% Manufacturing Projects
2022	226	482	47%
2021	263	505	52%
2020	220	409	54%

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 (however, 20-plus jobs with no investment and no square ft. data do not qualify).

Projects are generally credited to the year they are announced.

New manufacturing sector investment projects 2020 – 2022

FACT:

Intel’s \$20.0 billion investment to create two computer chip fabrication plants at one site employing 3,000 people was by far the single largest 2022 announcement.

Sectors	2022	2021	2020
Foods and Beverages	43	31	36
Transportation	33	35	17
Plastic and Rubber Products	26	36	28
Fabricated Metal Products	26	35	30
Machinery	22	27	18
Chemicals	19	28	24
Appliances and Electrical Equipment	12	10	7
Miscellaneous Goods	9	8	11
Paper and Related Products	6	10	8
Wood Products	6	4	1
Computer and Electronics	5	8	4
Nonmetallic Mineral Products	5	5	10
Petroleum and Coal Products	4	2	5
Primary Metals	4	11	10
Furniture and Related Products	2	5	2
Textiles/Apparel/Leather	2	5	4
Printing and Support	2	3	5

Source: Ohio Department of Development, Office of Research, Ohio Private Investment Survey, June 2023



Ohio manufacturing: A leader in U.S. manufacturing jobs (2022)

FACT:

In 2022, Ohio retained its third-place ranking in manufacturing employment nationally, with 5.4% of all U.S. manufacturing jobs. While still recovering, neither the U.S. nor Ohio manufacturing employment reached 2019 pre-pandemic levels in 2022.

Rank	2022		
	State	Manufacturing Employment	% of Total U.S. Mfg. Jobs
1	CA	1,335,789	10.5%
2	TX	925,394	7.3%
3	OH	683,148	5.4%
4	MI	603,413	4.7%
5	IL	571,465	4.5%
6	PA	563,640	4.4%
7	IN	541,112	4.2%
8	WI	476,773	3.7%
9	NC	473,254	3.7%
10	NY	419,896	3.3%

Total Ohio manufacturing jobs 2018-2022

Year	Manufacturing Jobs	Year-to-Year Change
2018	698,950	13,008
2019	700,786	1,836
2020	653,028	(47,758)
2021	665,724	12,696
2022	683,148	17,424

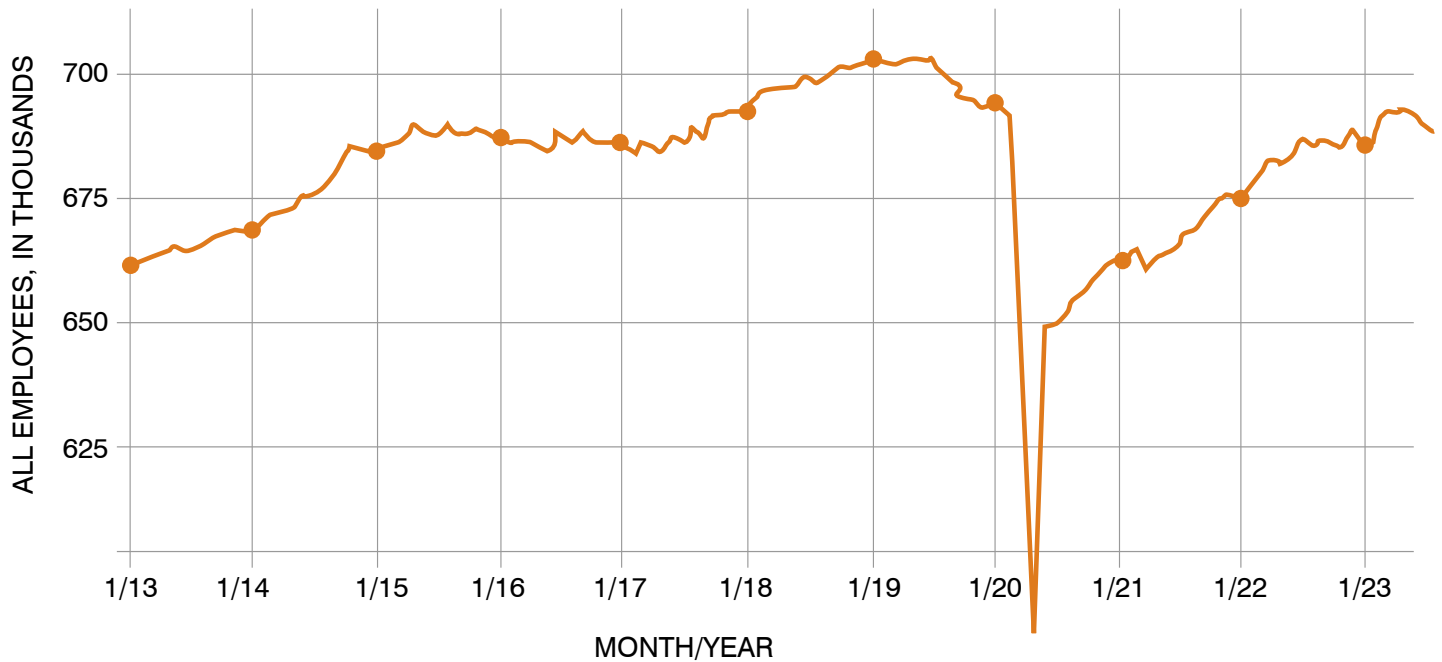
Total U.S. manufacturing jobs 2018-2022

Year	Manufacturing Jobs	Year-to-Year Change
2018	12,647,900	241,143
2019	12,776,157	128,257
2020	12,083,479	(692,678)
2021	12,302,657	219,178
2022	12,759,129	456,472

Source: U.S. Bureau of Labor Statistics, All Employees in Private NAICS 31-33 Manufacturing for All Establishment Sizes



Ohio Manufacturing Jobs 2013-2023 (seasonally adjusted, in thousands)



Source: U.S. Bureau of Labor Statistics

FACT:

Ohio manufacturing job totals averaged around 690,000 throughout 2023.

Ohio Manufacturing Jobs by Month

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	660.4	660.9	661.8	662.5	662.8	663.7	663.1	663.6	664.7	666.1	666.7	667.6
2014	667.9	669.4	670.4	671.9	673.7	674.5	674.9	676.9	678.7	680.9	684.3	683.9
2015	685.2	685.5	685.9	686.8	689.0	688.2	688.2	689.7	688.0	687.5	688.6	687.8
2016	687.0	686.6	686.8	685.8	685.9	684.1	688.3	686.9	688.2	686.5	685.7	686.4
2017	687.1	683.5	685.6	685.0	684.4	686.3	685.6	688.8	686.9	691.4	691.6	692.5
2018	692.7	695.8	696.7	697.7	698.1	699.5	700.5	698.9	699.6	702.3	701.8	702.6
2019	704.0	703.2	702.5	703.2	703.5	703.1	704.8	700.5	699.2	695.9	695.7	693.6
2020	695.0	692.3	690.9	582.1	603.9	647.7	647.6	650.3	653.9	655.5	657.7	659.9
2021	661.0	661.3	663.7	658.7	661.3	662.3	664.6	667.7	668.2	671.0	672.0	675.0
2022	673.9	676.3	679.3	682.8	682.5	682.1	687.2	685.3	686.6	686.7	685.2	689.1
2023	685.3	686.1	691.5	692.1	692.9	690.7	689.9	688.0	690.1	689.2	689.9(P)	

Source: U.S. Bureau of Labor Statistics



Manufacturing near top of Ohio private sector employment (2022)

FACT:

Almost 15% of all (unemployment-insurance covered) Ohio workers were employed in manufacturing in 2022. Only the health care and social assistance sector had greater employment among Ohio’s private sectors.

Rank	Industry Sector	Average Monthly Employment	% of total Ohio jobs
Total (covered) private Ohio employment		4,684,897	100%
1	Health care and social assistance	788,922	16.8%
2	Manufacturing	683,148	14.6%
3	Retail trade	546,638	11.7%
4	Accommodation and food services	461,566	9.9%
5	Administrative support and waste management services	321,777	6.9%
6	Professional, scientific, and technical services	283,754	6.1%
7	Transportation and warehousing	250,090	5.3%
8	Wholesale trade	238,074	5.1%
9	Finance and insurance	235,929	5.0%
10	Construction	233,271	5.0%
11	Other services (except public administration)	151,500	3.2%
12	Management of companies and enterprises	139,120	3.0%
13	Educational services	88,600	1.9%
14	Arts, entertainment, and recreation	80,069	1.7%
15	Information	69,565	1.5%
16	Real estate, rental, and leasing	66,556	1.4%
17	Agriculture, forestry, fishing, and hunting	18,118	0.4%
18	Utilities	17,713	0.4%
19	Mining, quarrying, and oil and gas extraction	8,617	0.2%

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



Of Ohio's 100 top employers by employment (headcount), 19 are manufacturers

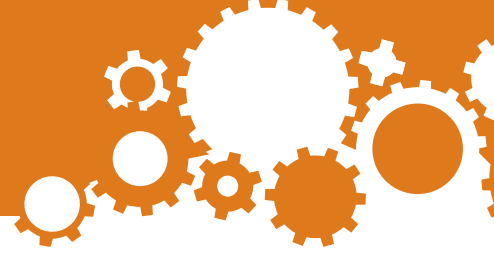
FACT:

Large, global industrial enterprises employ large numbers of Ohioans. The companies highlighted on this table have Ohio headquarters.

Rank	Company	Ohio Employment Estimate: Headcount	Headquarters	Product
1	American Honda Motor Co., Inc.	14,400	Tokyo, Japan	Motor vehicles
2	Whirlpool Corporation	11,079	Benton Harbor, MI	Consumer products
3	Procter & Gamble	11,000	Cincinnati, OH	Soaps and consumer goods
4	Berkshire Hathaway, Inc.	9,800	Omaha, NE	Machinery and fiberglass products
5	General Electric	9,000	Boston, MA	Aerospace and electrical equipment
6	Ford Motor Company	7,000	Dearborn, MI	Motor vehicles
7	Stellantis	6,600	Onbekend, Netherlands	Motor vehicles
8	Cleveland-Cliffs, Inc.	6,242	Cleveland, OH	Steel/mining
9	Sherwin-Williams Company	6,211	Cleveland, OH	Paints
10	Crown Equipment Corporation	5,000	New Bremen, OH	Lift trucks
11	Goodyear Tire & Rubber Company	4,800	Akron, OH	Rubber products
11	Swagelok Company	4,800	Solon, OH	Fluid systems
13	General Motors Corporation	4,483	Detroit, MI	Motor vehicles
14	Nestlé, S.A.	4,000	Vevey, Switzerland	Frozen foods
15	Honeywell International, Inc.	3,800	Morris Plains, NJ	Aerospace and electrical equipment
16	Marathon Petroleum Corporation	3,500	Findlay, OH	Petroleum products
17	EssilorLuxottica	3,300	Charenton-le-Pont, France	Lenses and eyewear
17	Lincoln Electric Holdings, Inc.	3,300	Cleveland, OH	Welding equipment
17	Worthington Industries	3,300	Worthington, OH	Steel products

Source: Ohio Department of Development, Office of Research, Ohio Major Employers, December 2022

OHIO MANUFACTURING AND JOBS



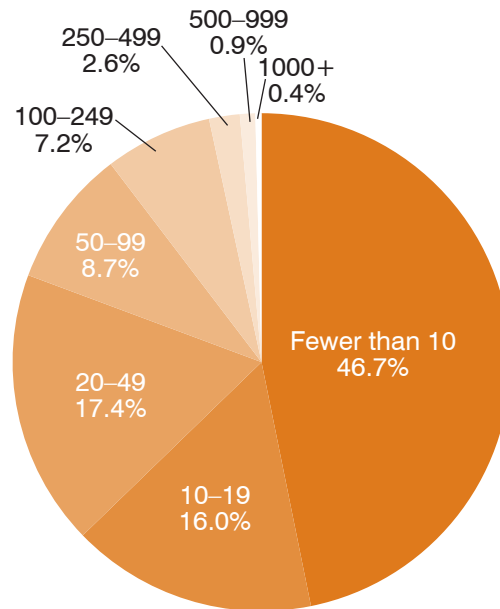
Number of Ohio manufacturing firms by number of employees

Manufacturing is comprised of large and small businesses

Number of Employees	Number of Firms (2021)	Number of Firms (2020)	Number of Firms (2019)	Number of Firms (2018)	Number of Firms (2017)
Fewer than 10	6,248	6,207	6,330	6,467	6,489
10-19	2,138	2,155	2,217	2,269	2,283
20-49	2,331	2,366	2,404	2,367	2,370
50-99	1,168	1,241	1,231	1,262	1,266
100-249	963	1,005	1,038	990	989
250-499	344	338	344	342	326
500-999	125	135	137	137	126
1,000+	52	46	53	54	53
Total	13,369	13,493	13,754	13,888	13,902

Source: U.S. Census 2021 County Business Patterns

Distribution of Ohio manufacturing firms by number of employees (2021)



FACT:

Most Ohio manufacturing firms (47%) employ fewer than 10 people, while 0.4% of firms employ 1,000 or more people.



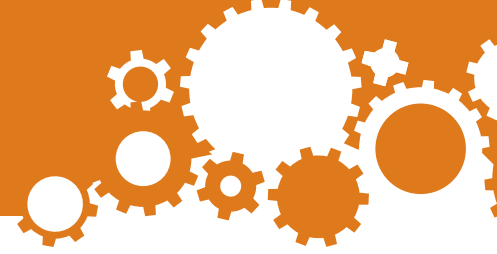
Mid-sized manufacturing firms provide plentiful jobs

Number of employees	Number of firms (2021)	Total number of employees (2021)	Percent of all employees by size of manufacturing firm
Fewer than 10	6,248	23,153	3%
10-19	2,138	29,397	4%
20-49	2,331	73,535	11%
50-99	1,168	82,629	12%
100-249	963	149,203	22%
250-499	344	120,793	18%
500-999	125	81,959	12%
1,000+	52	103,642	16%
Total	13,369	664,311	100%

Source: U.S. Census 2021 County Business Patterns

FACT:

In 2021, mid-sized manufacturing firms (100-499 employees) employed 40% of Ohio’s manufacturing employees. Manufacturers with 100-249 employees had the most total employees at 149,203.



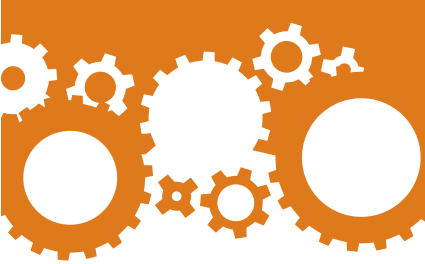
Traditional industries continue to be Ohio's leading manufacturing job producers

FACT:

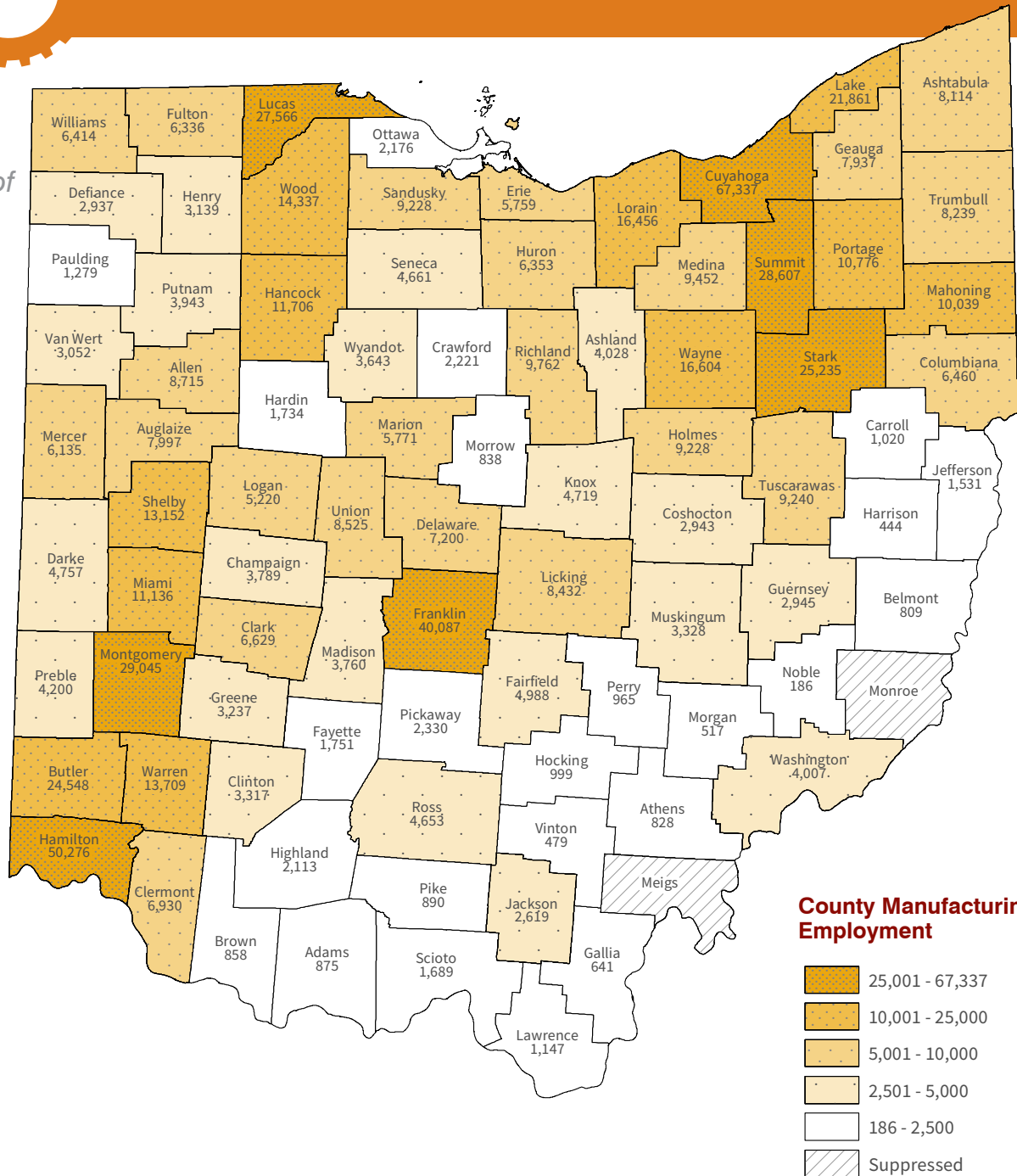
Traditional industries are foundational to the state's economy. All but one of these major categories of manufacturing (Electrical equipment and appliances) experienced employment increases from 2021 to 2022. The largest percentage gains were in Paper manufacturing (5.5%) and Computer and electronic products manufacturing (4.9%).

Manufacturing industry (NAICS)	Number of jobs (2022)	Number of jobs (2021)	Number of jobs (2020)	Number of jobs (2019)
Durable Goods				
Transportation equipment (336)	114,909	114,578	113,054	128,820
Fabricated metal products (332)	96,697	93,356	92,171	102,296
Machinery (333)	77,592	74,825	74,399	79,954
Primary metals (331)	35,164	34,064	34,241	35,852
Nonmetallic mineral products (327)	26,552	26,104	25,512	27,481
Electrical equipment and appliances (335)	26,391	26,472	25,437	26,406
Computer and electronic products (334)	21,267	20,275	20,664	21,309
Furniture and related products (337)	15,461	15,396	14,580	15,559
Nondurable Goods				
Food manufacturing (311)	62,199	59,911	59,321	59,889
Plastics and rubber products (326)	57,489	56,850	54,518	58,289
Chemical manufacturing (325)	48,750	47,158	45,874	46,024
Paper (322)	21,932	20,784	20,275	20,549
Printing and related support activities (323)	19,117	18,597	18,507	21,049

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



Statewide
manufacturing
employment as of
2022: 713,899



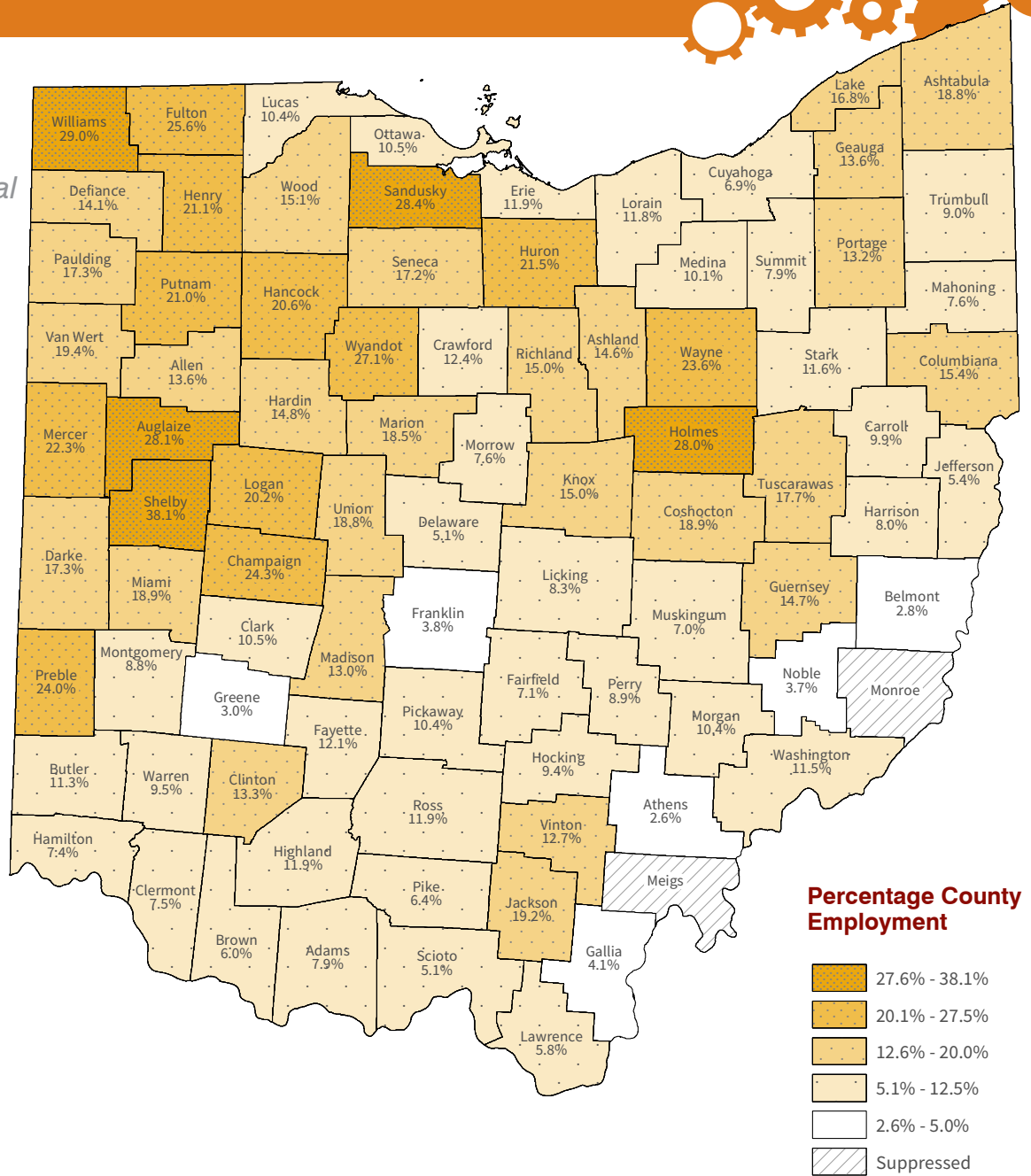
Source: Ohio Department of Development, Office of Research, January 2023 (U.S. Bureau of Economic Analysis)

FACT:

Cuyahoga County in 2022 continued to have the greatest manufacturing employment at 67,337, followed by Hamilton (50,276), Franklin (40,087), Montgomery (29,045), Summit (28,607), Lucas (27,566), and Stark (25,235) counties.

OHIO MANUFACTURING AND JOBS

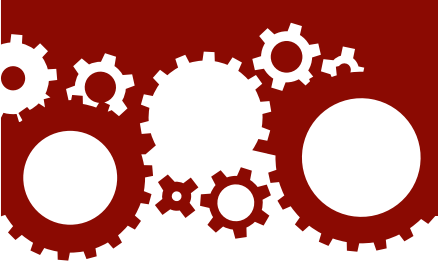
Statewide manufacturing employment of total employment by county as of 2022: Roughly 10%



Source: Ohio Development Services Agency, Office of Research, January 2023 (U.S. Bureau of Economic Analysis)

FACT:

In 2022, manufacturing continued to employ about one out of every 10 Ohio workers. Shelby County had the greatest manufacturing employment density at 38.1%. Manufacturing represents more than 20% of all jobs in 15 other counties.



OHIO MANUFACTURING EARNINGS & WAGES

Ohio annual wages by
industry sector (2022)

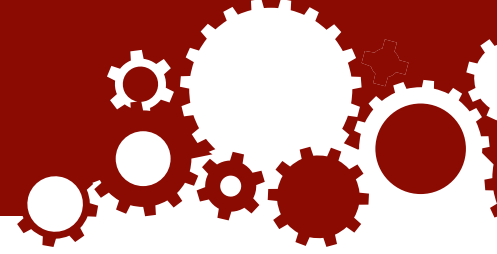
Industry Sector (NAICS code)	Total Wages (\$ in thousands)	Average Annual Wage
Manufacturing (31-33)	\$47,822,138	\$70,003
Health care and social assistance (62)	\$46,329,931	\$58,726
Professional, scientific, and technical services (54)	\$26,066,879	\$91,864
Finance and insurance (52)	\$22,771,906	\$96,520
Wholesale trade (42)	\$20,330,249	\$85,395
Retail trade (44-45)	\$19,923,839	\$36,448
Management of companies and enterprises (55)	\$17,664,294	\$126,972
Construction (23)	\$16,463,152	\$70,575
Administrative support and waste management services (56)	\$15,201,454	\$47,242
Transportation and warehousing (48-49)	\$14,317,114	\$57,248
Accommodation and food services (72)	\$9,926,478	\$21,506
Other services (except public administration) (81)	\$6,313,120	\$41,671
Information (51)	\$6,096,060	\$87,631
Real estate, rental, and leasing (53)	\$3,991,928	\$59,978
Educational services (61)	\$3,902,499	\$44,046
Arts, entertainment, and recreation (71)	\$3,328,354	\$41,569
Utilities (22)	\$2,013,375	\$113,670
Agriculture, forestry, fishing, and hunting (11)	\$816,001	\$45,039
Mining, quarrying, and oil and gas extraction (21)	\$698,343	\$81,046

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

FACT:

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

OHIO MANUFACTURING EARNINGS & WAGES



Average annual earnings within manufacturing subsectors (2022)

NAICS Category	Industry	# Establishments	# Employees	Total Wages (\$ in thousands)	Average Annual Pay
311	Food manufacturing	1,188	62,199	\$3,887,396	\$62,500
312	Beverage and tobacco product manufacturing	397	11,688	\$596,686	\$51,052
313	Textile mills	60	1,915	\$133,178	\$69,560
314	Textile product mills	184	2,257	\$101,617	\$45,026
315	Apparel manufacturing	90	1,735	\$79,523	\$45,843
316	Leather and allied product manufacturing	48	1,047	\$51,943	\$49,631
321	Wood product manufacturing	652	13,923	\$726,730	\$52,195
322	Paper manufacturing	328	21,932	\$1,506,633	\$68,696
323	Printing and related support activities	1,143	19,117	\$1,000,951	\$52,359
324	Petroleum and coal products manufacturing	114	4,939	\$614,619	\$124,436
325	Chemical manufacturing	865	48,750	\$5,077,609	\$104,156
326	Plastics and rubber products manufacturing	857	57,489	\$3,356,004	\$58,376
327	Non-metallic mineral product manufacturing	705	26,552	\$1,794,767	\$67,594
331	Primary metal manufacturing	441	35,164	\$2,896,172	\$82,362
332	Fabricated metal product manufacturing	3,507	96,697	\$6,209,569	\$64,217
333	Machinery manufacturing	1,767	77,592	\$5674,714	\$73,136
334	Computer and electronic product manufacturing	548	21,267	\$1,618,033	\$76,081
335	Electrical equipment and appliance manufacturing	346	26,391	\$1,768,651	\$67,016
336	Transportation equipment manufacturing	818	114,909	\$8,592,722	\$74,779
337	Furniture and related product manufacturing	723	15,461	\$825,124	\$53,368
339	Miscellaneous manufacturing	977	22,125	\$1,309,498	\$59,187
		15,755	683,148	\$47,822,138	\$70,003

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

FACT:

In 2022, the average annual pay in manufacturing increased to \$70,003 from \$66,944 in 2021, a 4.6% increase.

HIGHLIGHTS

FACT:

The leading Ohio industries in terms of **number of employees:**

NAICS Category	# Employees
336 – Transportation equipment manufacturing	114,909
332 – Fabricated metal product manufacturing	96,697
333 – Machinery manufacturing	77,592
311 – Food manufacturing	62,199
326 – Plastics and rubber products manufacturing	57,489

FACT:

The leading Ohio industries in terms of **average annual wages:**

NAICS Category	Average Annual Wage
324 – Petroleum and coal products manufacturing	\$124,436
325 – Chemical manufacturing	\$104,156
331 – Primary metal manufacturing	\$82,362
334 – Computer and electronic product manufacturing	\$76,081
336 – Transportation equipment manufacturing	\$74,779

FACT:

The NAICS categories with the most **numerous Ohio manufacturing establishments:**

NAICS Category	# of Establishments
332 – Fabricated metal products manufacturing	3,507
333 – Machinery manufacturing	1,767
311 – Food manufacturing	1,188
323 – Printing and related support activities	1,143
339 – Miscellaneous manufacturing	977

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

OHIO MANUFACTURING AND THE GLOBAL ECONOMY



Ohio exports to the world (2022)

FACT:

In 2022, Ohio was again the ninth-largest exporting state, with industrial machinery continuing to be the top exported good.

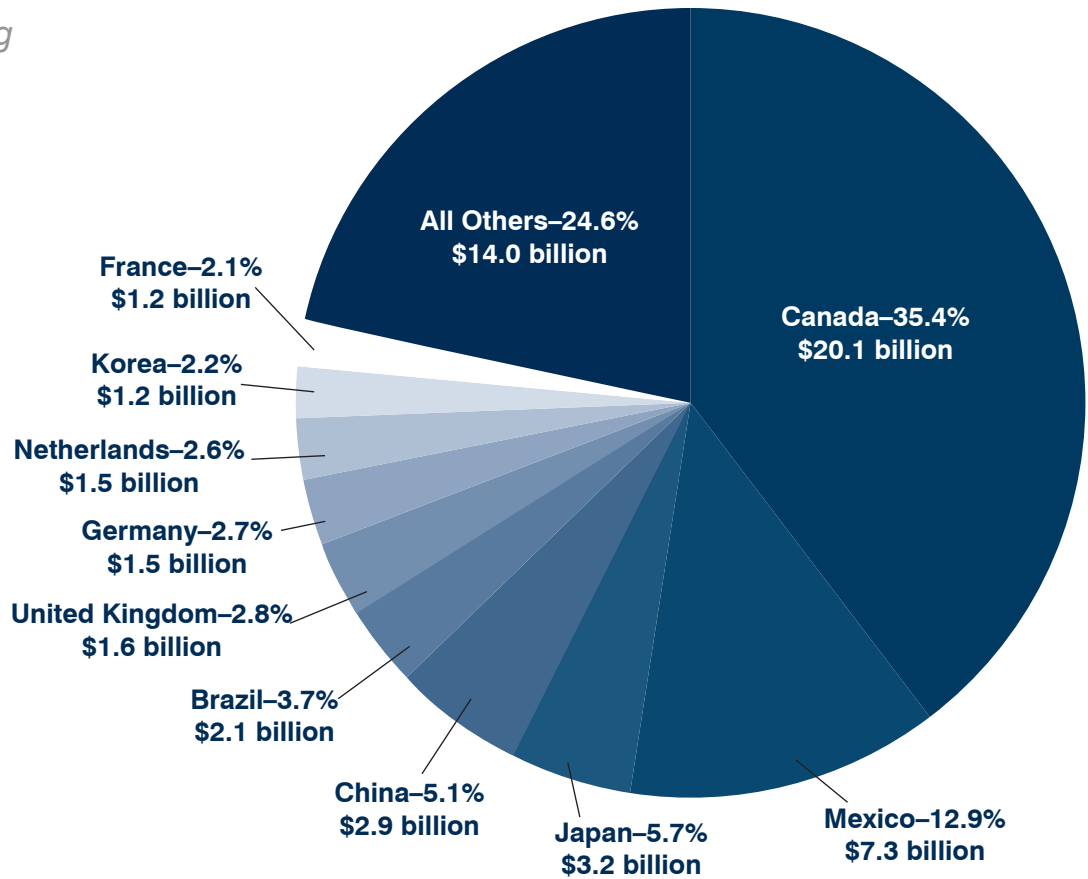
Rank	2022		
	State	Exports (\$ in billions)	Top Export
1	TX	\$487	Mineral fuel, oil, etc.
2	CA	\$186	Industrial machinery
3	LA	\$121	Mineral fuel, oil, etc.
4	NY	\$109	Prec. stones; jewelry
5	IL	\$79	Industrial machinery
6	FL	\$68	Electric machinery
7	MI	\$61	Vehicles and parts
8	WA	\$61	Aircraft and parts
9	OH	\$57	Industrial machinery
10	PA	\$50	Pharmaceutical products

Rank	2021			2020		
	State	Exports (\$ in billions)	Top Export	State	Exports (\$ in billions)	Top Export
1	TX	\$376	Mineral fuel, oil, etc.	TX	\$276	Mineral fuel, oil, etc.
2	CA	\$175	Industrial machinery	CA	\$156	Electric machinery
3	NY	\$90	Prec. stones; jewelry	NY	\$66	Prec. stones; jewelry
4	LA	\$76	Mineral fuel, oil, etc.	LA	\$58	Mineral fuel, oil, etc.
5	IL	\$66	Industrial machinery	IL	\$53	Industrial machinery
6	FL	\$56	Electric machinery	FL	\$46	Electric machinery
7	MI	\$56	Vehicles and parts	OH	\$45	Industrial machinery
8	WA	\$54	Aircraft and parts	MI	\$44	Vehicles and parts
9	OH	\$51	Industrial machinery	WA	\$41	Aircraft and parts
10	NJ	\$49	Prec. stones; jewelry	GA	\$39	Aircraft and parts

*Source: Ohio Department of Development, Office of Research,
Ohio Exports Report 2021, August 2022*



Ohio's top 10 trading partners (2022)



Source: Ohio Development Services Agency, Research Office, Ohio Exports Report 2022

FACT:

In 2022, Ohio exported \$56.8 billion in goods to 212 countries and territories, an 11.8% increase in value from 2021 (\$50.7 billion).

By comparison, the U.S. experienced an increase of 17.5% in exports from 2021 to 2022.

As is typical, almost half of Ohio's exports went to Canada and Mexico.

OHIO MANUFACTURING AND THE GLOBAL ECONOMY



Ohio's top manufactured export commodities (2022)

FACT:

- In 2022, industrial machinery was Ohio's leading export (\$8.7 billion). Ohio was 5th among the 50 states in this category with 3.8% of the U.S. total.
- The top six categories (industrial machinery, vehicles, aircraft, pharmaceuticals, plastics, and electrical machinery) accounted for 56.7% (\$32.2 billion) of the state total.
- Ohio leads the nation in exports of soaps/cleaning preparations/waxes (15.7% of U.S. total) as well as paints/dyes/putty (8.4% of U.S. total).
- Pharmaceutical products increased sharply for the second consecutive year increasing 107% over the year, while exports of mineral fuels had a sharp spike of 185% for the year.

Commodities	Exported goods (\$ in billions) 2022	% of Ohio exports 2022	Ohio's state ranking 2022	Exported goods (\$ in billions) 2021	% of Ohio exports 2021
Machinery (including computers)	\$8.7	15.4%	5th	\$8.3	16.5%
Vehicles and parts	\$8.4	14.8%	8th	\$7.8	15.5%
Aircraft, spacecraft, and parts	\$4.8	8.4%	7th	\$4.1	8.2%
Pharmaceutical products	\$3.8	6.7%	8th	\$1.8	3.6%
Plastics and articles thereof	\$3.4	6.0%	3rd	\$3.3	6.5%
Electric machinery; sound/TV equipment	\$3.1	5.4%	16th	\$3.0	6.0%
Mineral fuel, oil, etc.	\$1.8	3.2%	16th	\$0.6	NA
Optic, photo; medical instruments	\$1.8	3.1%	18th	\$1.7	3.3%
Iron and steel products	\$1.7	2.9%	4th	\$1.5	2.9%
Essential oils, perfumery, cosmetic, etc.	\$1.5	2.6%	3rd	\$1.2	2.4%
Iron and steel	\$1.5	2.6%	4th	\$1.1	NA
Soap, waxes, lubricating preparations, etc.	\$1.3	NA	1st	\$1.1	2.5%
Misc. chemical products	\$1.2	NA	12th	\$1.1	2.5%
Rubber and articles thereof	\$1.1	7.3%	3rd	\$0.9	NA

Source: Ohio Department of Development, Office of Research, Ohio Exports Report 2022



Industry leads statewide reduction/recycling of Ohio-generated waste

* Ohio no longer has a numerical (percentage) recycling goal for the industrial sector. As a result, some solid waste management districts have stopped surveying for data from the sector, likely resulting in a decrease in material being reported.

Note: Ohio EPA attributes some of the year-to-year variations in recycling rates to changes in economic activity/output. However, year-to-year changes are also due to how many, and which, entities respond to annual Solid Waste Management District surveys. Consequently, Ohio EPA generally focuses on trends over several years when evaluating changes in recycling activity rather than changes from one year to the next.

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
2019	4,301,306	8,560,651	12,861,957	28.5	67.1	46.2
2020	4,386,564	6,550,058	10,936,622	30.0	52.6	40.4
2021	4,263,786	8,110,789	12,374,575	27.9	53.4	40.6
2022*	4,552,735	6,623,750	11,176,485	28.9	44.9	36.6

Source: Ohio Environmental Protection Agency

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, including metals, glass, paper, and plastics; thus, manufacturers are strong advocates for recycling systems in Ohio and the U.S.

Each year, Ohio's 52 local Solid Waste Management Districts survey businesses 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 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 – the Ohio Materials Marketplace – which provides Ohio businesses a venue to advertise and acquire scrap and by-product materials that might otherwise be destined for landfills.

OHIO MANUFACTURING AND THE ENVIRONMENT



Ohio emissions data (not manufacturing specific)

³The 2010 and more recent summarized point source emissions are calculated from information provided to Ohio EPA from Title V and Synthetic Minor permitted facilities.

See Ohio EPA Emission Inventory System (EIS) web page: <https://epa.ohio.gov/divisions-and-offices/air-pollution-control/reports-and-data/emission-inventory-system>.

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	2021 (tons)	% reduction 2010:2021
SO ₂	2,659,612	619,267	77%	106,965	83%
NO _x	690,195	150,891	78%	77,271	49%
Particulate Matter	174,250	66,303	62%	22,175	67%
Organic Compounds	169,515	36,284	79%	32,365	11%
Carbon Monoxide	329,700	243,864	26%	137,674	44%

	1982 (PPB)	2012 (PPB)	% reduction 1982:2012	2021 (PPB)	% reduction 2012:2021
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Highest 4 th -high eight-hour ozone concentration in Ohio	115	91	20.9%	75	17.6%
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	1983 (PPB)	2012 (PPB)	% reduction 1983:2012	2021 (PPB)	% reduction 2012:2021
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Highest annual average Sulphur dioxide (SO ₂) concentration in Ohio	24.07	5.25	78.2%	2.74	47.8%
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	2000 μ/m ³	2012 μ/m ³	% reduction 2000: 2012	2021 μ/m ³	% change 2012:2021
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Highest annual average Particulate Matter (2.5 μ or smaller) concentration in Ohio	19.7	12.31	37.5%	12.68	3.0% increase
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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.³



Toxic releases to the environment (pounds per year): multi-year trend for core chemicals at base years 1988 and 2001, all industries (not manufacturing specific)

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	104,341,351	1,043,905	11,538,544	29,291,941	188,489,950
1999	37,672,554	458,895	12,077,836	19,036,238	113,789,099
2018	14,536,025	161,579	7,167,366	11,447,225	55,591,601
2019	15,048,270	184,351	8,059,626	10,638,309	56,046,520
2020	13,063,650	193,396	5,208,933	8,900,372	45,328,012
2021	13,025,438	159,458	10,285,056	8,948,769	49,196,464
2022	12,414,287	143,930	4,958,410	6,933,589	44,359,942
% change 1988-2022	-88.10	-86.21	-57.03	-76.33	-76.47
% change 1999-2022	-67.05	-68.64	-58.95	-63.58	-61.02

<i>2001 core chemicals</i>					
2001	119,894,999	10,006,806	31,985,954	66,020,183	279,328,513
2018	36,543,783	6,842,435	17,338,122	26,222,761	114,905,291
2019	34,606,092	8,329,394	16,208,245	17,028,051	104,585,598
2020	30,860,070	7,496,071	12,013,728	14,434,555	92,081,284
2021	31,065,397	5,893,585	18,115,096	14,894,343	95,884,502
2022	30,277,580	5,783,061	12,000,640	12,479,252	88,262,015
% change 2001-2022	-74.75	-42.21	-62.48	-81.10	-68.40

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:

Manufacturers have contributed significantly to Ohio's reduction of toxic releases.





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**.

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