

OHIO

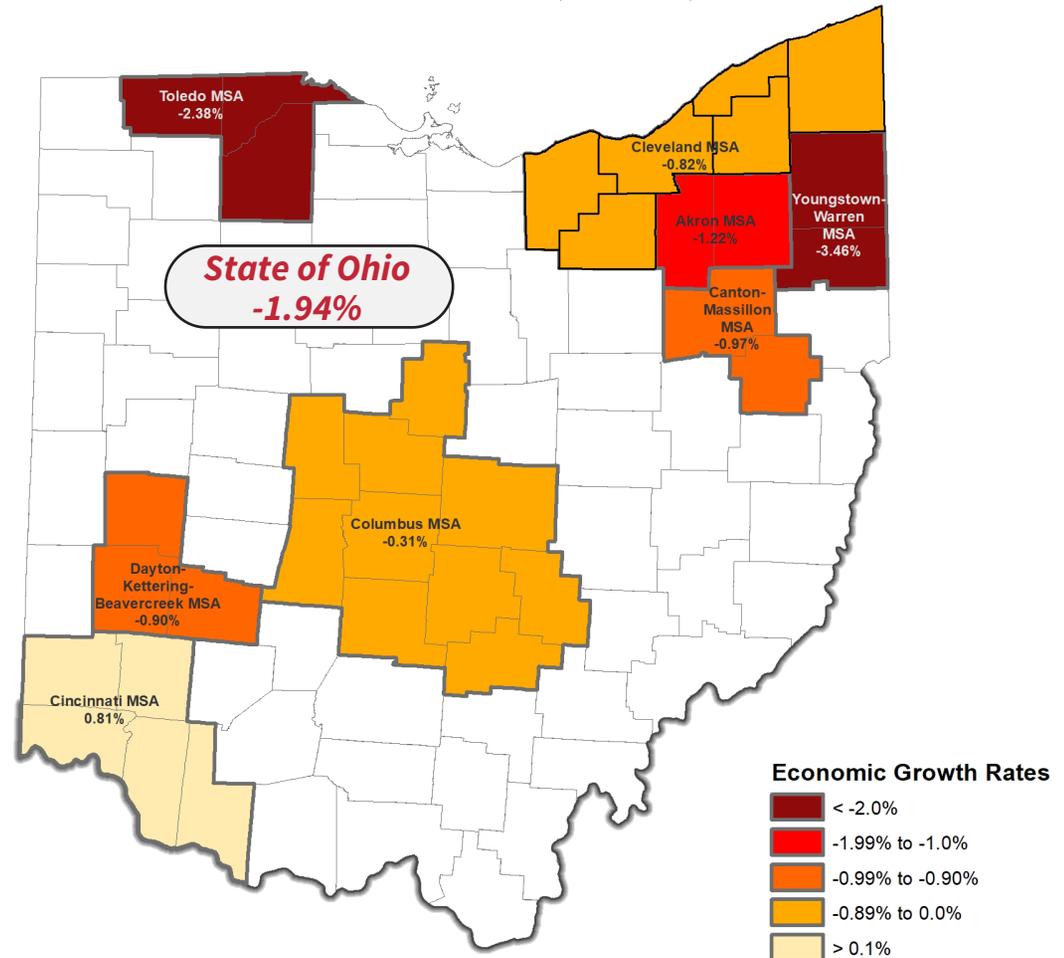
LEADING INDICATORS

AUGUST 2025

PREDICTED ANNUALIZED GROWTH RATES FOR OHIO AND SELECT METROPOLITAN STATISTICAL AREAS (MSAs)

The Ohio Leading Indicators report uses an annualized growth rate to forecast employment growth for Ohio and its eight largest MSAs for the next six months. The model examines seasonally adjusted total nonfarm employment. These data are seasonally adjusted by the leading indicators model and should not be compared to other seasonally adjusted data.

Total employment is predicted to decrease at an annual rate of -1.94% for the next six months in Ohio. The following MSAs are also predicted to decrease: the Youngstown-Warren MSA at -3.46%; the Toledo MSA at -2.38%; the Akron MSA at -1.22%; the Canton-Massillon MSA at -0.97%; the Dayton-Kettering-Beavercreek MSA at -0.90%; the Cleveland MSA at -0.82%; and the Columbus MSA at -0.31%. The Cincinnati MSA is expected to increase at 0.81% .

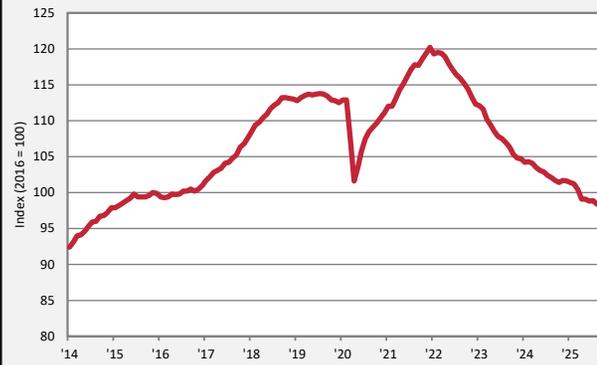


LEADING INDICATORS AND COMPONENTS

UNITED STATES

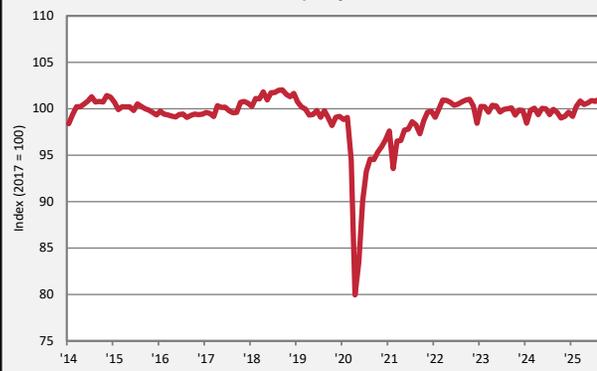
The U.S. Leading Economic Index decreased 0.5% from July and decreased 3.6% from August 2024. The U.S. industrial production in manufacturing increased 0.2% over the month and increased 1.1% over the year.

U.S. LEADING ECONOMIC INDEX
(Seasonally Adjusted)



Source: The Conference Board

U.S. INDUSTRIAL PRODUCTION: MANUFACTURING
(Seasonally Adjusted)

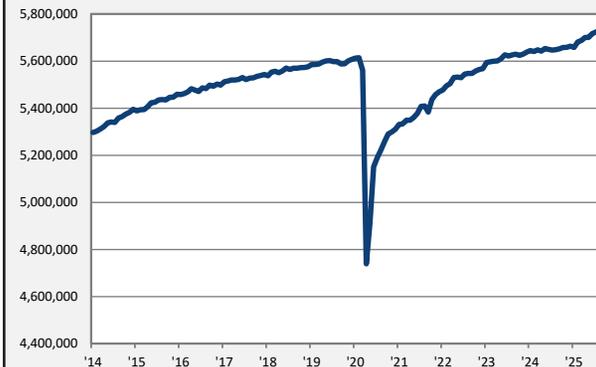


Source: Board of Governors of the Federal Reserve System

OHIO

Ohio's seasonally adjusted total nonfarm employment was 5,730,100 in August 2025, up 0.1% over the month and up 1.4% over the year. Initial unemployment claims increased 5.1% from July but decreased 7.1% from August 2024. Ohio's average weekly manufacturing hours decreased 2.4% from July. Housing permit valuations decreased 6.9% from the previous month but increased 4.4% from the previous year. *Building permit valuations for Ohio were higher than normal for October 2022, primarily driven by a larger-than-normal increase in the Akron MSA valuations.*

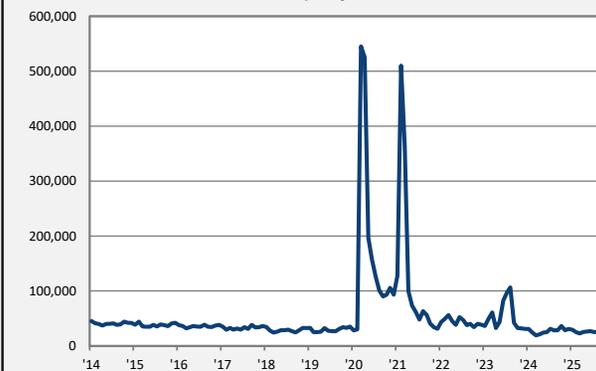
OHIO TOTAL NONFARM EMPLOYMENT
(Seasonally Adjusted)



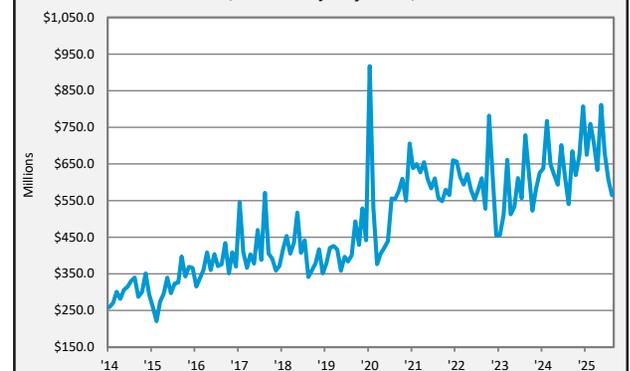
OHIO MANUFACTURING HOURS
(Seasonally Adjusted)



OHIO INITIAL CLAIMS FOR UNEMPLOYMENT INSURANCE
(Seasonally Adjusted)



OHIO VALUATION OF HOUSING PERMITS
(Seasonally Adjusted)



LEADING INDICATORS AND COMPONENTS

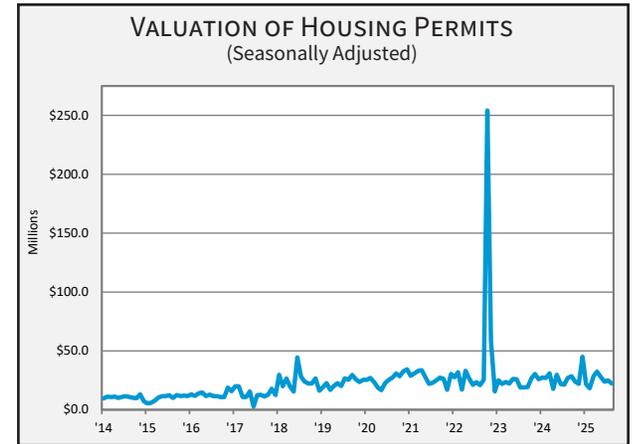
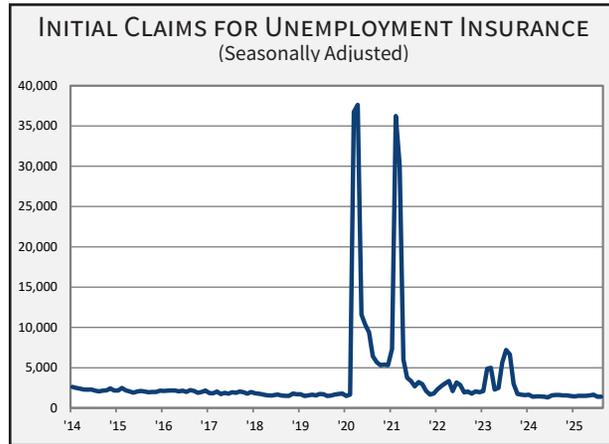
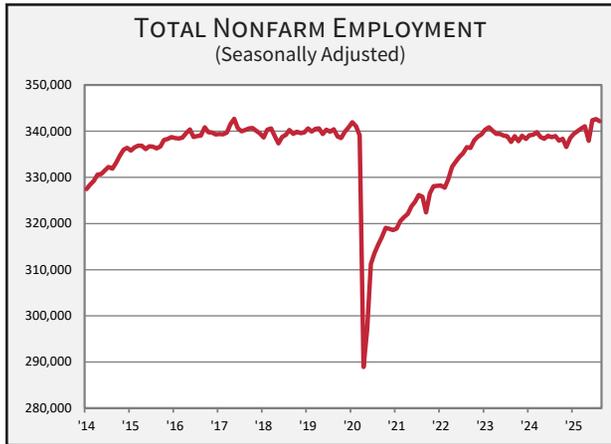
UNITED STATES	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
U.S. Leading Economic Index (2016 = 100) (Seasonally Adjusted)	102.1	101.7	101.4	101.7	101.6	101.4	101.2	100.4	99.1	99.1	98.8	98.9	98.4	-0.5%	-3.6%
U.S. Industrial Production: Manufacturing (2017 = 100) (Seasonally Adjusted)	99.9	99.6	99.0	99.2	99.6	99.2	100.3	100.8	100.4	100.6	100.9	100.8	101.0	0.2%	1.1%
OHIO															
OHIO	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	5,648.8	5,652.2	5,657.5	5,658.3	5,662.8	5,657.9	5,681.3	5,687.3	5,700.7	5,700.4	5,716.9	5,722.9	5,730.1	0.1%	1.4%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	28,245	28,653	36,228	28,461	31,053	29,218	25,210	22,880	25,492	26,366	26,999	24,971	26,243	5.1%	-7.1%
Average Weekly Hours for Manufacturing (Seasonally Adjusted)	41.6	41.3	41.0	41.2	41.1	41.2	41.1	41.0	41.0	41.1	40.5	41.4	40.4	-2.4%	-2.9%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$540.4	\$684.7	\$619.6	\$673.1	\$807.5	\$675.0	\$759.2	\$707.9	\$633.3	\$811.4	\$677.5	\$606.2	\$564.3	-6.9%	4.4%

AKRON METROPOLITAN STATISTICAL AREA

Portage and Summit Counties

The leading indicator for the Akron metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -1.22% for the next six months. Seasonally adjusted nonfarm payroll employment was 342,100 in August, down 0.1% from July.

The number of initial claims for unemployment insurance in August was 1,403 claims, 1.0% less than the number of claims filed last month and 13.6% less than last year. The valuation of permits for new housing construction in August was \$22.2 million, a 10.8% decrease from July and a 17.8% decrease from August 2024. *The Akron MSA reported an extremely high number of housing permits and valuations for October 2022, giving the permit data a stronger-than-normal effect on the October 2022 leading indicators for the Akron MSA.*



AKRON	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	339.0	338.0	338.4	336.6	338.5	339.4	340.0	340.6	341.1	337.9	342.4	342.6	342.1	-0.1%	0.9%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	1,625	1,623	1,567	1,565	1,478	1,446	1,503	1,517	1,503	1,559	1,653	1,418	1,403	-1.0%	-13.6%
Average Weekly Hours for Manufacturing* (Seasonally Adjusted)	41.6	41.3	41.0	41.2	41.1	41.2	41.1	41.0	41.0	41.1	40.5	41.4	40.4	-2.4%	-2.9%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$27.0	\$28.4	\$23.9	\$22.1	\$45.0	\$21.7	\$18.3	\$28.7	\$32.3	\$27.8	\$23.8	\$24.9	\$22.2	-10.8%	-17.8%

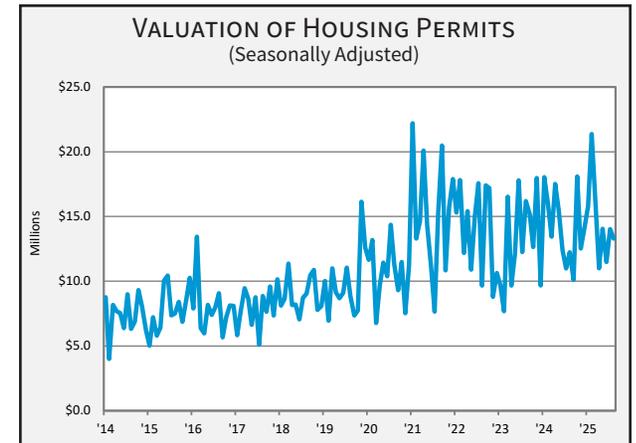
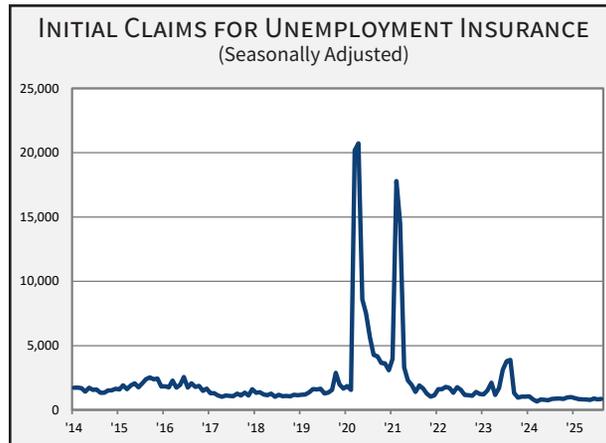
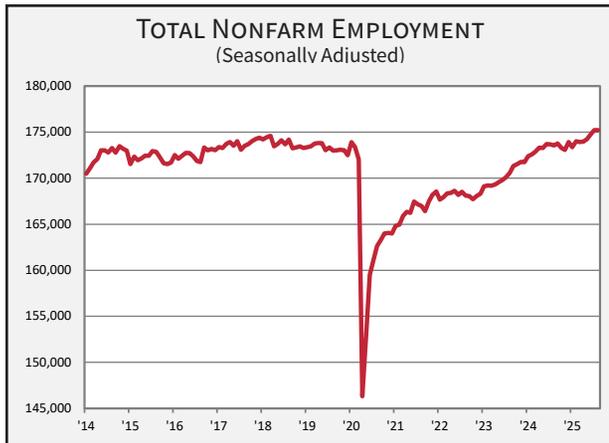
*In 2005, the BLS stopped producing manufacturing hours for Akron, Canton, Dayton, Toledo, and Youngstown. Starting in February 2005, data for the manufacturing hours for those MSAs are the state values.

CANTON-MASSILLON METROPOLITAN STATISTICAL AREA

Carroll and Stark Counties

The leading indicator for the Canton-Massillon metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -0.97% for the next six months. Seasonally adjusted nonfarm payroll employment was 175,200 in August, unchanged from July.

The number of initial claims for unemployment insurance in August was 852, up 5.1% from the number of claims filed last month but down 1.7% from last year. The valuation of permits for new housing construction in August was \$13.3 million, a 5.0% decrease from one month ago but a 9.0% increase from one year ago.



CANTON	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	173.5	173.8	173.3	173.1	173.9	173.4	174.0	173.9	174.0	174.2	174.8	175.2	175.2	0.0%	1.0%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	866	882	858	957	995	917	830	814	797	773	881	810	852	5.1%	-1.7%
Average Weekly Hours for Manufacturing* (Seasonally Adjusted)	41.6	41.3	41.0	41.2	41.1	41.2	41.1	41.0	41.0	41.1	40.5	41.4	40.4	-2.4%	-2.9%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$12.2	\$10.1	\$18.1	\$12.5	\$14.1	\$15.8	\$21.4	\$16.1	\$11.0	\$14.0	\$11.5	\$14.0	\$13.3	-5.0%	9.0%

*In 2005, the BLS stopped producing manufacturing hours for Akron, Canton, Dayton, Toledo, and Youngstown. Starting in February 2005, data for the manufacturing hours for those MSAs are the state values.

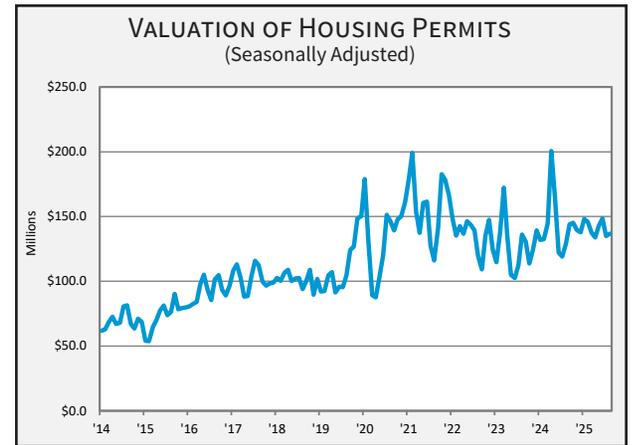
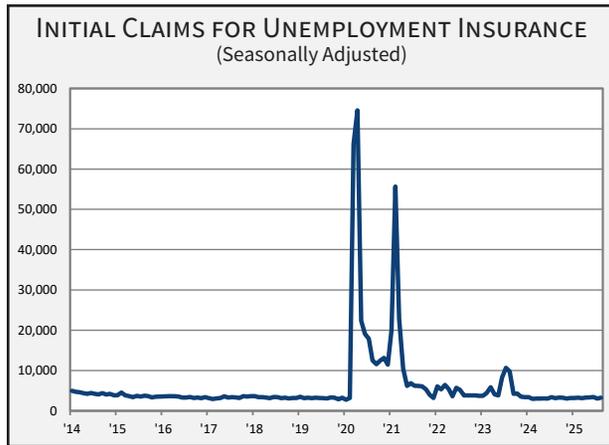
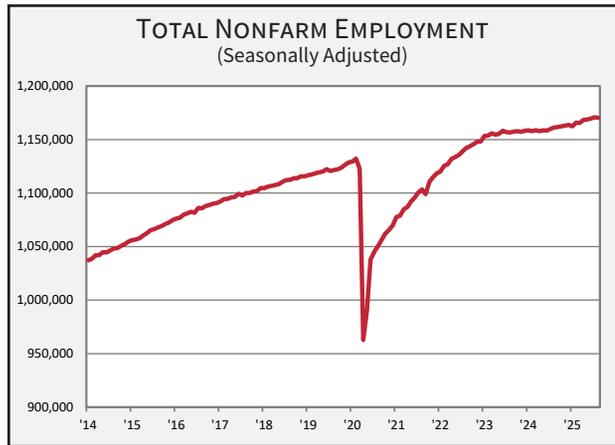
CINCINNATI METROPOLITAN STATISTICAL AREA

Brown, Butler, Clermont, Hamilton, and Warren Counties

This MSA also includes counties in Indiana and Kentucky (see page 12)

The leading indicator for the Cincinnati metropolitan area for August 2025 forecasts employment growth at an annual rate of 0.81% for the next six months. Seasonally adjusted nonfarm payroll employment was 1,170,400 in August, down 0.03% from July.

The number of initial claims for unemployment insurance in August was 3,252 claims, 6.9% more than last month and 3.3% more than last year. Average weekly manufacturing hours decreased to 39.7 in August. The valuation of permits for new housing construction in August was \$136.7 million, a 1.3% increase from July and a 6.2% increase from August 2024.



CINCINNATI	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	1,161.2	1,161.8	1,162.3	1,163.1	1,163.7	1,162.3	1,165.7	1,165.4	1,168.4	1,168.8	1,169.4	1,170.7	1,170.4	-0.03%	0.8%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	3,148	3,288	3,241	3,045	3,183	3,214	3,262	3,159	3,310	3,346	3,468	3,042	3,252	6.9%	3.3%
Average Weekly Hours for Manufacturing (Seasonally Adjusted)	35.2	36.0	36.0	36.8	38.1	37.0	39.1	40.4	40.7	40.8	41.1	40.9	39.7	-2.9%	12.8%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$128.7	\$143.9	\$145.2	\$139.6	\$137.8	\$148.1	\$145.9	\$137.5	\$133.8	\$142.7	\$148.4	\$134.9	\$136.7	1.3%	6.2%

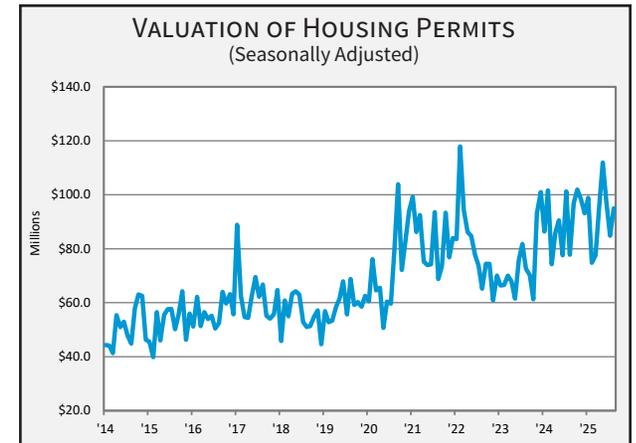
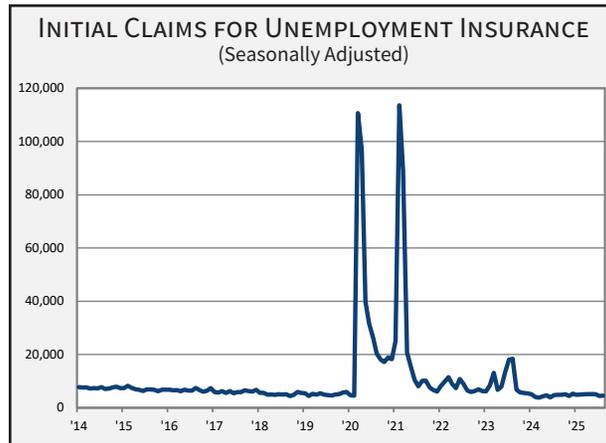
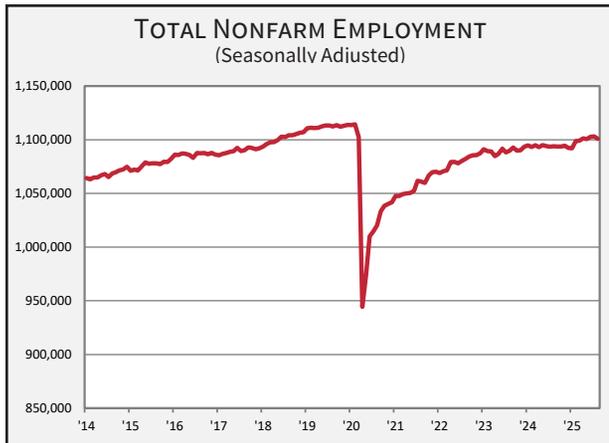
CLEVELAND METROPOLITAN STATISTICAL AREA

Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina Counties



The leading indicator for the Cleveland metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -0.82% for the next six months. Seasonally adjusted nonfarm payroll employment was 1,100,900 in August, down 0.19% from July.

The number of initial claims for unemployment insurance in August was 4,576, up 3.2% from the number of claims filed last month but down 5.4% from last year. Average weekly manufacturing hours decreased to 41.8 in August. The valuation of permits for new housing construction in August was \$95.0 million, an 11.9% increase from July and a 22.1% increase from August 2024.



CLEVELAND	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	1,093.8	1,093.7	1,093.7	1,094.5	1,092.3	1,092.0	1,098.7	1,099.2	1,101.3	1,100.4	1,102.7	1,103.0	1,100.9	-0.19%	0.6%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	4,835	4,868	5,080	4,503	5,341	4,898	5,032	5,122	5,194	5,193	5,095	4,435	4,576	3.2%	-5.4%
Average Weekly Hours for Manufacturing (Seasonally Adjusted)	40.6	40.2	40.4	41.4	41.4	41.1	42.7	42.8	43.4	42.5	40.7	42.2	41.8	-0.9%	3.0%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$77.8	\$96.9	\$102.0	\$98.4	\$93.2	\$98.9	\$74.8	\$77.6	\$95.5	\$112.0	\$96.9	\$84.9	\$95.0	11.9%	22.1%

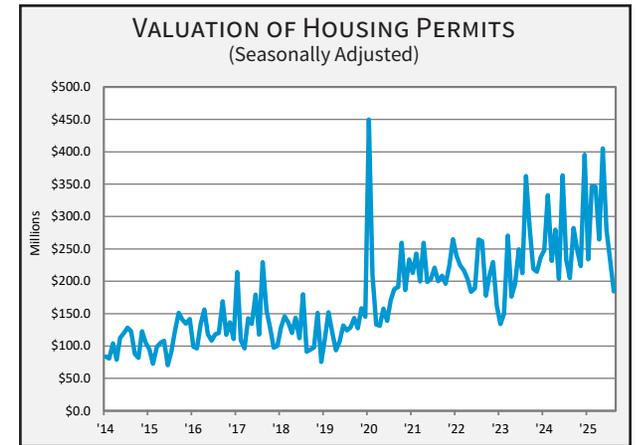
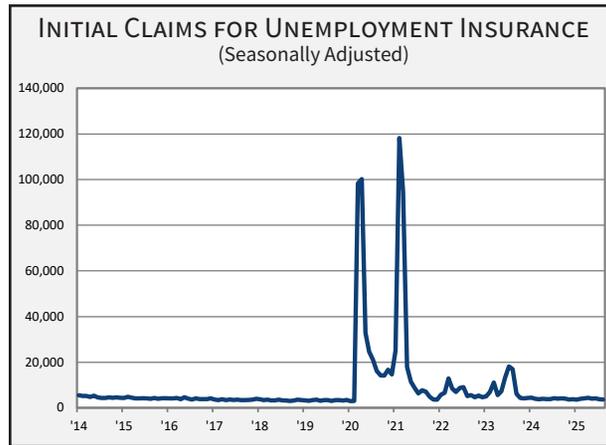
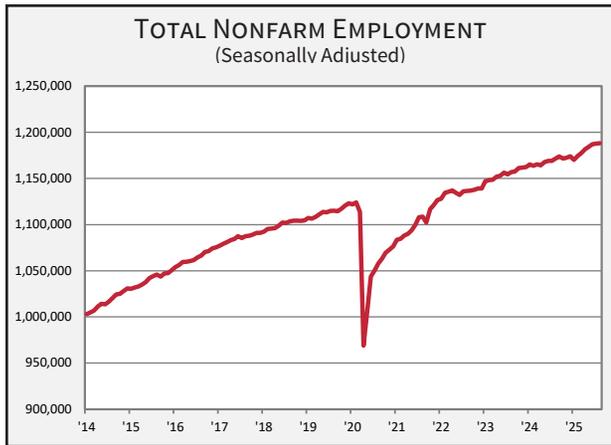
COLUMBUS METROPOLITAN STATISTICAL AREA

Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union Counties



The leading indicator for the Columbus metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -0.31% for the next six months. Seasonally adjusted nonfarm payroll employment was 1,188,100 in August, a 0.03% increase from July.

The number of initial claims for unemployment insurance in August was 3,635, down 2.5% from the number of claims filed last month and down 9.1% from last year. Average weekly manufacturing hours decreased to 35.2 in August. The valuation of permits for new housing construction in August was \$184.4 million, 21.0% less than July and 10.0% less than August 2024.



COLUMBUS	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	1,171.4	1,173.7	1,171.4	1,172.4	1,174.0	1,170.0	1,174.1	1,177.5	1,181.5	1,184.2	1,187.0	1,187.7	1,188.1	0.03%	1.4%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	4,000	4,117	4,000	3,662	3,792	3,527	3,946	4,111	4,429	4,039	4,147	3,727	3,635	-2.5%	-9.1%
Average Weekly Hours for Manufacturing (Seasonally Adjusted)	30.6	32.4	31.9	33.8	34.4	36.3	37.3	35.7	34.0	34.8	37.2	36.4	35.2	-3.3%	15.0%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$205.0	\$282.1	\$248.8	\$223.4	\$395.4	\$234.1	\$346.7	\$345.9	\$264.6	\$405.2	\$279.1	\$233.4	\$184.4	-21.0%	-10.0%

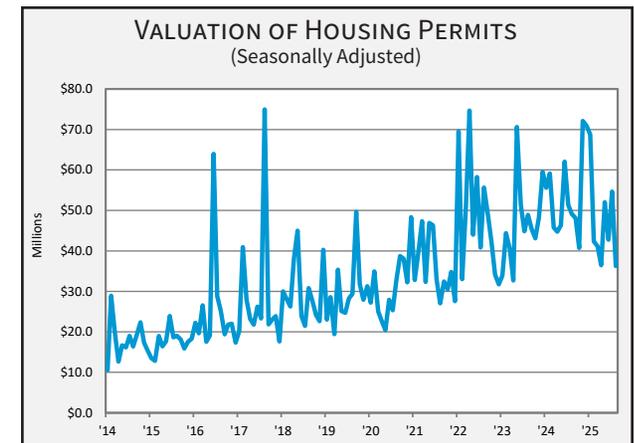
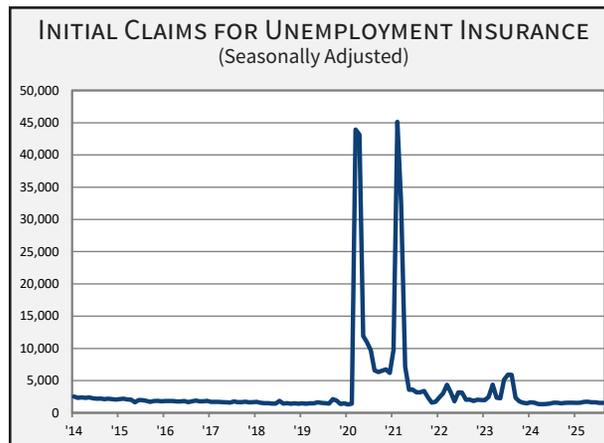
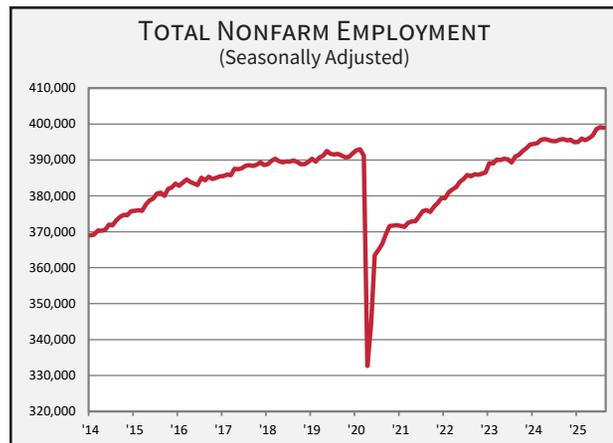
DAYTON-KETTERING-BEAVERCREEK METROPOLITAN STATISTICAL AREA

Greene, Miami, and Montgomery Counties



The leading indicator for the Dayton-Kettering-Beavercreek metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -0.90% for the next six months. Seasonally adjusted nonfarm payroll employment was 399,000 in August, down 0.1% from July.

The number of initial claims for unemployment insurance in August was 1,524, down 1.7% from the number of claims filed last month and down 3.1% from last year. The valuation of permits for new housing construction in August was \$36.2 million, a 33.8% decrease from July and a 26.3% decrease from August 2024.



DAYTON-KETTERING-BEAVERCREEK	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	395.6	395.8	395.4	395.6	394.9	395.0	395.9	395.5	396.0	396.8	398.6	399.2	399.0	-0.1%	0.9%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	1,573	1,463	1,545	1,554	1,557	1,547	1,575	1,710	1,746	1,631	1,632	1,550	1,524	-1.7%	-3.1%
Average Weekly Hours for Manufacturing* (Seasonally Adjusted)	41.6	41.3	41.0	41.2	41.1	41.2	41.1	41.0	41.0	41.1	40.5	41.4	40.4	-2.4%	-2.9%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$49.1	\$48.1	\$40.7	\$72.1	\$70.9	\$68.7	\$42.3	\$41.1	\$36.4	\$52.0	\$42.7	\$54.7	\$36.2	-33.8%	-26.3%

*In 2005, the BLS stopped producing manufacturing hours for Akron, Canton, Dayton, Toledo, and Youngstown. Starting in February 2005, data for the manufacturing hours for those MSAs are the state values.

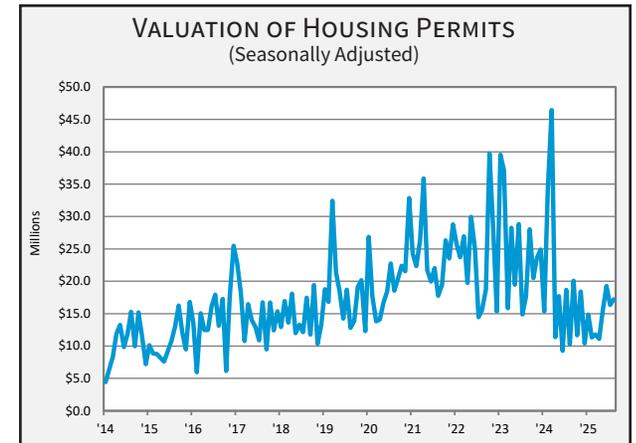
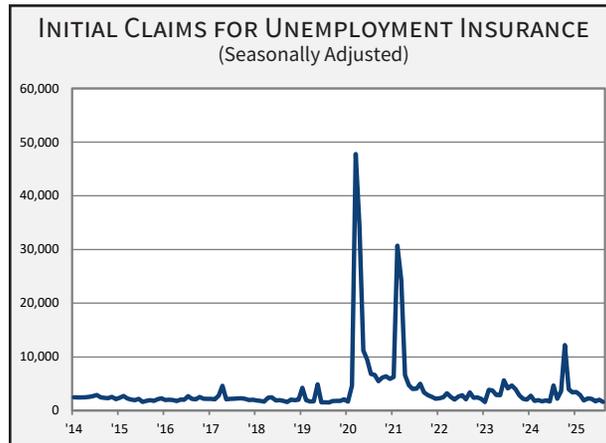
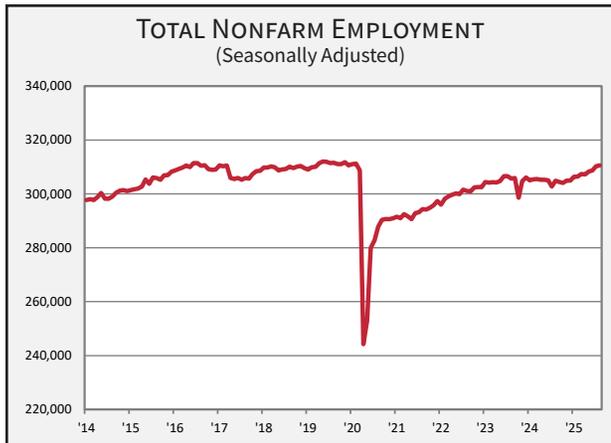
TOLEDO METROPOLITAN STATISTICAL AREA

Fulton, Lucas, and Wood Counties



The leading indicator for the Toledo metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -2.38% for the next six months. Seasonally adjusted nonfarm payroll employment was 310,600 in August, up 0.1% from July.

The number of initial claims for unemployment insurance in August was 1,609, down 20.2% from the number of claims filed last month and down 27.0% from last year. The valuation of permits for new housing construction in August was \$17.2 million, a 5.5% increase from July and a 67.0% increase from August 2024.



TOLEDO	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	304.9	304.5	304.1	304.9	304.9	306.3	306.4	307.3	307.2	308.3	308.7	310.2	310.6	0.1%	1.9%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	2,204	3,633	12,178	3,945	3,377	3,473	2,910	1,902	2,248	2,162	1,745	2,016	1,609	-20.2%	-27.0%
Average Weekly Hours for Manufacturing* (Seasonally Adjusted)	41.6	41.3	41.0	41.2	41.1	41.2	41.1	41.0	41.0	41.1	40.5	41.4	40.4	-2.4%	-2.9%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$10.3	\$20.1	\$11.7	\$18.4	\$10.4	\$14.9	\$11.3	\$11.8	\$11.1	\$15.5	\$19.3	\$16.3	\$17.2	5.5%	67.0%

*In 2005, the BLS stopped producing manufacturing hours for Akron, Canton, Dayton, Toledo, and Youngstown. Starting in February 2005, data for the manufacturing hours for those MSAs are the state values.

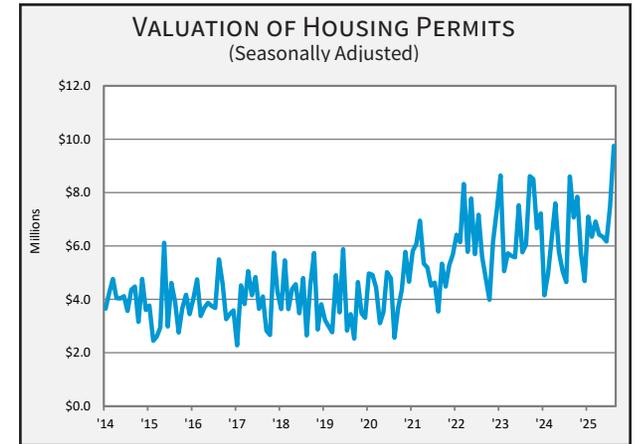
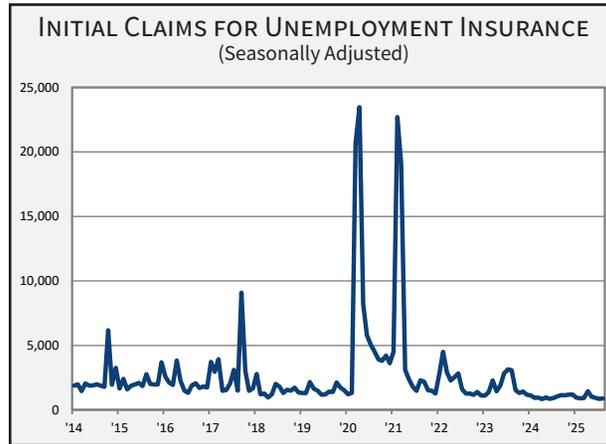
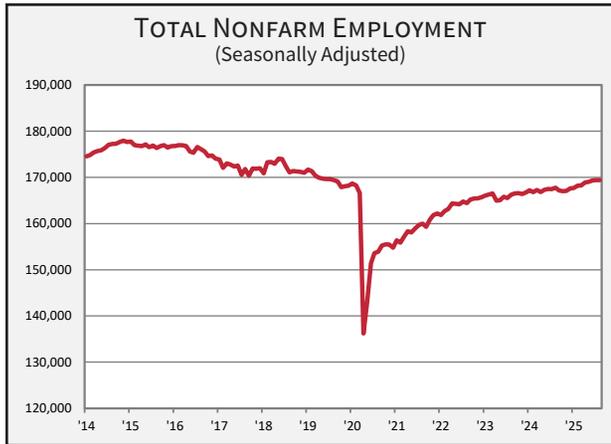
YOUNGSTOWN-WARREN METROPOLITAN STATISTICAL AREA

Mahoning and Trumbull Counties



The leading indicator for the Youngstown-Warren metropolitan area for August 2025 forecasts negative employment growth at an annual rate of -3.46% for the next six months. Seasonally adjusted nonfarm payroll employment was 169,400 in August, unchanged from July.

The number of initial claims for unemployment insurance in August was 885, up 4.5% from the number of claims filed last month but down 15.4% from last year. The valuation of permits for new housing construction in August was \$9.8 million, a 30.7% increase from July and a 14.0% increase from August 2024.



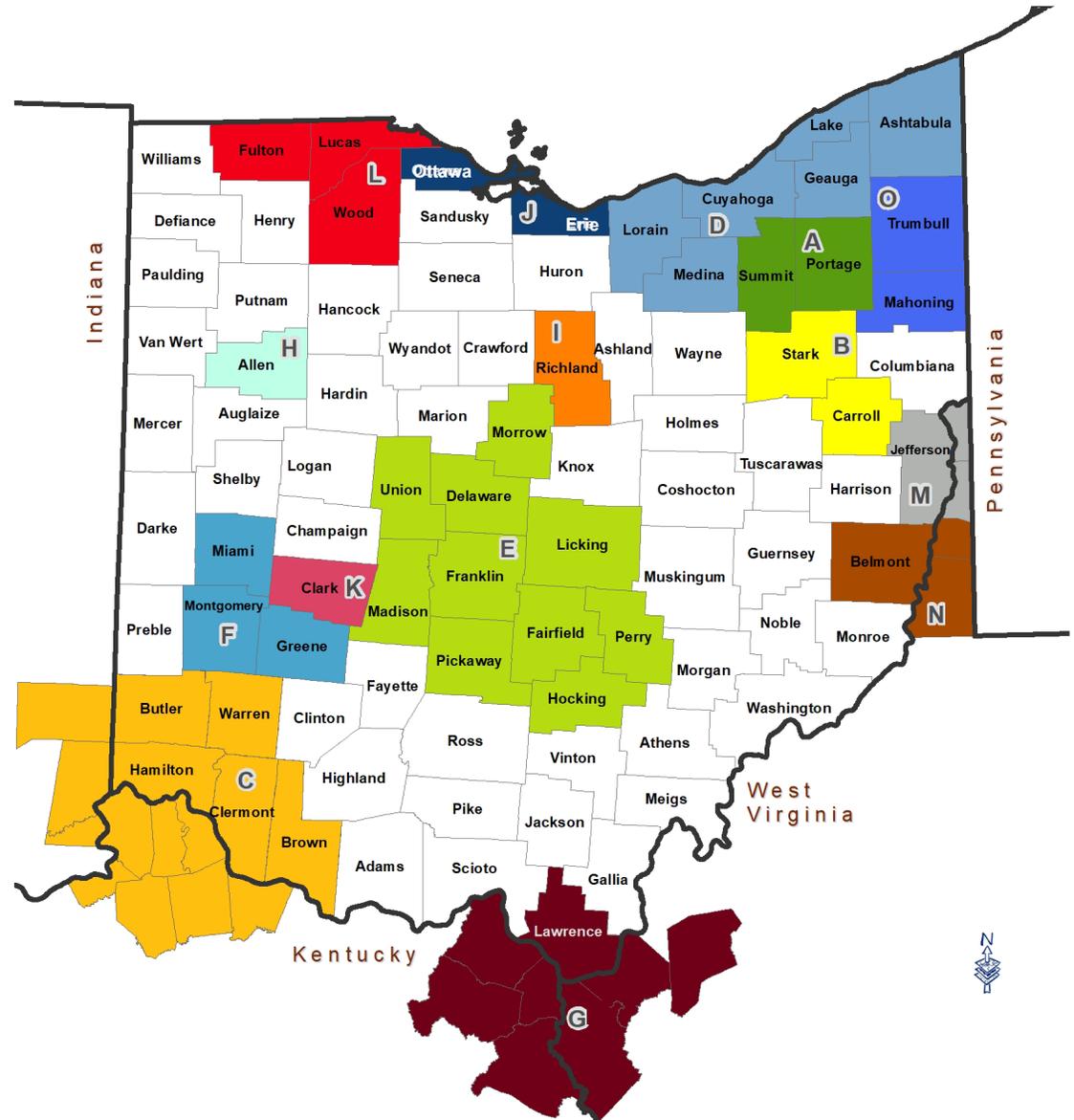
YOUNGSTOWN-WARREN	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Percent Change	
														Month	Year
Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)	167.8	167.2	167.0	167.1	167.6	167.7	168.2	168.3	168.9	169.0	169.3	169.4	169.4	0.0%	1.0%
Initial Claims for Unemployment Insurance (Seasonally Adjusted)	1,046	1,151	1,133	1,172	1,195	948	903	918	1,442	1,012	935	846	885	4.5%	-15.4%
Average Weekly Hours for Manufacturing* (Seasonally Adjusted)	41.6	41.3	41.0	41.2	41.1	41.2	41.1	41.0	41.0	41.1	40.5	41.4	40.4	-2.4%	-2.9%
Valuation of Housing Permits (Seasonally Adjusted in Millions)	\$8.6	\$7.1	\$7.8	\$5.7	\$4.7	\$7.1	\$6.3	\$6.9	\$6.4	\$6.4	\$6.2	\$7.5	\$9.8	30.7%	14.0%

*In 2005, the BLS stopped producing manufacturing hours for Akron, Canton, Dayton, Toledo, and Youngstown. Starting in February 2005, data for the manufacturing hours for those MSAs are the state values.

OHIO METROPOLITAN STATISTICAL AREAS (MSAs)

Developed by the U.S. Office of Management and Budget, Metropolitan Statistical Areas are integrated geographic regions comprised of at least one city or urban area (with a population of at least 50,000) and adjacent communities. Metropolitan Statistical Areas make it possible for federal statistical agencies to utilize the same boundaries when publishing statistical data. These are definitions based on analysis of 2020 Census data.

- A. Akron: Portage and Summit counties
- B. Canton-Massillon: Carroll and Stark counties
- C. Cincinnati: Brown, Butler, Clermont, Hamilton, and Warren counties in Ohio; Dearborn, Franklin, and Ohio counties in Indiana; Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton counties in Kentucky
- D. Cleveland: Ashtabula, Cuyahoga, Geauga, Lake, Lorain, and Medina counties
- E. Columbus: Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union counties
- F. Dayton-Kettering-Beavercreek: Greene, Miami, and Montgomery counties
- G. Huntington-Ashland: Lawrence County in Ohio; Boyd, Carter, Greenup, and Lawrence counties in Kentucky; Cabell, Putnam, and Wayne counties in West Virginia
- H. Lima: Allen County
- I. Mansfield: Richland County
- J. Sandusky: Erie and Ottawa counties
- K. Springfield: Clark County
- L. Toledo: Fulton, Lucas, and Wood counties
- M. Weirton-Steubenville: Jefferson County in Ohio; Brooke and Hancock counties in West Virginia
- N. Wheeling: Belmont County in Ohio; Marshall and Ohio counties in West Virginia
- O. Youngstown-Warren: Mahoning and Trumbull counties



TECHNICAL NOTES

The leading economic indicators for Ohio and the eight largest Metropolitan Statistical Areas (MSAs) are designed to anticipate changes in area economies. The Gross National Product is the accepted measure of economic activity at the national level, but there are no monthly measures of the dollar value of goods and services at the state and metropolitan levels. Instead, the Ohio leading indicators forecast the growth rates of total nonfarm employment for each area.

The leading indicators are generated with vector auto regression models using six inputs. The inputs are statistically significant predictors of Ohio total nonfarm growth rates at the 90 percent confidence level.

The six inputs are:

- U.S. Leading Indicator (Source: The Conference Board, <https://www.conference-board.org/data/bcicountry.cfm?cid=1>)
- U.S. Industrial Production in the Manufacturing Sector (Source: Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/IPMAN>)
- Unemployment Insurance Claims (Source: Ohio Department of Job and Family Services, <https://ohiolmi.com/home/UIclaims>)
- Housing Valuations (Source: U.S. Census Bureau, <https://www.census.gov/construction/bps/>)
- Manufacturing Hours (Source: Current Employment Statistics program, <https://ohiolmi.com/portals/206/CES/LMR.pdf>)
- Job Openings and Labor Turnover Survey (Source: U.S. Bureau of Labor Statistics, [Job Openings and Labor Turnover Survey Home Page \(bls.gov\)](https://www.bls.gov/jolts/))

The models forecast growth rates for six time-horizons (one to six months); the published forecast is an annualized average of those forecasts. The models use rolling 120-month windows of data. Each month, a new month of data is added (the most current available) and the oldest month is dropped. This approach allows for possible structural changes in the economy over time. All data series are converted monthly growth rates using the first difference of the natural logarithms multiplied by 100. Seasonal adjustments are made within the models using the U.S. Census' X-13ARIMA-SEATS program; seasonally adjusted data from the leading indicator models will not match data from original sources.

The forecasting models for the Ohio leading indicators are 'real time' processes that do not build on previous forecasts. For this reason, the Ohio leading indicators should not be used as a time series. The models use data as they are available each month, including revisions to older data. For example, monthly data releases may be preliminary and later revised, other series are revised during annual 'benchmarking' and occasionally a series may be reindexed to a new time point. Some of these revisions could be substantial.

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- Partner with the workforce and economic development community.
- Develop and deploy new information solution tools and systems for the workforce and economic development community.
- Provide products and services that are customer- and demand-driven.
- Be known as an important and reliable source for information solutions that support workforce development goals and outcomes.

This periodical is published under the direction of Bureau Chief, Nick Wallace. For further information, visit OhioLMI.com or call the Ohio Bureau of Labor Market Information at (614) 752-9494.

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