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.

Ohio’s forecasted June 2019 annualized employment growth rate is 1.35 percent. The following MSAs are also predicted to grow: the Akron MSA at 0.65 percent; the Dayton MSA at 0.79 percent; the Cleveland-Elyria MSA at 1.09 percent; the Canton-Massillon MSA at 1.49 percent; the Toledo MSA at 1.73 percent; the Cincinnati MSA at 1.96 percent; and the Columbus MSA at 2.02 percent. The Youngstown-Warren-Boardman MSA has a negative annual growth rate projected at -0.39 percent.
United States

The U.S. Composite of Leading Indicators decreased 0.3 percent from May but increased 1.4 percent over the year. The U.S. industrial production in manufacturing increased 0.4 percent over the month and 0.5 percent from June 2018.

Ohio

Ohio’s seasonally adjusted total nonfarm employment was 5,604,300 in June 2019, up 0.3 percent over the month and 0.8 percent over the year. Initial unemployment claims decreased 11.9 percent from May and 4.7 percent over the year. Ohio’s average manufacturing hours remained at 41.3 hours per week in June. Housing permit valuation increased 12.0 percent from the previous month but decreased 2.4 percent from one year ago.
# Leading Indicators and Components

## United States

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</thead>
<tbody>
<tr>
<td>U.S. Composite Index of Leading Indicators (2016 = 100) (Seasonally Adjusted)</td>
<td>110.0</td>
<td>110.4</td>
<td>110.9</td>
<td>111.5</td>
<td>111.4</td>
<td>111.5</td>
<td>111.3</td>
<td>111.3</td>
<td>111.5</td>
<td>111.7</td>
<td>111.8</td>
<td>111.8</td>
<td>111.5</td>
<td>-0.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>U.S. Industrial Production: Manufacturing (2012 = 100) (Seasonally Adjusted)</td>
<td>105.8</td>
<td>106.2</td>
<td>106.7</td>
<td>106.7</td>
<td>106.6</td>
<td>106.8</td>
<td>107.5</td>
<td>106.9</td>
<td>106.3</td>
<td>105.6</td>
<td>105.9</td>
<td>106.3</td>
<td></td>
<td>0.4%</td>
<td>0.5%</td>
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## Ohio

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</thead>
<tbody>
<tr>
<td>Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)</td>
<td>5,559.4</td>
<td>5,565.7</td>
<td>5,568.5</td>
<td>5,570.8</td>
<td>5,568.8</td>
<td>5,563.1</td>
<td>5,573.0</td>
<td>5,589.0</td>
<td>5,590.7</td>
<td>5,590.5</td>
<td>5,591.1</td>
<td>5,590.1</td>
<td>5,604.3</td>
<td></td>
<td>0.3%</td>
</tr>
<tr>
<td>Initial Claims for Unemployment Insurance (Seasonally Adjusted)</td>
<td>30,139</td>
<td>29,252</td>
<td>27,197</td>
<td>24,712</td>
<td>27,364</td>
<td>29,649</td>
<td>28,544</td>
<td>30,354</td>
<td>27,807</td>
<td>29,599</td>
<td>29,365</td>
<td>32,614</td>
<td>28,723</td>
<td></td>
<td>-11.9%</td>
</tr>
<tr>
<td>Average Weekly Hours for Manufacturing (Seasonally Adjusted)</td>
<td>42.2</td>
<td>42.1</td>
<td>42.1</td>
<td>42.6</td>
<td>42.6</td>
<td>42.8</td>
<td>42.9</td>
<td>42.4</td>
<td>41.9</td>
<td>41.5</td>
<td>41.5</td>
<td>41.3</td>
<td>41.3</td>
<td></td>
<td>0.0%</td>
</tr>
<tr>
<td>Valuation of Housing Permits (Seasonally Adjusted in Millions)</td>
<td>$393.2</td>
<td>$425.0</td>
<td>$334.7</td>
<td>$362.5</td>
<td>$385.5</td>
<td>$420.9</td>
<td>$371.7</td>
<td>$395.5</td>
<td>$463.1</td>
<td>$430.5</td>
<td>$404.2</td>
<td>$342.7</td>
<td>$383.8</td>
<td></td>
<td>12.0%</td>
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</table>
The leading indicator for the Akron metropolitan area for June 2019 forecasts employment growth at an annual rate of 0.65 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 341,700 in June, up 0.5 percent from May.

The number of initial claims for unemployment insurance in June was 1,806 claims, more than the number of claims filed last month and last year. The valuation of permits for new housing construction in June was $19.2 million, an 11.9 percent decrease from May and a 55.2 percent decrease from one year ago.
The leading indicator for the Canton-Massillon metropolitan area for June 2019 forecasts employment growth at an annual rate of 1.49 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 175,800 in June, up 0.2 percent from May.

The number of initial claims for unemployment insurance in June was 1,664 claims, 4.0 percent more than the number of claims filed last month and 60.9 percent more than last year. The valuation of permits for new housing construction in June was $8.8 million, a 2.3 percent increase from May and a 27.5 percent increase from one year ago.
Ohio Leading Indicators • June 2019

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 June 2019 forecasts employment growth at an annual rate of 1.96 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 1,132,700 in June, an increase of 0.5 percent from May.

The number of initial claims for unemployment insurance in June was 3,148 claims, 7.8 percent less than the number of claims filed last month and 9.2 percent less than last year. The valuation of permits for new housing construction in June was $94.0 million, an 18.2 percent increase from May but a 4.1 percent decrease from one year ago.
The leading indicator for the Cleveland-Elyria metropolitan area for June 2019 forecasts employment growth at an annual rate of 1.09 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 1,078,700 in June, a 0.1 percent decrease from May.

The number of initial claims for unemployment insurance in June was 5,339 claims, 1.2 percent less than the number of claims filed last month and 0.1 percent less than last year. The valuation of permits for new housing construction in June was $65.6 million, an 11.4 percent increase from May and a 7.7 percent increase from one year ago.
The leading indicator for the Columbus metropolitan area for June 2019 forecasts employment growth at an annual rate of 2.02 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 1,111,300 in June, unchanged from May.

The number of initial claims for unemployment insurance in June was 3,343 claims, 5.6 percent more than the number of claims filed last month but 6.0 percent less than last year. The valuation of permits for new housing construction in June was $122.0 million, 9.4 percent more than May but 0.8 percent less than one year ago.
The leading indicator for the Dayton metropolitan area for June 2019 forecasts employment growth at an annual rate of 0.79 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 390,700 in June, unchanged from May.

The number of initial claims for unemployment insurance in June was 1,640 claims, 3.9 percent less than the number of claims filed last month and 10.2 percent more than last year. The valuation of permits for new housing construction in June was $23.8 million, a 10.5 percent decrease from May but a 3.5 percent increase from June 2018.

<table>
<thead>
<tr>
<th>Dayton Metropolitan Statistical Area</th>
<th>Greene, Miami, and Montgomery Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>The leading indicator for the Dayton metropolitan area for June 2019 forecasts employment growth at an annual rate of 0.79 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 390,700 in June, unchanged from May. The number of initial claims for unemployment insurance in June was 1,640 claims, 3.9 percent less than the number of claims filed last month and 10.2 percent more than last year. The valuation of permits for new housing construction in June was $23.8 million, a 10.5 percent decrease from May but a 3.5 percent increase from June 2018.</td>
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<table>
<thead>
<tr>
<th>Total Nonfarm Employment</th>
<th>Initial Claims for Unemployment Insurance</th>
<th>Valuation of Housing Permits</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Seasonally Adjusted)</td>
<td>(Seasonally Adjusted)</td>
<td>(Seasonally Adjusted)</td>
</tr>
<tr>
<td>350,000 - 395,000</td>
<td>0 - 8,000</td>
<td>$0 - $80,000</td>
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</tr>
</thead>
<tbody>
<tr>
<td>Nonagricultural Wage and Salary Employment (Seasonally Adjusted in Thousands)</td>
<td>389.8</td>
<td>390.0</td>
<td>390.4</td>
<td>390.3</td>
<td>389.7</td>
<td>389.7</td>
<td>389.5</td>
<td>390.0</td>
<td>391.2</td>
<td>390.2</td>
<td>390.2</td>
<td>390.7</td>
<td>0.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Initial Claims for Unemployment Insurance (Seasonally Adjusted)</td>
<td>1,487</td>
<td>1,594</td>
<td>1,476</td>
<td>1,501</td>
<td>1,429</td>
<td>1,490</td>
<td>1,446</td>
<td>1,476</td>
<td>1,483</td>
<td>1,564</td>
<td>1,530</td>
<td>1,707</td>
<td>1,640</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Valuation of Housing Permits (Seasonally Adjusted in Millions)</td>
<td>$23.0</td>
<td>$19.8</td>
<td>$29.1</td>
<td>$28.2</td>
<td>$25.5</td>
<td>$22.1</td>
<td>$42.9</td>
<td>$24.4</td>
<td>$27.6</td>
<td>$19.9</td>
<td>$34.6</td>
<td>$26.6</td>
<td>$23.8</td>
<td>-10.5%</td>
</tr>
<tr>
<td>Average Weekly Hours for Manufacturing* (Seasonally Adjusted)</td>
<td>42.2</td>
<td>42.1</td>
<td>42.1</td>
<td>42.6</td>
<td>42.6</td>
<td>42.8</td>
<td>42.9</td>
<td>42.4</td>
<td>41.9</td>
<td>41.5</td>
<td>41.5</td>
<td>41.3</td>
<td>41.3</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

*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.
The leading indicator for the Toledo metropolitan area for June 2019 forecasts employment growth at an annual rate of 1.73 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 310,900 in June 2019, a 0.4 percent increase from May.

The number of initial claims for unemployment insurance in June was 1,595 claims, 68.6 percent less than the number of claims filed last month and 17.3 percent less than last year. The valuation of permits for new housing construction in June was $14.6 million, a 24.7 percent decrease from May and an 11.5 percent increase from one year ago.
The leading indicator for the Youngstown-Warren-Boardman metropolitan area for June 2019 forecasts negative employment growth at an annual rate of -0.39 percent for the next six months. Seasonally adjusted nonfarm payroll employment was 218,100 in June, a 0.6 percent increase from May.

The number of initial claims for unemployment insurance in June was 1,343 claims, less than the number of claims filed last month and last year. The valuation of permits for new housing construction in June was $6.0 million, a 66.7 percent increase from May and one year ago.
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 2010 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, Ohio, and Union counties in Indiana; Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton counties in Kentucky
D. Cleveland-Elyria: Cuyahoga, Geauga, Lake, Lorain, and Medina counties
E. Columbus: Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union counties
F. Dayton: Greene, Miami, and Montgomery counties
G. Huntington-Ashland: Lawrence County in Ohio; Boyd and Greenup counties in Kentucky; Cabell, Lincoln, Putnam, and Wayne counties in West Virginia
H. Lima: Allen County
I. Mansfield: Richland County
J. Springfield: Clark County
K. Toledo: Fulton, Lucas, and Wood counties
L. Weirton-Steubenville: Jefferson County in Ohio; Brooke and Hancock counties in West Virginia
M. Wheeling: Belmont County in Ohio; Marshall and Ohio counties in West Virginia
N. Youngstown-Warren-Boardman: Mahoning and Trumbull counties in Ohio; Mercer County in Pennsylvania
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 five inputs. The inputs are statistically significant predictors of Ohio total nonfarm growth rates at the 90 percent confidence level.

The five inputs are:

- U.S. Industrial Production in the Manufacturing Sector (Source: Federal Reserve Bank of St. Louis, [https://fred.stlouisfed.org/series/IPMAN](https://fred.stlouisfed.org/series/IPMAN))
- Unemployment Insurance Claims (Source: Ohio Department of Job and Family Services, [http://ohiolmi.com/uc/UCReports.htm](http://ohiolmi.com/uc/UCReports.htm))
- Housing Valuations (Source: U.S. Census Bureau, [https://www.census.gov/construction/bps/](https://www.census.gov/construction/bps/))

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 new time point. Some of these revisions could be substantial.
Business Principles for Workforce Development

- 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.