



# Industry Spotlight

## Manufacturing

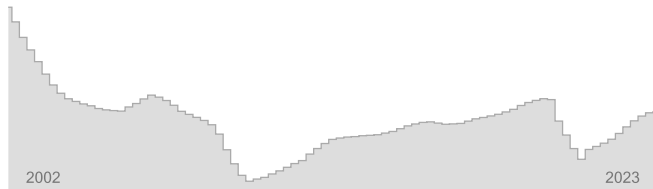
Reading, PA MSA



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Manufacturing  
Reading, PA MSA – 2023Q3

EMPLOYMENT



**31,799**

Regional employment / 13,186,537 in the nation

WAGES



**\$70,781**

Avg Wages per Worker / \$81,387 in the nation

**0.5%** ↑

Avg Ann % Change Last 10 Years / **+0.7%** in the US



**17.4%**

% of Total Employment / **8.0%** in the US

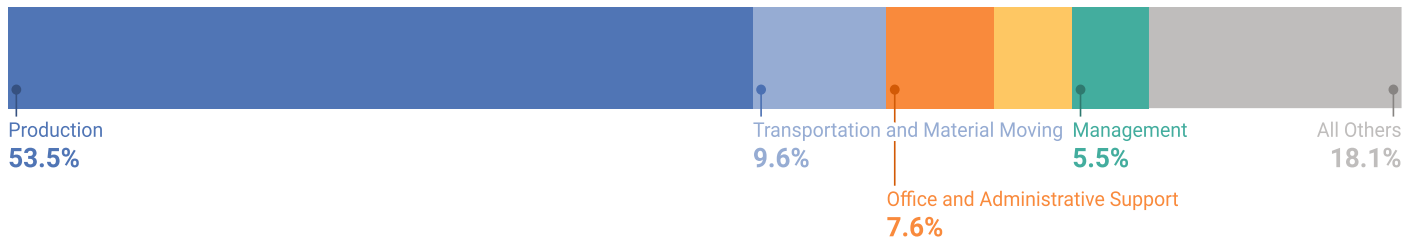


**2.7%** ↑

Avg Ann % Change Last 10 Years / **+3.0%** in the US

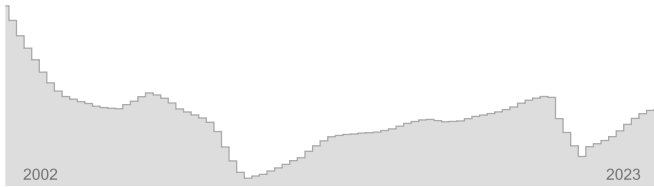


TOP OCCUPATION GROUPS

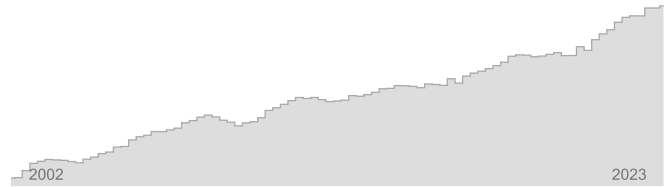



# Industry Snapshot


## EMPLOYMENT



## WAGES

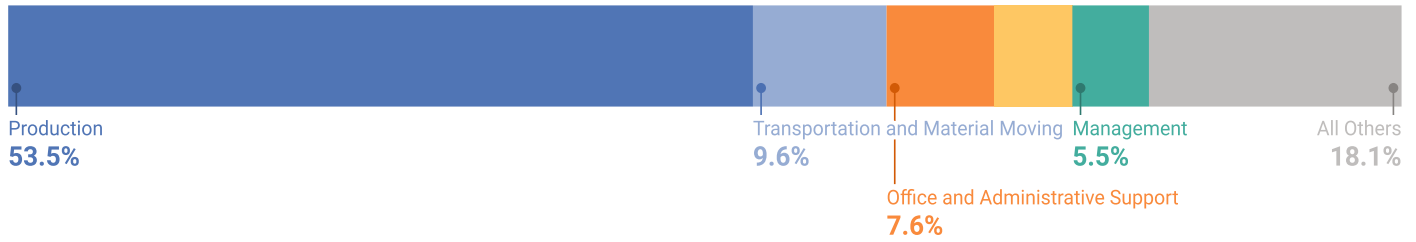


2-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
<b>Manufacturing</b>	<b>31,799</b>	<b>\$70,781</b>	<b>2.16</b>		<b>3,170</b>	<b>-0.1%</b>


 Employment is one of the broadest and most timely measures of a region's economy. Fluctuations in the number of jobs shed light on the health of an industry. A growing employment base creates more opportunities for regional residents and helps a region grow its population.

 Since wages and salaries generally compose the majority of a household's income, the annual average wages of a region affect its average household income, housing market, quality of life, and other socioeconomic indicators.

# Staffing Pattern



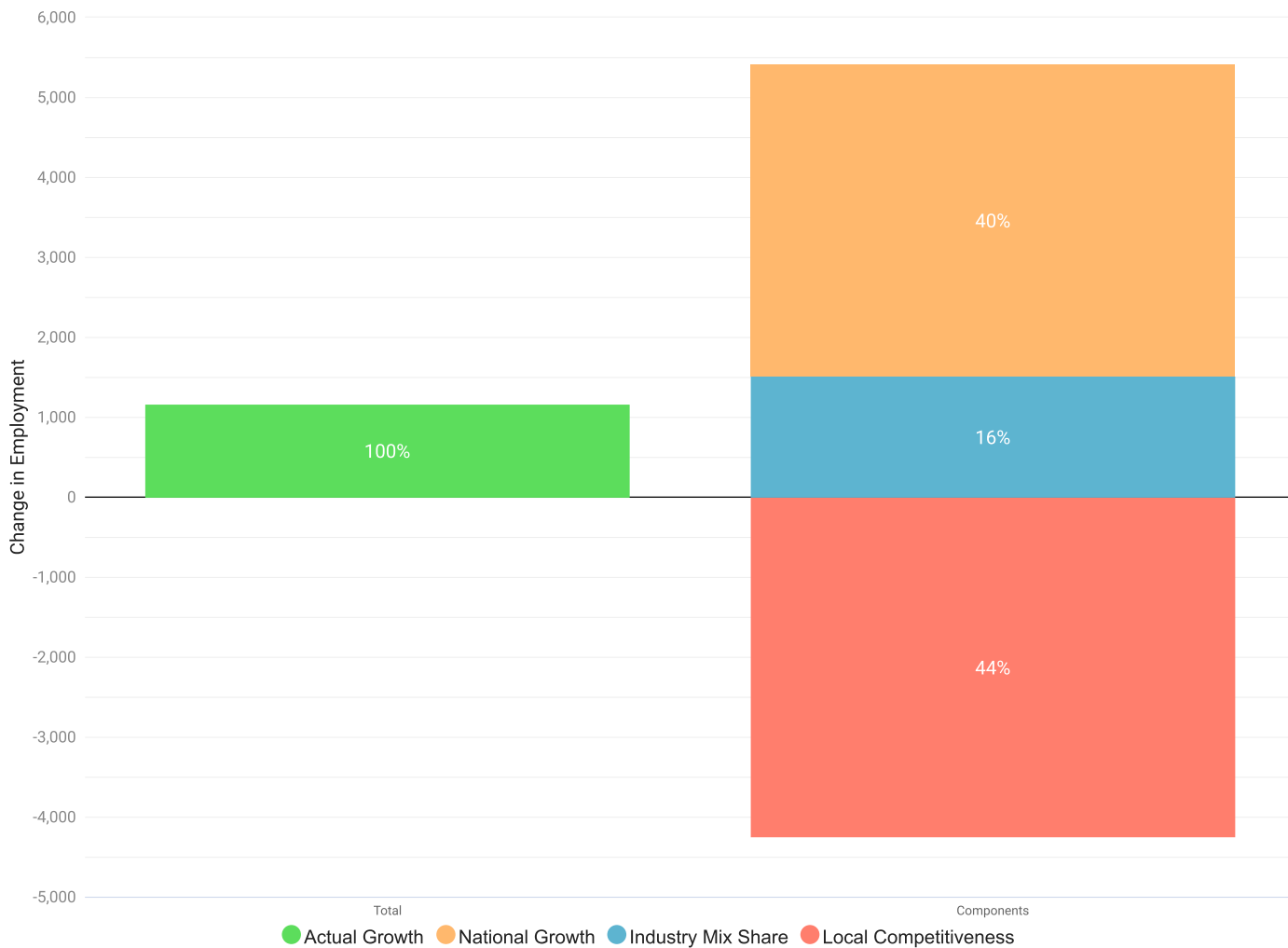
6-digit Occupation	Empl	Avg Ann Wages	Annual Demand
Team Assemblers	2,296	\$41,800	243
Electrical, Electronic, and Electromechanical Equipment Assemblers, Except Coil Winders, Tapers, and Finishers	2,210	\$41,600	308
First-Line Supervisors of Production and Operating Workers	1,209	\$70,600	108
Laborers and Freight, Stock, and Material Movers, Hand	1,149	\$43,000	144
Inspectors, Testers, Sorters, Samplers, and Weighers	966	\$47,200	100
Welders, Cutters, Solderers, and Brazers	697	\$49,700	64
Industrial Machinery Mechanics	675	\$63,500	61
Packaging and Filling Machine Operators and Tenders	661	\$40,600	68
General and Operations Managers	647	\$145,000	51
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	643	\$46,100	68
Remaining Component Occupations	20,621	\$63,400	1,935
<b>Total</b>	<b>31,774</b>		

 The mix of occupations points to the ability of a region to support an industry and its flexibility to adapt to future demand. Industry wages are a component of the cost of labor for regional employers.



# Drivers of Employment Growth

Over the ten years ending 2022, employment in Manufacturing for the Reading, PA MSA added 1,166 jobs. After adjusting for national growth during this period and industry mix share, the part of this employment change due to local competitiveness was a loss of 4,249 jobs—meaning this industry was less competitive than its national counterpart during this period.

Drivers of Employment Growth for Reading, PA MSA



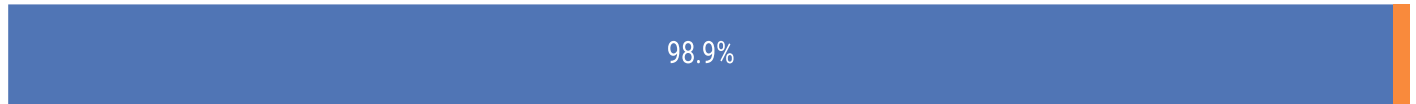
Source: JobsEQ® Data as of 2022Q4

-  Shift-share analysis sheds light on the factors that drive regional employment growth in an industry. A positive change in local competitiveness indicates advantages that may be due to factors such as superior technology, management, and labor pool, etc.
-  National growth is due to the overall growth or contraction in the national economy. Industry mix share is the growth attributable to the specific industries examined (based on national industry growth patterns and the industry mix of the region).

# Employment Distribution by Type

The table below shows the employment mix by ownership type for Manufacturing for the Reading, PA MSA. Four of these ownership types — federal, state, and local government and the private sector — together constitute “Covered Employment” (employment covered by the Unemployment Insurance programs of the United States and reported via the Quarterly Census of Employment and Wages).

“Self-Employment” refers to unincorporated self-employment and represents workers whose primary job is self-employment (that is, these data do not include workers whose primary job is a wage-and-salary position that is supplemented with self-employment).



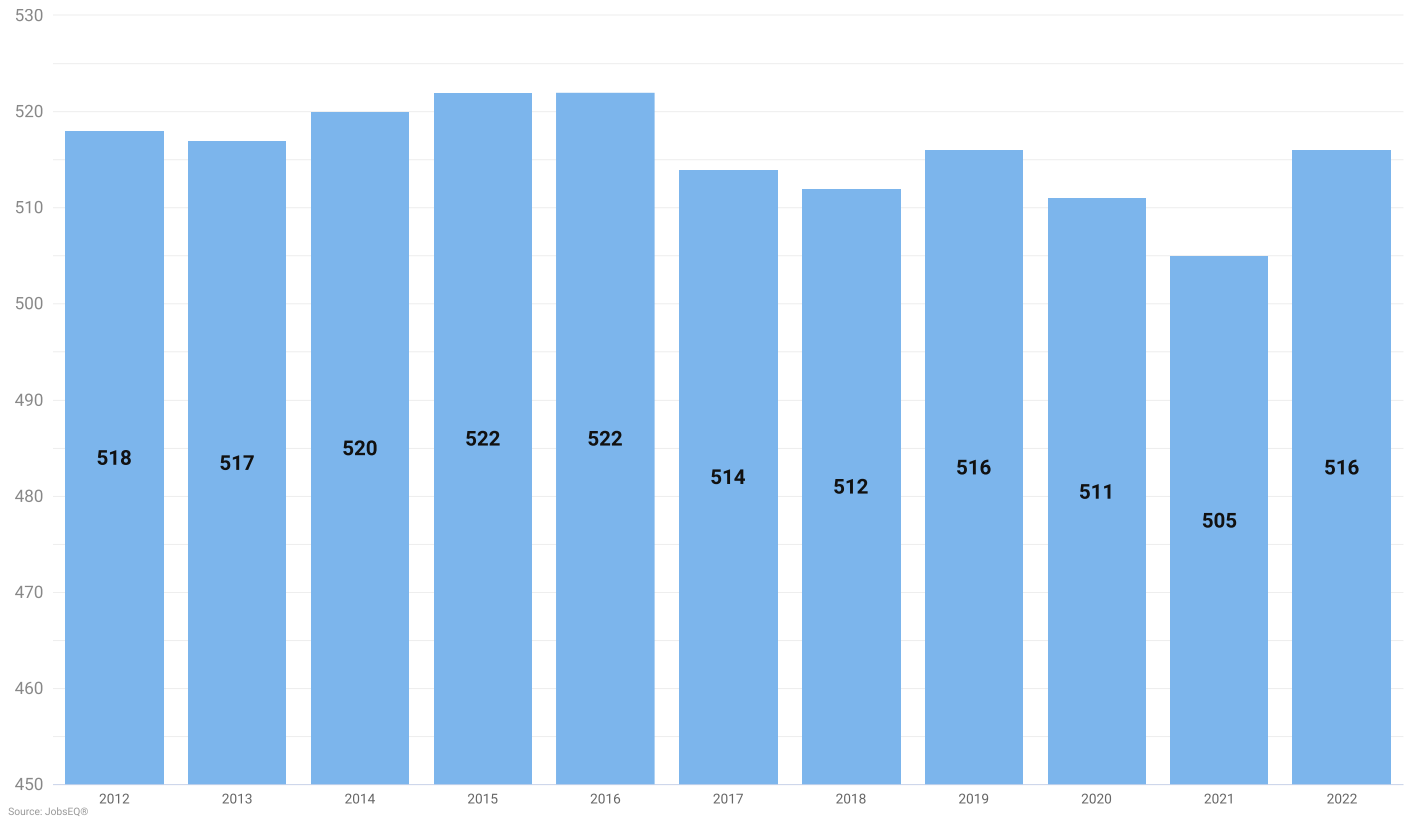
	Empl	%
Private	31,436	98.9%
Self-Employment	363	1.1%
Other Non-Covered	0	0.0%

Source: JobsEQ®


 Strong entrepreneurial activity is indicative of growing industries. Using self-employment as a proxy for entrepreneurs, a higher share of self-employed individuals within a regional industry points to future growth.

# Establishments

In 2022, there were 516 Manufacturing establishments in the Reading, PA MSA (per covered employment establishment counts), a decrease from 518 establishments ten years earlier in 2012.



Source: JobsEQ®

 New business formations are an important source of job creation in a regional economy, spurring innovation and competition, and driving productivity growth. Establishment data can provide an indicator of growth in businesses by counting each single location (such as a factory or a store) where business activity takes place, and with at least one employee.



# GDP & Productivity

In 2022, Manufacturing produced \$5.4 billion in GDP for the Reading, PA MSA.

GDP: Indexed 2012 = 100



## 23.3 %

Industry Share of Total GDP /  
**10.8 %** in the nation



## 3.9 % ↑

Avg Ann % Change Last 10 Yrs /  
**3.5 %** in the nation



## \$580k

Output per Worker /  
**\$651k** in the nation



💡 Gross domestic product (GDP) is the most comprehensive measure of regional economic activity, and an industry's contribution to GDP is an important indicator of regional industry strength. It is a measure of total value-added to a regional economy in the form of labor income, proprietor's income, and business profits, among others. GDP values shown on this page are nominal GDP data.

💡 Growth in productivity (output per worker) leads to increases in wealth and higher average standards of living in a region.

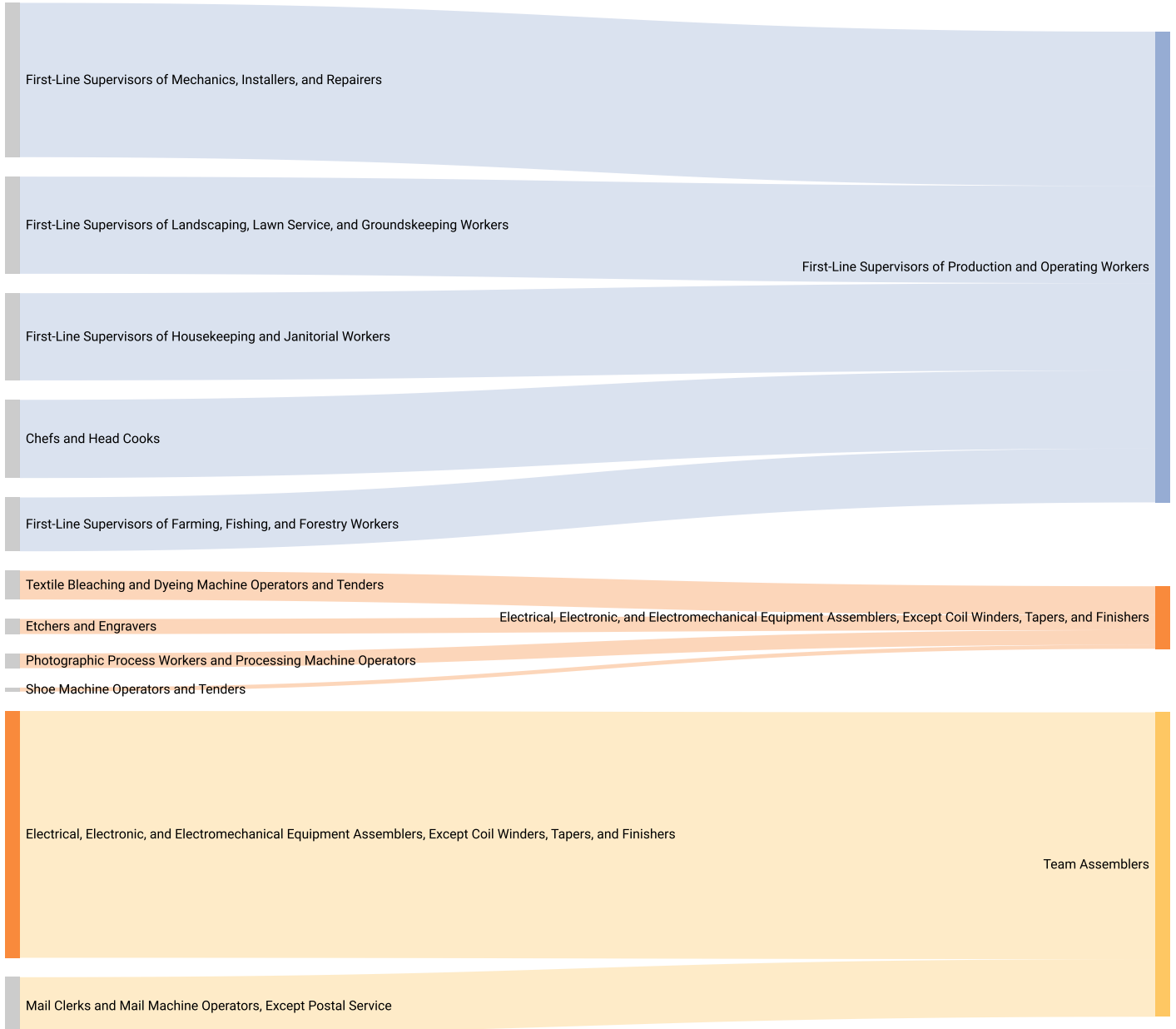
# Supply Chain: Top Suppliers


As of 2023Q3, Manufacturing in the Reading, PA MSA are estimated to make \$8.8 billion in annual purchases from suppliers in the United States with about 31% or \$2.7 billion of these purchases being made from businesses located in the Reading, PA MSA.

<b>2-digit Supplier Industries</b>	<b>Purchases from In-Region (\$M)</b>	<b>Purchases from Out-of-Region (\$M)</b>
Manufacturing	\$1,944.3	\$2,758.5
Mining, Quarrying, and Oil and Gas Extraction	\$2.0	\$680.1
Professional, Scientific, and Technical Services	\$93.8	\$494.0
Agriculture, Forestry, Fishing and Hunting	\$139.8	\$340.0
Real Estate and Rental and Leasing	\$54.1	\$364.1
Remaining Supplier Industries	\$515.1	\$1,425.0
<b>Total</b>	<b>\$2,749.1</b>	<b>\$6,061.7</b>

 Supplier-buyer networks can indicate local linkages between industries, regional capacity to support growth in an industry, and potential leakage of sales out of the region.

# Sector Strategy Pathways





 The graphics on this page illustrate relationships and potential movement (from left to right) between occupations that share similar skill sets. Developing career pathways as a strategy promotes industry employment growth and workforce engagement.

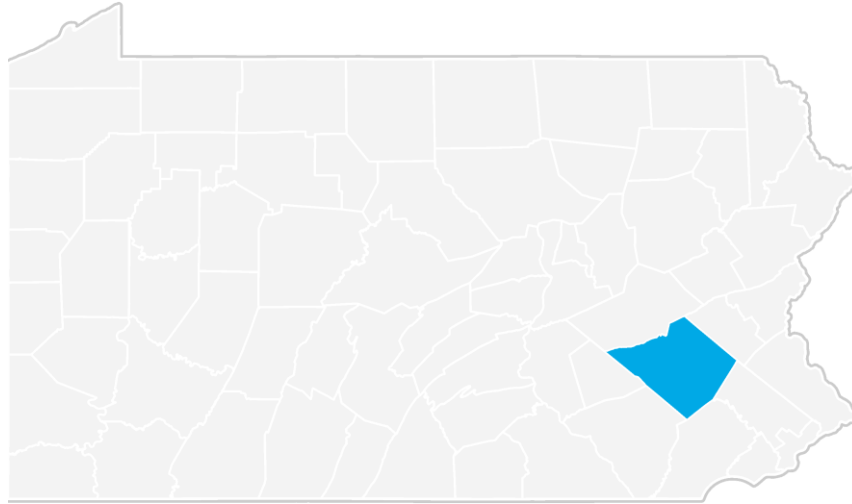
# Postsecondary Programs Linked to Manufacturing

Program	Awards
<b>Albright College</b>	
Fashion/Apparel Design	15
<b>Berks Career &amp; Technology Center</b>	
Welding Technology/Welder	8
<b>Kutztown University of Pennsylvania</b>	
Business Administration and Management, General	240
Chemistry, General	12
Commercial and Advertising Art	58
Digital Arts	30
<b>Pennsylvania State University-Penn State Berks</b>	
Electromechanical/Electromechanical Engineering Technology/Technician	39
Mechanical Engineering	38
<b>Reading Area Community College</b>	
Computer/Computer Systems Technology/Technician	22
Electrical and Power Transmission Installation/Installer, General	14

Source: [JobsEQ®](#)

-  The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.
-  Among postsecondary programs at schools located in the Reading, PA MSA, the sampling above identifies those most linked to occupations relevant to Manufacturing. For a complete list see JobsEQ®, <http://www.chmuraecon.com/jobseq>

# Reading, PA MSA Regional Map



# Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2023Q3 and are based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts.
- Occupation employment is as of 2023Q3 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OEWS data. Wages by occupation are as of 2023, utilizing BLS OEWS data and imputed by Chmura.
- GDP is derived from BEA data and imputations by Chmura. Productivity (output per worker) is calculated by Chmura using industry employment and wages as well as GDP and BLS output data. Supply chain modeling including purchases by industry are developed by Chmura.
- Postsecondary awards are per the NCES and are for the 2021-2022 academic year.
- Establishment counts are per the BLS QCEW data.
- Figures may not sum due to rounding.

# Region Definition

**Reading, PA MSA is defined as the following counties:**

Berks County, Pennsylvania

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# FAQ

## **What is (LQ) location quotient?**

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

## **What is annual demand?**

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.

## **What is the difference between industry wages and occupation wages?**

Industry wages and occupation wages are estimated via separate data sets, often the time periods being reported do not align, and wages are defined slightly differently in the two systems (for example, certain bonuses are included in the industry wages but not the occupation wages). It is therefore common that estimates of the average industry wages and average occupation wages in a region do not match exactly.