



The Workforce Partners
OF METROPOLITAN CHICAGO



JOBS **eQ**

Manufacturing

Metro Chicago

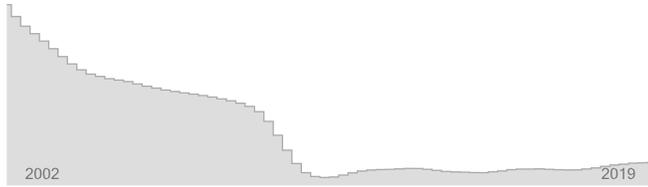


Industry Spotlight

Industry Snapshot	4
Staffing Pattern	5
Geographic Distribution	6
Drivers of Employment Growth	7
Employment Distribution by Type	8
Establishments	9
GDP & Productivity.....	10
Supply Chain: Top Suppliers.....	11
Sector Strategy Pathways	12
Postsecondary Programs Linked to Manufacturing.....	12
Region Definition.....	13
Data Notes.....	15
FAQ.....	15

Manufacturing
Metro Chicago – 2019Q2

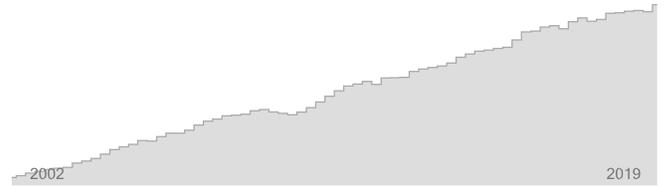
EMPLOYMENT



385,151

Regional employment / **13,066,266** in the nation

WAGES



\$75,829

Avg Wages per Worker / **\$68,823** in the nation

-0.6% ↓

Avg Ann % Change Last 10
+0.1% in the U.S.



8.5%

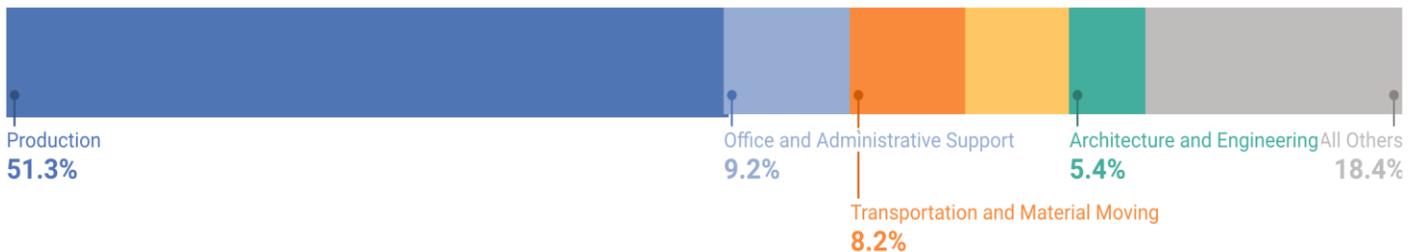
% of Total Employment / Avg Ann % Change Last 10 Years /
8.3% in the U.S. Years / +2.5% in the U.S.



3.0% ↑



TOP OCCUPATION GROUPS



TOP INDUSTRIES

Avg Ann % Change in Employment, Last 10 Years

-0.7% ↓

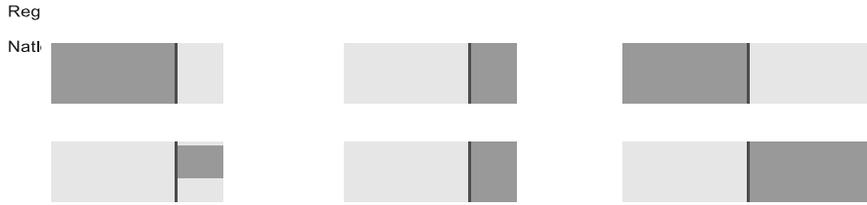
1.2% ↑

-0.2% ↓

Region
Nation

Region
Nation

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 3



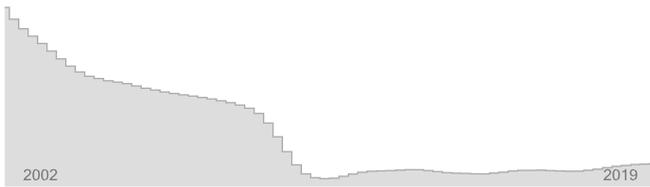
Fabricated Metal Product Manufacturing

Food Manufacturing

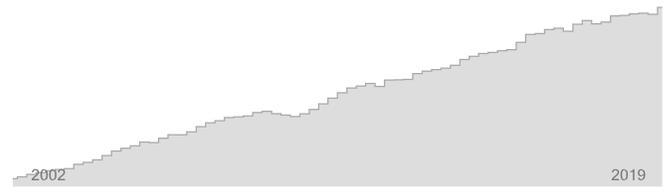
Chemical Manufacturing

Industry Snapshot

EMPLOYMENT



WAGES



3-Digit Industry	Empl	Avg Ann Wages	LQ	5yr History	Annual Demand	Forecast Ann Growth
Fabricated Metal Product Manufacturing	61,968	\$63,997	1.42		5,743	-1.0%
Food Manufacturing	53,305	\$60,009	1.12		5,986	-0.7%
Chemical Manufacturing	37,833	\$130,517	1.55		3,269	-1.2%
Machinery Manufacturing	35,145	\$76,119	1.08		3,037	-1.3%
Plastics and Rubber Products Manufacturing	30,620	\$68,769	1.44		2,838	-1.4%
Computer and Electronic Product Manufacturing	24,525	\$88,467	0.79		1,682	-2.0%
Miscellaneous Manufacturing	23,899	\$87,472	1.24		2,185	-1.0%
Printing and Related Support Activities	20,651	\$67,027	1.60		1,741	-2.4%
Transportation Equipment Manufacturing	18,496	\$74,804	0.36		1,699	-0.8%
Electrical Equipment, Appliance, and Component Manufacturing	18,361	\$75,610	1.57		1,627	-1.4%
Remaining Component Industries	60,349	\$59,739	0.73		5,519	-1.7%
Manufacturing	385,151	\$75,829	1.02		35,239	-1.2%

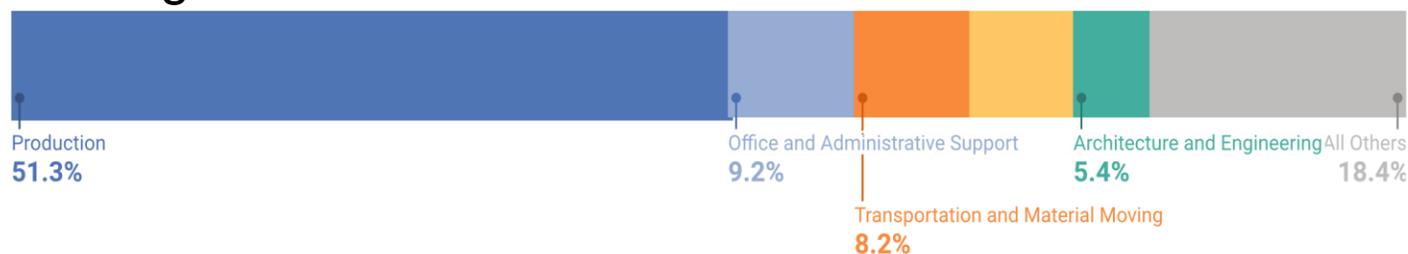
💡 Employment is one of the broadest and most timely measures of a region's economy. Fluctuations in the number of jobs shed light on the health of an industry. A growing employment base creates more opportunities for regional residents and helps a region grow its population.



Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 4

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	24,131	\$32,600	1,945
Machinists	14,262	\$41,900	1,309
First-Line Supervisors of Production and Operating Workers	12,851	\$64,200	1,074
Inspectors, Testers, Sorters, Samplers, and Weighers	11,565	\$42,400	987
Laborers and Freight, Stock, and Material Movers, Hand	10,683	\$31,900	1,312
Packaging and Filling Machine Operators and Tenders	9,624	\$35,900	978
General and Operations Managers	8,226	\$142,300	555
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	8,151	\$72,100	697
Packers and Packagers, Hand	7,620	\$27,300	1,034
Production Workers, All Other	7,299	\$40,800	726
Remaining Component Occupations	270,721	\$60,500	23,078
Total	385,151		

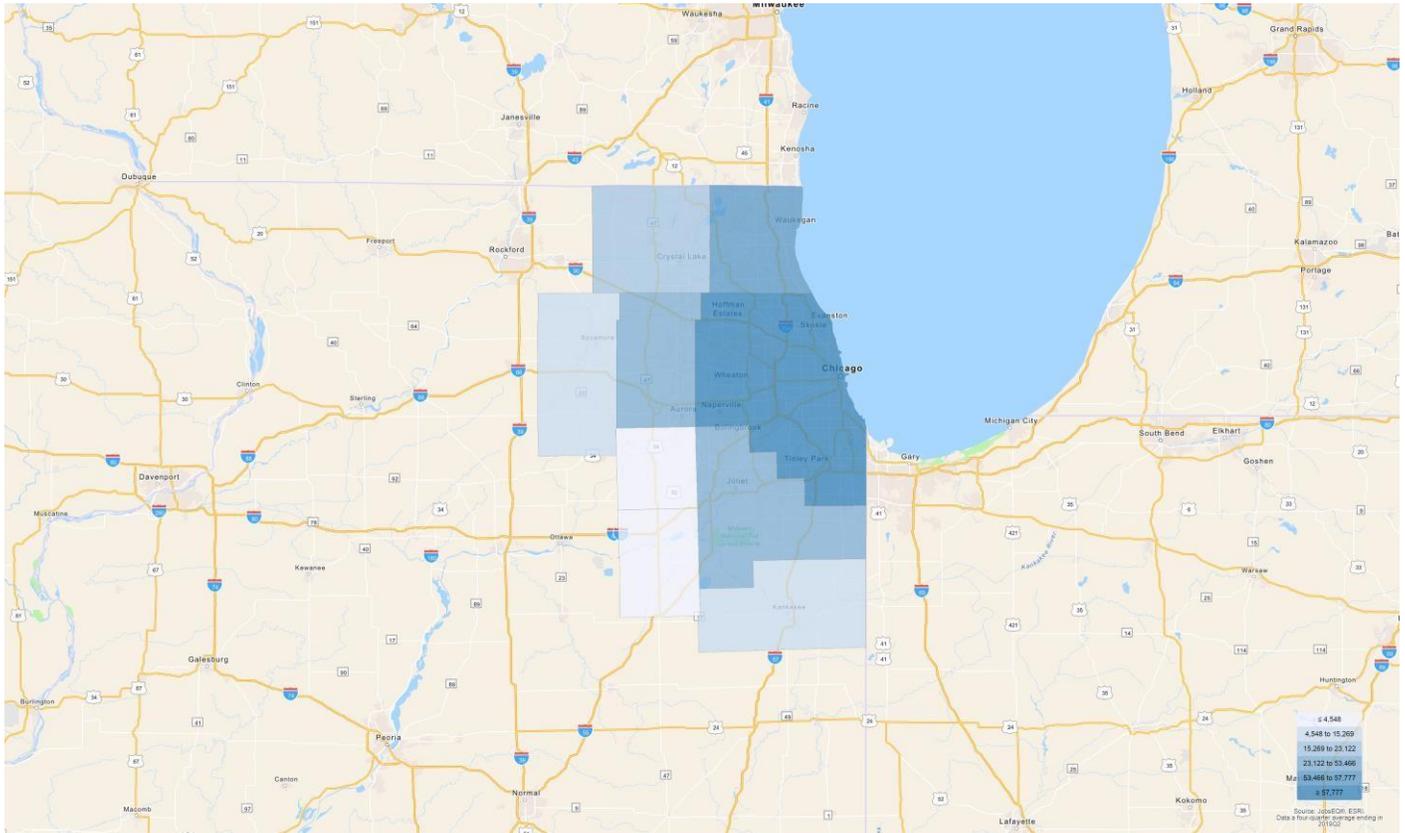
 The mix of occupations points to the ability of a region to support an industry and its flexibility to adapt to future demand. Industry wages are a component of the cost of labor for regional employers.

Geographic Distribution

Lake County, Illinois	53,467
Kane County, Illinois	32,069
Will County, Illinois	23,122

McHenry County, Illinois	15,269
Kankakee County, Illinois	7,045
DeKalb County, Illinois	4,549
Kendall County, Illinois	3,492
Grundy County, Illinois	1,382

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 6



Region	Empl	Region	Empl
	186,978		
DuPage County, Illinois	57,777		
Cook County, Illinois			

Source: JobsEQ®

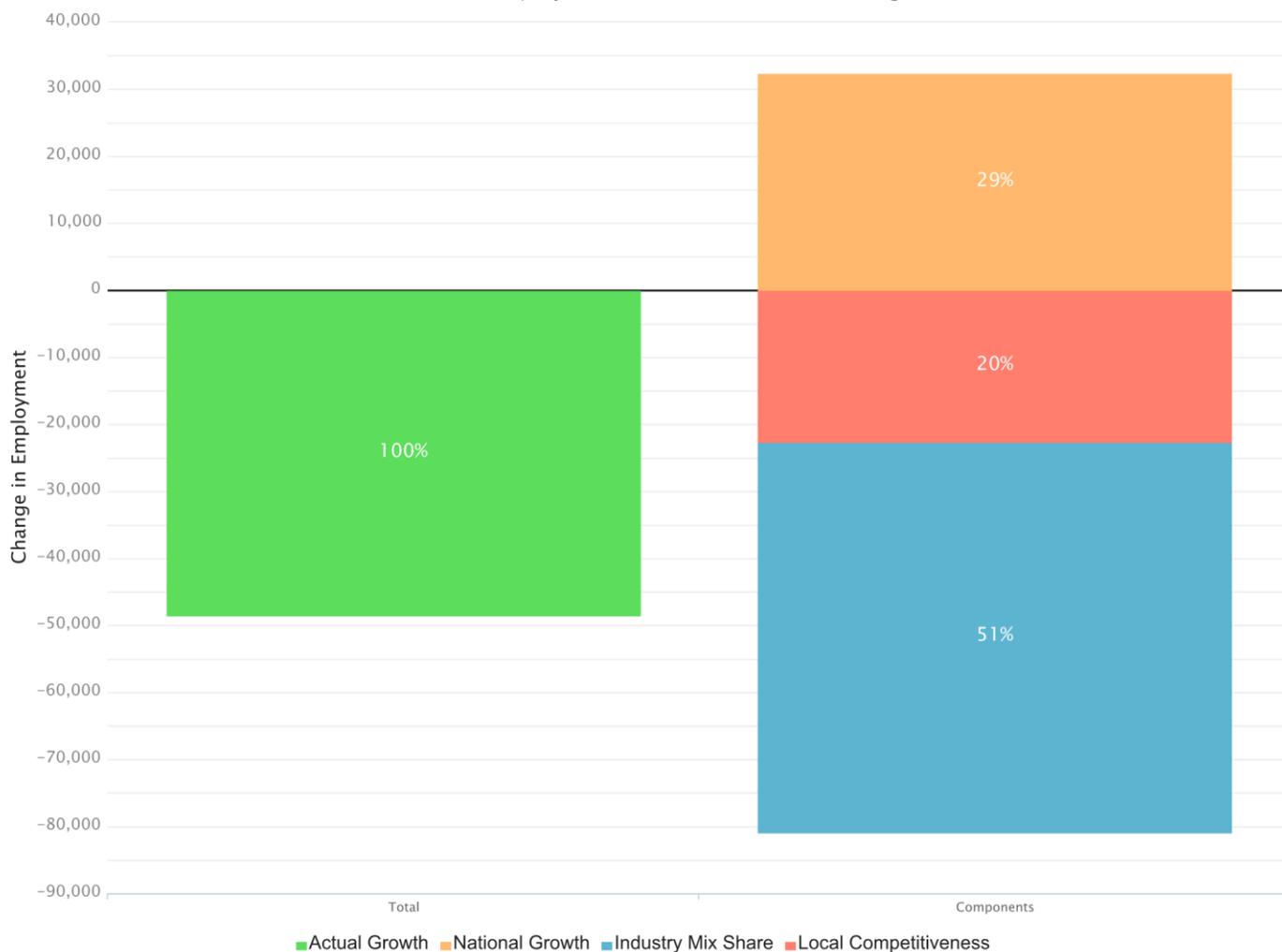
💡 A geographic concentration of firms in related fields of business may reduce production costs, attract more suppliers and customers, and increase supply and demand for specialized labor, but may also increase competitive pressure and drive down prices.

Drivers of Employment Growth

Over the ten years ending 2018, employment in Manufacturing for the Metro Chicago shed 48,479 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 22,572 jobs—meaning this industry was less competitive than its national counterpart during this period.

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 7

Drivers of Employment Growth for Metro Chicago



Source: JobsEQ®, Data as of 2018Q4

 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 Metro Chicago. 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).

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 8

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



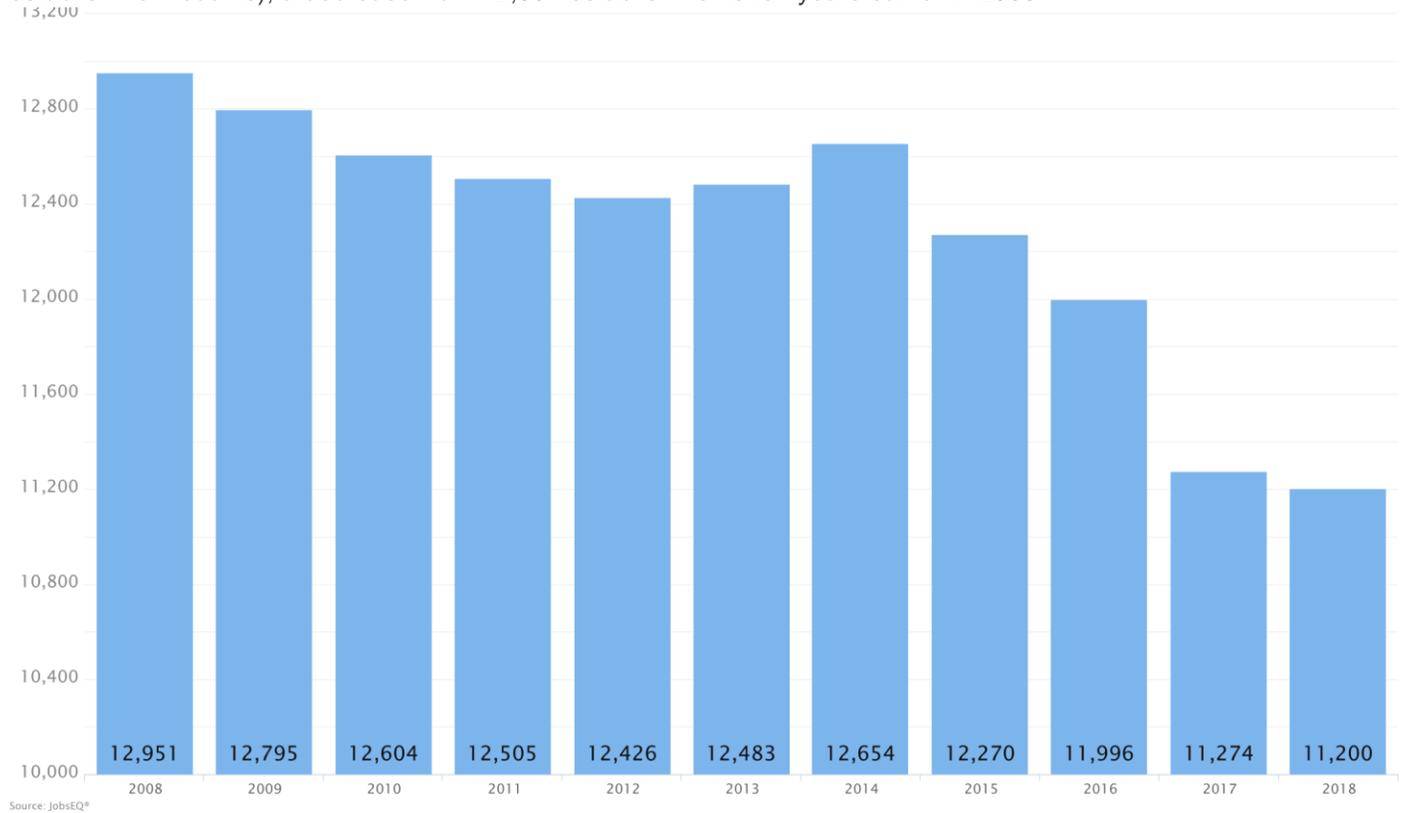
	Empl	%
Private	379,568	98.6%
Self-Employment	5,574	1.4%
Federal Government	9	0.0%

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 2018, there were 11,200 Manufacturing establishments in the Metro Chicago (per covered employment establishment counts), a decrease from 12,951 establishments ten years earlier in 2008.



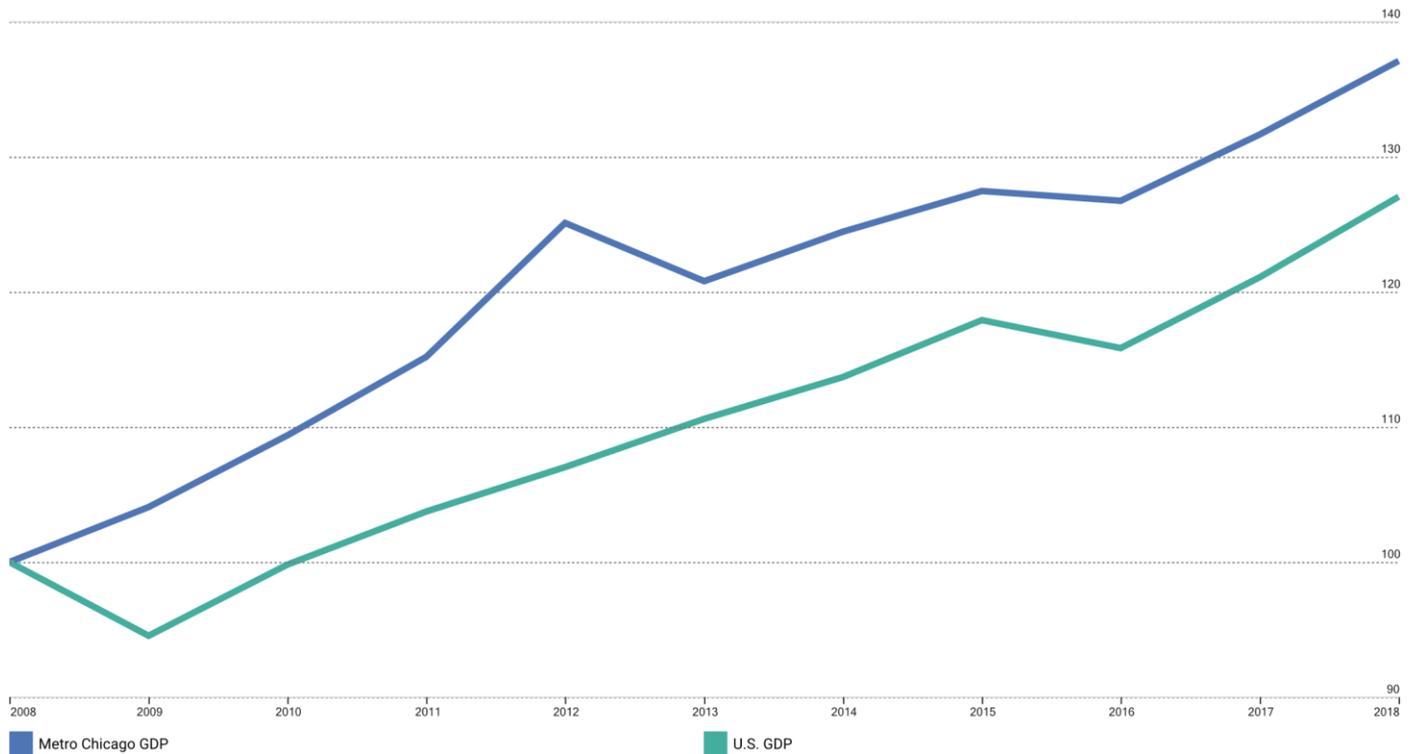
Source: JobsEQ®

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 9

💡 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 2018, Manufacturing produced \$72 billion in GDP for the Metro Chicago.
GDP: Indexed 2008 = 100



10.9 %

Industry Share of Total GDP / Worker /
11.3 % in the nation



3.2 % ↑

Avg Ann % Change Last 10 Yrs / Output per



\$541k



Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 10

Copyright © 2019 Chmura Economics & Analytics, All Rights Reserved.



 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.

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

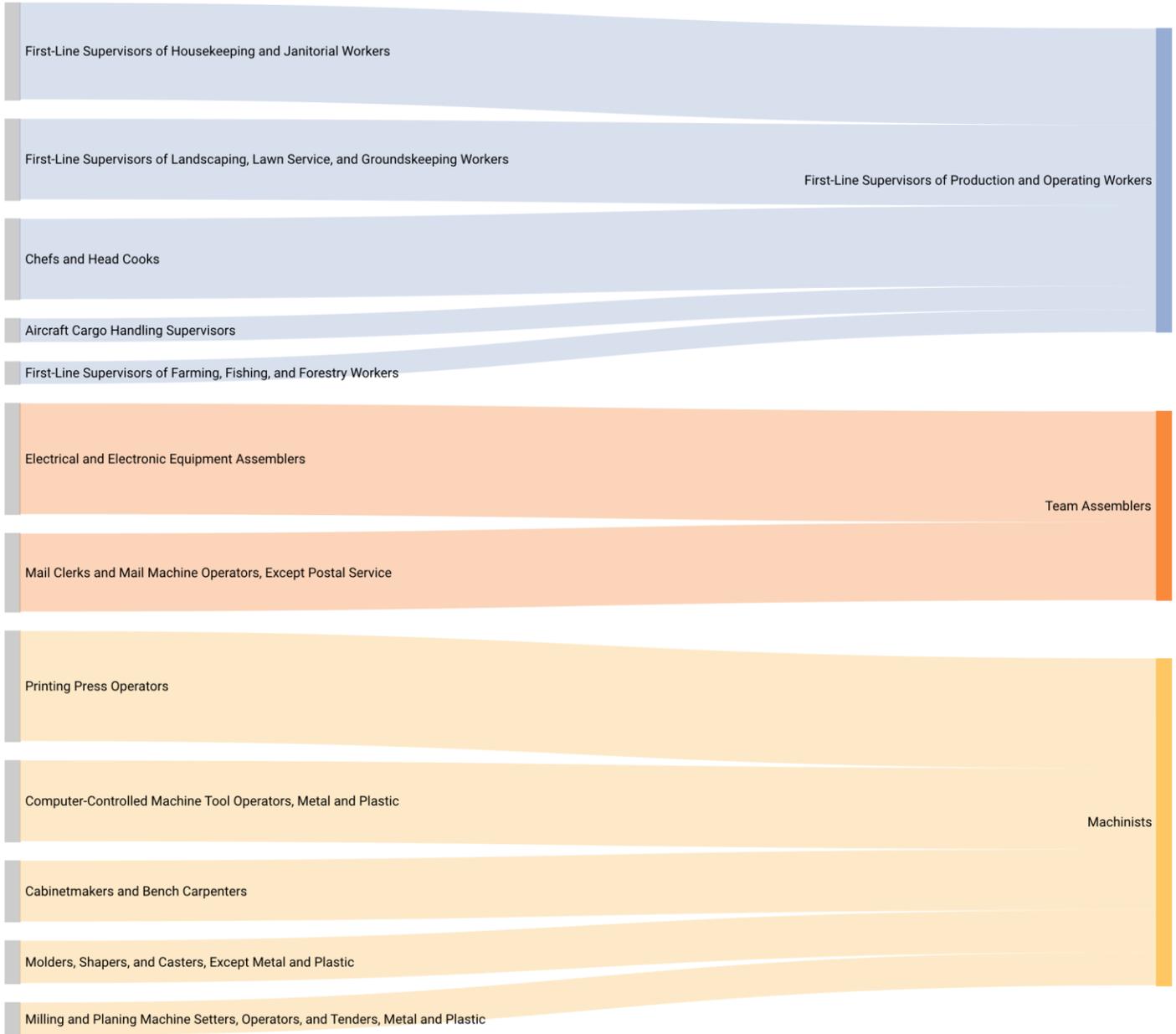
Supply Chain: Top Suppliers

As of 2019Q2, Manufacturing in the Metro Chicago are estimated to make \$32.9 billion in annual purchases from suppliers in the United States with about 34% or \$11.2 billion of these purchases being made from businesses located in the Metro Chicago.

3-digit Supplier Industries	Purchases from In-Region (\$M)	Purchases from Out-of-Region (\$M)
Chemical Manufacturing	\$1,703.8	\$3,542.0
Professional, Scientific, and Technical Services	\$554.8	\$1,741.1
Management of Companies and Enterprises	\$1,797.6	\$385.6
Merchant Wholesalers, Durable Goods	\$673.5	\$1,278.3
Merchant Wholesalers, Nondurable Goods	\$395.0	\$959.6
Remaining Supplier Industries	\$6,066.1	\$13,809.0
Total	\$11,190.9	\$21,715.6

 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

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 12

Copyright © 2019 Chmura Economics & Analytics, All Rights Reserved.



College of DuPage	
Biological and Physical Sciences	289
Elgin Community College	
Welding Technology/Welder	92
ETI School of Skilled Trades	
Welding Technology/Welder	72
Kankakee Community College	
Welding Technology/Welder	74
Moraine Valley Community College	
Biological and Physical Sciences	739
Welding Technology/Welder	80
Oakton Community College	
Electromechanical and Instrumentation and Maintenance Technologies/Technicians, Other	53
Waubensee Community College	
Biological and Physical Sciences	426
William Rainey Harper College	
Biological and Physical Sciences	287
Welding Technology/Welder	82

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 the Metro Chicago, the sampling above identifies those most linked to occupations relevant to Manufacturing.

Region Definition

Metro Chicago is defined as the following counties:

Source: JobsEQ®, <http://www.chmuraecon.com/jobseq> 13

Cook County, Illinois

DeKalb County, Illinois

DuPage County, Illinois

Grundy County, Illinois

Kane County, Illinois

Kankakee County, Illinois

Kendall County, Illinois

Lake County, Illinois

McHenry County, Illinois

Will County, Illinois

Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2019Q2 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 2019Q2 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Occupation wages are per the BLS OES data and are as of 2018.
- 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 2017-2018 academic year.
- Establishment counts are per the BLS QCEW data.
- Figures may not sum due to rounding.

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.