



KANSAS MANUFACTURING SOLUTIONS

Trusted Advisors for Growth

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National
Network™

MANUFACTURING IN KANSAS



**Manufacturing Day
October 4, 2019
Fuller Industries
Great Bend, KS**

MANUFACTURING IN KANSAS

FEBRUARY 2020



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HIGHLIGHTS

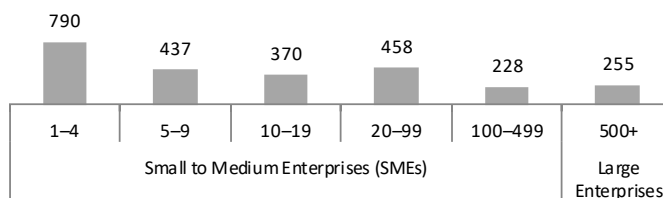
- Kansas is home to approximately 2,538 manufacturing firms.
- Manufacturing contributed \$27.6 billion to the Kansas economy in 2018, representing 16.4 percent of the state's total gross domestic product (GDP).
- Kansas ranks 11th among all states in its percentage of GDP from manufacturing.
- The manufacturing sector's 172,666 jobs accounted for 8.9 percent of Kansas total employment and 12.3 percent of total worker earnings in 2018.
- Earnings from manufacturing jobs comprise 17.1 percent of total worker earnings in non-metropolitan Kansas and 10.7 percent of worker earnings in metropolitan areas.
- The average manufacturing job in Kansas paid \$59,210 in wages and salaries in 2018.
- Kansas exported \$9.38 billion worth of manufactured goods to other countries in 2019.

NUMBER OF FIRMS

Kansas is home to approximately 2,538 manufacturing firms operating from 2,791 physical establishments throughout the state.

- 90 percent of Kansas manufacturing firms are owned by small or medium-sized enterprises (SMEs) with fewer than 500 paid employees.
- Large manufacturing enterprises, with 500 or more employees, account for roughly ten percent of Kansas manufacturing firms.

NUMBER OF KANSAS MANUFACTURING FIRMS BY EMPLOYMENT SIZE OF THE PARENT ENTERPRISE



Source: U.S. Census Bureau

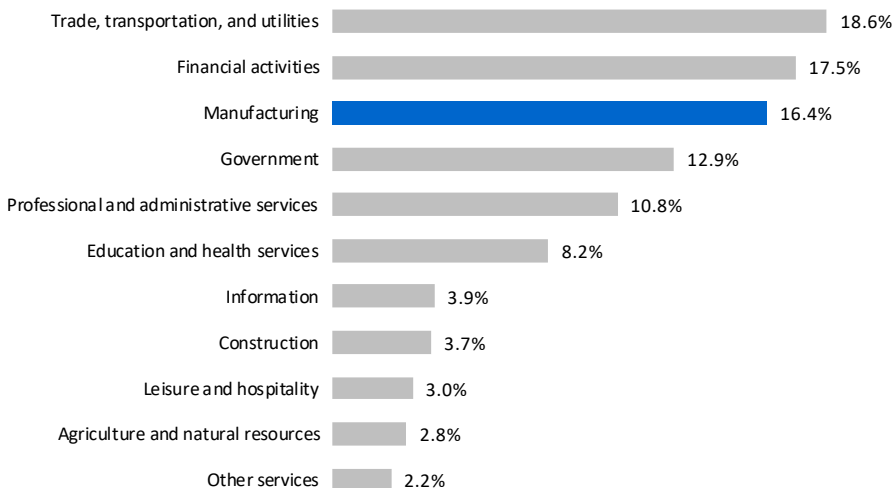
GROSS DOMESTIC PRODUCT

Gross domestic product (GDP) measures the contributions of labor and capital to the market value of goods and services produced in a state. The total GDP for Kansas industries in 2018 was \$168.3 billion.

The manufacturing sector contributed \$27.6 billion to the Kansas economy in 2018, representing 16.4 percent of the state's total GDP. Kansas ranks 11th among all states in the percentage of GDP derived from the manufacturing sector.

When measured by GDP size, manufacturing ranks third among major economic sectors in Kansas. Manufacturing ranks fifth in GDP size among major economic sectors nationally.

PERCENTAGE OF KANSAS GDP BY MAJOR SECTOR



Source: U.S. Bureau of Economic Analysis

Note: Agriculture and natural resources industries include production agriculture, agricultural services, forestry, fishing, hunting, and mining. Activities such as grain processing, ethanol production, meat slaughtering and processing, agricultural chemical and fertilizer production, and agricultural equipment manufacturing are classified within the manufacturing sector, per national industrial accounting standards. The financial activities sector includes finance, insurance, and real estate industries.

Note: There are 2,907 small proprietorships or partnerships with no paid employees other than the principals. Known as "nonemployer firms," these establishments increase the total number of manufacturers in Kansas to 5,445. KMS provides support for these types of firms. However, to a much lesser degree than the 2,538 employer firms.

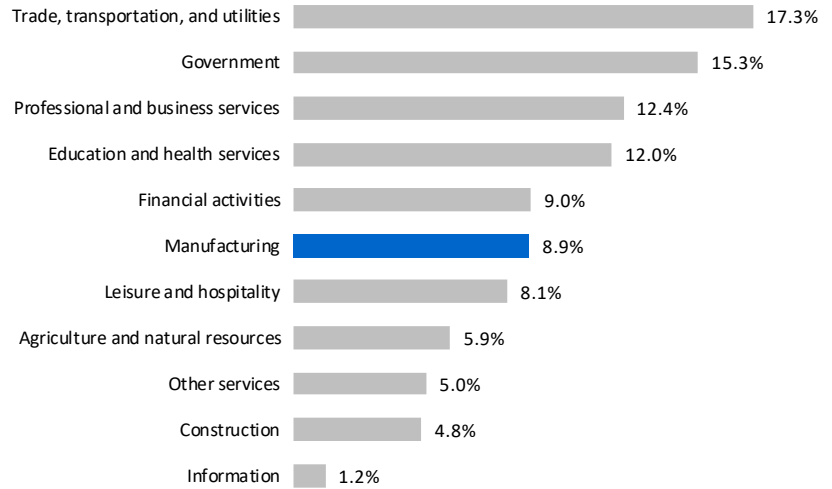
EMPLOYMENT

The Kansas manufacturing sector had 172,666 jobs in 2018, accounting for 8.9 percent of the state’s total employment. In the United States, manufacturing accounted for 6.7 percent of total employment.

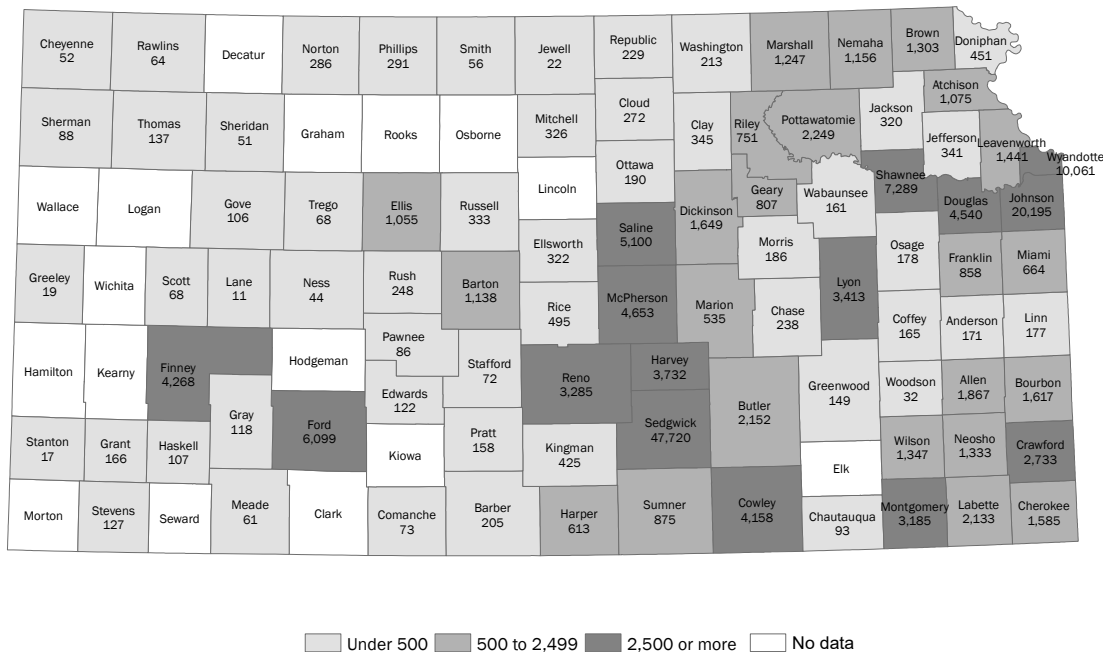
Measured by employment size, manufacturing ranks sixth among major economic sectors in Kansas. In the United States, manufacturing ranks seventh among major sectors.

More than half (60 percent) of Kansas manufacturing jobs are located in metropolitan areas. By county, manufacturing employment was highest in Sedgwick (47,720 jobs), followed by Johnson (20,195 jobs).

PERCENTAGE OF KANSAS JOBS BY MAJOR SECTOR



NUMBER OF MANUFACTURING JOBS BY COUNTY



Source: U.S. Bureau of Economic Analysis

Note: Employment statistics on this page describe the number of full-time and part-time jobs, as opposed to the number of employed persons.

THE DIVERSE KANSAS MANUFACTURING SECTOR

DURABLE AND NONDURABLE GOODS

Industries within the manufacturing sector are frequently grouped into two broad categories: durable goods and nondurable goods. *Durable* goods are tangible products that can be stored or inventoried and that have an average life of at least three years. *Nondurable* goods have an average life of less than three years.

Kansas durable goods industries account for a higher fraction of jobs and GDP than nondurable goods industries. Durable goods production accounts for 53.6 percent of Kansas manufacturing GDP and 59.7 percent of its manufacturing jobs. Nationally, durable goods production accounts for 55.9 percent of manufacturing GDP and 62.6 percent of manufacturing jobs.

SPECIALIZATION BY INDUSTRY

Areas of relative industrial specialization within the manufacturing sector may be identified using “location quotients,” which divide a state’s percentage of employment in a given industry by that same industry’s percentage of U.S. employment. A location quotient greater than one indicates specialization and suggests the state has a relative competitive advantage in that industry. Kansas demonstrates relative specialization in the following manufacturing industries: transportation equipment, petroleum and coal, food and beverages, machinery, printing and related, and plastics and rubber products.

DURABLE GOODS EMPLOYMENT	
Transportation equipment.....	39,094
Machinery.....	20,371
Fabricated metals.....	16,863
Miscellaneous.....	5,669
Nonmetallic mineral products.....	5,471
Computers and electronics.....	3,911
Furniture and related products.....	3,784
Electrical equipment and appliances.....	3,753
Wood products.....	2,266
Primary metals.....	1,886
<i>Total, durable goods.....</i>	<i>103,068</i>

NONDURABLE GOODS EMPLOYMENT	
Food and beverages.....	35,349
Plastics and rubber products.....	10,496
Chemicals.....	8,728
Printing and related.....	8,124
Textiles, apparel, leather, and related.....	2,639
Petroleum and coal.....	2,424
Paper.....	1,838
<i>Total, non-durable goods.....</i>	<i>69,598</i>

KANSAS MANUFACTURING INDUSTRIES RANKED BY GDP

	2017 GDP (\$ millions)	% of Kansas Manufacturing Totals			Comparative U.S. Percentages			Location Quotient
		GDP	Jobs	Establishments	GDP	Jobs	Establishments	
Transportation equipment.....	7,978	31.6%	22.6%	4.4%	14.2%	12.8%	3.5%	1.77
Food and beverages.....	4,439	17.6%	20.5%	12.9%	12.1%	14.9%	14.1%	1.38
Petroleum and coal.....	2,599	10.3%	1.4%	1.2%	5.9%	0.9%	0.7%	1.56
Chemicals.....	2,082	8.2%	5.1%	3.8%	16.6%	6.5%	4.4%	0.78
Machinery.....	1,838	7.3%	11.8%	8.5%	6.8%	8.7%	6.0%	1.35
Fabricated metals.....	1,385	5.5%	9.8%	16.7%	6.8%	11.3%	14.5%	0.86
Plastics and rubber products.....	992	3.9%	6.1%	2.9%	3.5%	5.5%	2.6%	1.10
Printing and related.....	864	3.4%	4.7%	9.1%	1.8%	3.6%	8.1%	1.30
Nonmetallic mineral products.....	634	2.5%	3.2%	4.6%	2.7%	3.4%	3.8%	0.94
Electrical equipment and appliances.....	618	2.4%	2.2%	1.7%	2.9%	3.1%	1.9%	0.69
Computers and electronics.....	566	2.2%	2.3%	2.2%	12.9%	8.0%	3.3%	0.28
Miscellaneous.....	387	1.5%	3.3%	14.0%	4.2%	5.6%	15.3%	0.58
Paper.....	238	0.9%	1.1%	0.6%	2.5%	2.7%	0.8%	0.39
Furniture and related products.....	237	0.9%	2.2%	4.3%	1.3%	3.2%	5.3%	0.68
Wood products.....	191	0.8%	1.3%	5.7%	1.8%	3.5%	6.2%	0.38
Primary metals.....	116	0.5%	1.1%	1.3%	2.7%	2.9%	1.3%	0.38
Textiles, apparel, leather, and related.....	93	0.4%	1.5%	6.1%	1.3%	3.2%	8.1%	0.47

Sources: U.S. Bureau of Economic Analysis and County Business Patterns, U.S. Census Bureau

AVERAGE MANUFACTURING EARNINGS PER JOB

- Kansas manufacturing workers earned an average of \$59,210 in wages and salaries in 2018. Workers across all sectors of the Kansas economy earned an average of \$46,610 in wages and salaries per job.
- Average earnings per job in the Kansas manufacturing sector were 86.4 percent of the U.S. average for manufacturing jobs. All-sector average earnings per job in Kansas were 81.4 percent of the U.S. average.
- Average wage and salary earnings in manufacturing ranked fourth among all major sectors in the Kansas economy.
- By detailed manufacturing industry, average earnings were highest in petroleum and coal products manufacturing, at \$102,448 per job.
- Manufacturing wages vary across the state, with higher levels often found in and near metropolitan areas and larger cities. In 2018, the top three counties by average manufacturing wages and salaries were Sedgwick (\$71,345), Atchison (\$69,552), and Butler (\$69,501).

AVERAGE WAGE AND SALARY EARNINGS PER JOB IN KANSAS (\$000S)

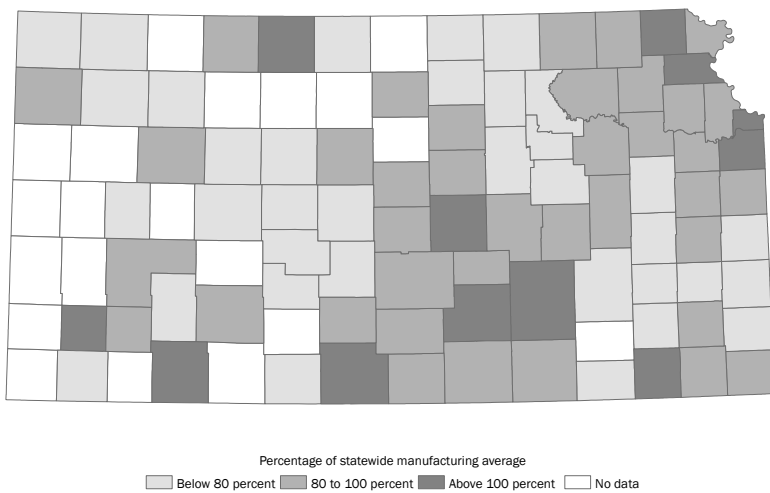
By Major Sector

Average for all sectors.....	46.6
Financial activities.....	67.7
Information.....	63.4
Professional and business services.....	61.3
Manufacturing.....	59.2
Construction.....	54.7
Agriculture and natural resources.....	47.0
Government.....	43.0
Education and health services.....	42.6
Trade, transportation, and utilities.....	42.2
Other services.....	34.5
Leisure and hospitality.....	16.8

By Manufacturing Industry

Petroleum and coal.....	102.4
Transportation equipment.....	76.5
Chemicals.....	74.0
Paper.....	67.3
Computers and electronics.....	64.0
Machinery.....	55.8
Electrical equipment and appliances.....	55.0
Nonmetallic minerals.....	53.9
Primary metals.....	53.2
Food.....	52.8
Plastics and rubber products.....	50.7
Fabricated metals.....	48.7
Apparel.....	48.2
Miscellaneous.....	47.7
Printing and related.....	44.1
Beverage and tobacco.....	42.9
Wood products.....	41.6
Furniture and related.....	37.9
Textile product mills.....	34.6
Textile mills.....	(N/A)
Leather and allied products.....	(N/A)

AVERAGE MANUFACTURING WAGES BY COUNTY



Sources: U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics

EXPORTS FROM KANSAS

BY TYPE OF GOOD

In 2019, the state of Kansas was the transportation origin for \$11.6 billion worth of merchandise exports including agricultural commodities, raw materials, and manufactured goods. Manufactured goods accounted for 81 percent of the state’s total exports.

With \$9.38 billion worth of manufactured exports in 2019, Kansas ranked 31st among all states on this measure (see Export Data Notes for information about export measurement).

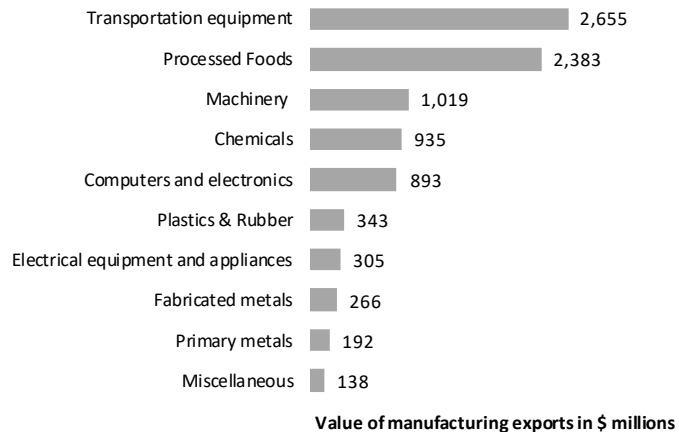
The single largest manufacturing export industry for Kansas was transportation equipment manufacturing, which accounted for 28.3 percent of the state’s total manufacturing exports.

BY DESTINATION

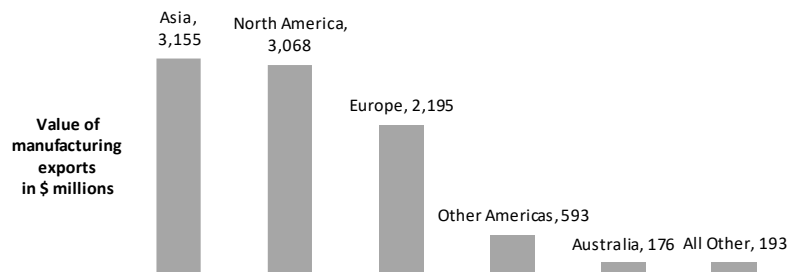
The greatest share (33.6 percent) of Kansas manufactured exports are shipped to Asia. Trading partners in North America and Europe follow as the top importers of manufactured goods from Kansas.

Canada was the top destination country for manufactured exports from Kansas in 2019, followed by Mexico and Japan.

TOP 10 MANUFACTURING EXPORT INDUSTRIES FOR KANSAS



KANSAS MANUFACTURING EXPORT DESTINATIONS



EXPORT DATA NOTES

Origin of Movement

It is important to note that Kansas export totals do not reflect the value of agricultural and other goods that were originally produced in Kansas but ultimately exported from other states. The trade statistics on this page are based on origin of movement (OM) data from the U.S. Department of Commerce. The OM method credits exports to the state where the goods began their final journey to the point of exit from the United States, as specified on official U.S. export declarations filed by shippers. The place from which merchandise began its export journey is not necessarily the place where the merchandise was produced. In many cases, the OM is the location of a distributor, warehouse, or cargo processing facility. Consequently, OM cannot be used to reliably describe the production origin of U.S. exports.

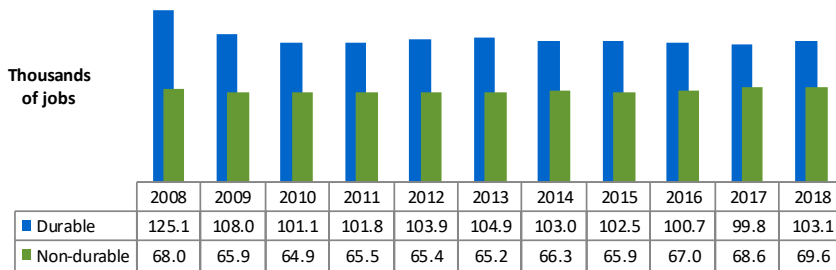
Source: ITA Trade Stats Express, Office of Trade and Industry Information, International Trade Administration, U.S. Department of Commerce

TOP 10 COUNTRIES FOR KANSAS MANUFACTURING EXPORTS

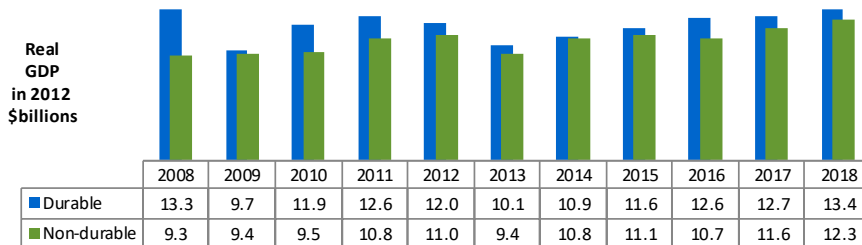
	Exports (\$ millions)
Canada.....	1,829
Mexico.....	1,239
Japan.....	883
Germany.....	492
United Kingdom.....	451
China.....	399
South Korea.....	386
Singapore.....	365
Brazil.....	227
France.....	221

RECENT TRENDS IN KANSAS MANUFACTURING

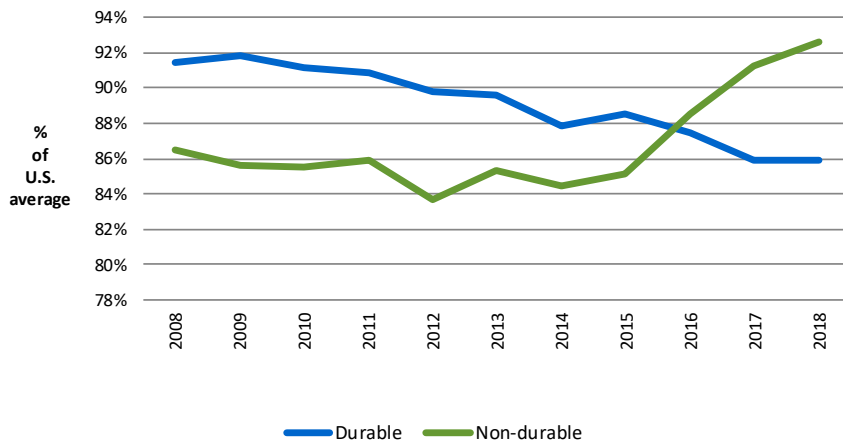
MANUFACTURING JOBS



MANUFACTURING GDP



KANSAS MANUFACTURING WAGE & SALARY EARNINGS PER JOB COMPARED TO U.S. AVERAGES



KANSAS EMPLOYMENT GAINS AND LOSSES IN THOUSANDS OF JOBS, 2008-2018

BY MAJOR SECTOR

Professional and business services	33.4
Financial activities	26.4
Education and health services	22.5
Leisure and hospitality	18.0
Trade, transportation, and utilities	16.1
Agriculture and natural resources	11.2
Other services	0.8
Government	(2.2)
Construction	(3.7)
Information	(19.3)
Manufacturing	(20.5)

BY DETAILED MANUFACTURING INDUSTRY

Durable Goods

Machinery	1.21
Fabricated metals	0.50
Wood products	(0.22)
Electrical equip. & appliances	(0.38)
Nonmetallic mineral products	(0.72)
Primary metals	(1.47)
Furniture and related products	(1.62)
Computers and electronics	(4.66)
Transportation equipment	(13.89)

Nondurable Goods

Food and beverages	3.20
Chemicals	1.35
Plastics and rubber products	0.55
Petroleum and coal	0.52
Paper	(0.53)
Textiles, apparel, leather, and related	(1.00)
Printing and related	(2.53)

Miscellaneous Manufacturing

Miscellaneous Manufacturing	(0.75)
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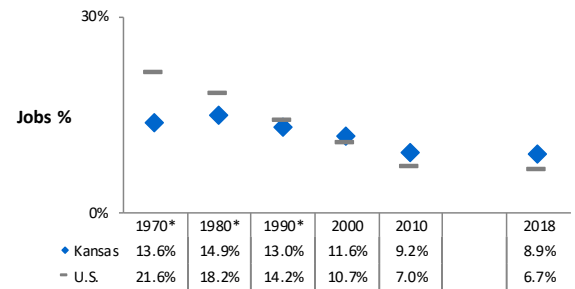
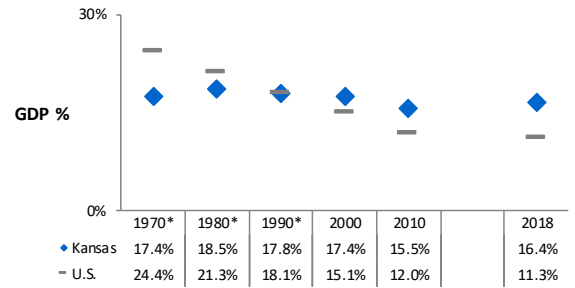
Source: U.S. Bureau of Economic Analysis

MANUFACTURING SECTOR PERCENTAGE SHARES OF GDP AND EMPLOYMENT

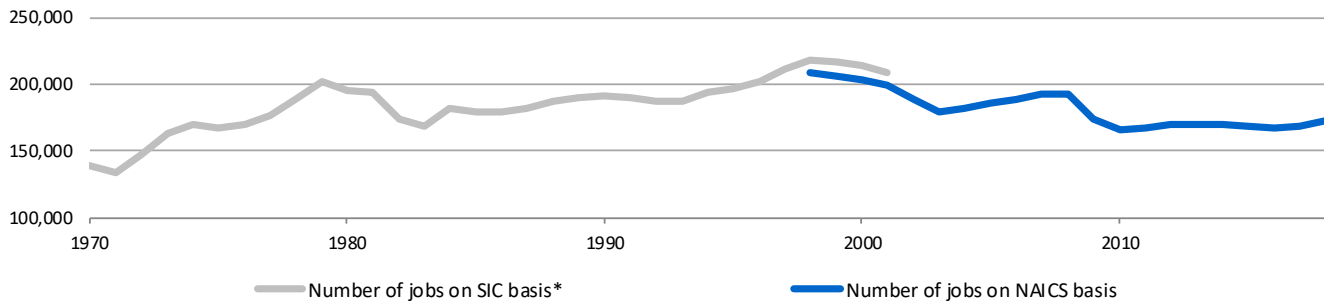
Manufacturing has accounted for a declining share of U.S. GDP in recent decades, with the manufacturing sector’s contribution falling from 24.4 percent to 12.0 percent between 1970 and 2010. In 2018, the national percentage was 11.3 percent.

In Kansas, the share of total GDP contributed by manufacturing dropped from 17.4 percent in 1970 to 15.5 percent in 2010. The manufacturing sector’s share increased slightly to 16.4 percent by 2018.

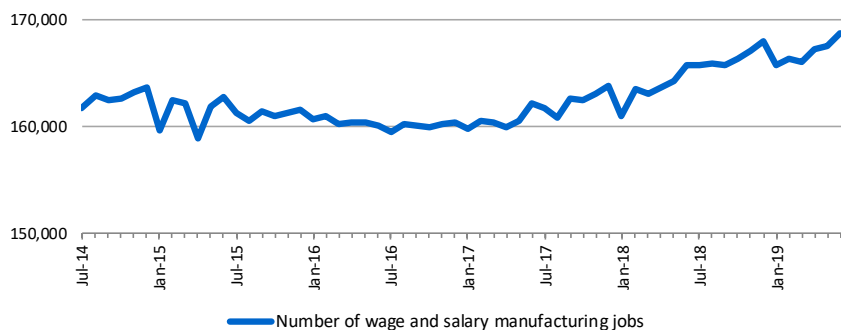
Manufacturing activity also requires a smaller share of jobs compared to decades past. Manufacturing jobs accounted for 21.6 percent of total U.S. jobs in 1970, compared to 7.0 percent in 2010. The share was slightly lower at 6.7 percent nationally in 2018. In Kansas, manufacturing jobs now account for 8.9 percent of total employment, compared to 9.2 percent in 2010 and 13.6 percent in 1970.



KANSAS HISTORICAL MANUFACTURING EMPLOYMENT



RECENT MONTHLY MANUFACTURING JOB LEVELS IN KANSAS

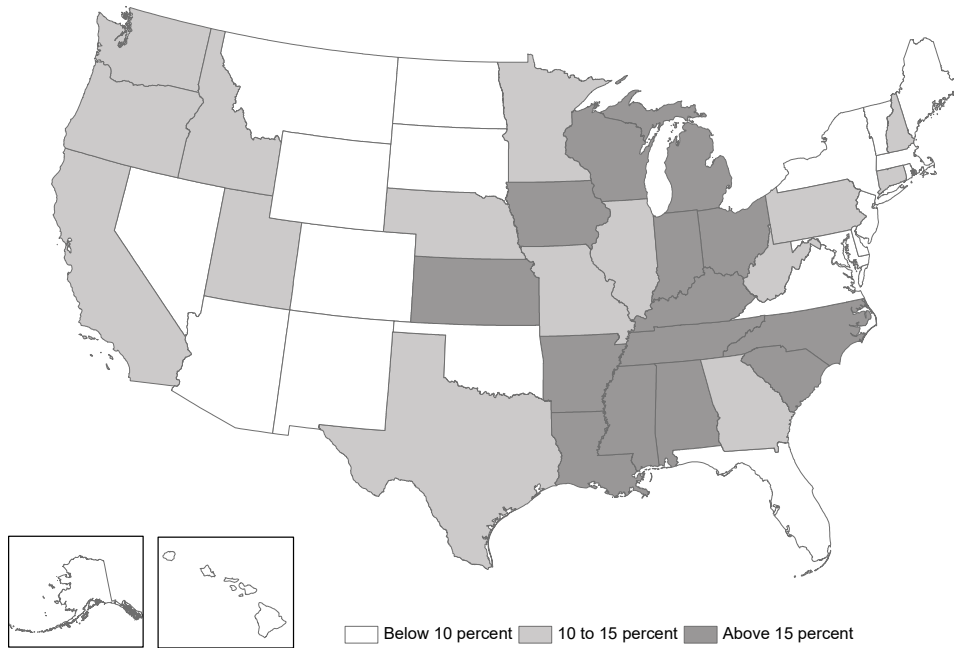


***SIC and NAICS**

The North American Industry Classification System (NAICS) is used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data. NAICS replaced the Standard Industrial Classification (SIC) system in 1997. Historical data compiled under the SIC system, indicated with an asterisk (*) on this page, are not directly comparable to data compiled on a NAICS basis.

Sources: U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics

PERCENTAGE OF STATE GDP FROM MANUFACTURING



TOP 15 STATES BY % OF GDP FROM MANUFACTURING

Indiana	27.5%
Louisiana	20.3%
Michigan	18.8%
Wisconsin	18.8%
Kentucky	18.1%
North Carolina	17.9%
Iowa	17.7%
Alabama	17.0%
Ohio	16.5%
South Carolina	16.4%
Kansas	16.4%
Mississippi	16.3%
Tennessee	15.1%
Arkansas	15.0%
Oregon	14.2%

INDICATORS OF INNOVATION POTENTIAL: WHERE KANSAS RANKS AMONG ALL STATES

Kansas employs 12.1 engineers for every thousand workers.

The U.S. economy demands 12.5 engineers per thousand workers.

WORKFORCE

RANK

Percentage of adults with high school diploma or higher.....	17
Percentage of adults with bachelor's degree or higher.....	17
Engineers as a percentage of the workforce.....	24
Science & engineering degrees as % of higher education degrees conferred.....	50

RESEARCH AND TECHNOLOGY

RANK

High-technology firms as a percentage of all business establishments.....	21
Business R&D performance as a percentage of private sector GDP.....	23
Academic R&D in science & engineering fields per \$1 million in GDP.....	26
Utility patents awarded per 1,000 jobs.....	30

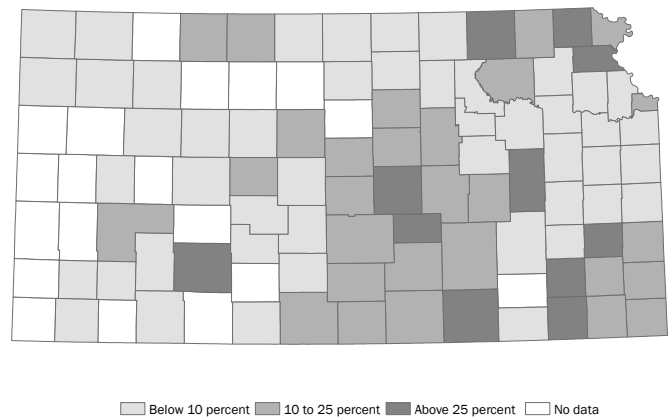
Sources this page: U.S. Bureau of Economic Analysis; 2018 American Community Survey, U.S. Census Bureau; Science & Engineering Indicators 2020, National Science Foundation; and U.S. Patent and Trademark Office

CONTRIBUTIONS TO LOCAL ECONOMIES

The manufacturing sector contributes to local economies in Kansas in a number of ways. Manufacturing firms pay wages to local workers, they purchase raw materials and services from local producers and firms, their profits accrue to local owners and investors, and they pay taxes to local and state governments.

- On average, manufacturing jobs account for 8.9 percent of total employment in Kansas. This fraction is lower in the state’s metropolitan counties (7.7 percent) and higher in non-metropolitan counties (11.6 percent), according to data for 2018.
- Manufacturing accounts for 12.3 percent of total worker earnings in Kansas. The sector’s earnings percentage exceeds its employment percentage because manufacturing jobs tend to pay higher wages than many other sectors.
- Manufacturing accounts for 10.7 percent of total earnings in Kansas metropolitan areas and 17.1 percent of total earnings in non-metropolitan regions.
- Of the 105 counties in Kansas, at least 11 derive more than one quarter of total worker earnings from manufacturing jobs.
- The top three counties by percentage of total earnings from manufacturing in 2018 were McPherson (36.4%), Wilson (35.4%), and Ford (34.1%).

MANUFACTURING PERCENTAGE OF TOTAL EARNINGS



Source: U.S. Bureau of Economic Analysis

Kansas Manufacturing Solutions (KMS), part of the NIST Manufacturing Extension Partnership (MEP), exists to provide solutions to small and medium sized manufacturers in the state of Kansas to enable competitiveness, growth, and profitability.

A trusted advisor to Kansas manufacturers, KMS’ suite of solutions include: Continuous Improvement, Sustainability, Quality and Compliance, Workforce Development, and Business Optimization. These solutions are crucial to enabling Kansas manufacturers to increase profits, grow sales, and create and retain jobs, strengthening their competitiveness in the local and global marketplace.

As the only resource in Kansas solely dedicated to supporting small to medium sized manufacturing companies with programs and services, KMS is held accountable through published third-party quarterly surveys of KMS clients to ensure a performance scorecard of certified value for the manufacturing customers we serve. This provides reassurance to our Kansas manufacturers that KMS has their best interests in mind and that a positive ROI is achievable.

Focused on this mission since its inception in 1991, KMS continues to evolve its business model based on the shifting needs of manufacturers and changes in the manufacturing support ecosystem.