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Center for Economic Development and Business Research

Kansas Manufacturing

Machinery Manufacturing

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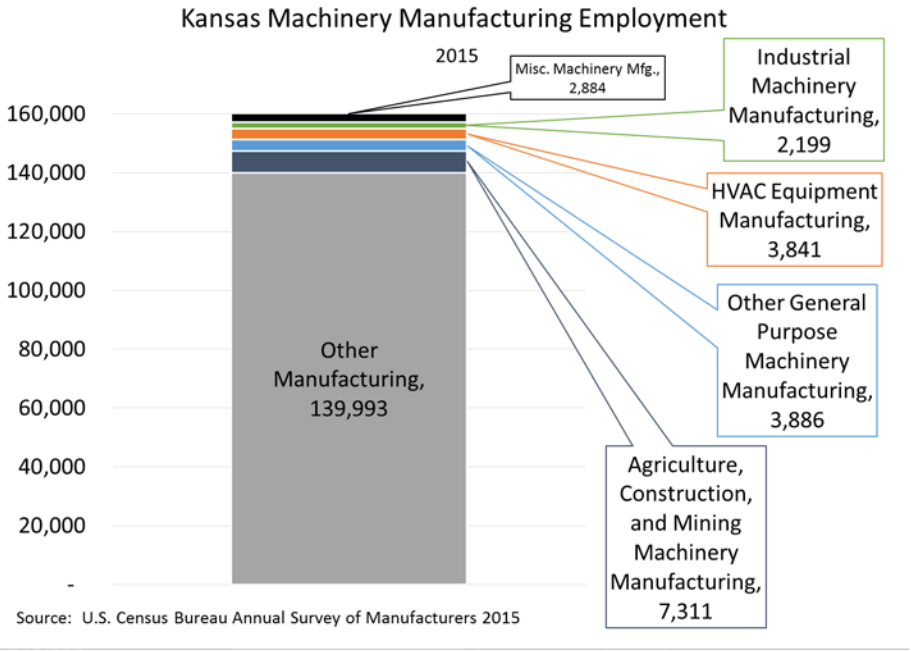
Machinery Manufacturing

Industries in the Machinery Manufacturing subsector create end products that apply mechanical force. Complex assembly operations are an inherent part of the production process. In general, design considerations are critical in machinery production. Establishments specializing in making machinery intended for particular applications define the industries within this subsector.

There are seven components of machinery manufacturing in Kansas, totaling thirteen percent of total state manufacturing employment. Agriculture, construction, and mining machinery manufacturing is the largest industry in this subsector in Kansas, employing five percent of the manufacturing workers in Kansas. Other general purpose machinery manufacturing and ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing (HVAC) each employ about 2.4 percent of state manufacturing workers. Industrial machinery manufacturing employees 1.4 percent of state manufacturing workers. Metalworking machinery, engine, turbine, and power transmission equipment, and commercial and service industry machinery each employ less than one percent of state manufacturing workers. [1]



In Kansas, machinery manufacturing is a moderate wage industry with growing employment. Over the past decade, employment in this industry has averaged about 17,500 employees and grew at an average annual rate of 1.3 percent between 2005 and 2015. [2]

[1] Unless otherwise referenced, all data in this report is from the U.S. Census Bureau Annual Survey of Manufactures 2015

[2] Bureau of Labor Statistics – Quarterly Census of Employment and Wages

Agriculture, Construction, and Mining Machinery Manufacturing

This industry group comprises establishments primarily engaged in manufacturing farm machinery and equipment, power mowing equipment, other powered home lawn and garden equipment, construction machinery, surface mining machinery, logging equipment, oil and gas field, and underground mining machinery and equipment.

Each of the subsectors of this industry has a different outlook over the next five years. Farm machinery and equipment revenue is projected to decline over the next five years due to increasing interest rates and price declines for crops.[3] Construction machinery manufacturing is expected to rebound somewhat over the next five years, as the value of construction improves.[4] Oil and gas machinery manufacturing is expected to partially rebound from its current downturn over the next five years as oil prices recover.[5]

There is a high concentration of agriculture, construction, and mining machinery manufacturing in Kansas. It is over two and a half times more concentrated in Kansas than in the United States as a whole. In this industry, the three largest establishments account for the majority of employment in Kansas.[6] The biggest agriculture machinery employers in the state are AGCO and Landoll Corp. CNH is the largest construction machinery employer in the state. [7]

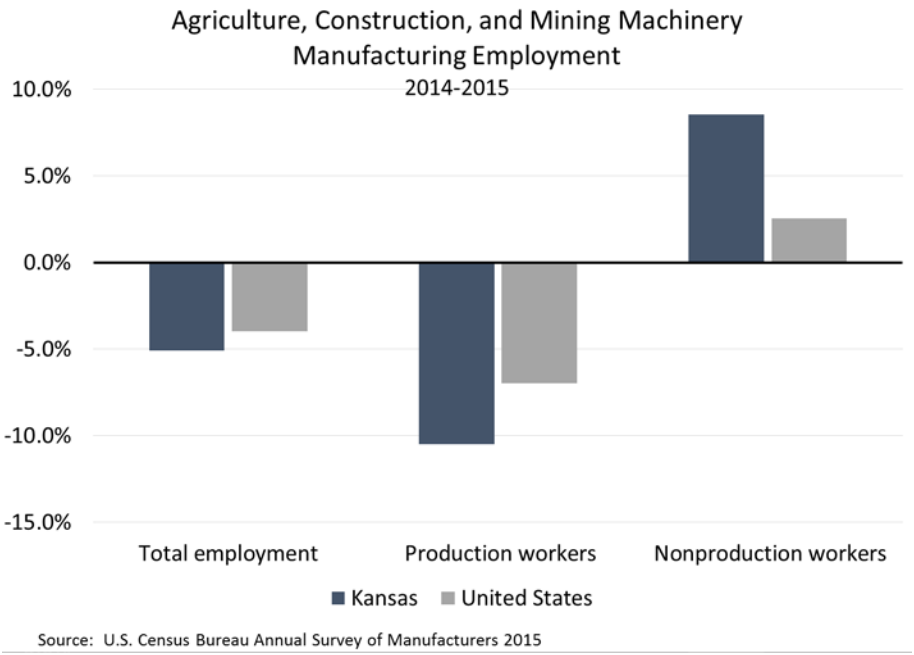
Employment

The number of agriculture, construction, and mining machinery jobs in Kansas has been volatile over the past decade with decreases in 2009, 2010, and 2015. However, in general, there has been more growth in employment than decline. Employment grew at an average annual rate of 2.7 percent between 2005 and 2015.[8]

Of the 7,311 agriculture, construction, and mining machinery employees in Kansas in 2015, 68 percent were production workers, and 32 percent were nonproduction workers. There were 0.48 nonproduction workers for each production worker in the state, slightly lower than the national average for this industry of 0.51 nonproduction workers for each production worker.

Between 2014 and 2015, agriculture, construction, and mining machinery employment decreased in Kansas and the United States. There was a total decrease in Kansas of 391 workers, production workers decreased by 578, and nonproduction workers increased by 187 workers.

[3] IBISWorld Tractors & Agricultural Machinery Manufacturing in the U.S. September 2016
[4] IBISWorld Construction Machinery Manufacturing in the U.S. March 2017
[5] IBISWorld Mining, Oil & Gas Machinery Manufacturing in the U.S. November 2016
[6] U.S. Census Bureau – County Business Patterns 2014
[7] Infogroup, Inc.
[8] Bureau of Labor Statistics – Quarterly Census of Employment and Wages



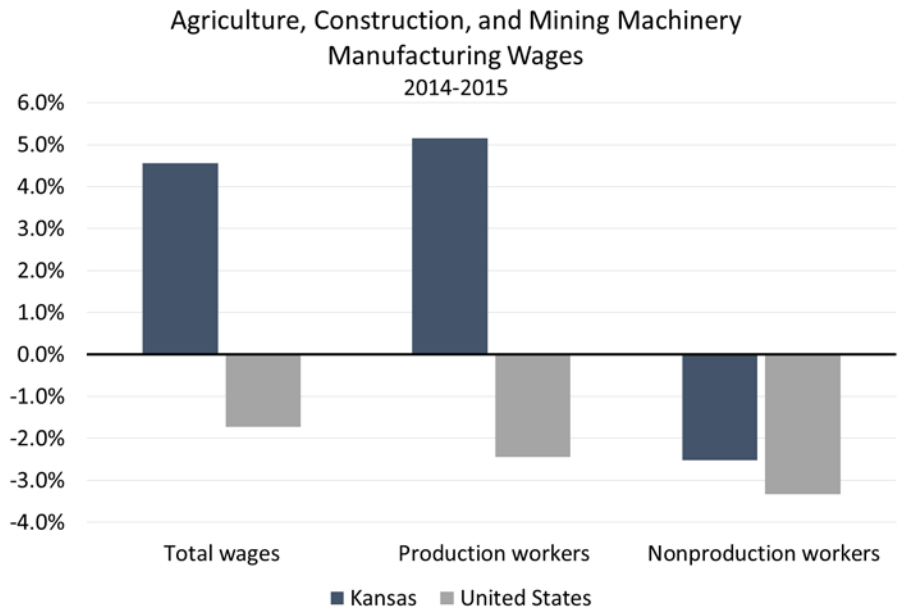
Wages

Agriculture, construction, and mining machinery manufacturing is a moderate wage industry. The average salary in 2015 for employees in this industry in Kansas was $57,227, 2.6 percent higher than the average salary for manufacturing in the state. At $45,165 annually, production workers in this industry earned 5.1 percent less than the average for production workers in Kansas. At $ 82,345 a year, nonproduction workers earned 7.6 percent more than the average for nonproduction workers in manufacturing in Kansas.

Agriculture, Construction, and Mining Machinery Manufacturing Annual Wage per Worker 2015	
Total employment	$57,227
Production workers	$45,165
Nonproduction workers	$82,345

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015, total wages in this industry increased in Kansas and decreased in the United States, with the relative increase in Kansas being somewhat larger, at a 4.6 percent gain compared to a 1.7 percent decrease. The total increase in wages can be attributed to the increase in wages for production workers in Kansas. The average annual wage for nonproduction workers declined in the United States and Kansas.



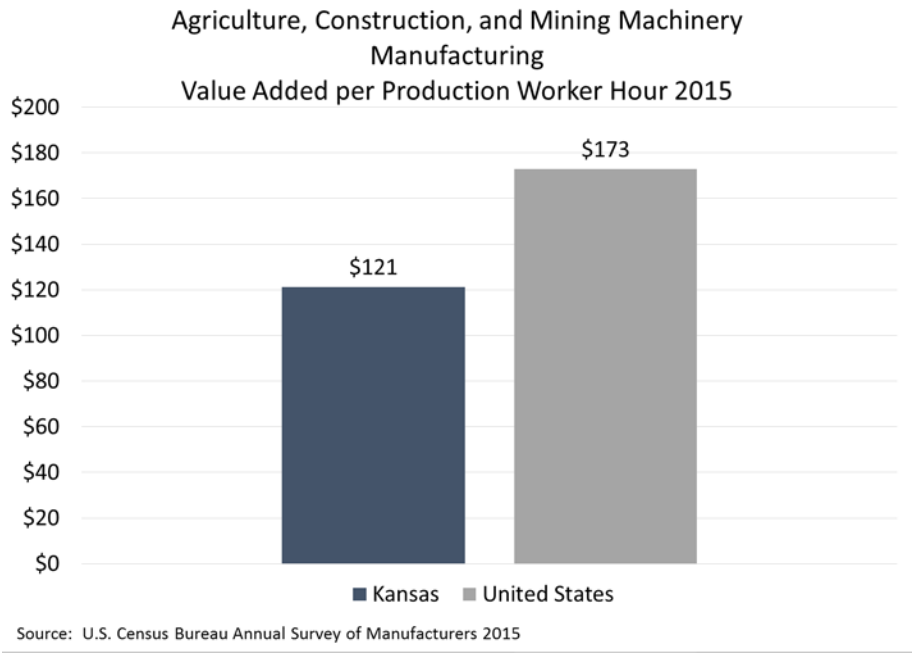
In Kansas, there has been an increase in salaries and a reduction in employment of production workers in agriculture, construction, and mining machinery, indicating there was a shortage of production workers in this industry. At the same time, there was an increase in employment and decrease in wages for nonproduction workers, indicating there was a surplus of nonproduction workers.

Productivity

In 2015, agriculture, construction, and mining machinery workers in Kansas worked an average of 37.60 hours a week, down 1.9 percent from 2014, slightly more than the national average for this industry of 36.48, which decreased 3.1 percent from 2014. It is also less than the average for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was $152 in 2015. [9] In 2015, the average value added per production worker hour for agriculture, construction, and mining machinery was $173. The Kansas average was $121. This difference in productivity may be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.

[9]Productivity is an average measure of the efficiency of production. It can be measured as the ratio of inputs to outputs. In measuring the efficiency of manufacturing industries, it is common to measure productivity as the ratio of the production hours to the value added from the manufacturing activity. The value added from the manufacturing activity is determined by subtracting the cost of materials and supplies from the value of shipments.



Other General Purpose Machinery Manufacturing

This industry group comprises establishments primarily engaged in manufacturing pumps and compressors, material handling equipment, and all other general purpose machinery.

Nationally, all of the industries in this subsector are expected to grow over the next five years. The growth in pump and compressor manufacturing is due to increases in crude oil prices, utility construction, and a strong dollar.[10] Forklift and conveyor manufacturing growth is attributed to increasing business investment.[11] Power tool manufacturing growth is due to steady increases in automobile manufacturing and housing construction.[12]

The concentration of other general purpose machinery manufacturing workers in Kansas is below the national average, but there are almost 4,000 employees in this industry in the state. The largest employer in this industry in Kansas is ScriptPro, a manufacturer of robotics for pharmacies. Cargotec Solutions LLC is a big employer in heavy-duty material handling equipment. Smith and Loveless is a large employer in pumping equipment manufacturing.[13]

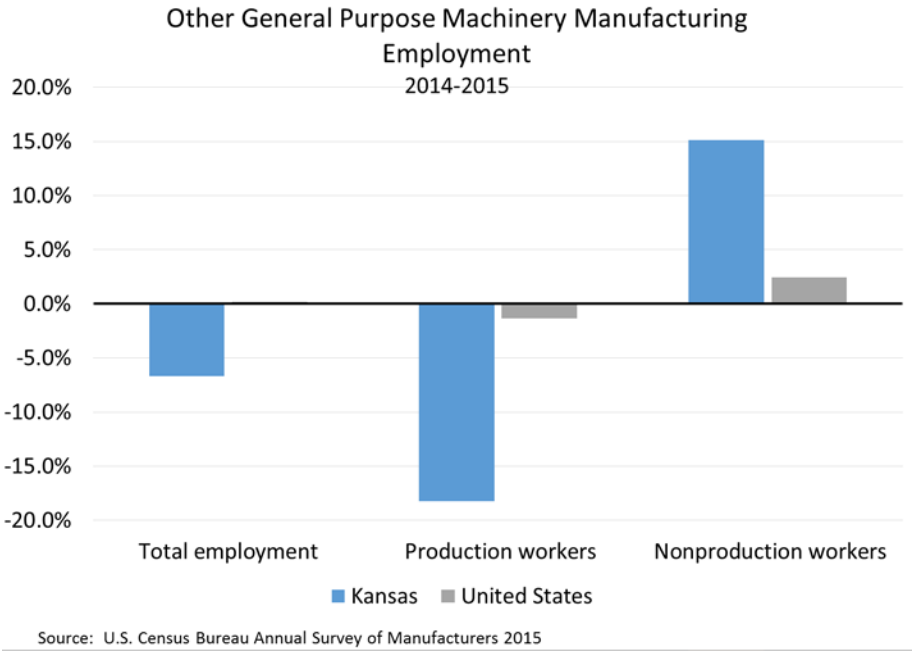
[10] IBISWorld – Pump and Compressor Manufacturing in the U.S. November 2016
[11] IBISWorld – Forklift and Conveyor Manufacturing in the U.S. September 2016
[12] IBISWorld – Power Tools and Other General Purpose Machinery Manufacturing in the U.S. October 2016
[13] Infogroup, Inc.

Employment

Jobs in other general purpose machinery manufacturing in Kansas have been flat over the past decade. There was a significant decrease in 2009, due to the recession, and a recovery in 2011. However, employment grew at an average annual rate of only 0.3 percent between 2005 and 2015. [14]

Of the 3,886 other general purpose machinery manufacturing workers in Kansas in 2015, 57 percent were production workers, and 43 percent were nonproduction workers. There were 0.75 nonproduction workers for each production worker in the state, slightly higher than the national average for this industry of 0.68 nonproduction workers for each production worker.

Between 2014 and 2015, total other general purpose machinery manufacturing employment decreased in Kansas by 6.7 percent and was flat in the United States as a whole. There was a total decrease in Kansas of 278 workers, a reduction of 496 production workers that was partially offset by an increase of 218 nonproduction workers. This change in employment in Kansas was similar to the change in national employment, but the changes in Kansas were relatively larger.



Wages

Jobs in other general purpose machinery manufacturing are lower wage jobs in Kansas. The average salary in 2015 for this industry in Kansas was $53,293, 4.5 percent lower than the average salary for manufacturing in the state. At $41,765 annually, production workers in other general purpose machinery manufacturing earned 12.2 percent less than the average for production workers in Kansas. At $68,752 a year, nonproduction workers earned 10.1 percent less than the average for nonproduction workers in manufacturing in Kansas.

[14]Bureau of Labor Statistics – Quarterly Census of Employment and Wages

Other General Purpose Machinery Manufacturing Annual Wage per Worker 2015	
Total employment	$53,293
Production workers	$41,765
Nonproduction workers	$68,752

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015, wages in other general purpose machinery manufacturing increased in both Kansas and the United States, the relative increase in Kansas was somewhat larger at an 8.2 percent gain compared to a 2.1 percent gain. The majority of the increase can be attributed to increased wages of nonproduction workers.

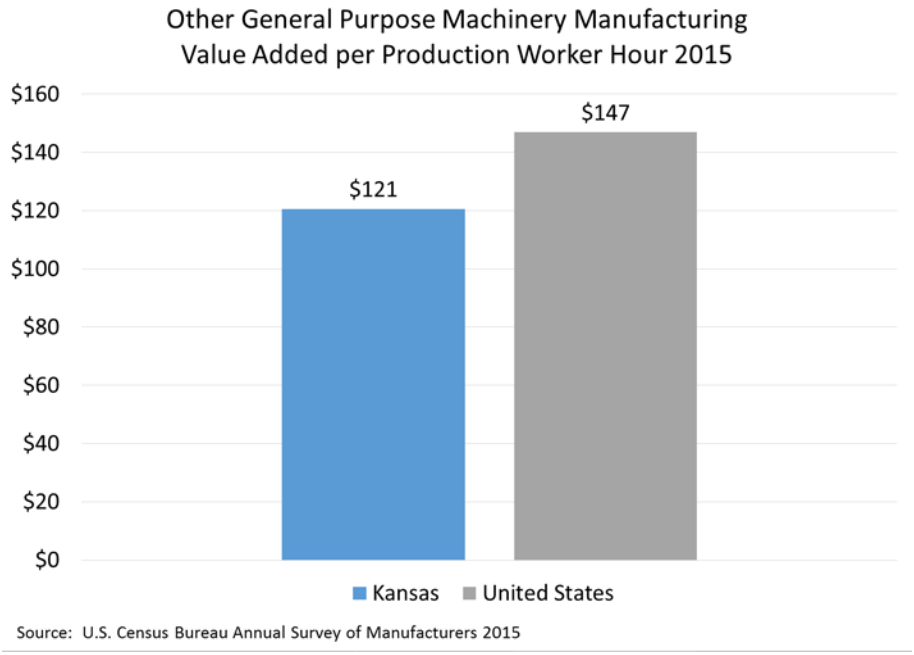
Source: U.S. Census Bureau Annual Survey of Manufacturers 2015 - Inflation adjusted growth rate.

In Kansas, there has been a decrease in employment and an increase in wages for production workers in other general purpose machinery manufacturing, an indication of a decline in the supply of employees to this industry. However, there has been an increase in wages and employment for nonproduction workers in this industry indicating an increase in demand for these workers.

Productivity

In 2015, other general purpose machinery manufacturing workers in Kansas worked an average of 36.49 hours a week, down 4.8 percent from 2014 and somewhat less than the national average of 38.98 hours, which decreased one percent from 2014. It is less than the mean for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was $152 in 2015. In 2015, the average value added per production worker hour for other general purpose machinery manufacturing was $147 in the United States. The Kansas average was $121. This difference in productivity may be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.



Heating, Ventilation, Air-conditioning, and Commercial Refrigeration Equip. Mfg. (HVAC)

This industry comprises establishments primarily engaged in manufacturing ventilating, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment. Over the next five years, it is expected to see modest growth driven by a persistent increase in construction activity.[15]

This industry accounts for 2.4 percent of total Kansas manufacturing employment and has a high concentration of employment relative to the United States as a whole. There are two times the number of workers in Kansas then there are in the United States in general.

The majority of the establishments in this industry in Kansas are moderate in size with about 100 employees. [16] The largest employer is Johnson Controls which has about 1,000 employees.[17]

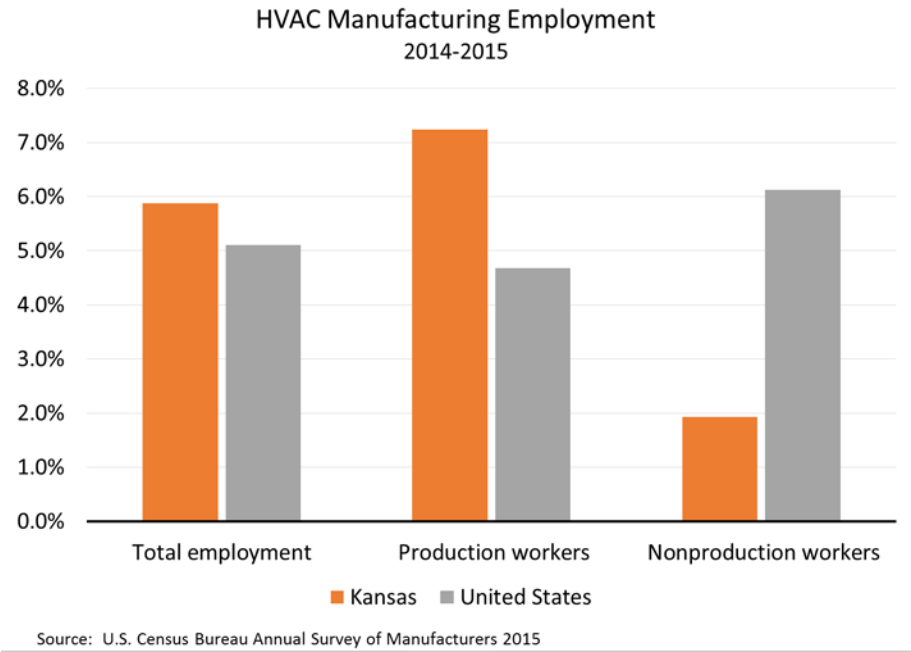
[15] IBISWorld – Heating and Air Conditioning Equipment Manufacturing in the U.S. June 2016
[16] U.S. Census Bureau – County Business Patterns 2014
[17] Infogroup, Inc.

Employment

Job growth in HVAC manufacturing has increased at an average rate of 1.2 percent a year since 2005. However, there were decreases in jobs in 2008, 2009 and 2013.[18]

Of the 3,814 HVAC manufacturing workers in Kansas in 2015, 75 percent were production workers, and 25 percent were nonproduction workers. There were 0.33 nonproduction workers for each production worker in the state, somewhat lower than the national average for HVAC manufacturing of 0.41 nonproduction workers for each production worker.

Between 2014 and 2015, total HVAC manufacturing employment increased in both Kansas and the United States, with the relative increase in Kansas being larger than the United States, a 5.9 percent gain compared to a 5.1 percent gain. There was a total increase in Kansas of 213 workers, an increase of 195 production employees and 18 nonproduction workers. In the United States as a whole production and nonproduction workers also increased.



Wages

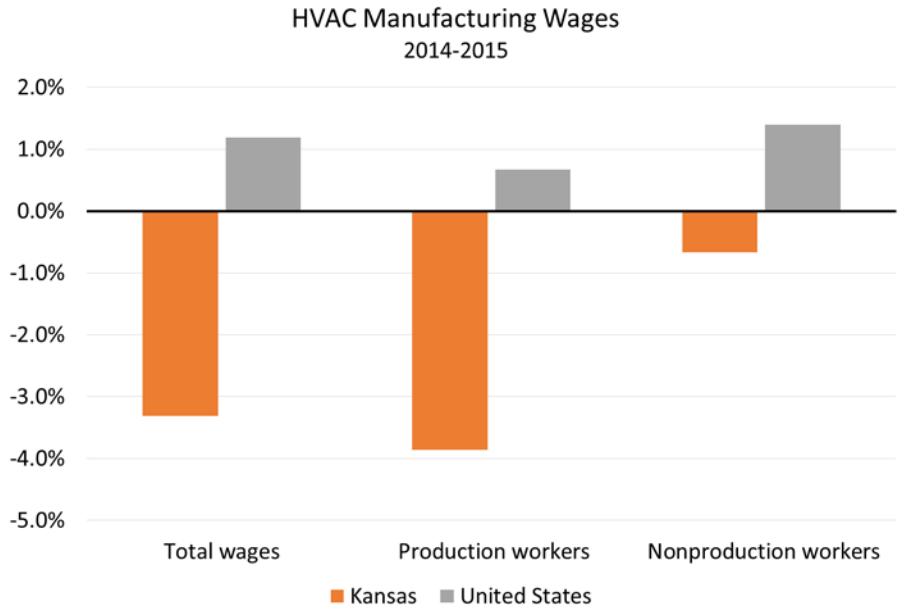
Wages for jobs in HVAC manufacturing are low for production and nonproduction workers. The average salary in 2015 for this industry in Kansas was $40,256, 27.9 percent lower than the average salary for manufacturing in the state. At $32,508 annually, production workers in HVAC manufacturing earned 31.7 percent less than the average for production workers in Kansas. At $ 63,804 a year, nonproduction workers earned 16.6 percent less than the average for nonproduction workers in manufacturing in Kansas.

[18] Bureau of Labor Statistics – Quarterly Census of Employment and Wages

HVAC Equipment Manufacturing Annual Wage per Worker 2015	
Total employment	$40,256
Production workers	$32,508
Nonproduction workers	$63,804

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015, total average wages in Kansas in other HVAC manufacturing decreased by 3.3 percent and increased by 1.2 percent at the national level, for both production and nonproduction workers.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015 - Inflation adjusted growth rate.

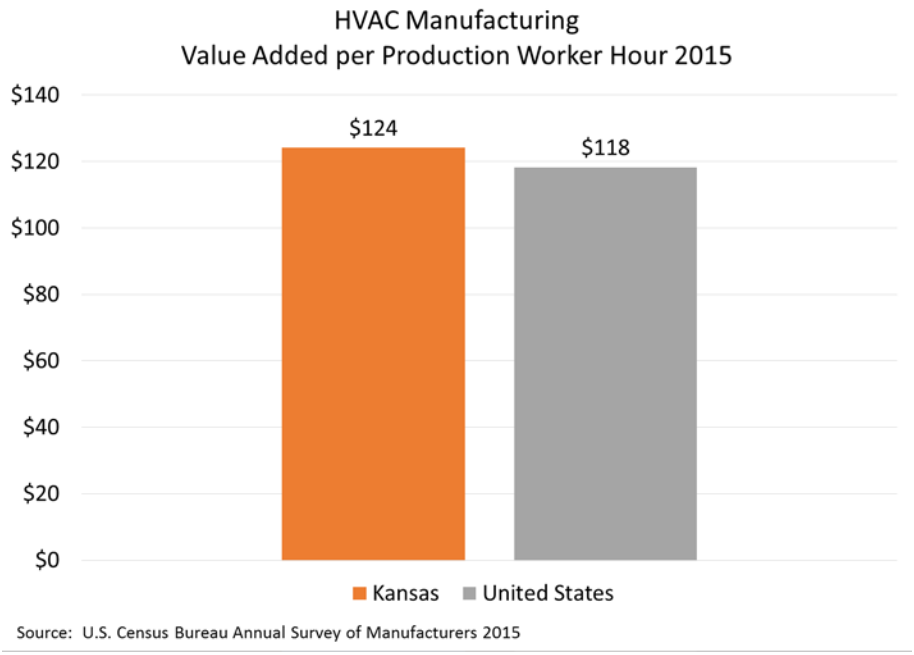
In Kansas, there has been an increase in employment and wages for production and nonproduction workers in HVAC manufacturing, an indication of an increase in the supply of both unskilled and skilled workers to this industry.

Productivity

In 2015, HVAC manufacturing workers in Kansas worked an average of 34.26 hours a week, down 16.9 percent from 2014. Kansas workers worked less than the national average of 38.25 hours, which decreased 1.2 percent from 2014. It is less than the mean for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was $152 in 2015. In 2015, the average value added per production worker hour for HVAC manufacturing was $118 in the United States. The Kansas average was $124. This difference in productivity may be attributed to the difference in the specific type of manufacturing done in Kansas,

the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.



Industrial Machinery Manufacturing

This industry comprises establishments primarily engaged in manufacturing industrial machinery, such as food and beverage manufacturing machinery, semiconductor manufacturing machinery, sawmill and woodworking machinery (except handheld), machinery for making paper and paper products, printing and binding machinery and equipment, textile-making machinery, and machinery for making plastics and rubber products.

Nationally, over the next five years, industrial machinery manufacturing is anticipated to experience moderate growth. Woodworking machinery is expected to grow marginally due to improving housing markets.[19] Growth is plastics, and rubber machinery manufacturing will largely depend on exports and is expected to increase only slightly.[20] Semiconductor machinery manufacturing is anticipated to have the strongest growth in this industry due to rising consumption levels.[21]

There are approximately 43 establishments in Kansas in industrial machinery manufacturing, the majority of which have fewer than 100 employees.[22] The two of the largest firms produce food products

[19] IBISWorld – Woodworking Machinery Manufacturing in the U.S. June 2016.
[20] IBISWorld – Plastics and Rubber Machinery Manufacturing in the U.S. November 2016.
[21] IBISWorld – Semiconductor Machinery Manufacturing in the U.S. September 2016.
[22] U.S. Census Bureau – County Business Patterns

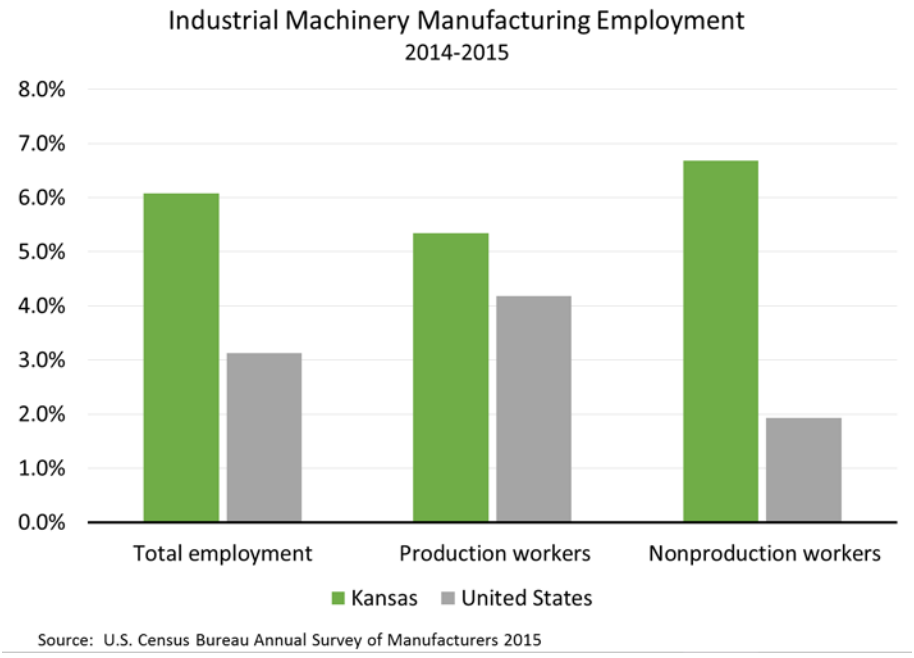
machinery, Baader-Linco and Great Western Mfg. Co. Inc. McCall Pattern Co. is also a large employer in the state, producing patterns for apparel.[23]

Employment

Over the past decade, industrial machinery manufacturing in Kansas has averaged about 1,600 workers annually. The level of employment decreased significantly in the 2008 recession but has grown at an average annual rate of 2.8 percent between 2005 and 2015.

Of the 2,199 industrial machinery manufacturing workers in Kansas in 2015, 45 percent were production workers, and 55 percent were nonproduction workers. There were 1.23 nonproduction workers for each production worker in the state, higher than the national average for industrial machinery of 0.87 nonproduction workers for each production worker.

Between 2014 and 2015, total employment in industrial machinery manufacturing increased in both Kansas and the United States, with the relative increase in the United States being smaller than Kansas, a 3.1 percent gain compared to a 6.1 percent gain. There was a total increase in Kansas of 126 workers, a result of an increase of 50 production employees and an increase of 76 nonproduction workers. In the United States as a whole production and nonproduction workers both increased.



[23] Infogroup, Inc.

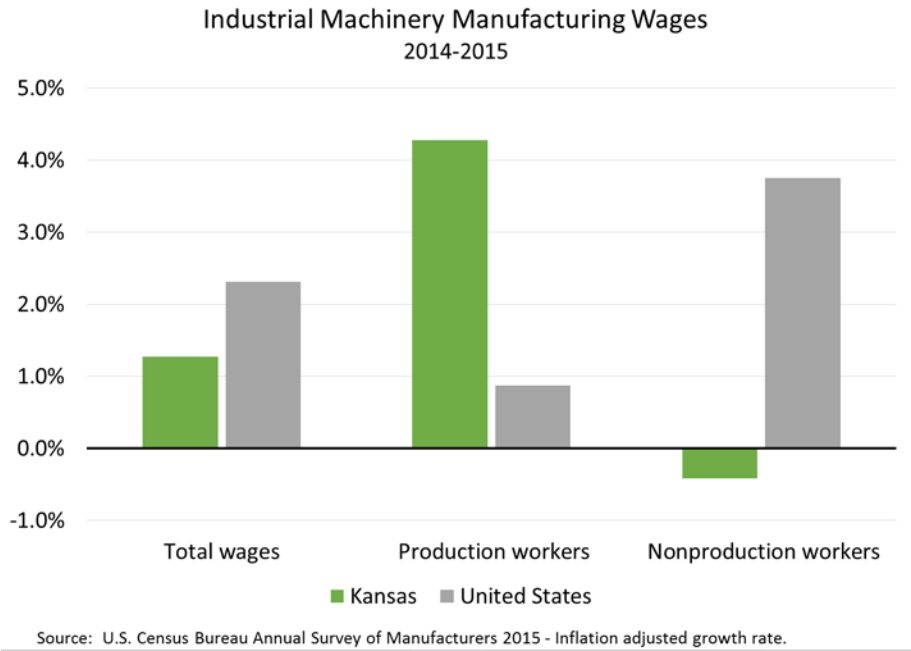
Wages

Jobs in industrial machinery manufacturing pay above average wages for production and nonproduction workers in Kansas. The average salary in 2015 for this industry in Kansas was $64,249, 15.1 percent higher than the average salary for manufacturing in the state. At $48,361 annually, production workers in industrial machinery earned 1.6 percent more than the average for production workers in Kansas. At $ 77,163 a year, nonproduction workers earned 0.9 percent more than the average for nonproduction workers in manufacturing in Kansas.

Industrial Machinery Manufacturing Annual Wage per Worker 2015	
Total employment	$64,249
Production workers	$48,361
Nonproduction workers	$77,163

Source: U.S. Census Bureau Annual Survey of Manufacturers

Between 2014 and 2015, total average wages in Kansas in industrial machinery manufacturing increased by 1.3 percent, considerably less than the national average of 2.3 percent. The relatively small increases can be attributed to increases in the average wage of production and decreases in the average salary of nonproduction workers in Kansas.



In Kansas, there has been an increase in employment and increases in the wages of production workers in industrial machinery manufacturing, an indication there has been increased demand for these workers. At the same time, there has been increased employment and decreased wages for nonproduction workers, an indication there has been an increase in the supply of skilled workers to this industry.

Productivity

In 2015, industrial machinery manufacturing workers in Kansas worked an average of 40.37 hours a week, up 0.5 percent from 2014, more than the national average of 38.60 hours, which decreased 1.8 percent from 2014. It is less than the mean for manufacturing in Kansas of 39.06 hours a week.

In the United States, the average value added per production worker hour in manufacturing, in general, was $152 in 2015. In 2015, the average value added per production worker hour for industrial machinery manufacturing was $165 in the United States. The Kansas average was $173. This difference in productivity may be attributed to the difference in the specific type of manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.