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Center for Economic Development and Business Research

Kansas Manufacturing

Transportation Equipment

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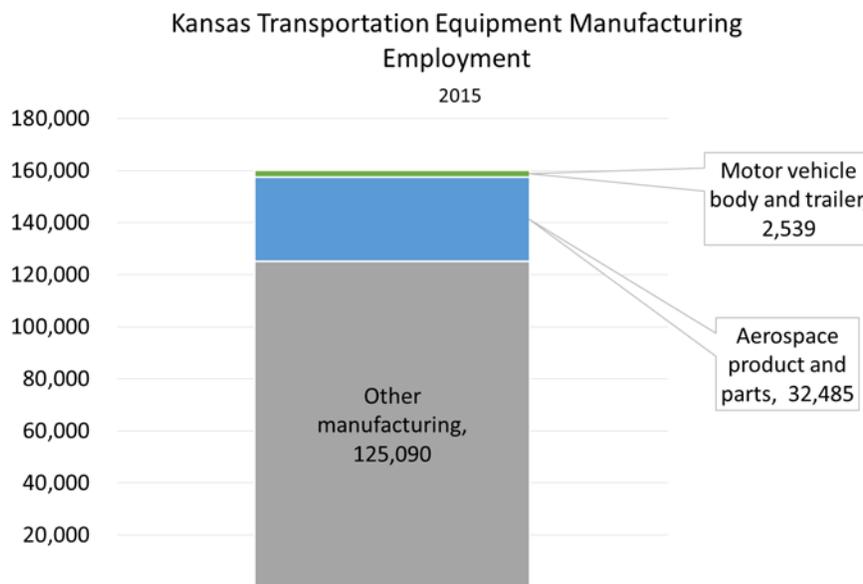
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Transportation Equipment Manufacturing

Industries in the Transportation Equipment Manufacturing subsector produce equipment and machinery for transporting people and goods. Transportation equipment manufacturing makes a significant contribution to the national economy. This subsector includes the production of motor vehicles, aerospace products, railroad rolling stock, and ship building.

There are two components of transportation equipment manufacturing with a significant presence in the Kansas economy. Aerospace product and parts manufacturing is a major driver in the state economy providing many high paying jobs. However, the number of aerospace jobs in the state has been in decline since 2009. There is also a small group of motor vehicle body and trailer manufacturing firms in the state. These are generally lower wage jobs, with a generally stable level of employment.

Aerospace products and parts manufacturing is the largest manufacturing component of the Kansas economy. There were 32,485 workers in Kansas in 2015 working in this industry, 20 percent of all manufacturing workers in the state. Motor vehicle body and trailer manufacturing had 2,539 workers in the state economy in 2015, two percent of all manufacturing workers.¹



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

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

Aerospace Products and Parts Manufacturing

The aerospace products and parts manufacturing sector consists of the manufacturing of aircraft, aircraft engines, aircraft parts, auxiliary equipment, guided missiles, and space vehicles. This includes the production of commercial, military, and civilian aircraft.

Nationally, this industry is projected to see increased revenue over the next five years, mostly attributed to commercial and military production. The strong global and domestic demand for commercial aircraft are anticipated to continue. Military production is expected to pick up, but there is a risk this increase may not materialize due to budget uncertainty. The civil segment is expected to continue to face headwinds from declining aircraft orders. Consolidation will also continue, especially in the supply chain.²

There is a high concentration of aerospace products and parts manufacturing in Kansas. It is over five times more concentrated in Kansas than in the United States as a whole. Kansas has the fifth highest number of aerospace employees in the United States, at 32,485. This is 7.7 percent of the total aerospace manufacturing employees in the United States. Only Washington, California, Texas, and Connecticut have more aerospace employees. Aerospace manufacturing varies greatly between states, depending on the concentration of a particular type of manufacturing.

Kansas aerospace manufacturing includes commercial, military, and civilian aircraft. There are also all levels of the aerospace supply chain represented in the Kansas economy, from products and parts to final assembly. The largest aerospace employers in Kansas include production in all segments of the industry. Some of the largest aerospace employers in Kansas are in the Wichita area, Cessna Aircraft Co. (Textron Aviation), Spirit Aero Systems, and UTC Aerospace. GE Aviation has a large facility, Strother Field in Arkansas City, and Honeywell Aerospace has a large facility in Olathe.³

Employment

The number of aerospace product and parts manufacturing jobs in Kansas have decreased significantly over the past decade, decreasing an average of 1.7 percent annually since 2005.⁴

Of the 32,485 aerospace employees in Kansas in 2015, 69 percent were production workers and 31 percent were nonproduction workers. This is 0.45 nonproduction workers for each production worker in the state, much lower than the national average for aerospace of 0.77 nonproduction workers for each production worker.

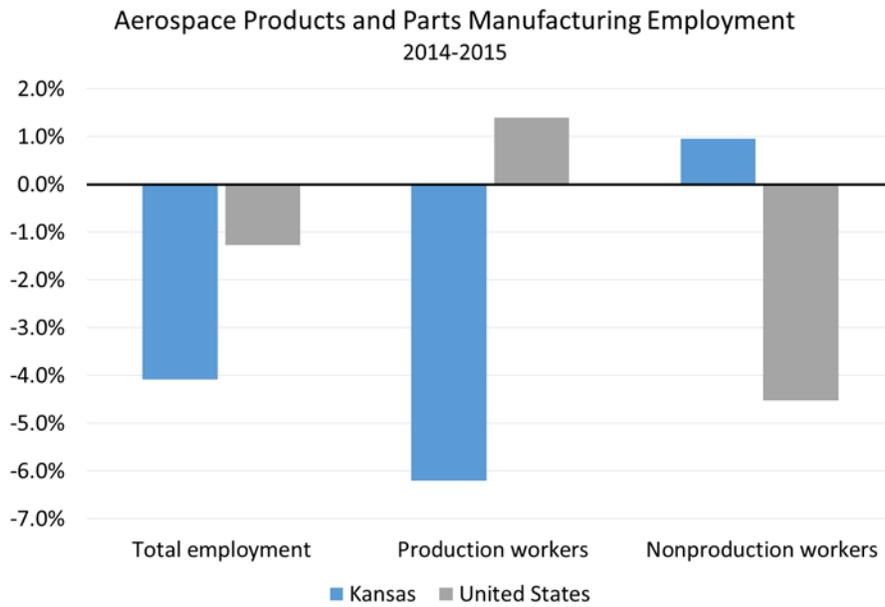
Between 2014 and 2015 total aerospace employment decreased in both Kansas and the United States, with the relative decreases in Kansas being somewhat larger, a 4.1 percent loss relative to a 1.3 percent loss. There was a total decrease in Kansas of 1,381 workers. This was a result of a decrease of 1,477

² IBISWorld Aircraft, Engine & Parts Manufacturing in the U.S. December 2016

³ Infogroup, Inc.

⁴ Bureau of Labor Statistics – Quarterly Census of Employment and Wages

production workers and an increase of 96 nonproduction workers. In the United State as a whole, production workers increased and nonproduction workers decreased.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

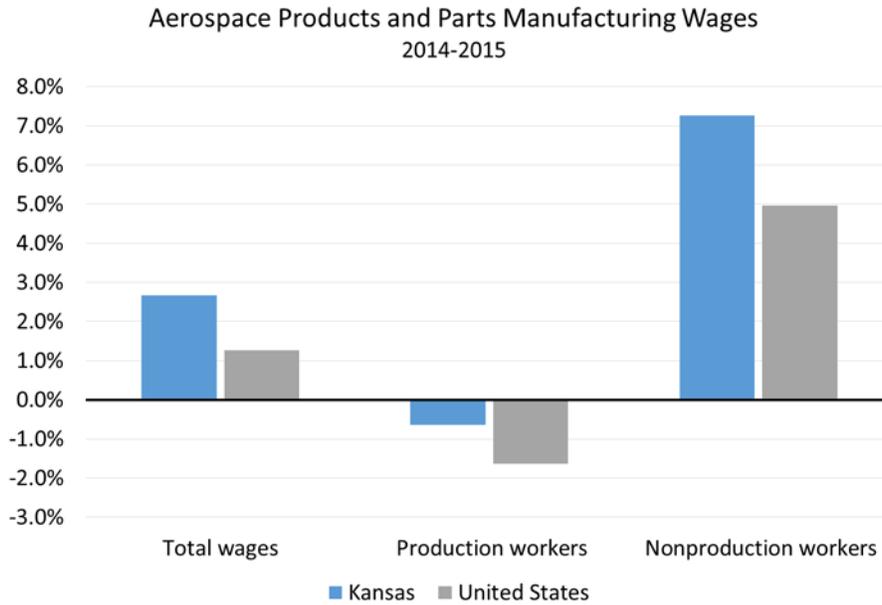
Wages

Aerospace products and parts manufacturing is generally a high wage industry. The average wage in 2015 for workers in this industry in Kansas was \$74,796, 34 percent higher than the average wage for manufacturing in the state. At \$66,862 annually, production workers in aerospace earned 40.5 percent more than the average for production workers in Kansas. At \$92,240 annually, nonproduction workers earned 20.6 percent more than the average for nonproduction workers in manufacturing in Kansas.

Aerospace Products and Parts Manufacturing Annual Wage per Worker 2015	
Total employment	\$74,796
Production workers	\$66,862
Nonproduction workers	\$92,240

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

Between 2014 and 2015, wages in the aerospace products and parts manufacturing industry increased in both Kansas and the United States, with the relative increase in Kansas being somewhat larger, at a 2.7 percent gain relative to a 1.3 percent gain. This can be attributed to smaller than average decreases in the average wage of production workers, and larger than average increases in the average wage of nonproduction workers.



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

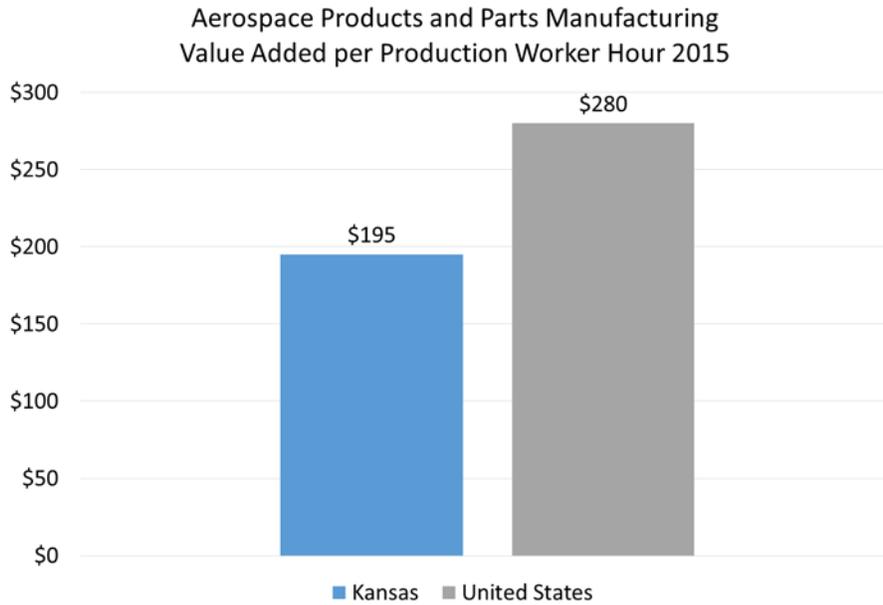
The decrease in the wage and employment of production workers, at the same time there has been an increase in the wage and employment of nonproduction workers, is an indication of the continued decreased demand for low-skilled workers and increased demand for high-skilled workers in the aerospace industry in Kansas. These trends are generally attributed to changes in production technology and offshoring of jobs.

Productivity

In 2015, aerospace products and parts manufacturing workers in Kansas worked an average of 37.14 hours a week, up 2.8 percent from 2014. This is slightly less than the national average for aerospace production workers of 37.63, which decreased 4.9 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 2015.⁵ The value added per production hour in aerospace products and parts manufacturing is generally much higher due to the precision production processes involved. In 2015, the average value added per production worker hour for aerospace products and parts was \$280 in the United States. The Kansas average was \$195. This difference in productivity may possibly be attributed to the difference in the specific type of aerospace manufacturing done in Kansas, the amount of capital investment by local companies, the skill and experience of local production workers, or other factors.

⁵Productivity 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.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

Motor Vehicle Body and Trailer Manufacturing

The motor vehicle body and trailer manufacturing sector includes manufacturing of motor vehicle bodies, truck trailers, motor homes, travel trailers, and campers. Based on demographic trends and below average fuel costs, this industry is expected to grow nationally. However, the industry will likely experience increased pressure from environmental regulations regarding fuel emissions.⁶

Motor vehicle body and trailer manufacturing has a moderate level of concentration of workers in Kansas, 35 percent more than in the United States as a whole. However, Kansas City, Missouri, has a large automobile manufacturing presence, with both Ford and General Motors production facilities.

The majority of the workers in this industry in Kansas work for small to midsize companies with 50 to 100 employees.⁷ The largest employers in motor vehicle body manufacturing in Kansas are Diamond Coach Corp. and Hillsboro Industries. Doonan Specialized Trailer LLC is the largest truck trailer manufacturer in the state. Neville Welding and Wilkens Manufacturing are the largest employers in travel trailer and camper manufacturing.⁸

⁶ IBISWorld

⁷ U.S. Census Bureau – 2014 County Business Patterns

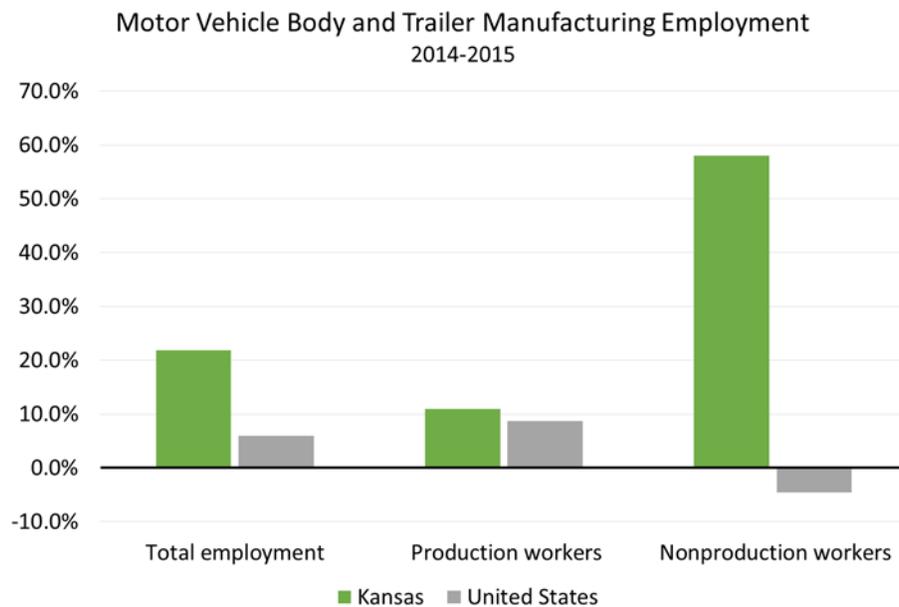
⁸ Infogroup, Inc.

Employment

Employment in the motor vehicle body and trailer industry in Kansas has remained somewhat steady at approximately between 2,300 and 2,800 workers over the past decade, with the exception of a dip down to about 2,000 workers during the 2008 recession.⁹

Of the 2,539 motor vehicle body and trailer employees in Kansas in 2015, 70 percent were production workers and 30 percent were nonproduction workers. This is 0.43 nonproduction workers for each production worker in the state, much higher than the national average for motor vehicle body and trailer production of 0.23 nonproduction workers for each production worker.

Between 2014 and 2015 total motor vehicle body and trailer employment increased in both Kansas and the United States, with the relative increase in Kansas being considerably larger, a 21.8 percent gain relative to a 5.9 percent gain. There was a total increase in Kansas of 455 workers. This was a result of an increase of 176 production workers and an increase of 279 nonproduction workers. In the United States as a whole, production workers increased and nonproduction workers decreased.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015

Wages

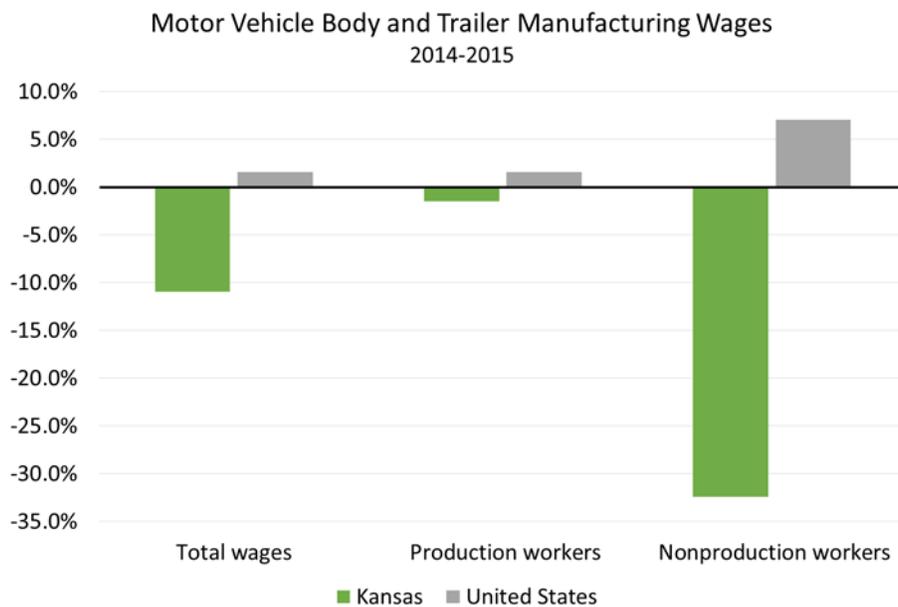
Jobs in motor vehicle body and trailer manufacturing generally provide a lower than average wage in Kansas. The average wage in 2015 for this industry in Kansas was \$37,840, 32 percent lower than the average wage for manufacturing in the state. At \$36,304 annually, production workers in motor vehicle body and trailer manufacturing earned 23.7 percent less than the average for production workers in Kansas. At \$41,436 annually, nonproduction workers earned 45.8 percent less than the average for nonproduction workers in manufacturing in Kansas.

⁹ Bureau of Labor Statistics – Quarterly Census of Employment and Wages

Motor Vehicle Body and Trailer Manufacturing Annual Wage per Worker 2015	
Total employment	\$37,840
Production workers	\$36,304
Nonproduction workers	\$41,436

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

Between 2014 and 2015 wages in the motor vehicle body and trailer manufacturing industry decreased in Kansas by 11 percent and increased in the United States by 1.6 percent. The majority of the decrease in wages can be attributed to decreases in nonproduction workers. Production workers had a relatively smaller decrease in wages.



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

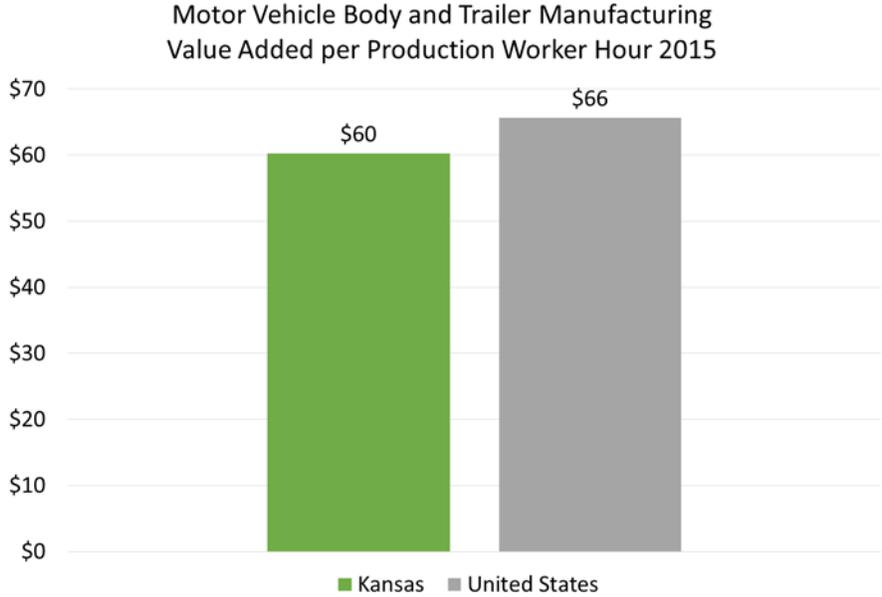
In Kansas, there has been an increase in employment and a decrease in wages for both production and nonproduction workers in motor vehicle body and trailer manufacturing. This is an indication there is an ample supply of labor, both skilled and unskilled, available to this industry. This could be attributed to the decrease in demand for labor in other manufacturing industries.

Productivity

In 2015, motor vehicle body and trailer manufacturing workers in Kansas worked an average of 37.81 hours a week, down 7.1 percent from 2014. This is somewhat less than the national average of 39.28, which decreased 2.0 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. The value added per production hour in motor vehicle body and trailer

manufacturing is generally much lower. In 2015 the average value added per production worker hour for motor vehicle body and trailer was \$66 in the United States. The Kansas average was \$60. This difference in productivity may possibly 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.



Source: U.S. Census Bureau Annual Survey of Manufacturers 2015