



**2017
Kansas
Economic
Report**

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Secretary's Message

Greetings – thank you for your interest in the Kansas economy.

I am pleased to present this year's Kansas Economic Report that I believe shows the diversity of Kansas' economy and the opportunities we have. The division of Labor Market Information Services (LMIS) produces this report taking a detailed look into the Kansas economy.

Our state has always valued hard work and that is shown through one of the hardest working labor forces in the country. Kansas is also home to many businesses – small and large – that continue to grow and create jobs.

Kansas added 8,300 private sector jobs in 2016. This marks the sixth consecutive year of job growth. The number of unemployed decreased to 61,879 the lowest number of unemployed people in the state in 15 years.

The Kansas labor force participation rate remains among the highest in the nation in 2016 at 67.1 percent. This is well above the national rate of 62.8 percent.

The average unemployment rate for 2016 was 4.2 percent, matching the unemployment rate prior to the Great Recession. There are employment opportunities in the state. Estimates from the 2017 Kansas Job Vacancy Survey show there were 48,908 open positions in the second quarter. This is a 9.1 percent increase from 2016.

I encourage you to take a look at the many different economic factors discussed in this report and remember to take all of them into consideration when making an assessment of our state's economy.

Thank you for your efforts to strengthen the Kansas economy and make our state the best place to work and live.

Lana Gordon, Secretary
Kansas Department of Labor



Executive Summary

The Kansas economy grew and added jobs in 2016 but other economic indicators show some reason for concern. Struggles in the agriculture, oil and gas, manufacturing, and management of companies and enterprises industry sectors have led to slower growth in the state. Management of companies and enterprises consists of corporate and regional headquarters and offices. Also concerning is the uneven growth by location in Kansas.

The labor force in Kansas decreased by 0.3 percent in 2016 due to decreases in both the number of people working and the number of unemployed people. Western Kansas experienced the largest labor force decrease while the rest of the state outside of the Kansas City area also recorded smaller labor forces. However, the annual average state unemployment rate remained low at 4.2 percent. **Kansas is still in the top 10 nationally in labor force participation rate and the number of unemployment claims continues to decrease significantly.**

Kansas recorded an increase of 8,300 private sector jobs in 2016, or 0.7 percent. This was the sixth consecutive year of job growth but the lowest growth rate for Kansas in that time span. Six of the 11 major industries added jobs in 2016. Mining and logging, which in Kansas mostly includes oil and gas and related jobs, lost 1,600 jobs from 2015 to 2016, while the manufacturing and professional and business services industries decreased by 900 jobs each. Management of companies and enterprises is included in professional and business services and lost 1,600 jobs. The Metropolitan Statistical Areas added 9,900 nonfarm jobs, with the majority of that growth in the Kansas City Area, while the rest of the state lost 2,300 jobs.

Wage growth was relatively flat in 2016 while overall personal income increased. The average weekly wage in Kansas increased from \$843 in 2015 to \$849 in 2016. However, inflation-adjusted real wages decreased slightly due to the 0.8 percent inflation experienced in the Midwest in 2016. **Kansas personal income growth ranked 39th out of the 50 states, but the 2.8 percent increase was the highest growth rate recorded since 2012.** Personal income increased in most industry sectors with notable exceptions being the mining and management of companies and enterprises which decreased by 12.1 percent and 9.4 percent respectively.

Kansas' Gross Domestic Product (GDP) grew for the seventh consecutive year. The inflation-adjusted real GDP growth was 0.2 percent, the second lowest growth rate since the end of the Great Recession. Kansas ranked 42nd out of the 50 states in GDP growth rate. GDP increased in most sectors as well with a few notable exceptions. Agriculture recorded the largest GDP decline of any industry sector, decreasing by \$704 million from 2015 to 2016. Large declines were also recorded in mining, management of companies and enterprises and manufacturing. Kansas export sales were down over the year due to a nearly \$700 million decrease in manufacturing export sales. On a positive note, agricultural exports increased from 2015 to 2016 by about \$179 million. Productivity also increased from 2015 to 2016 in Kansas despite decreasing nationally.

Early data in 2017 indicates the economy is continuing to grow. Kansas has added 3,700 total nonfarm jobs and 3,600 private sector jobs over the year as of June. The not seasonally adjusted unemployment rate has improved even further, averaging 3.8 percent through the first six months of 2017. Job vacancy data showed a 9.1 percent increase in vacancies from second quarter of 2016 to second quarter of 2017.

Note: Due to revisions and benchmarking processes, some data may have been updated since last year's Economic Report was published. The data included in the 2017 Economic Report is current as of July 21, 2017. For more information on data found in this report, see *Sources* on page 76.

Population

Population is an important statistic to review for economic purposes for two reasons, both of which benefit businesses. A growing population leads to a larger market for businesses and may lead to more jobs as demand for goods and services increase. A growing population also potentially increases the size and quality of the labor force which provides more labor supply for businesses to fill jobs.

Table 1 Total Population Kansas and U.S. 2005 - 2016						
	2005	2006	2007	2008	2009	2010
Kansas	2,745,299	2,762,931	2,783,785	2,808,076	2,832,704	2,858,850
U.S.	295,516,599	298,379,912	301,231,207	304,093,966	306,771,529	309,348,193
	2011	2012	2013	2014	2015	2016
Kansas	2,869,503	2,885,262	2,892,821	2,899,360	2,906,721	2,907,289
U.S.	311,663,358	313,998,379	316,204,908	318,563,456	320,896,618	323,127,513

Source: U.S. Census Bureau, Population Estimates

Table 1 above, shows a historical perspective of the Kansas and U.S. populations since 2005. The Kansas population was estimated at 2,907,289 in 2016. This represents a gain of 568 people or 0.02 percent. This is the lowest population growth rate for Kansas since 1971 and well below the post-World War II historical average of 0.7 percent. Kansas' population ranks 35th out of the 50 states. The U.S. population is also growing at historically low levels, recording 0.7 percent growth to 323.1 million in 2016. The U.S. population growth rate was the lowest since 1937 and marks the 16th consecutive year that the growth rate in the U.S. has been one percent or lower, the longest recorded time period with this slow of population growth.

“ Kansas' population ranks 35th out of the 50 states. ”

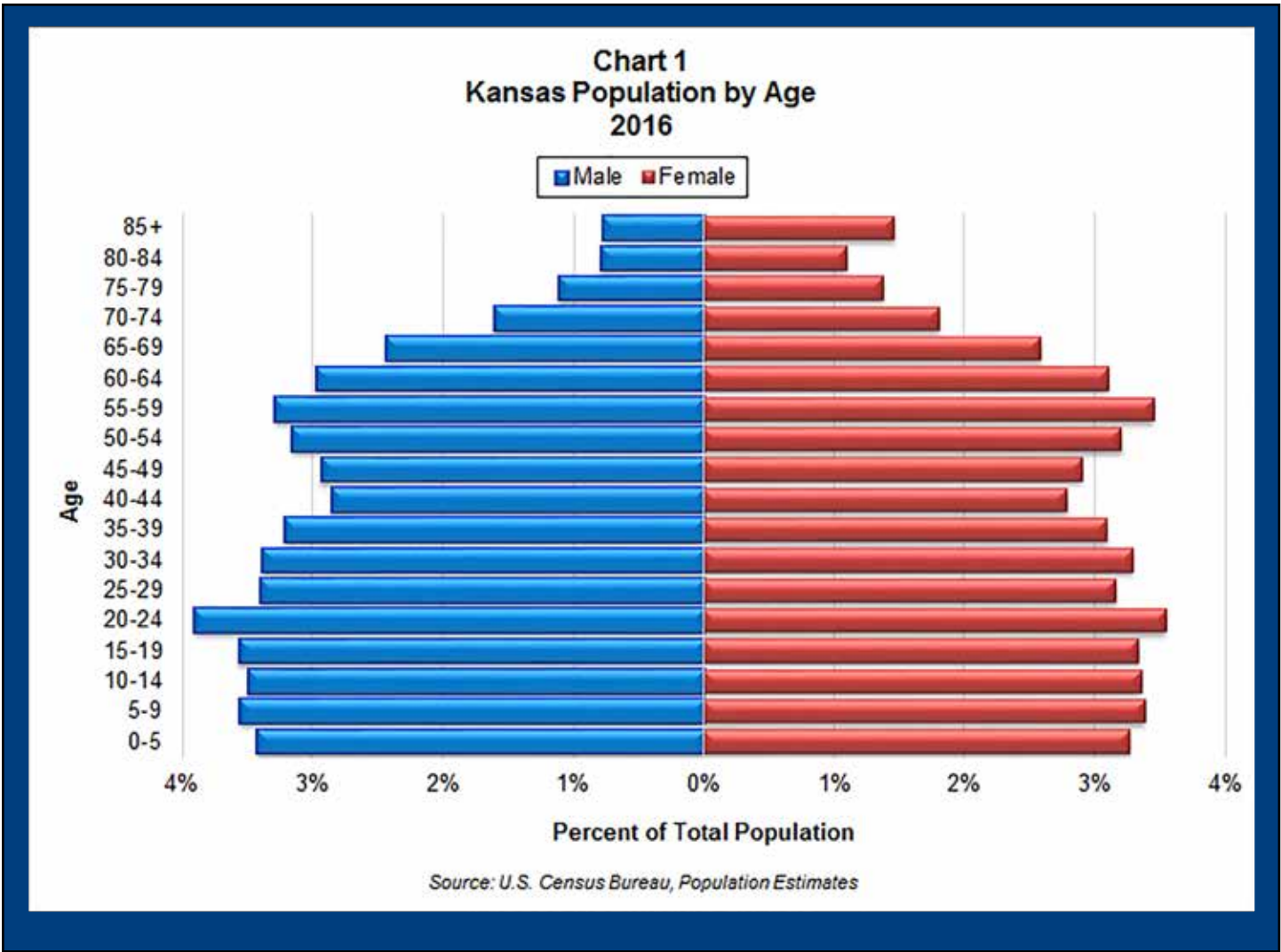


Chart 1 above, displays the Kansas population by age group and gender in what is called a population pyramid. It is known as a pyramid since population by age group generally decreases with age creating a pyramid shape. However, the pyramid for Kansas shows that there are two major peaks in the population, one centering on the 20-24 age group representing the Millennial generation and the 55-59 age group representing the younger members of the Baby Boomer generation. The 20-24 age group has the largest population in Kansas making up 7.4 percent of the total population.

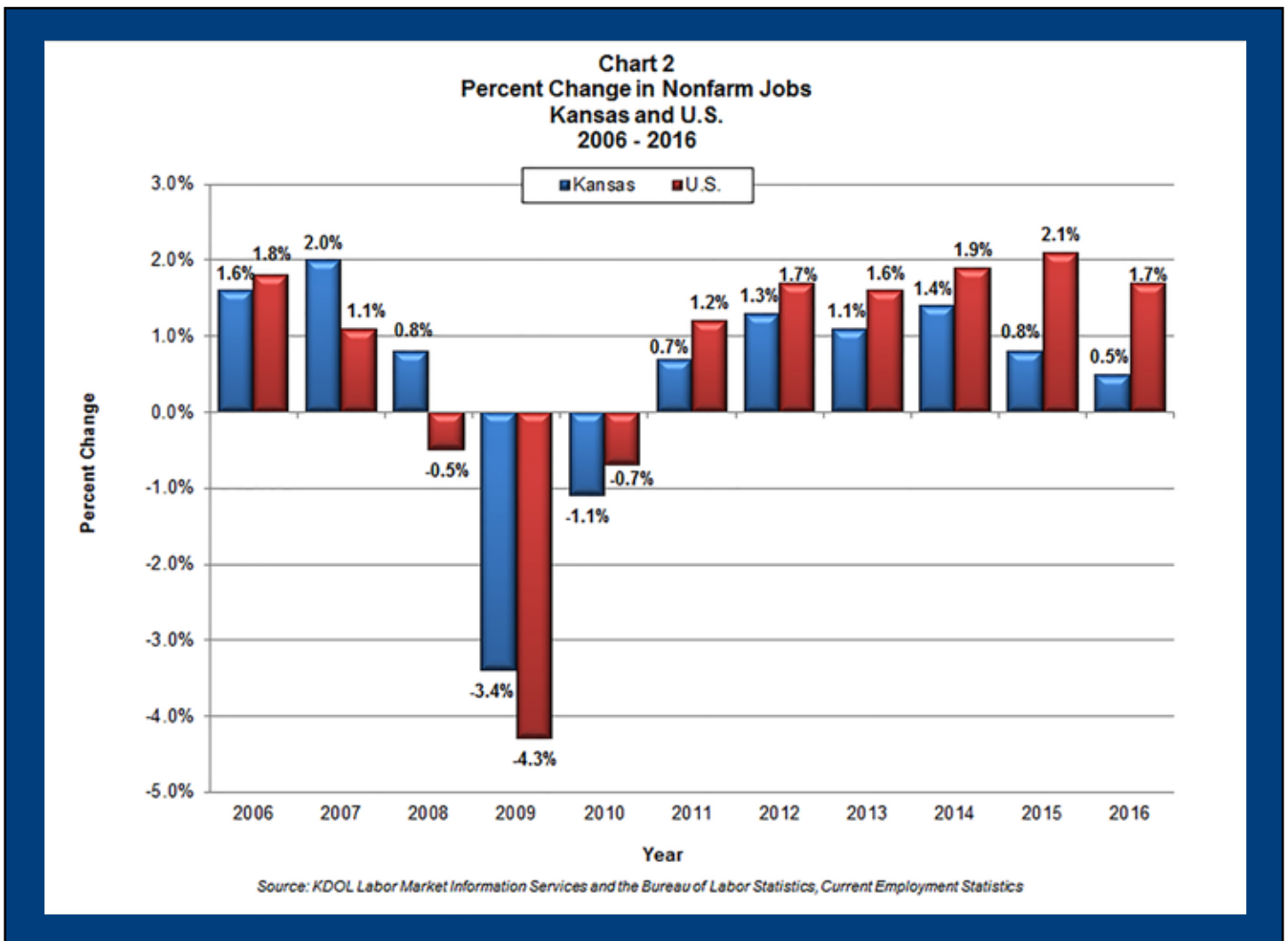
For economic purposes, the two main age groups that are studied are the 16 and over population and the 25-54 population. The 16 and over population includes everyone who is eligible to be in the labor force, while 25-54 year olds are considered prime age workers. The 16 and over population for Kansas in 2016 was 2,272,404, an increase of 5,570, or 0.2 percent. The 25-54 year old population was 1,086,018 in 2016, a decrease of 7,108, or 0.7 percent. However, a major portion of the decrease was in the 50-54 age group indicating that a lot of the decline may be due to people aging out of the 25-54 group. On the other hand, future labor force growth may be in jeopardy since the population under 25 also decreased by 7,221, or 0.7 percent.

Statewide Summary

Nonfarm Jobs

The change in nonfarm jobs is one of the most current indicators of the economy's health. Job growth indicates increased demand for businesses' products and services. This puts money in the hands of those previously unemployed also further increasing the demand for consumer goods and services. Additional jobs also lead to increased output, signifying economic growth.

In 2016, Kansas added 8,300 private sector jobs, or 0.7 percent growth and 7,600 total nonfarm jobs, or 0.5 percent. This is the sixth consecutive year that Kansas experienced job growth, with 86,400 private sector jobs added during this time frame. Nationally, private sector jobs increased in 2016 by 2.3 million, or 1.9 percent, and nonfarm jobs increased in 2016 by 2.5 million, or 1.7 percent. This is also the sixth straight year of job growth for the U.S. **Chart 2 below**, shows the Annual Percent Changes in Nonfarm Jobs for Kansas and the U.S. since 2006. **Table 3 next page**, displays Nonfarm Jobs in the U.S. and Kansas.



**Table 3
Nonfarm Jobs
Kansas and U.S.
2006-2017**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Kansas	1,354.6	1,381.1	1,392.0	1,344.6	1,329.8	1,339.6	1,357.4	1,372.1	1,390.9	1,402.3	1,409.9
U.S.	136,453	137,999	137,242	131,313	130,361	131,932	134,175	136,381	138,958	141,843	144,306

2017						
	January	February	March	April	May	June
Kansas	1,385.2	1,399.5	1,406.5	1,412.8	1,415.7	1,413.0
U.S.	143,273	144,292	144,940	145,948	146,789	147,388

Note: Data in thousands and not seasonally adjusted

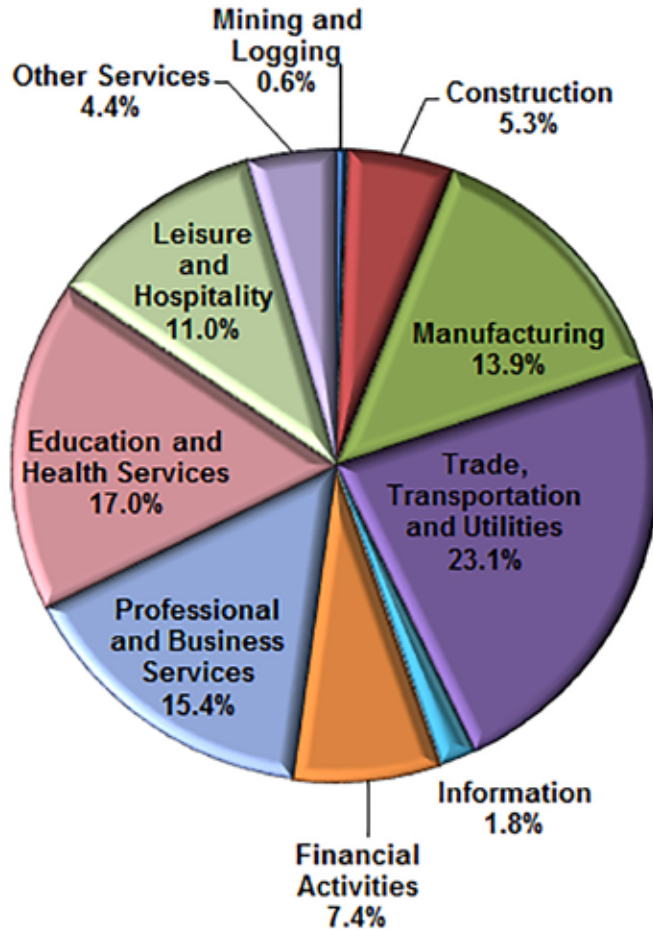
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics

Job growth was recorded in six of the 11 major industries in Kansas during 2016. Financial activities gained the most jobs in 2016, adding 5,000 jobs. Almost all of the job increase was in the finance and insurance sector. Education and health services recorded a 2,000 job increase, with all the growth occurring in health care and social assistance. Other services, which includes establishments like repair shops, beauty salons, and non-profit organizations, gained 1,900 jobs. Job growth was also recorded in trade, transportation and utilities; leisure and hospitality; and construction.

Five of the major industries lost jobs over the year. Mining and logging, which includes oil and gas extraction and support activities, declined by 1,600 jobs or 18.8 percent in 2016. Manufacturing lost 900 jobs with the losses in durable goods manufacturing outweighing the gains in non-durable goods manufacturing. Professional and business services also recorded a 900 job decrease due to losses in the management of companies and enterprises sector along with the administrative and support and waste management and remediation services sector. Job decreases were also recorded in government and information.

“ Job growth was recorded in six of the 11 major industries in Kansas during 2016. ”

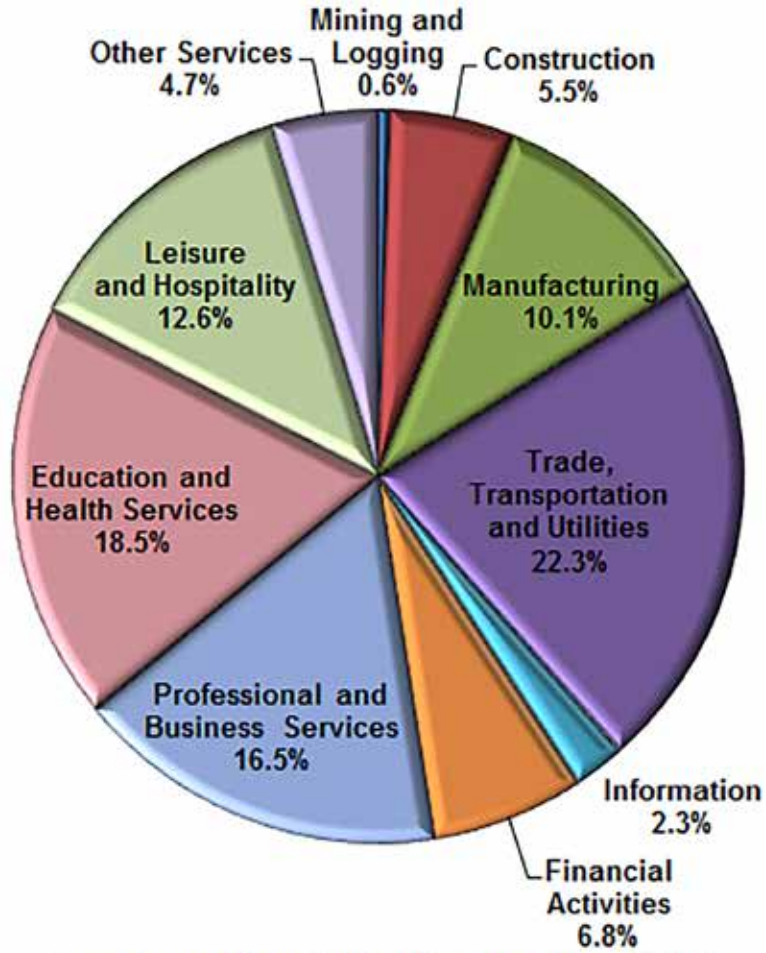
Chart 3 Kansas Private Sector Jobs by Industry 2016



Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics

Chart 3 above, and **Chart 4 next page**, display the percentage of private sector jobs by industry in 2016 for Kansas and the U.S. As seen in the charts, the distribution of jobs by industry in Kansas is similar to the national level with one notable difference being a higher concentration of jobs in manufacturing in Kansas compared to the rest of the U.S.

Chart 4 U.S. Private Sector Jobs by Industry 2016



Source: Bureau of Labor Statistics, Current Employment Statistics

Location Quotients

Location quotients compare the concentration of private sector employment by industry for two or more areas. Through the use of location quotients the industry sectors that contribute the most to the Kansas economy can be identified. If the location quotient is higher than one, Kansas has a higher concentration of employment in that industry compared to the rest of the country. This means Kansas has an advantage in that industry and is likely to generate more income from that industry from sources outside of Kansas. The opposite is true if the location quotient is less than one.

Table 4 next page, lists the Location Quotients by Industry sector for Kansas. All but two of the location quotients are between 0.75 and 1.25, indicating that Kansas has a fairly similar employment by industry distribution to the U.S. as was mentioned in the previous section. There are eight industry sectors where Kansas recorded a location quotient greater than one and therefore has an advantage. The manufacturing industry recorded the highest location quotient in 2016 at 1.35, due to high concentrations of employment in the manufacturing of transportation equipment (location quotient of 2.46), petroleum and coal products (2.15), and food (2.14). Location quotients higher than two indicate Kansas has more than twice the concentration of jobs in those sectors compared to the rest of the country.

Utilities; mining, quarrying and oil and gas extraction; and management of companies of enterprises also had location quotients higher than 1.10. Utilities has a high concentration of jobs in natural gas distribution and electric power generation. Oil and gas extraction has a relatively high location quotient bringing up the total for mining, quarrying and oil and gas extraction. Management of companies and enterprises has a higher location quotient due to the location of several corporate and regional headquarters in Kansas.

The highest location quotient for an individual industry subsector is animal production and aquaculture at 2.79 but the overall agriculture, forestry, fishing & hunting location quotient is only 1.01 due to the lack of forestry, logging and commercial fishing, hunting and trapping activities in Kansas. There are 11 industries with a location quotient less than one, with the lowest being educational services at 0.54 due to the lack of private educational institutions.

“ Through the use of location quotients the industry sectors that contribute the most to the Kansas economy can be identified. ”

**Table 4
Location Quotients by Industry
2016**

Industry	Kansas
Manufacturing	1.35
Utilities	1.25
Mining, Quarrying and Oil and Gas Extraction	1.15
Management of Companies and Enterprises	1.13
Wholesale Trade	1.06
Finance and Insurance	1.04
Agriculture, Forestry, Fishing and Hunting	1.01
Transportation and Warehousing	1.01
U.S. at 1.00	
Retail Trade	0.98
Health Care and Social Assistance	0.97
Construction	0.95
Administrative and Support and Waste Management and Remediation Services	0.93
Accommodation and Food Services	0.86
Professional, Scientific and Technical Services	0.85
Other Services	0.79
Arts, Entertainment and Recreation	0.77
Information	0.76
Real Estate and Rental and Leasing	0.75
Educational Services	0.54

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics; Quarterly Census of Employment & Wages

Civilian Labor Force and Labor Force Participation Rate

The civilian labor force is a measure of the number of people over the age of 16 that are available for work. This includes individuals who are employed as well as those who are unemployed but actively seeking work. A growing labor force is favorable as it increases the amount of workers available for employers and shows there is increasing confidence of finding a job in a given area.

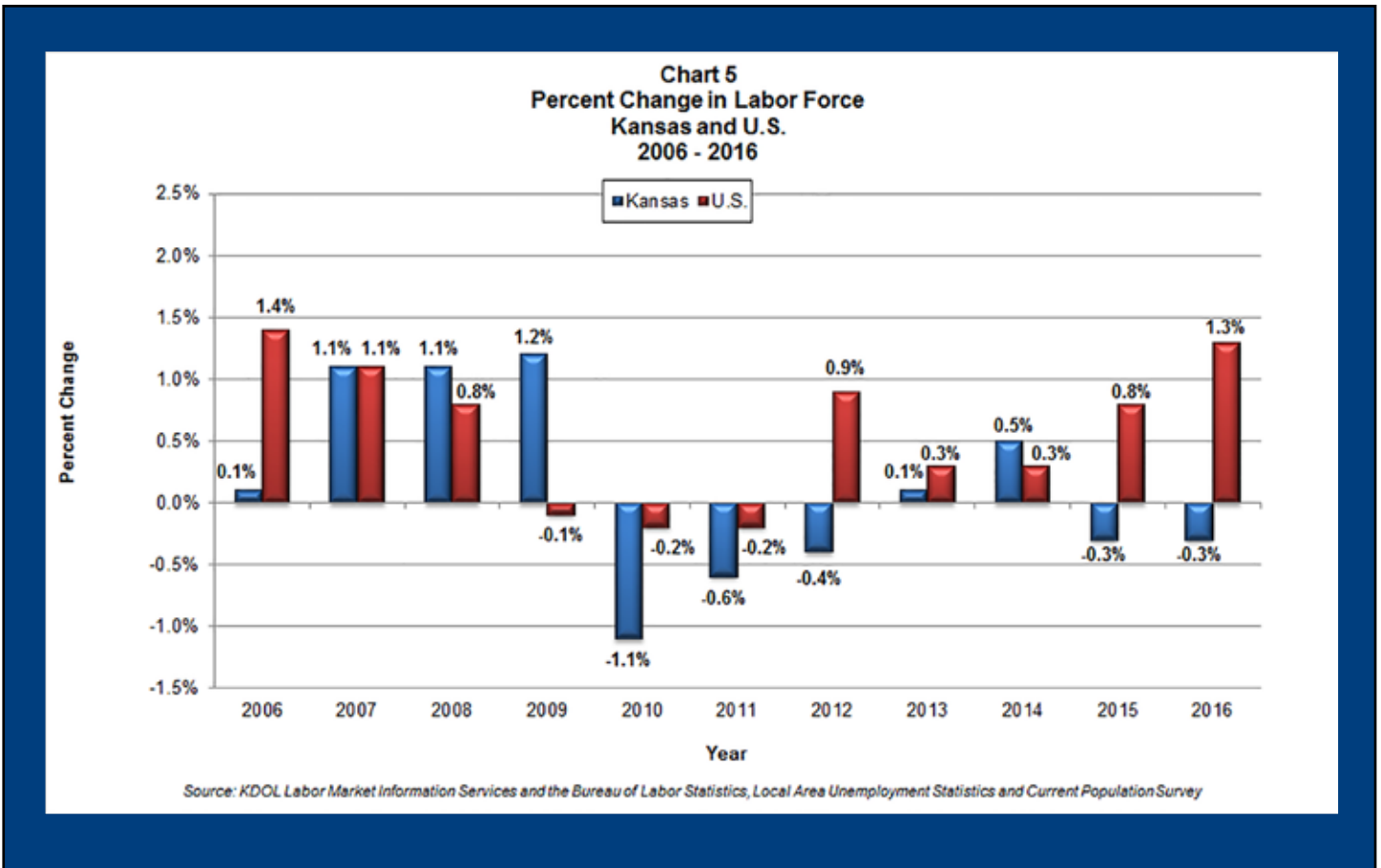
As indicated in **Table 5 below**, there were 1,484,001 people in the labor force in 2016, a 0.3 percent decrease. This is the second consecutive year the labor force has contracted in Kansas. The decrease was due to fewer Kansans counted as employed and unemployed. There were 1,422,122 Kansans working in 2016, a decrease of 0.3 percent and the number of unemployed people decreased by 0.8 percent to 61,879 people. Population and labor force participation decreases for the 20-24 age group were significant factors leading to the smaller labor force.

Table 5 Labor Force Statistics Kansas 2015 & 2016				
	2015	2016	Change	%Change
Civilian Labor Force	1,489,165	1,484,001	-5,164	-0.3%
Employed	1,426,764	1,422,122	-4,642	-0.3%
Unemployed	62,401	61,879	-522	-0.8%
Unemployment Rate	4.2	4.2	0.0	0.0%

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics

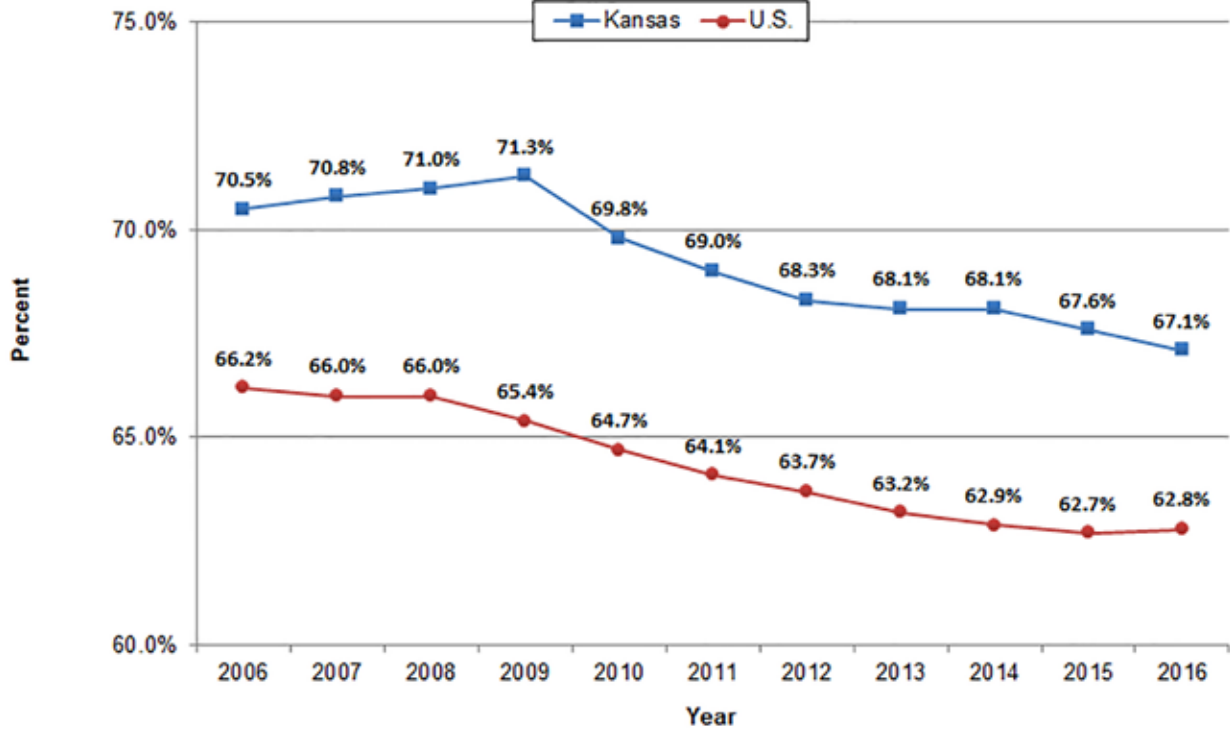
“The civilian labor force is a measure of the number of people over the age of 16 that are available for work.”

The U.S. civilian labor force increased for the fifth consecutive year, recording an expansion of 1.3 percent to 159.2 million. There were 151.4 million people in the U.S. working in 2016, a 1.7 percent increase. The number of unemployed people decreased by 545,000 or 6.6 percent, to 7.8 million in 2016. **Chart 5 below**, shows the percent change in the labor force for Kansas and the U.S.



The labor force participation rate is the percentage of all individuals above the age of 16, non-institutionalized and civilian, who participate in the labor force. Kansas' labor force participation rate remained among the highest in the nation in 2016. As shown in **Chart 6 next page**, the rate was 67.1 percent in Kansas, which is tied for the 9th highest rate for states, and well above the national rate of 62.8 percent. The Kansas rate represents a decrease of 0.5 percentage points and is the lowest recorded since 1984 while the national rate increased for the first time since 2006. Major contributing factors in the decline of the labor force participation rate in recent years are an increase in the retired population along with more students attending post-secondary institutions.

Chart 6
Labor Force Participation Rate
Kansas and U.S.
2006 - 2016



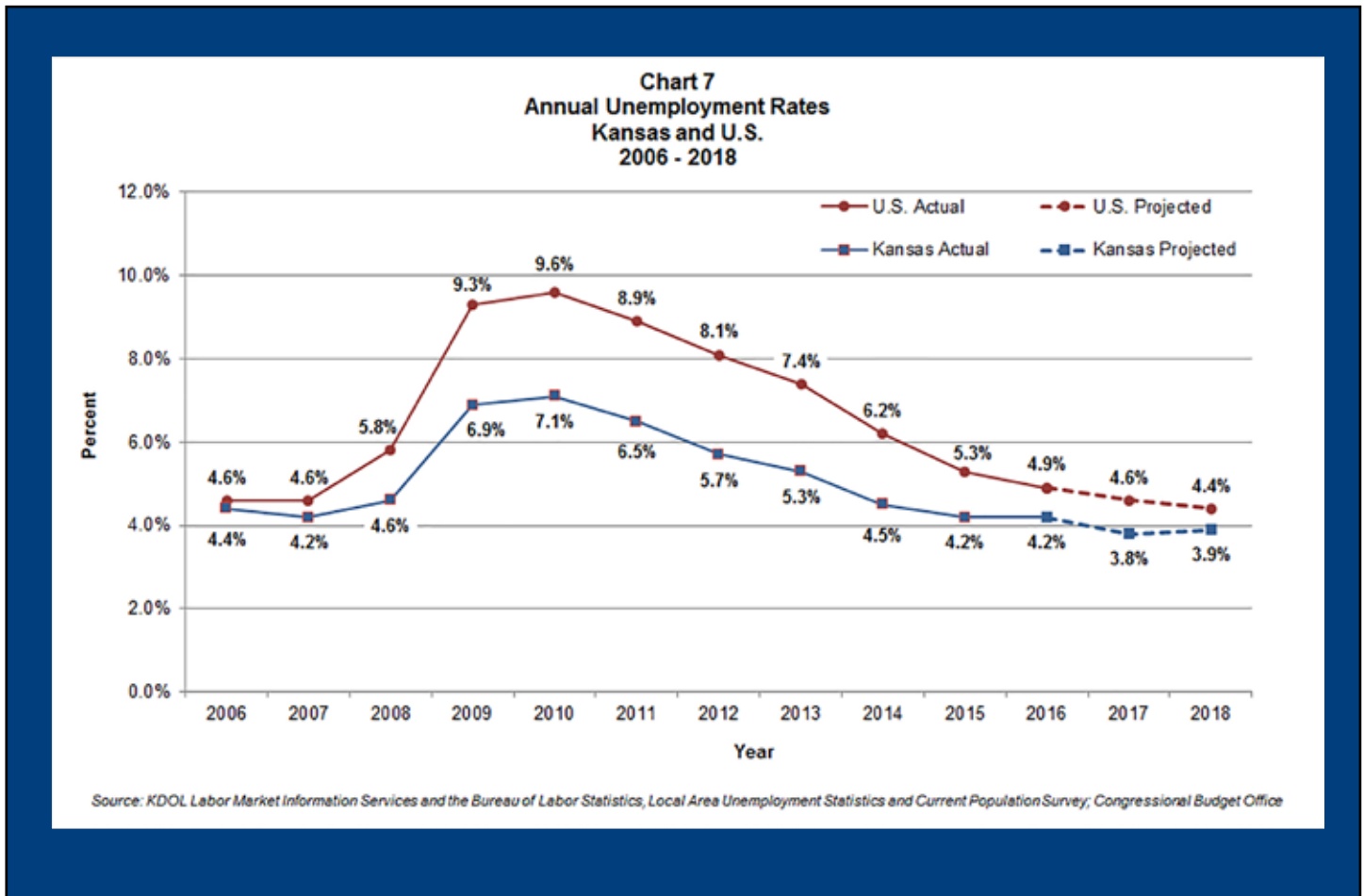
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics and Current Population Survey

Unemployment Rate

The unemployment rate is a frequently cited economic statistic because it shows how many people want a job and cannot find one. The unemployment rate shows the percentage of the labor force that is unemployed and currently looking for a job. If the rate is high, there is a large number of people who want a job but are having difficulty finding one due to a lack of demand for employees.

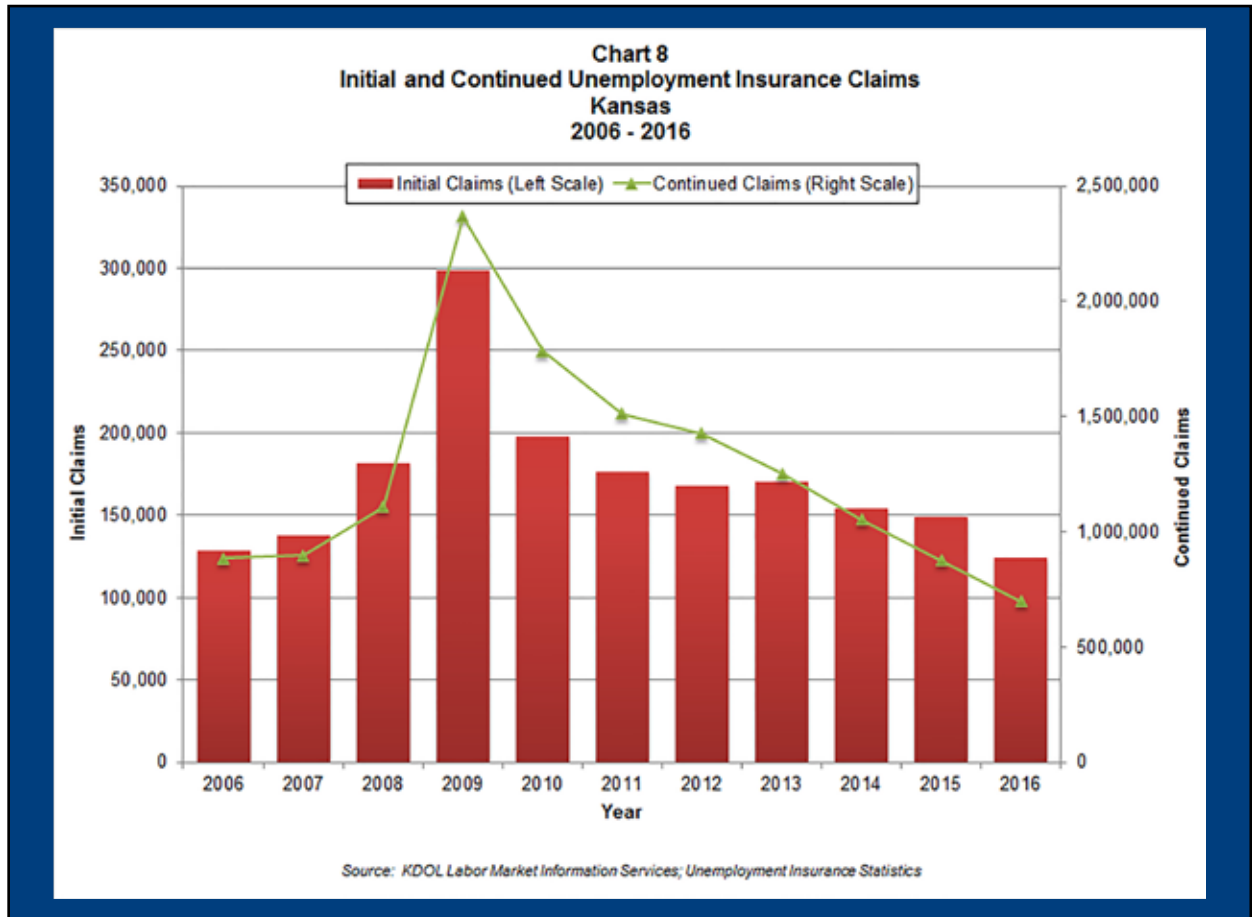
In 2016, Kansas continued to have low unemployment rates, recording an average annual unemployment rate of 4.2 percent. The unemployment rate was unchanged from 2015. The unemployment rate is 0.5 percentage points lower than the historical average (1976-present) annual unemployment rate for Kansas which is 4.7 percent. The 2016 annual rate is also tied for the 8th lowest annual unemployment rate since 1976.

Kansas' rate continues to be lower than the national unemployment rate, which fell to 4.9 percent in 2016, a decrease of 0.4 percentage points from 2015. The U.S. unemployment rate is still higher than experienced before the most recent recession when the rate was 4.6 percent. **Chart 7 below**, compares the unemployment rates for Kansas and the U.S. from 2006 to 2016, along with the projected rates for 2017 and 2018. The projected rate for Kansas is expected to stay near four percent while the U.S. rate is projected to continue to decrease and finally reach pre-recession levels.



Unemployment Insurance Claims

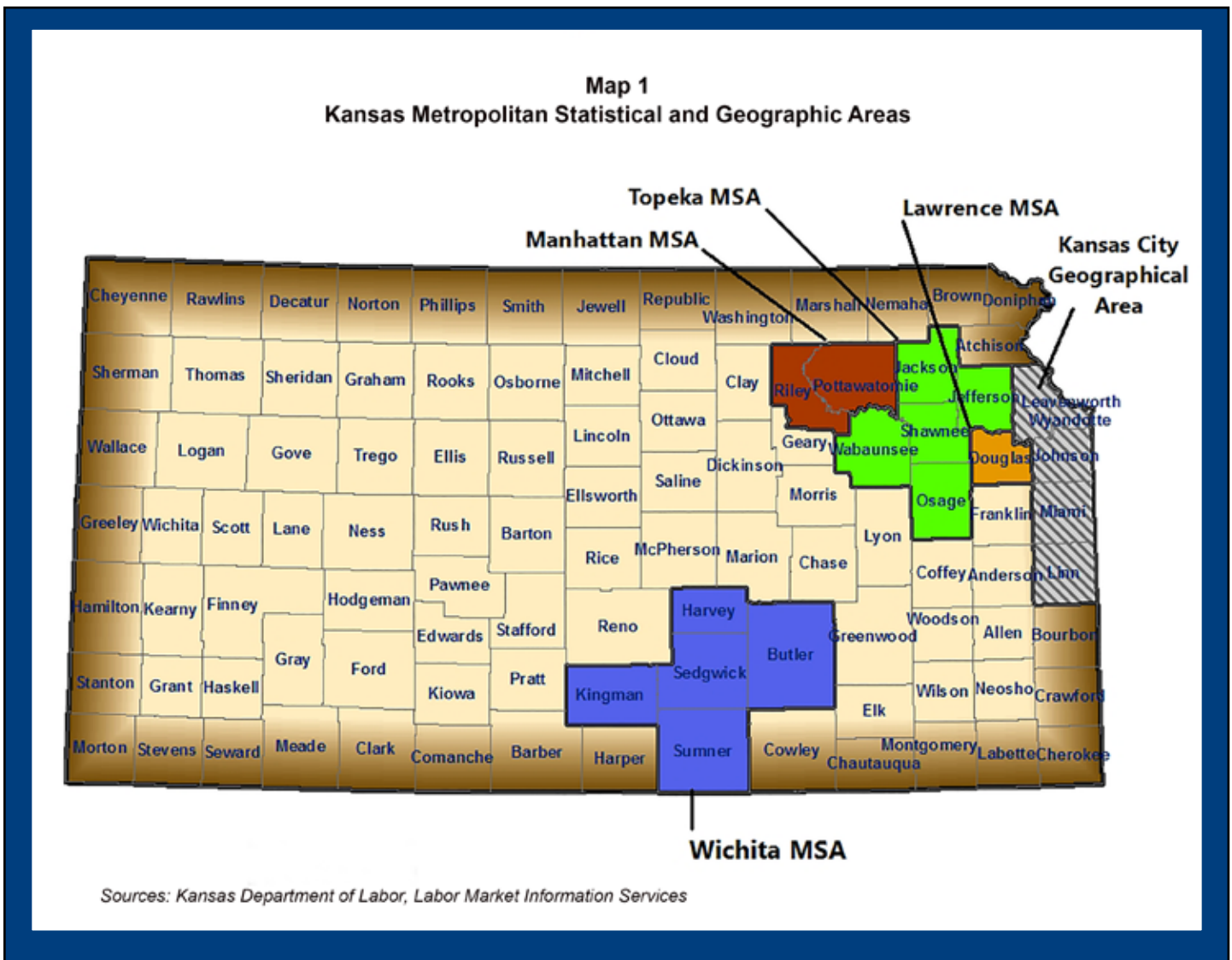
Analyzing trends in unemployment insurance claims is another way to assess unemployment and the labor market. An initial claim is the first claim filed by a claimant to request a determination of eligibility for unemployment benefits. A continued claim is a claim filed by a claimant for a weekly payment of unemployment benefits; this is typically done every week until the claimant finds a job, exhausts benefits, or leaves the labor force. Initial claims are an indicator of emerging unemployment, and continued claims indicate the level of difficulty the unemployed are having at finding a new job. Note that the number of claims is not a representation of total unemployment, as not all Kansans are covered under unemployment insurance laws or may choose not to file for unemployment benefits.



As shown in **Chart 8 above**, the number of initial claims filed in 2016 decreased by 16.3 percent to 124,635 claims. This is the first time the number of initial claims have been under 125,000 since 2000. Continued claims declined by 20.1 percent in 2016, to 699,564 claims. This is the first time the number of continued claims has been below 700,000 since 1998 and is only the second time claims have been below that mark since 1974. While the improving economy is mostly to credit for this decrease, recent law changes have also played a role. Starting in 2014, the maximum number of weeks of benefits unemployment claimants can file has been based on the unemployment rate. This has caused the maximum number of weeks to decline from 26 weeks prior to the law change to 20 weeks for most of 2014 and finally to 16 weeks for most of 2015 and all of 2016. Since this change went into effect, continued claims have decreased by 44.1 percent.

Metropolitan Statistical Areas

Metropolitan Statistical Areas (MSAs) are major urban areas including the surrounding counties with a high number of commuters. The Kansas Department of Labor (KDOL) releases data for the four MSAs completely in Kansas: Lawrence, Manhattan, Topeka and Wichita, along with the Kansas counties of the Kansas City MSA, which is referred to as the Kansas City Area. **Map 1 below**, shows the locations of the MSAs within Kansas while **Table 6 next page**, displays key economic data for the MSAs. MSAs are important because of their concentrated population and subsequent employment. Information pertaining to these areas can give insight into the overall economic well-being of the state.



**Table 6
Kansas MSA Comparison
Kansas
2016**

Metropolitan Statistical Area	Civilian Labor Force			Unemployment Rate		Nonfarm Jobs		
	Total CLF	Change from 2015	% Change from 2015	Rate	Change from 2015	Number of Jobs	Change from 2015	% Change from 2015
Kansas City Area	458,556	2,433	0.5%	3.9%	-0.1%	468,400	5,700	1.2%
Lawrence MSA	65,556	270	0.4%	3.6%	-0.1%	54,000	900	1.7%
Manhattan MSA	49,202	-416	-0.8%	3.4%	0.1%	44,200	0	0.0%
Topeka MSA	120,395	234	0.2%	4.1%	-0.2%	112,600	1,500	1.4%
Wichita MSA	309,338	-678	-0.2%	4.7%	0.0%	297,300	1,800	0.6%

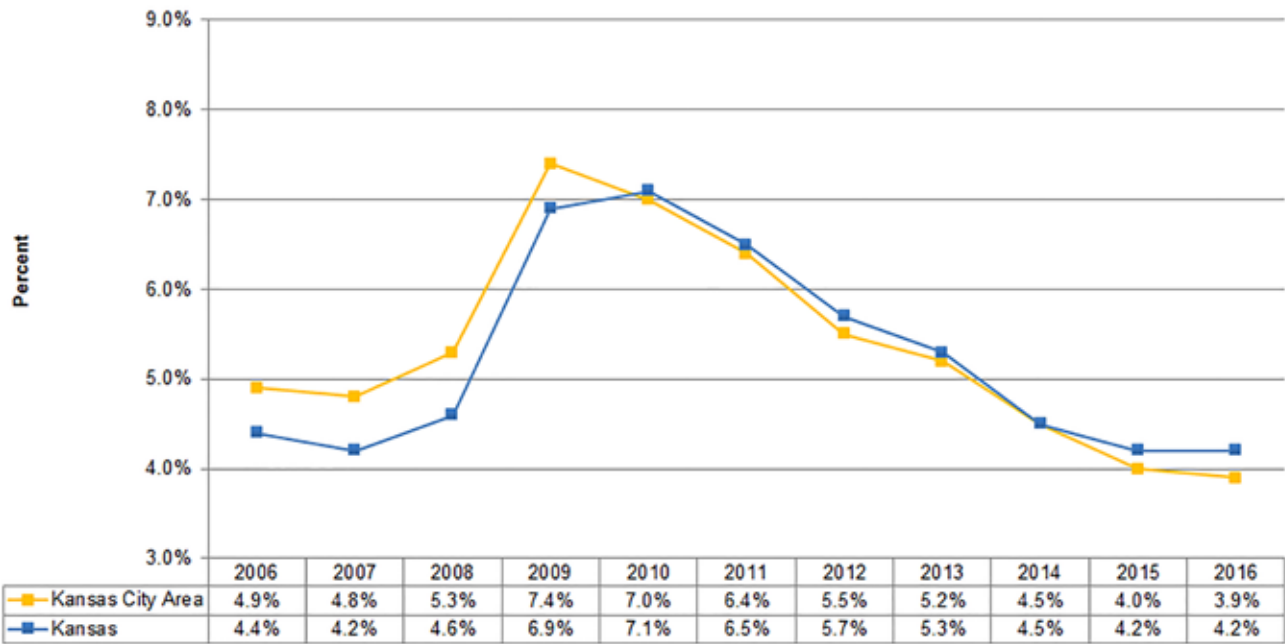
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics and Current Employment Statistics

Kansas City Area

The Kansas City Area is comprised of five counties: Johnson, Leavenworth, Linn, Miami and Wyandotte. The Kansas City Area population grew by 7,660, or 0.9 percent, to 871,008 in 2016. The labor force grew by 2,433, or 0.5 percent, to 458,556 in 2016. The number of people working grew by 2,849, or 0.7 percent to 440,732. The number of people in the labor force and working are record highs for the Kansas City Area and the most of any MSA. The Kansas City Area also had the highest growth rate in both the labor force and people working of any MSA. The unemployment rate in 2016 was 3.9 percent, a 0.1 percentage point reduction and the first time the annual unemployment rate has been below four percent since 2000. **Chart 9 next page**, shows the annual unemployment rate for the Kansas City Area since 2006.

“The number of people in the labor force and working are record highs for the Kansas City Area and the most of any MSA.”

Chart 9
 Kansas City Area Unemployment Rate
 2006 - 2016



Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics

In 2016, the Kansas City Area added 5,700 nonfarm jobs, or 1.2 percent, and 5,500 private sector jobs, or 1.4 percent. This is the highest number of jobs added in any MSA. In fact, more jobs were added in the Kansas City Area than in all the other Kansas MSAs combined. Eight of the 10 published industries grew in the Kansas City Area from 2015 to 2016. Trade, transportation and utilities added 2,300 jobs with gains recorded throughout the industry. The majority of the growth was in transportation, warehousing and utilities, which added 1,400 jobs, while retail trade increased by 700 jobs and wholesale trade added 200 jobs. Financial activities added 1,000 jobs with gains throughout the industry. Education and health services added 900 jobs, all in health care and social assistance, while the other services industry also grew by 900 jobs.

Two industries lost jobs over the year. Professional and business services lost 1,300 jobs with gains in professional, scientific and technical services being overshadowed by losses in the management of companies and enterprises sector and the administrative and support and waste management and remediation services sector. Information lost 500 jobs over the year. **Table 7 next page**, displays employment by industry for the Kansas City Area in 2015 and 2016.

Table 7 Kansas City Area Nonfarm Jobs 2015 & 2016				
	2015	2016	Change	%Change
Total Nonfarm	462,700	468,400	5,700	1.2%
Total Private	406,200	411,700	5,500	1.4%
Mining, Logging & Construction	19,400	20,200	800	4.1%
Manufacturing	30,800	31,500	700	2.3%
Trade, Transportation & Utilities	97,300	99,600	2,300	2.4%
Information	8,400	7,900	-500	-6.0%
Financial Activities	35,200	36,200	1,000	2.8%
Professional & Business Services	93,900	92,600	-1,300	-1.4%
Education & Health Services	65,200	66,100	900	1.4%
Leisure & Hospitality	40,000	40,700	700	1.8%
Other Services	16,000	16,900	900	5.6%
Government	56,500	56,700	200	0.4%

Note: Numbers may not add up due to rounding

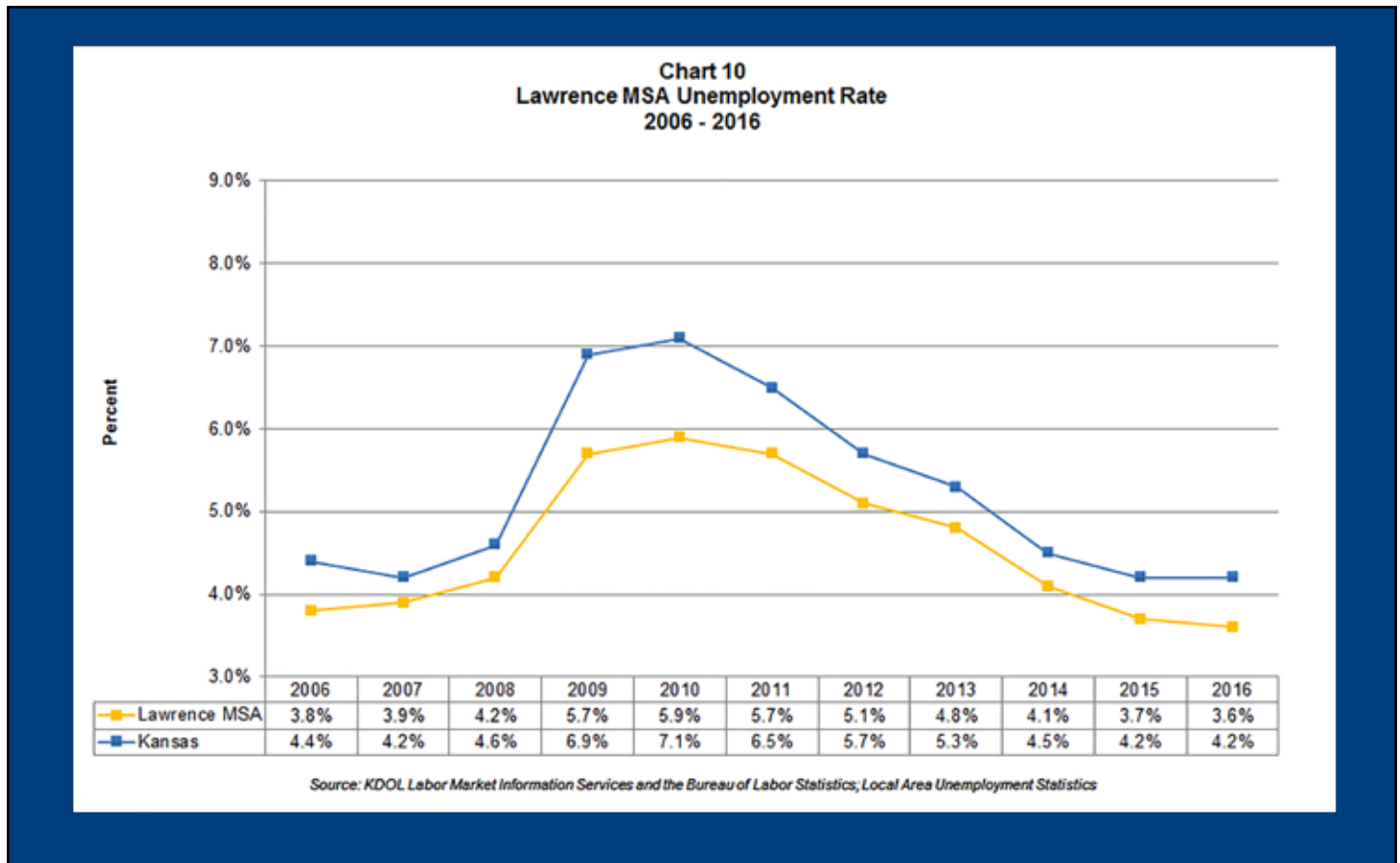
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics

The average weekly hours worked declined for the Kansas City Area from 35.0 hours in 2015 to 34.3 hours in 2016. Average hourly earnings increased slightly from \$26.02 in 2015 to \$26.08 in 2016. The reduction in work hours resulted in a \$16.16 decrease in average weekly earnings in 2016 to \$894.54. Despite the decrease, the Kansas City Area still recorded the highest hourly and weekly earnings of any Kansas MSA.

“ The Kansas City Area recorded the highest hourly and weekly earnings of any Kansas MSA. ”

Lawrence MSA

The Lawrence MSA includes only Douglas County. However its population and job concentration make it a major urban center for the state. The Lawrence MSA population grew by 1,525 people to 119,440 in 2016. The 1.3 percent growth rate made it the fastest growing MSA in 2016. The labor force grew by 270, or 0.4 percent, to 65,556 while the number of people working grew by 318, or 0.5 percent, to 63,205. These were both record highs for the Lawrence MSA. The unemployment rate in 2016 was 3.6 percent, a 0.1 percentage point reduction from the previous year. **Chart 10 below**, displays the unemployment rate for the Lawrence MSA since 2006.



In 2016, the Lawrence MSA added 900 nonfarm jobs, or 1.7 percent, and 700 private sector jobs, or 1.9 percent. **These were the highest job growth rates of any Kansas MSA. Table 8 next page**, shows that six of the seven published industries in the Lawrence MSA added jobs in 2016. Trade, transportation and utilities added the most jobs, gaining 400 jobs. Leisure and hospitality added 200 jobs while four other industries added 100 jobs: goods producing (a combination of mining and logging; construction and manufacturing), professional and business services, education and health services and government. The other private service providing industry, a combination of information, financial activities and other services, was the only industry to lose jobs, decreasing by 200 jobs.

**Table 8
Lawrence MSA Nonfarm Jobs
2015 & 2016**

	2015	2016	Change	% Change
Total Nonfarm	53,100	54,000	900	1.7%
Total Private	36,800	37,500	700	1.9%
Goods Producing	5,500	5,600	100	1.8%
Trade, Transportation & Utilities	7,900	8,300	400	5.1%
Professional & Business Services	5,400	5,500	100	1.9%
Education & Health Services	5,700	5,800	100	1.8%
Leisure & Hospitality	6,900	7,100	200	2.9%
Other Private Service Providing	5,400	5,200	-200	-3.7%
Government	16,400	16,500	100	0.6%

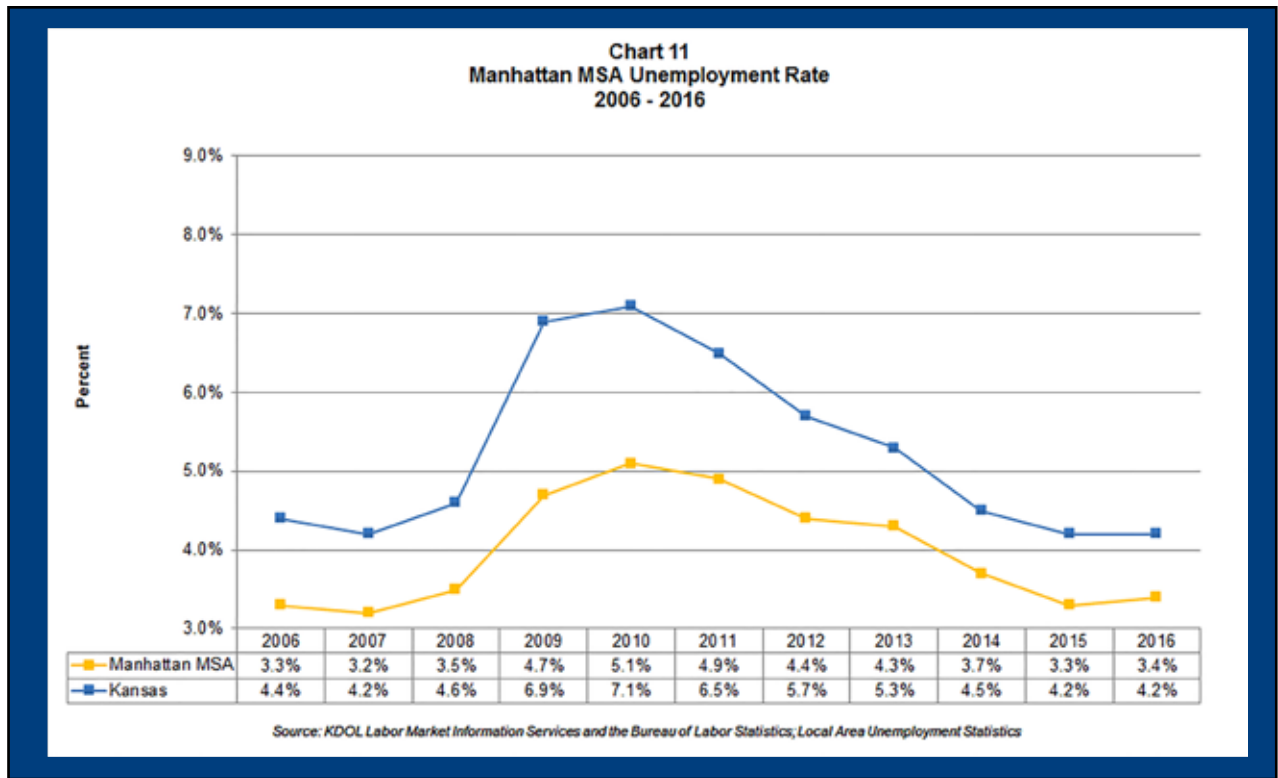
Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics

The average weekly hours worked in the Lawrence MSA increased by 1.9 hours from 2015 to 2016 to 28.0 hours, the shortest average work week in any Kansas MSA. Average hourly earnings increased from \$18.50 to \$19.23, but are still the lowest of any Kansas MSA. The increases in both hours worked and hourly earnings resulted in average weekly earnings increasing from \$482.85 in 2015 to \$538.44 in 2016. This is also the lowest weekly earnings recorded in any Kansas MSA but the fastest growth rate.

Manhattan MSA

The Manhattan MSA is comprised of Pottawatomie and Riley counties. The Manhattan MSA population decreased by 1,502, or 1.5 percent, to 97,004 in 2016. This was the largest decline in population of any Kansas MSA. The labor force contracted by 416, or 0.8 percent, to 49,202 due to the number of people working decreasing by 417, or 0.9 percent, to 47,542. The percent decline in the labor force and people working was the highest of any MSA. The unemployment rate in 2016 was 3.4 percent, an increase of 0.1 percentage points. Despite being the only Kansas MSA to see an increase in the unemployment rate, the Manhattan MSA still recorded the lowest unemployment rate of the Kansas MSAs. **Chart 11 next page**, displays the unemployment rate for the Manhattan MSA since 2006.



In 2016, the number of total nonfarm jobs in the Manhattan MSA was unchanged while private sector jobs declined by 600, or 2.1 percent. The Manhattan MSA was the only one of the Kansas MSAs not to add nonfarm or private sector jobs. As seen in **Table 9 below**, which shows the employment by industry for the Manhattan MSA, only 3 industries are published due to the small size of the MSA. Growth in government jobs was offset by nearly equal losses in the goods producing and private service providing industries.

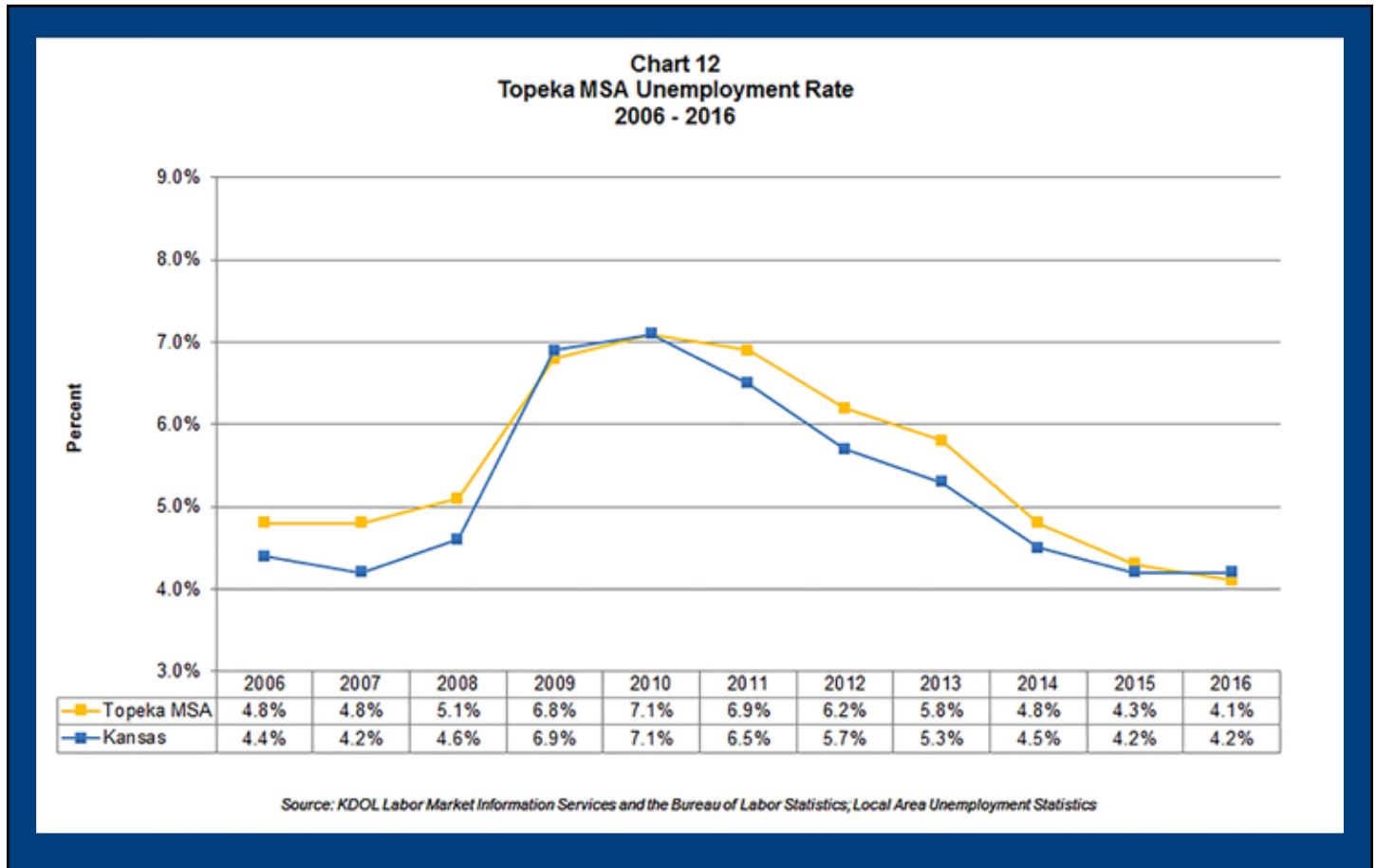
Table 9 Manhattan MSA Nonfarm Jobs 2015 & 2016				
	2015	2016	Change	% Change
Total Nonfarm	44,200	44,200	0	0.0%
Total Private	29,000	28,400	-600	-2.1%
Goods Producing	5,400	5,100	-300	-5.6%
Private Service Providing	23,700	23,300	-400	-1.7%
Government	15,100	15,800	700	4.6%

*Note: Numbers may not add up due to rounding
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics*

The average weekly hours worked in the Manhattan MSA increased by 0.5 hours in 2016 to 31.7 hours. The average hourly earnings also increased from \$21.06 in 2015 to \$21.14 in 2016 leading to a \$13.07 increase in average weekly earnings to \$670.14. This was the second largest increase in average weekly earnings.

Topeka MSA

The Topeka MSA is comprised of Jackson, Jefferson, Osage, Shawnee and Wabaunsee counties. The Topeka MSA population decreased by 504 people from 2015 to 2016 to 233,068. Despite the decrease in population, the Topeka MSA labor force grew by 234 people to 120,395 in 2016. There were 115,447 people working in 2016, an increase of 412, or 0.4 percent. The unemployment rate in 2016 was 4.1 percent, a decrease of 0.2 percentage points and the largest improvement in the unemployment rate in any Kansas MSA. **Chart 12 below**, displays the unemployment rate for the Topeka MSA since 2006.



In 2016, the Topeka MSA added 1,500 nonfarm jobs, or 1.4 percent. All the job gains were in the private sector, which grew by 1.8 percent. The Topeka MSA recorded the second highest job growth rate of any Kansas MSA. Four of the 10 published industries experienced job growth in 2016. Most of the job growth occurred in professional and business services, which grew by 900 jobs. The other two industries to gain more than 100 jobs were other services and education and health services which added 300 jobs and 200 jobs respectively. The two industries that lost jobs were trade, transportation and utilities along with information. Both industries lost 100 jobs. Four industries recorded no change from 2015 to 2016. **Table 10 next page**, shows the jobs by industry in 2015 and 2016 for the Topeka MSA.

**Table 10
Topeka MSA Nonfarm Jobs
2015 & 2016**

	2015	2016	Change	% Change
Total Nonfarm	111,100	112,600	1,500	1.4%
Total Private	84,200	85,700	1,500	1.8%
Mining, Logging & Construction	5,800	5,900	100	1.7%
Manufacturing	7,300	7,300	0	0.0%
Trade, Transportation & Utilities	17,700	17,600	-100	-0.6%
Information	1,500	1,400	-100	-6.7%
Financial Activities	7,400	7,400	0	0.0%
Professional & Business Services	13,400	14,300	900	6.7%
Education & Health Services	18,100	18,300	200	1.1%
Leisure & Hospitality	8,600	8,600	0	0.0%
Other Services	4,500	4,800	300	6.7%
Government	26,900	26,900	0	0.0%

Note: Numbers may not add up due to rounding

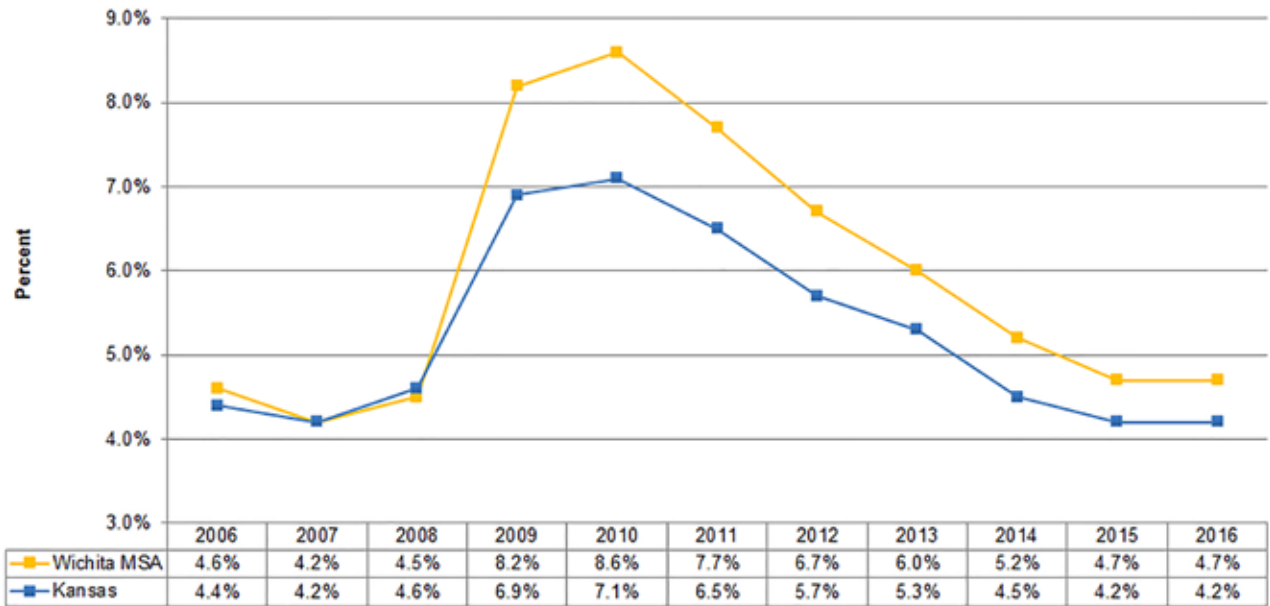
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics

Average weekly hours worked decreased by 0.9 hours in the Topeka MSA in 2016 to 32.4 hours. Average hourly earnings increased from \$20.87 in 2015 to \$21.79 in 2016. This was the largest increase in average hourly earnings of any Kansas MSA. Average weekly earnings increased from \$694.97 in 2015 to \$706.00 in 2016.

Wichita MSA

The Wichita MSA contains Butler, Harvey, Kingman, Sedgwick and Sumner counties. Population in the Wichita MSA grew by 1,656 from 2015 to 2016 to 644,672. The labor force decreased by 678, or 0.2 percent, to 309,338 due to the number of people working declining by 720, or 0.2 percent, to 294,792. The unemployment rate in 2016 was 4.7 percent, unchanged from a year ago. As seen in **Chart 13 next page**, the Wichita MSA continues to have the highest unemployment rate of any Kansas MSA.

Chart 13
Wichita MSA Unemployment Rate
2006 - 2016



Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics; Local Area Unemployment Statistics

In 2016, the Wichita MSA added 1,800 nonfarm jobs, or 0.6 percent. This growth was concentrated in the private sector which also added 1,800 jobs, or 0.7 percent. Six of the 10 industries in the Wichita MSA experienced job growth in 2016. Professional and business services and leisure and hospitality both gained 800 jobs in 2016. The gains in professional and business services were in the professional, scientific and technical services sector and the administrative and support and waste management and remediation services sector. The growth in leisure and hospitality was mostly in accommodation and food services. Other services also recorded notable gains, adding 500 jobs.

“ Six of the 10 industries in the Wichita MSA experienced job growth in 2016. ”

Four industries lost jobs from 2015 to 2016. Trade, transportation and utilities lost 200 jobs due to losses in the retail trade sector. Financial activities also lost 200 jobs. The mining, logging and construction industry and the manufacturing industry both decreased by 100 jobs. **Table 11 below**, shows the jobs by industry in 2015 and 2016 for the Wichita MSA.

Table 11 Wichita MSA Nonfarm Jobs 2015 & 2016				
	2015	2016	Change	% Change
Total Nonfarm	295,500	297,300	1,800	0.6%
Total Private	255,000	256,800	1,800	0.7%
Mining, Logging & Construction	16,400	16,300	-100	-0.6%
Manufacturing	52,000	51,900	-100	-0.2%
Trade, Transportation & Utilities	52,500	52,300	-200	-0.4%
Information	4,500	4,700	200	4.4%
Financial Activities	11,400	11,200	-200	-1.8%
Professional & Business Services	32,900	33,700	800	2.4%
Education & Health Services	44,300	44,400	100	0.2%
Leisure & Hospitality	31,400	32,200	800	2.5%
Other Services	9,600	10,100	500	5.2%
Government	40,500	40,600	100	0.2%

Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Current Employment Statistics

Average weekly hours worked decreased from 2015 to 2016 by 1.4 hours in the Wichita MSA to 34.3 hours. Even with the decline, this is still tied with the Kansas City Area for the longest work week of any Kansas MSA. Average hourly earnings increased from \$20.98 in 2015 to \$21.45 in 2016. Average weekly earnings decreased from \$748.99 in 2015 to \$735.74 in 2016, due to fewer hours worked.

Local Workforce Investment Areas

Workforce Innovation and Opportunity Act (WIOA)

The Workforce Innovation and Opportunity Act (WIOA) went into effect July 1, 2015, superseding the Workforce Investment Act of 1998 and amending other workforce programs. WIOA is designed to help job seekers access employment, education, training and support services to succeed in the labor market and to match employers with the skilled workers they need to compete in the global economy.

There are two core programs established through WIOA. One is operating local workforce centers and providing employment and training services for adults, dislocated workers and youth. This is accomplished by the states using grant money from the U.S. Department of Labor, which also provides guidance to the states on implementing programs. The other core program is adult education and literacy programs and vocational rehabilitation programs that assist individuals with disabilities in obtaining employment. Grant money and guidance is provided by the U.S. Department of Education for these programs. Other federal programs are also authorized through WIOA.

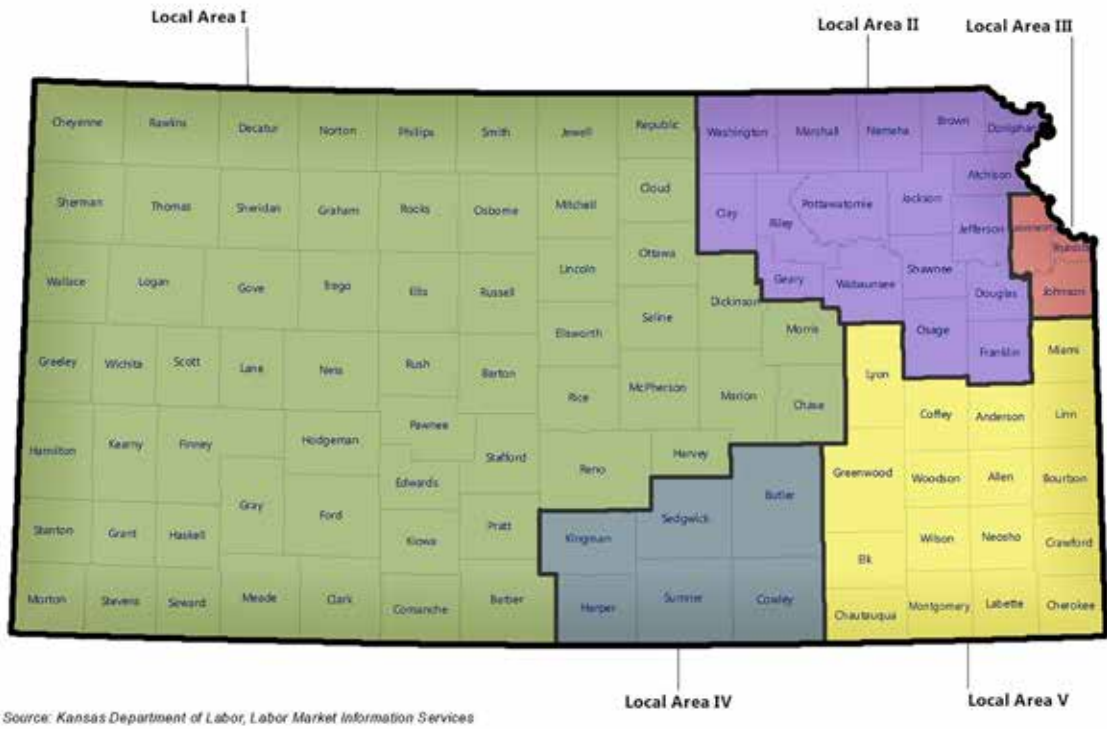
Workforce development programs available in Kansas include:

- Online job board at KansasWorks.com
- Worker training, employment and certification programs
- Employer recruitment and training assistance
- Support for employers facing closing or mass layoffs
- Support for specific groups such as veteran, disabled and older workers
- Services available at 26 workforce centers throughout the state

Workforce development programs in Kansas are administered through the Kansas Department of Commerce Workforce Services Division. The KansasWorks State Board, with a mix of public sector and private sector members appointed by the Governor, oversees the workforce development system in Kansas. In order to more efficiently administer the programs, the state is divided into five local workforce areas, as seen in **Map 2 next page**, each with their own workforce board. This report will detail the economic conditions in each of the local areas. **Table 12 next page**, displays key economic data about the local areas.

“ WIOA is designed to help job seekers access employment, education, training and support services. ”

Map 2 Kansas Local Areas



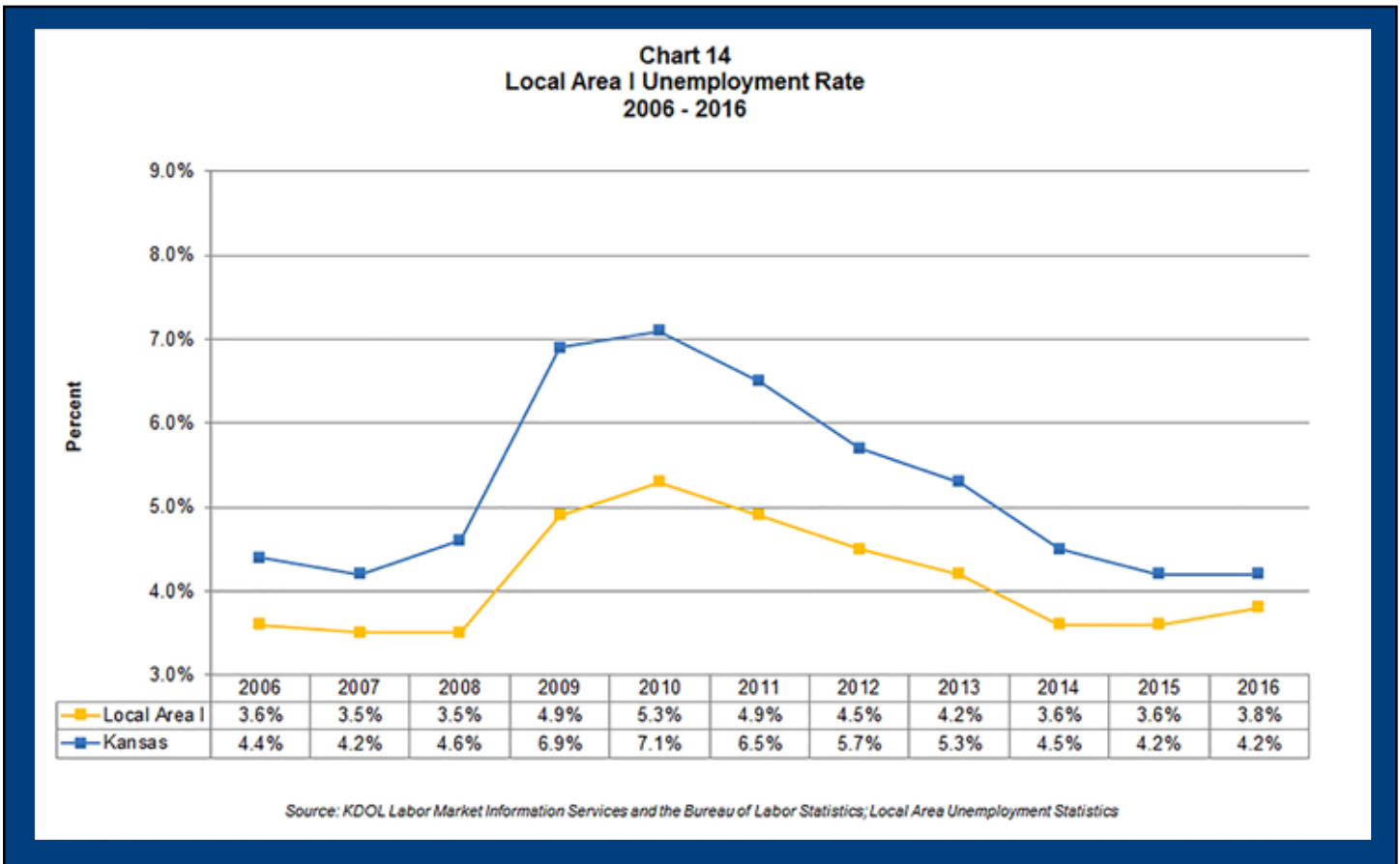
**Table 12
Local Workforce Investment Area Comparison
Kansas
2016**

Local Workforce Investment Area	Civilian Labor Force			Unemployment Rate		Jobs		
	Total CLF	Change from 2015	% Change from 2015	Rate	Change from 2015	Number of Jobs	Change from 2015	% Change from 2015
Local Area I (Western KS)	303,687	-5,678	-1.8%	3.8%	0.2%	254,654	-4,425	-1.7%
Local Area II (Northeast KS)	296,892	-439	-0.1%	4.0%	-0.1%	247,716	963	0.4%
Local Area III (Kansas City Area)	437,411	2,320	0.5%	3.8%	-0.2%	449,287	5,909	1.3%
Local Area IV (South Central KS)	312,029	-669	-0.2%	4.7%	0.0%	293,449	588	0.2%
Local Area V (Southeast KS)	133,993	-692	-0.5%	5.3%	0.0%	104,074	-496	-0.5%

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics and Quarterly Census of Employment & Wages

Local Area I – Western Kansas

Local Area I includes 62 counties in western and north central Kansas. In 2016, the total population of Local Area I was 577,125, a decrease of 4,842 or 0.8 percent from the previous year. The largest cities in this local area are Salina, Hutchinson, Dodge City, Garden City and Hays. The 2016 labor force for Local Area I was 303,687, a decrease from 2015 of 5,678, or 1.8 percent. This was the largest decrease in the labor force in any of the local areas. The decline was due to a decrease in the number of employed people. The Local Area I unemployment rate rose by 0.2 percentage points in 2016 to 3.8 percent. Despite the increase, Local Area I is still tied with Local Area III for the lowest unemployment rate of any of the local areas. **Chart 14 below**, displays the unemployment rate in Local Area I since 2006.



While statewide and Metropolitan Statistical Area job estimates come from nonfarm job totals as provided by the Current Employment Statistics (CES) program, job totals for the local areas and counties come from the Quarterly Census of Employment and Wages (QCEW) program. The biggest difference between the two is that QCEW is a count of all jobs subject to state and federal unemployment insurance. Jobs in QCEW may be reclassified between industries between years, which can result in large changes in the data. As seen in **Table 13 next page**, Local Area I lost approximately 4,400 total jobs in 2016, or 1.7 percent, and about 3,600 private sector jobs, or 1.8 percent. Local Area I experienced the largest job losses of any local area.

Ten of the 11 industries lost jobs with education and health services being the only industry to record job gains. It added 336 jobs with most of the job growth in health care and social assistance. Most of the job losses were concentrated in four industries: construction, professional and business services, natural resources and mining, and government. Construction lost 917 jobs, or 8.0 percent, with most of the decline recorded in heavy and civil engineering construction. Professional and business services declined by 881 jobs, or 5.8 percent. The majority of the decrease occurred in professional, scientific and technical services. Natural resources and mining decreased by 822 jobs, or 6.0 percent. Gains in agricultural employment were offset by continued job losses in the mining sector, which includes oil and gas extraction and support activities. Government declined by 786 jobs, or 1.4 percent, with losses occurring at the local government level. The average weekly wage in Local Area I was \$685 in 2016, an increase of \$7, or 1.0 percent, from 2015.

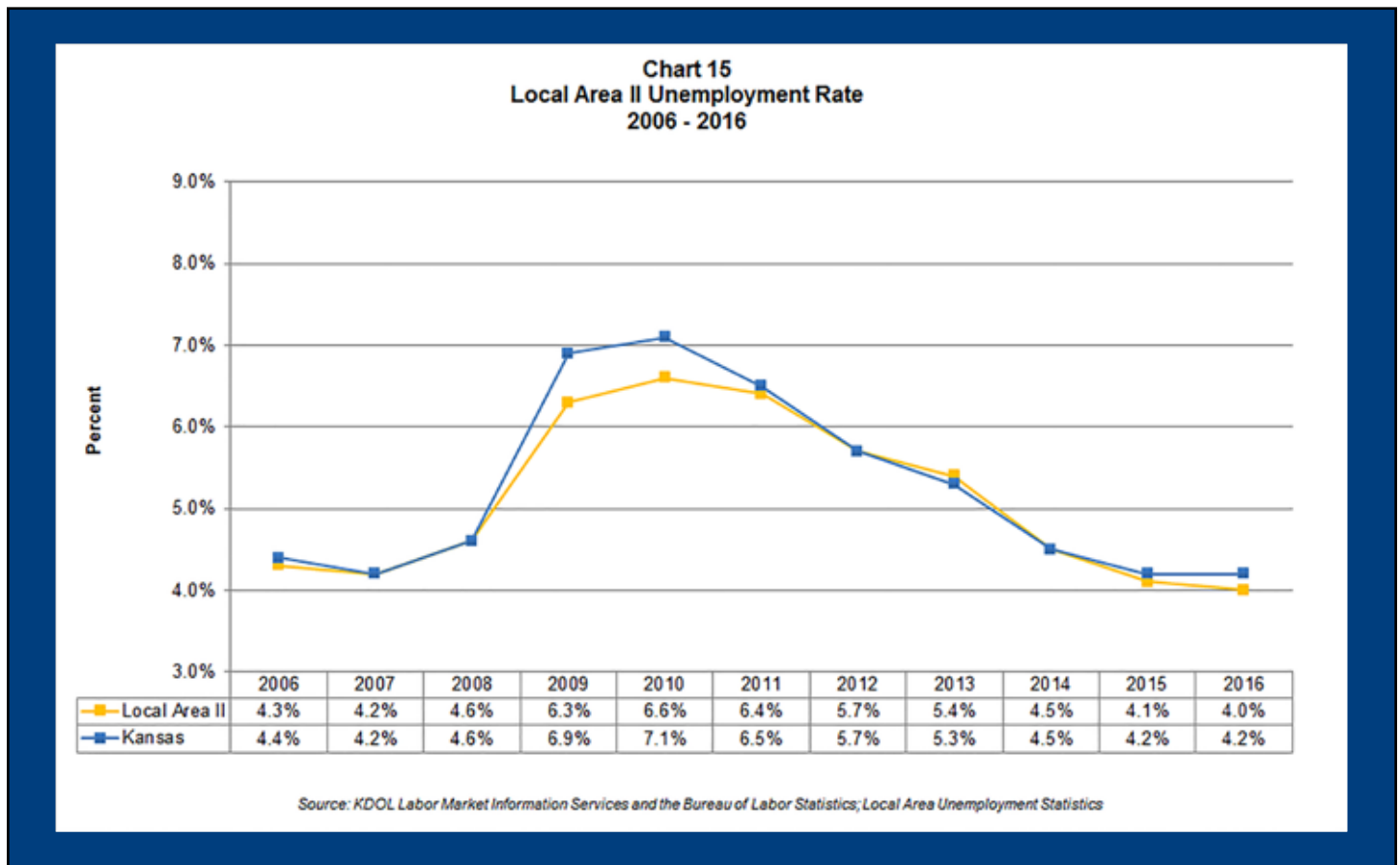
Table 13 Local Area I Jobs 2015 & 2016				
	2015	2016	Change	%Change
Total	259,079	254,654	-4,425	-1.7%
Total Private	201,077	197,436	-3,641	-1.8%
Natural Resources & Mining	13,809	12,987	-822	-6.0%
Construction	11,425	10,508	-917	-8.0%
Manufacturing	38,560	38,042	-518	-1.3%
Trade, Transportation & Utilities	48,754	48,598	-156	-0.3%
Information	3,221	3,166	-55	-1.7%
Financial Activities	9,285	9,073	-212	-2.3%
Professional & Business Services	15,272	14,391	-881	-5.8%
Education & Health Services	33,198	33,534	336	1.0%
Leisure & Hospitality	21,992	21,761	-231	-1.1%
Other Services	5,564	5,375	-189	-3.4%
Government	58,003	57,217	-786	-1.4%

Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment & Wages

Local Area II – Northeast Kansas

Local Area II includes 17 counties in northeast Kansas. In 2016, the population of Local Area II was 578,152, a decrease of 2,310, or 0.4 percent. The largest cities in this local area are Topeka, Lawrence, Manhattan and Junction City. In 2016, the labor force decreased by 439, or 0.1 percent, to 296,892 people. The number of people employed and unemployed decreased with 152 fewer people employed and 287 fewer people unemployed. The unemployment rate, as shown in **Chart 15 below**, decreased by 0.1 percentage point in 2016 to 4.0 percent.



Local Area II gained approximately 1,000 jobs, or 0.4 percent, from 2015 to 2016 as displayed in **Table 14 next page**. Private sector jobs increased by about 1,600, or 0.9 percent. Six of the 11 industries gained jobs with the most growth occurring in professional and business services, which added 1,070 jobs, or 4.4 percent, with most of the job gains occurring in administrative and support and waste management and remediation services. Trade, transportation and utilities added 778 jobs, or 1.9 percent, with almost all the growth occurring in transportation, warehousing and utilities. The only other industry to gain more than 100 jobs was education and health services, which added 296 jobs, or 0.9 percent, with almost all the expansion recorded in health care and social assistance.

Three industries lost more than 100 jobs. Government lost 664 jobs, or 1.0 percent, with decreases occurring in all levels of government. Manufacturing declined by 424 jobs, or 2.0 percent, with losses in durable goods manufacturing exceeding the gains experienced in non-durable goods manufacturing. Financial activities lost 137 jobs, or 1.1 percent, with losses recorded in the finance and insurance sector. The average weekly wage in Local Area II was \$754 in 2016. This was an increase of \$16, or 2.2 percent from 2015, which is the largest increase recorded in any of the local areas.

Table 14 Local Area II Jobs 2015 & 2016				
	2015	2016	Change	% Change
Total	246,753	247,716	963	0.4%
Total Private	183,492	185,118	1,626	0.9%
Natural Resources & Mining	2,131	2,153	22	1.0%
Construction	10,994	11,031	37	0.3%
Manufacturing	21,055	20,631	-424	-2.0%
Trade, Transportation & Utilities	41,842	42,620	778	1.9%
Information	3,311	3,218	-93	-2.8%
Financial Activities	12,789	12,652	-137	-1.1%
Professional & Business Services	24,458	25,528	1,070	4.4%
Education & Health Services	34,233	34,529	296	0.9%
Leisure & Hospitality	24,333	24,413	80	0.3%
Other Services	8,348	8,344	-4	0.0%
Government	63,262	62,598	-664	-1.0%

Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment & Wages

Local Area III – Kansas City Area

Local Area III consists of Johnson, Leavenworth and Wyandotte counties-the three largest counties on the Kansas side of the Kansas City Metropolitan Statistical Area. The population of Local Area III was 828,486 in 2016, an increase of 7,426 or 0.9 percent from 2015. This makes Local Area III the most populous and fastest growing local area. The 2016 labor force for Local Area III was 437,411, a gain from 2015 of 2,320, or 0.5 percent. There was an increase of 2,743 in the number of people working and a decrease of 423 in the number of unemployed people. The unemployment rate decreased by 0.2 percentage points from 2015 to 2016 to 3.8 percent, as seen in **Chart 16 below**. Local Area III tied Local Area I for the lowest unemployment rate of any local area.

Chart 16
Local Area III Unemployment Rate
2006 - 2016



Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics; Local Area Unemployment Statistics

Local Area III gained approximately 5,900 jobs, or 1.3 percent, from 2015 to 2016. This was by far the most jobs added in any local area. **Table 15 below**, also shows private sector jobs increased by about 5,700, or 1.5 percent. Nine of the 11 industries gained jobs over the year. Growth of over 1,000 jobs was recorded in trade, transportation and utilities; leisure and hospitality; and financial activities. Trade, transportation and utilities added 3,031 jobs, or 3.3 percent. The transportation, warehousing and utilities sector added about 1,900 jobs and the retail trade sector added approximately 1,200 jobs. Leisure and hospitality gained 1,166 jobs, or 3.0 percent, with most of the growth occurring in accommodation and food services. Financial activities grew by 1,130 jobs, or 3.3 percent, with gains throughout the industry.

Two industries lost jobs between 2015 and 2016. Professional and business services lost 1,866 jobs, with the losses recorded in the management of companies and enterprises sector and the administrative and support and waste management and remediation services sector. Information declined by 573 jobs, or 6.9 percent. The average weekly wage in 2016 for Local Area III was \$1,018, the highest average weekly wage of any of the local areas. This represents an increase of \$2 from 2015 or 0.2 percent.

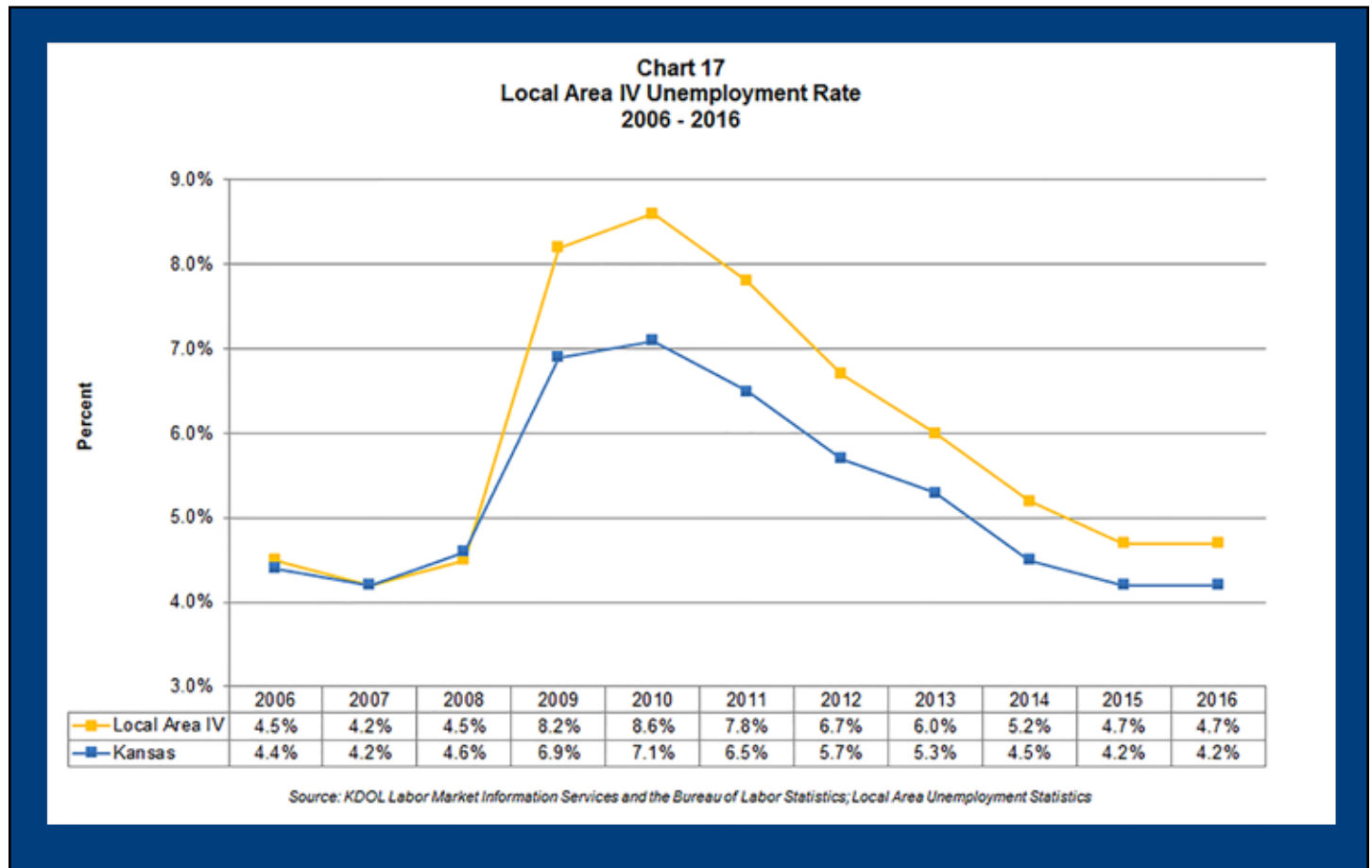
Table 15 Local Area III Jobs 2015 & 2016				
	2015	2016	Change	% Change
Total	443,378	449,287	5,909	1.3%
Total Private	390,170	395,841	5,671	1.5%
Natural Resources & Mining	533	559	26	4.9%
Construction	18,089	18,821	732	4.0%
Manufacturing	29,859	30,682	823	2.8%
Trade, Transportation & Utilities	93,121	96,152	3,031	3.3%
Information	8,319	7,746	-573	-6.9%
Financial Activities	34,656	35,786	1,130	3.3%
Professional & Business Services	93,868	92,002	-1,866	-2.0%
Education & Health Services	62,005	62,803	798	1.3%
Leisure & Hospitality	39,135	40,301	1,166	3.0%
Other Services	10,586	10,987	401	3.8%
Government	53,208	53,446	238	0.4%

Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment & Wages

Local Area IV – South Central Kansas

Local Area IV consists of Butler, Cowley, Harper, Kingman, Sedgwick and Sumner counties. This local area includes most of the Wichita Metropolitan Statistical Area. The 2016 population of Local Area IV was 651,197, an increase from 2015 of 1,531, or 0.2 percent. This makes Local Area IV the second largest by population. The labor force in 2016 had 312,029 individuals, a decrease from 2015 of 669, or 0.2 percent. The number of employed people decreased by 628 and the number of unemployed decreased by 41 people. **Chart 17 below**, shows that the unemployment rate in 2016 was 4.7 percent, unchanged from a year ago.



“ The 2016 population of Local Area IV was 651,197, an increase from 2015 of 1,531, or 0.2 percent. ”

Local Area IV added approximately 600 jobs, or 0.2 percent, in 2016 and approximately 1,100 private sector jobs, or 0.4 percent. As seen in **Table 16 below**, seven of the 11 industries added jobs. Leisure and hospitality added the most jobs, increasing by 821 jobs, or 2.6 percent, with gains in all sectors. Professional and business services grew by 549 jobs, or 1.7 percent, with most of the gains occurring in professional, scientific and technical services. Information and construction both added approximately 200 jobs.

Manufacturing lost the most jobs, recording a 612 job decline, or 1.2 percent, with the losses occurring in durable goods manufacturing. Government decreased by 463 jobs, or 1.1 percent, with most of the losses recorded at the local government level. Financial activities declined by 360 jobs, or 3.1 percent, with almost all of the decrease happening in finance and insurance. The Local Area IV 2016 average weekly wage was \$850, a decline of \$4 or 0.5 percent.

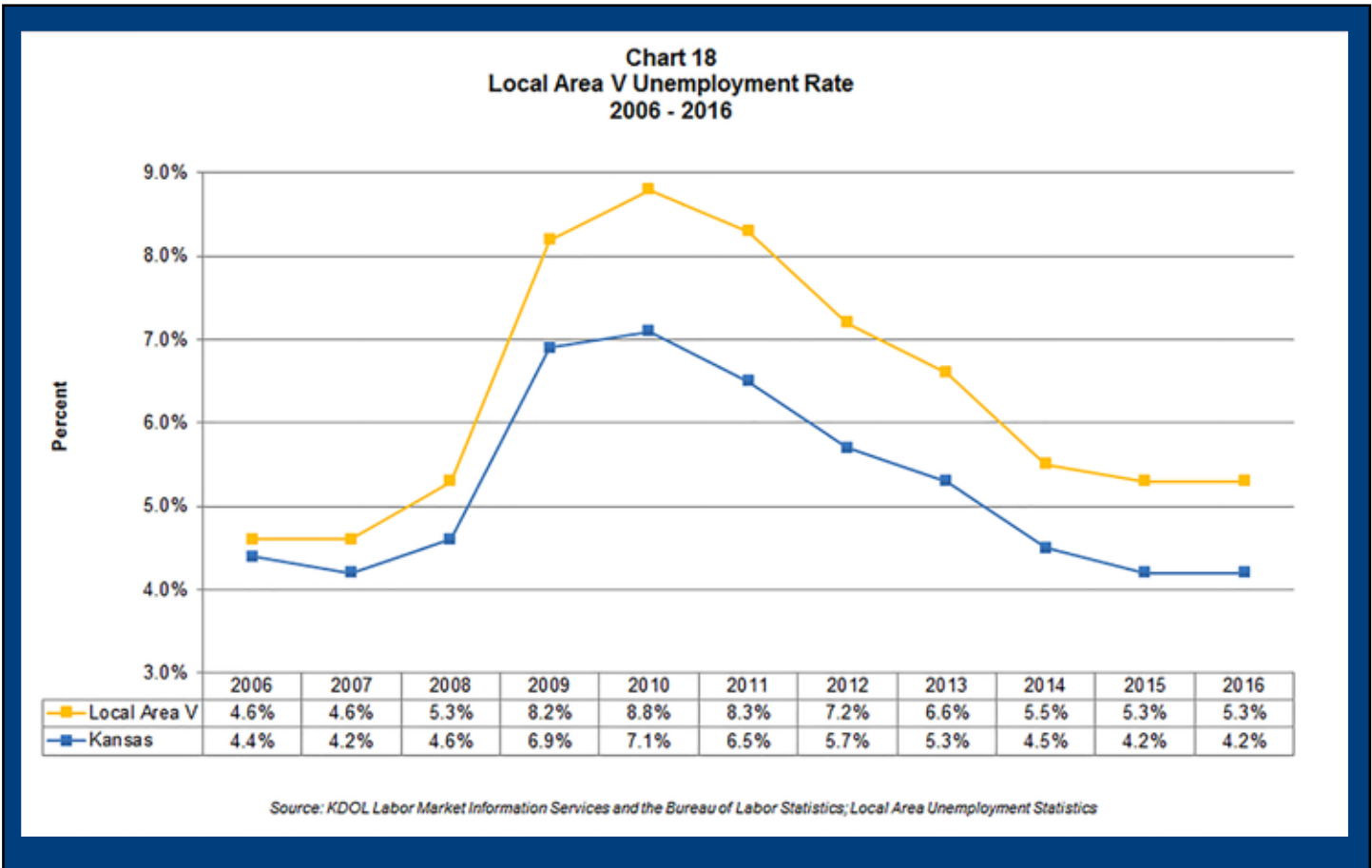
Table 16 Local Area IV Jobs 2015 & 2016				
	2015	2016	Change	% Change
Total	292,861	293,449	588	0.2%
Total Private	251,515	252,567	1,052	0.4%
Natural Resources & Mining	1,676	1,520	-156	-9.3%
Construction	15,123	15,333	210	1.4%
Manufacturing	52,532	51,920	-612	-1.2%
Trade, Transportation & Utilities	52,218	52,295	77	0.1%
Information	4,543	4,781	238	5.2%
Financial Activities	11,552	11,192	-360	-3.1%
Professional & Business Services	33,162	33,711	549	1.7%
Education & Health Services	42,338	42,468	130	0.3%
Leisure & Hospitality	31,714	32,535	821	2.6%
Other Services	6,660	6,814	154	2.3%
Government	41,346	40,883	-463	-1.1%

Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment & Wages

Local Area V – Southeast Kansas

Local Area V includes 17 counties in southeast Kansas. In 2016, the population of Local Area V was 272,329, a decrease from 2015 of 1,237, or 0.5 percent. The two largest cities in Local Area V are Emporia and Pittsburg. The 2016 labor force for Local Area V was 133,993, a decrease from 2015 of 692, or 0.5 percent. Local Area V has the smallest population and labor force of any local area. The change in labor force is due to a decrease in the number of employed as the number of people unemployed was unchanged over the year. The unemployment rate in 2016, displayed in **Chart 18 below**, was 5.3 percent which is unchanged from 2015 and the highest unemployment rate of any local area.



“ Local Area V has the smallest population and labor force of any local area. ”

As seen in **Table 17 below**, Local Area V lost approximately 500 total jobs, or 0.5 percent, from 2015 to 2016. Local Area V also lost about 500 private sector jobs, or 0.6 percent. Four of the 11 industries gained jobs during 2016 but education and health services was the only industry to grow by more than 100 jobs, adding 137 jobs, or 1.0 percent. All the gains were in health care and social assistance.

Of the seven industries that lost jobs, four of the industries lost over 100 jobs. Leisure and hospitality declined by 225 jobs, or 2.7 percent, with losses throughout the industry. Natural resources and mining decreased by 192 jobs, or 10.3 percent, due to losses in the mining sector. The trade, transportation and utilities industry and the professional and business services industry both lost approximately 100 jobs. The average weekly wage for Local Area V was \$667, an increase of \$7 from 2015 to 2016, or 1.1 percent.

Table 17 Local Area V Jobs 2015 & 2016				
	2015	2016	Change	% Change
Total	104,570	104,074	-496	-0.5%
Total Private	78,461	77,983	-478	-0.6%
Natural Resources & Mining	1,870	1,678	-192	-10.3%
Construction	3,746	3,822	76	2.0%
Manufacturing	18,857	18,842	-15	-0.1%
Trade, Transportation & Utilities	19,161	19,033	-128	-0.7%
Information	1,137	1,138	1	0.1%
Financial Activities	3,254	3,260	6	0.2%
Professional & Business Services	6,204	6,083	-121	-2.0%
Education & Health Services	14,135	14,272	137	1.0%
Leisure & Hospitality	8,444	8,219	-225	-2.7%
Other Services	1,653	1,638	-15	-0.9%
Government	26,109	26,091	-18	-0.1%

Note: Numbers may not add up due to rounding

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment & Wages

Kansas Counties

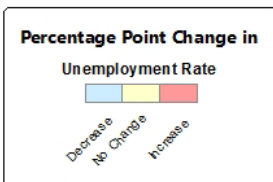
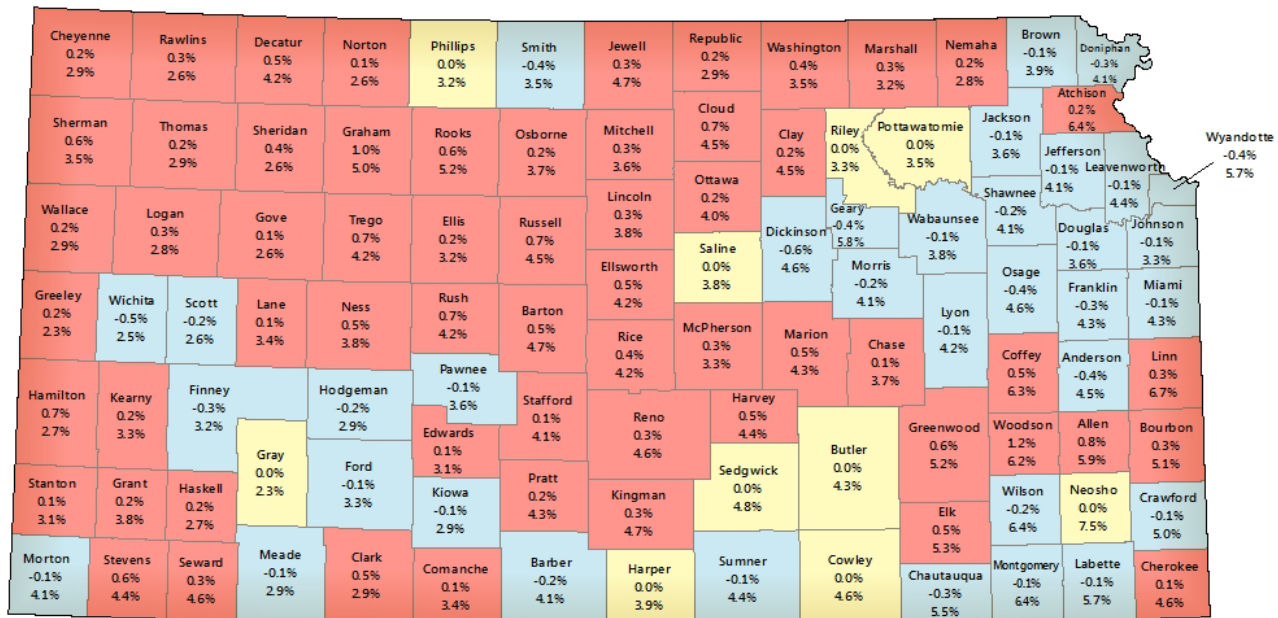
Kansas has 105 counties, each important to the economic welfare of the state. Economic trends and insight can be observed by studying county level statistics.

Unemployment Rate

In 35 counties, the unemployment rate decreased from 2015 to 2016. Dickinson County recorded the best improvement in the unemployment rate by dropping 0.6 percentage points. The unemployment rates for 10 counties were unchanged while 60 counties recorded unemployment rate increases. The largest increases were in Woodson and Graham counties where the unemployment rates increased by 1.2 and 1 percentage points respectively.

Twenty counties recorded an unemployment rate below three percent in 2016 and 50 counties had a rate below four percent. The counties with the lowest unemployment rate were Gray and Greeley counties, at 2.3 percent. Neosho County experienced the highest unemployment rate in 2016 at 7.5 percent, the same rate experienced in 2014 and 2015. Seven counties had an unemployment rate above six percent. See **Map 3 below**, to view the unemployment rates and the change in the unemployment rate from 2015 to 2016 by county.

Map 3
Unemployment Rate by County



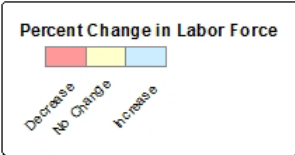
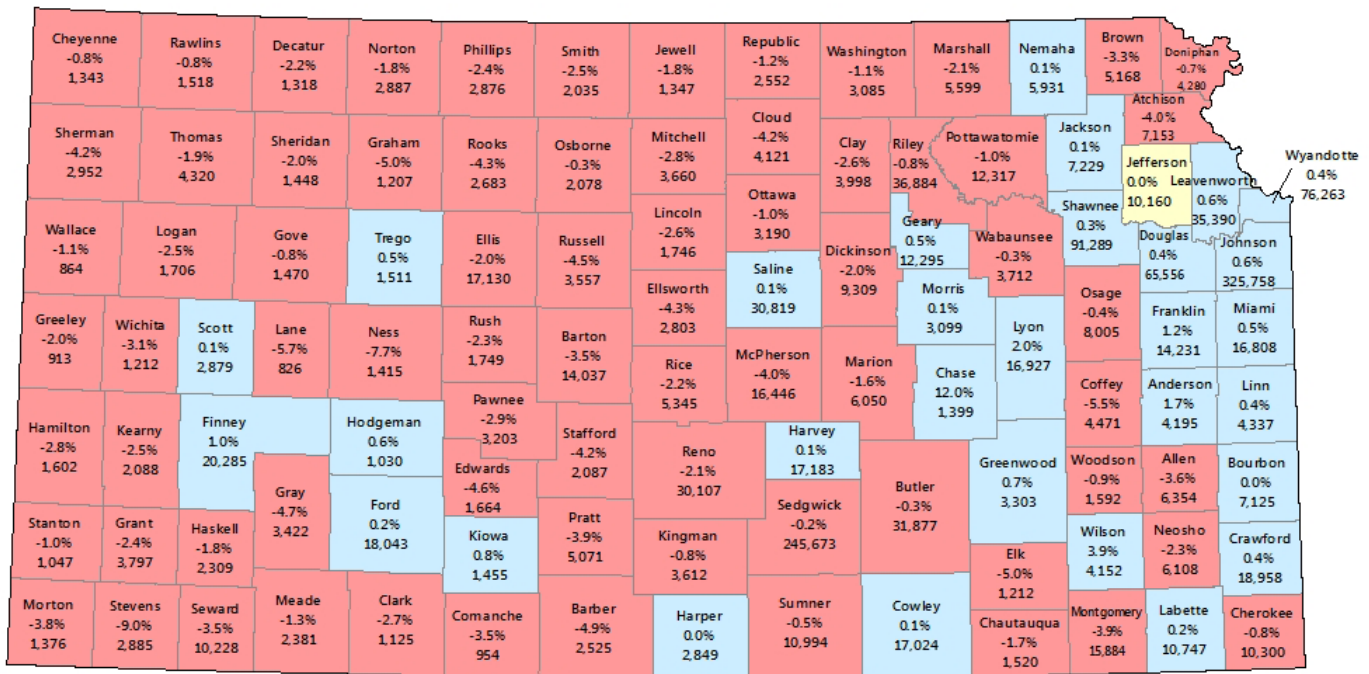
Source: Kansas Department of Labor, Labor Market Information Services in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics

Labor Force

The labor force increased in 30 counties from 2015 to 2016. There were six counties that had labor force growth of one percent or greater. Chase County recorded the largest percent increase, with the labor force expanding by 12 percent while Johnson County experienced the largest total increase by adding 1,854 people to the labor force in 2016. Stevens County recorded the largest percent decrease in the labor force at nine percent while McPherson County lost the most individuals out of the labor force at 690 people.

Johnson County had the largest labor force in 2016 with 325,758 individuals, accounting for 22 percent of the total labor force in Kansas. Sedgwick County was the only other county with a labor force greater than 100,000 at 245,673, accounting for 16.6 percent of the Kansas labor force. Lane County had the smallest labor force at 826 people, one of four counties with a labor force of fewer than 1,000 people. See **Map 4 below**, to view the labor force and the change in the labor force from 2015 to 2016 by county.

Map 4 Labor Force by County



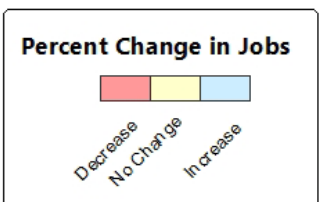
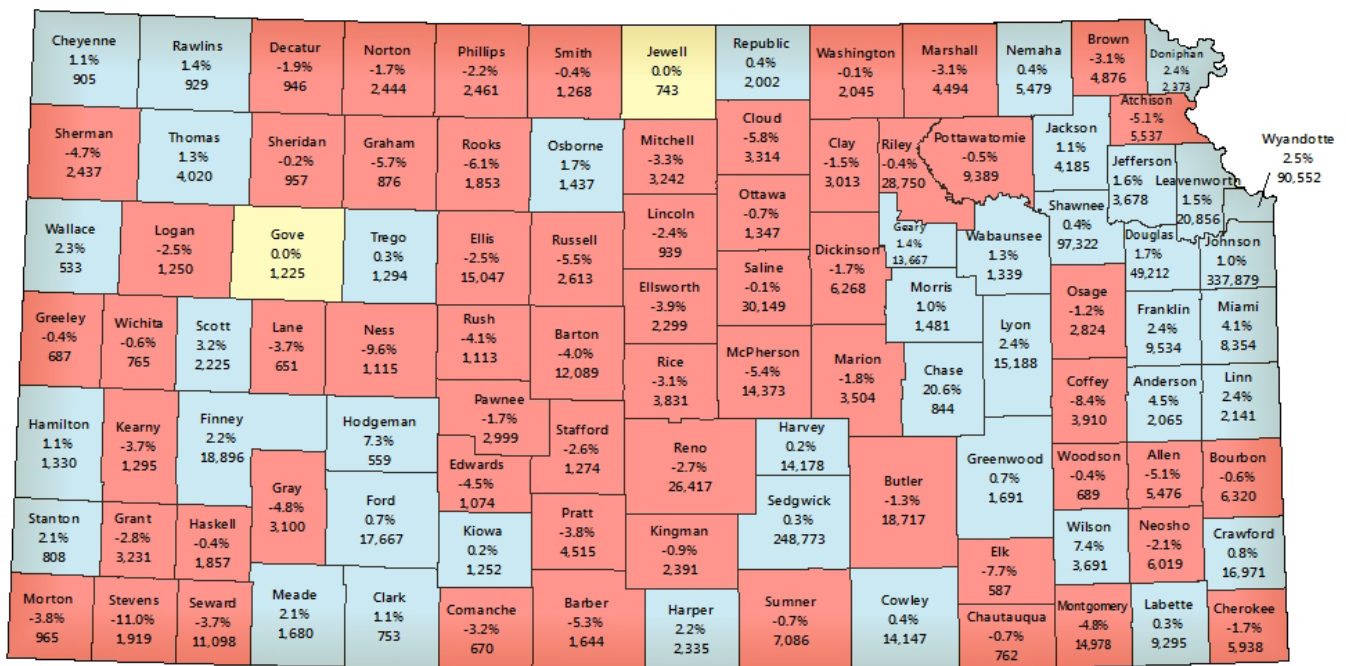
Source: Kansas Department of Labor, Labor Market Information Services in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics

Jobs

The number of jobs increased in 42 counties during 2016. Forty of the counties experienced a job growth rate of 0.3 percent or higher, equaling or exceeding the statewide growth rate in employment covered by unemployment insurance in Kansas. Chase County experienced the largest percent increase in jobs at 20.6 percent while Johnson County added the most total jobs with 3,355 more jobs. Stevens County experienced the largest percent decrease in jobs at 11 percent while McPherson County lost the most total jobs, recording 818 fewer jobs in 2016.

There were 337,879 jobs in Johnson County in 2016, the most of any county, followed by Sedgwick County with 248,773 jobs and Shawnee County with 97,322 jobs. Wallace County recorded the fewest number of jobs with 533, one of 20 counties with fewer than 1,000 jobs. See **Map 5 below**, to view jobs and the change in jobs from 2015 to 2016 by county.

Map 5 Jobs by County



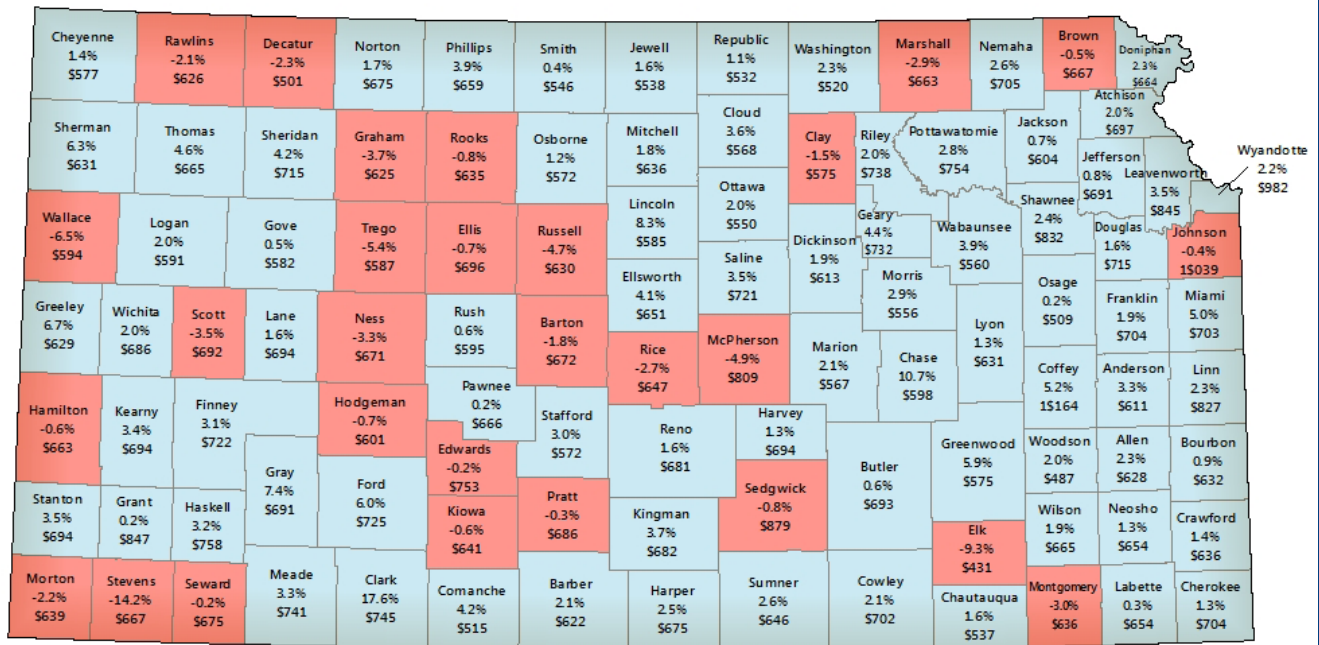
Source: Kansas Department of Labor, Labor Market Information Services in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics

Average Weekly Wage

Average weekly wage increased in 77 counties in 2016. With the Midwest experiencing inflation of 0.8 percent in 2016, 68 counties experienced growth in inflation adjusted average weekly wages giving Kansans in those counties more money to spend on additional goods and services. Clark County experienced the most growth in wages, with average weekly wages increasing from \$634 in 2015 to \$745 in 2016, a 17.6 percent increase. Chase County also recorded a notable increase in average weekly wage, going from \$540 in 2015 to \$598 in 2016, a 10.7 percent increase. Stevens County recorded the largest decrease in average weekly wages, with a decline of \$110, or 14.2 percent. Elk, Trego and Wallace counties also experienced wage decreases of five percent or greater.

Coffey County recorded the highest 2016 average weekly wage in Kansas at \$1,164. Johnson County was the only other county with an average weekly wage over \$1,000 at \$1,039. Elk County experienced the lowest average weekly wage at \$431, one of 10 counties with an average weekly wage less than \$550. See **Map 6 below**, to view average weekly wage by county and the change in average weekly wage from 2015 to 2016 by county.

Map 6
Average Weekly Wage by County



Percent Change in Average Weekly Wage



Source: Kansas Department of Labor, Labor Market Information Services in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics

Job Vacancies

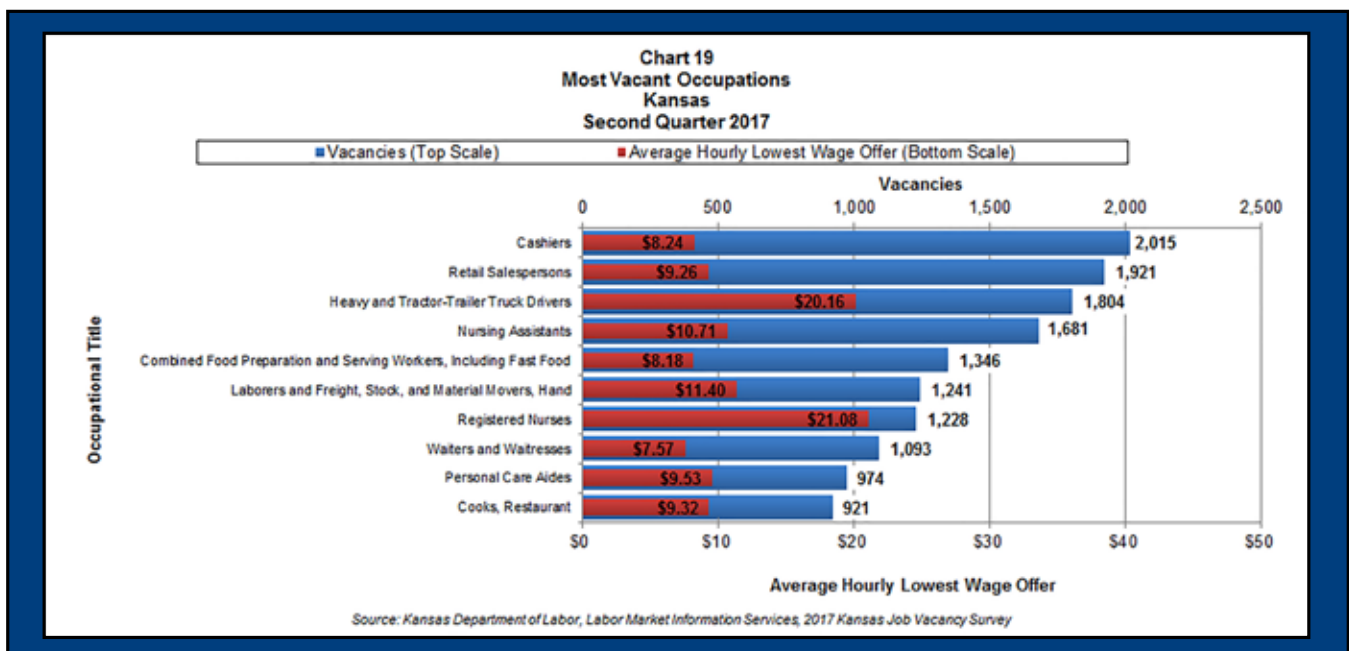
The number of job vacancies and the ratio of the number of unemployed individuals to the number of vacant jobs can be used to measure the demand for labor in a given area, which helps provide insight to the health of the labor market. The Kansas Department of Labor conducts an annual Job Vacancy Survey (JVS) in order to measure labor demand by area, industry and occupation. The most recent survey was conducted during the second quarter of 2017. The Bureau of Labor Statistics (BLS) also releases monthly data on job openings in the U.S. and the Midwest region through their Job Openings and Labor Turnover Survey.

There were 48,908 job vacancies in Kansas during the second quarter of 2017, a 9.1 percent increase from 2016. This represents the second most vacancies recorded since the Kansas JVS started in 2004. The statewide vacancy rate was 3.4 percent, indicating that for every 100 positions in Kansas, 3.4 were vacant and 96.6 were filled. This is lower than the 3.7 percent job vacancy rate for the U.S. and the 3.9 percent rate for the Midwest recorded for May 2017.

There were 1.1 unemployed people for every vacancy in Kansas, an improvement of 0.2 from one year ago and the lowest ratio recorded in the history of JVS. This is the eighth consecutive year that the number of unemployed people per vacancy has decreased in Kansas. In May 2017, there were 1.2 unemployed people per vacancy in the U.S while in the Midwest there were 1.0 unemployed people per vacancy.

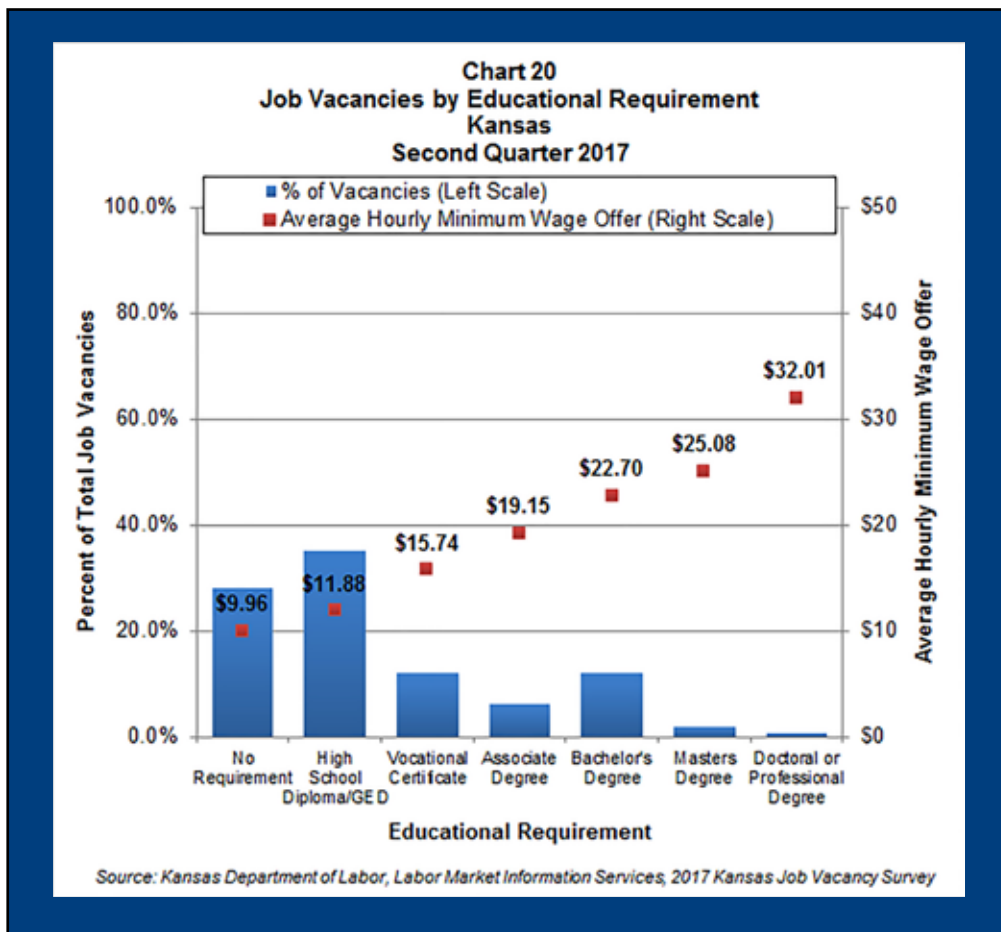
Since the number of unemployed people and the number of vacancies are relatively even, this indicates that there are jobs available for almost everyone in the Kansas labor force. However, there may be a skills mismatch between unemployed people and the available positions leading to continued difficulty finding and filling jobs. One benefit of the tightening labor market is it may eventually lead to an increase in wages as the supply of workers for available positions continues to decrease.

The top 10 occupations with the most vacancies in Kansas are shown in **Chart 19 below**. Also shown is the average lowest hourly wage offered for vacancies in each of those occupations. These ten occupations reflect a combination of occupations with high turnover, increased demand, and a continuing shortage of qualified workers.



Cashiers were the most vacant positions in Kansas with 2,015 job vacancies, followed by retail salespersons with 1,921 job vacancies. Most of the occupations in the top ten are occupations with high turnover rates leading to a greater number of job vacancies. Three of the occupations are health care related professions; nursing assistants, registered nurses and personal care aides; reflecting the continued demand for healthcare workers as the older population increases. Two relatively high paying occupations, heavy and tractor-trailer truck drivers and registered nurses, are in the top 10 reflecting a continued shortage of workers for those positions. The top 10 most vacant occupations accounted for 29.1 percent of the job vacancies in Kansas.

Chart 20 below, shows the percentage of job vacancies by educational requirement as well as the average lowest hourly wage offered by educational requirement. As expected, the average starting pay increases with the amount of education required. Openings with no educational requirements had the lowest average hourly wage offered at \$9.96, while vacancies requiring a doctoral or professional degree had the highest at \$32.01. The average lowest wage offer for all vacancies was \$12.95 per hour. The majority of vacancies, 63.3 percent, required a high school diploma or GED or had no educational requirements at all. About 30 percent of openings required a post-secondary vocational certificate, an associate degree, or a bachelor’s degree while only a small percentage of vacancies required a postgraduate degree.



Short-Term Projections

Short-term projections are approximations of near-future job levels. This is estimated using a combination of methods considering trends in past job levels and looking at the relationships between job levels and hours worked, consumer expectations, interest rates, money supply and price indices. Observed trends and relationships are held constant, but no assumptions are made about any other variable including the business cycle. Short-term projections reflect changes in cyclical, structural and frictional factors.

Projections inform researchers and other interested parties about the future direction of the labor market and its implications for the economy. Projections also play an important role in making career choices. While general interest in certain careers may impact occupational choices, information about future trends in employment or demand for labor helps identify practical options to ensure future job security.

Projections use the most comprehensive measure of jobs. This measure includes jobs covered by unemployment insurance as well as non-covered jobs. Data on self-employed workers are calculated by applying national staffing patterns to state employment data. LMIS conducts school and church surveys that provide information about jobs that are not covered by unemployment insurance. Data on railroad workers are sourced from the Railroad Retirement Board (RRB).

Table 18 below, shows short-term projections by industry for the first quarter 2018 from the first quarter 2016. The top 10 industries by numerical change are shown. Total jobs are expected to increase by 1.3 percent, to 1,494,528, over the two-year period. The annual average growth rate is 0.7 percent. The private sector – combined with public schools and hospitals – is expected to add 20,680 jobs, with an average annual growth rate of 0.7 percent. The government sector - excluding schools and hospitals - is expected to decrease by 1,329 jobs to 96,702, a 1.4 percent decline over the period. For the projections program, public schools are included in the educational services industry, and public hospitals are in the health care and social assistance industry. The sectors expected to add the most jobs over the next two years are health care and social assistance, transportation and warehousing, and accommodation and food services.

Table 18
Top 10 Industries by Numerical Job Change
2016 - 2018

Industry	Job Numbers		Job Changes		
	Quarter 1 2016	Quarter 1 2018	Numerical	Percent	Annual Avg. Growth %
Total, All Industries	1,475,177	1,494,528	19,351	1.3%	0.7%
Professional, Scientific, and Technical Services	73,172	75,746	2,574	3.5%	1.7%
Food Services and Drinking Places	97,416	99,900	2,484	2.5%	1.3%
Warehousing and Storage	9,792	11,786	1,994	20.4%	9.7%
Social Assistance	33,736	35,165	1,429	4.2%	2.1%
Hospitals	67,073	68,487	1,414	2.1%	1.0%
Administrative and Support Services	74,093	75,298	1,205	1.6%	0.8%
Specialty Trade Contractors	37,189	38,081	892	2.4%	1.2%
Ambulatory Health Care Services	54,075	54,958	883	1.6%	0.8%
Insurance Carriers and Related Activities	30,913	31,670	757	2.4%	1.2%
Nursing and Residential Care Facilities	39,622	40,234	612	1.5%	0.8%

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

Table 19 below, shows the top 10 growing occupational groups by numerical change. Over the projection period, food preparation and serving related occupations are expected to add 2,605 jobs. The other occupational groups projected to grow by more than 2,000 jobs are transportation and material moving occupations and sales and related occupations.

The personal care and service occupational group has the highest annual average growth rate at 1.7 percent. Other groups projected to grow more than one percent per year are farming, fishing and forestry occupations; transportation and material moving occupations; computer and mathematical occupations; and food preparation and serving related occupations. It is expected that there will be 92,208 openings over the projection period, or an average of 46,104 per year from new and replacement jobs. Approximately 75.6 percent or 69,703 openings will be replacement openings.

Table 19 Top 10 Occupations by Numerical Job Change 2016 - 2018						
Occupations	Job Numbers		Job Changes			Total Openings
	Quarter 1 2016	Quarter 1 2018	Numerical	Percent	Annual Avg. Growth %	
Total, All Occupations	1,475,177	1,494,528	19,351	1.3%	0.7%	92,208
Food Preparation and Serving Related Occupations	118,254	120,859	2,605	2.2%	1.1%	12,642
Transportation and Material Moving Occupations	98,188	100,761	2,573	2.6%	1.3%	7,220
Sales and Related Occupations	144,887	147,061	2,174	1.5%	0.7%	11,768
Personal Care and Service Occupations	54,513	56,364	1,851	3.4%	1.7%	4,060
Healthcare Practitioners and Technical Occupations	83,294	84,752	1,458	1.8%	0.9%	4,892
Office and Administrative Support Occupations	235,068	236,389	1,321	0.6%	0.3%	11,877
Management Occupations	86,781	88,084	1,303	1.5%	0.7%	4,972
Business and Financial Operations Occupations	71,515	72,591	1,076	1.5%	0.7%	3,933
Computer and Mathematical Occupations	37,011	37,949	938	2.5%	1.3%	1,922
Healthcare Support Occupations	45,478	46,364	886	2.0%	1.0%	2,804

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

BLS assigns the level of education typically needed to enter each occupation. There are eight categories shown in **Table 20 next page**. The greatest numerical change in jobs is projected for those that do not require any formal educational credential, adding 7,813 jobs. There are 5,051 additional jobs projected that require a high school diploma or equivalent, and 3,653 additional jobs over the two-year projection period that prefer a bachelor’s degree. The fastest growing group are occupations that require no formal educational credential at an annual growth rate of 1.0 percent.

“ The greatest numerical change in jobs is projected for those that do not require any formal educational credential, adding 7,813 jobs. ”

Table 20
Projections by Education Requirement
2016 - 2018

Education	Job Numbers		Job Changes			Total Openings
	Quarter 1 2016	Quarter 1 2018	Numerical	Percent	Annual Avg. Growth %	
Total	1,475,177	1,494,528	19,351	1.3%	0.7%	92,208
No formal educational credential	384,034	391,847	7,813	2.0%	1.0%	33,239
High school diploma or equivalent	568,964	574,015	5,051	0.9%	0.4%	30,528
Bachelor's degree	294,533	298,186	3,653	1.2%	0.6%	16,157
Postsecondary non-degree award	95,815	97,489	1,674	1.7%	0.9%	5,824
Doctoral or professional degree	33,877	34,264	387	1.1%	0.6%	1,717
Associate degree	29,484	29,862	378	1.3%	0.6%	1,647
Master's degree	21,897	22,257	360	1.6%	0.8%	1,278
Some college, no degree	46,573	46,608	35	0.1%	0.0%	1,818

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

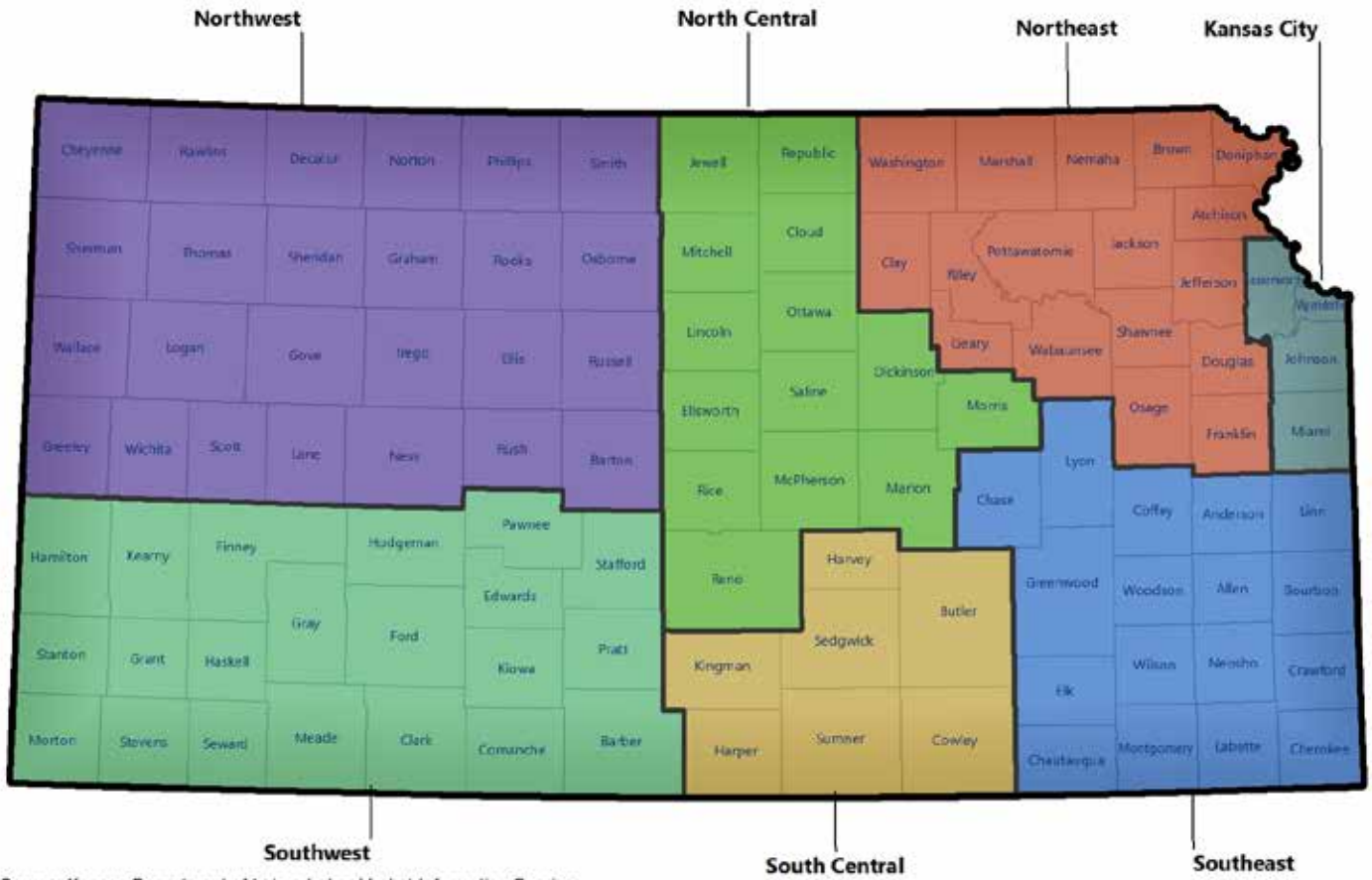
Total jobs are also estimated by projection region. The regions with the largest estimates for additional jobs are the Kansas City and South Central regions. The Kansas City region has the highest estimated annual average growth rate at 1.1 percent. **Table 21 below**, shows the short-term projections by region. **Map 7 next page** shows the projection regions.

Table 21
Projections by Region
2016 - 2018

Area	Job Numbers		Job Changes		
	Quarter 1 2016	Quarter 1 2018	Numerical	Percent	Annual Avg. Growth %
Statewide	1,475,177	1,494,528	19,351	1.3%	0.7%
Kansas City	496,965	508,256	11,291	2.3%	1.1%
South Central	337,363	341,264	3,901	1.2%	0.6%
Northeast	269,735	272,881	3,146	1.2%	0.6%
Southwest	87,530	88,291	761	0.9%	0.4%
Southeast	105,325	105,577	252	0.2%	0.1%
North Central	109,903	109,983	80	0.1%	0.0%
Northwest	67,970	67,923	-47	-0.1%	0.0%

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

Map 7 Projection Regions



Source: Kansas Department of Labor, Labor Market Information Services

Long-Term Projections

Every two years, each of the 50 states completes long-term projections in conjunction with the U.S. Department of Labor. The base year used in these projections is 2014 and the projection year is 2024.

Kansas total jobs in all industries are expected to grow by 106,038 to 1,585,026 jobs in 2024, an increase of 7.2 percent over the 10-year period. This averages out to 10,604 jobs per year, a 0.7 percent average annual growth. Goods-producing industries are projected to grow at an average annual rate of 0.4 percent from 2014 to 2024. Service providing industries are projected to grow at 0.8 percent annually over that period.

The primary objective of the long-term projections process is to approximate the level of jobs 10 years out from the base period. This level is projected using a variety of projection methods including those that consider historical trends and those that factor in outside variables. One important assumption is used in formulating long-term projections. It is assumed the Kansas labor market will be in full employment in the projected year. This means the labor market will be in equilibrium and labor supply will meet labor demand. In this way, the projections do not predict changes in the business cycle, and instead project the trend in long-term growth.

Long-term projections play an important role for students and others making career choices. Information about future trends in job growth and demand for labor is vital to making these life decisions.

Long-term projections use the most comprehensive measure of jobs. This includes jobs covered by unemployment insurance and those not covered by unemployment insurance. Data measuring jobs not covered by unemployment insurance is collected using a variety of sources. Data on self-employed workers is calculated by applying national staffing patterns to state employment data. LMIS conducts school and church surveys that provide information about jobs which are not covered by unemployment insurance. Data on railroad workers is sourced from the Railroad Retirement Board (RRB).

Table 22 next page, shows long-term projections for the projected year 2024 from the base year 2014. The top 10 industries by numerical change are shown in the table. The number of jobs in all industries is projected to grow at the rate of 0.7 percent per year. This is in line with the growth rate experienced in the 10 years from 2004 to 2014 (+0.7 percent annually). The rate of job growth was faster during the 1990's. From 1990 to 2014, job growth averaged 1.1 percent annually.

The goods producing industries (construction, manufacturing, and natural resources and mining) are projected to grow by 953 jobs per year, an annual rate of 0.4 percent. The remaining industries fall under the service providing sector which is projected to grow at double the goods producing rate, 0.8 percent, adding 9,587 jobs annually.

**Table 22
Top 10 Industries by Numerical Job Change
2014 - 2024**

Industry	Job Numbers		Job Changes		
	Base Year 2014	Projection Year 2024	Numerical	Percent	Annual Avg. Growth %
Total, All Industries	1,478,988	1,585,026	106,038	7.2%	0.7%
Health Care and Social Assistance	187,905	211,171	23,266	12.4%	1.2%
Professional, Scientific and Technical Services	67,391	81,464	14,073	20.9%	1.9%
Accommodation and Food Services	106,744	120,672	13,928	13.0%	1.2%
Management of Companies and Enterprises	18,630	29,357	10,727	57.6%	4.7%
Educational Services	142,567	151,673	9,106	6.4%	0.6%
Administrative Support and Waste Management and Remediation Services	83,445	91,218	7,773	9.3%	0.9%
Finance and Insurance	64,349	70,734	6,385	9.9%	1.0%
Transportation and Warehousing	48,453	53,859	5,406	11.2%	1.1%
Retail Trade	146,493	151,439	4,946	3.4%	0.3%
Construction	59,781	64,112	4,331	7.2%	0.7%

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

The health care and social assistance industry is projected to gain the largest number of jobs over the 10 year period with an additional 23,266 jobs. This major industry consists of four underlying industries: ambulatory health care services, hospitals, nursing and residential care facilities and social assistance. The fastest rate of growth of these underlying industries is projected to be in social assistance gaining 2.5 percent annually.

Of the major industries, management of companies and enterprises is projected to grow at the fastest rate, 4.7 percent annually. Employers in management of companies and enterprises administer, oversee and manage establishments involved in organizational planning for the company or are establishments that hold the securities of enterprises for the purpose of owning a controlling interest or influencing management decisions of that enterprise.

Table 23 next page, shows the top 10 occupational groups projected to gain the largest number of jobs over the projection period. Food preparation and serving related occupations is projected to gain 13,549 jobs during the 10 year period. This is an average annual growth rate of 1.1 percent. The food preparation and serving related group of occupations is made up of four sub groups, supervisors of food preparation and serving, cooks and food preparation workers, food and beverage serving workers, and other food preparation and serving related workers. The largest of these four categories in Kansas is food and beverage serving workers with 58,100 workers in 2014.

The occupational group projected to grow at the fastest rate over the projection period is personal care and service occupations. This occupational group is projected to grow by 1.8 percent on average annually. There are several sub groups that fall under personal care and service occupations. The largest group is other personal care and service workers, this includes personal care aides, childcare workers and recreation workers among others.

Table 23
Top 10 Occupations by Numerical Job Change
2014 - 2024

Occupations	Job Numbers		Job Changes			Total Openings
	Base Year 2014	Projection Year 2024	Numerical	Percent	Annual Avg. Growth %	
Total, All Occupations	1,478,988	1,585,026	106,038	7.2%	0.7%	460,049
Food Preparation and Serving Related Occupations	117,012	130,561	13,549	11.6%	1.1%	55,643
Office and Administrative Support Occupations	238,157	249,177	11,020	4.6%	0.5%	66,644
Personal Care and Service Occupations	56,554	67,415	10,861	19.2%	1.8%	21,275
Business and Financial Operations Occupations	71,462	79,496	8,034	11.2%	1.1%	22,524
Healthcare Practitioners and Technical Occupations	80,556	88,570	8,014	9.9%	1.0%	24,665
Management Occupations	83,979	91,515	7,536	9.0%	0.9%	24,208
Transportation and Material Moving Occupations	98,688	105,648	6,960	7.1%	0.7%	30,019
Education, Training and Library Occupations	88,874	94,918	6,044	6.8%	0.7%	24,742
Sales and Related Occupations	145,652	150,812	5,160	3.5%	0.3%	49,946
Computer and Mathematical Occupations	33,899	38,858	4,959	14.6%	1.4%	10,823

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

BLS assigns the level of education typically needed to enter each detailed occupation. Each occupation falls under one of eight education levels. As shown in **Table 24 below**, the largest increase in jobs is projected to be in those occupations classified as high school diploma or equivalent gaining 33,316 jobs over the projection period. These occupations made up 42 percent of all jobs in 2014. That number is projected to decline to 41 percent in 2024. This proportion is declining because there are other educational groups projected to grow at a faster rate and therefore take a larger share of all jobs in the future.

The educational categories projected to grow the fastest are master's degree and doctoral or professional degree. These are projected to grow at a rate of 11.6 percent and 9.8 percent over the 10 year period.

Table 24
Projections by Education Requirement
2014 - 2024

Education	Job Numbers		Job Changes			Total Openings
	Base Year 2014	Projection Year 2024	Numerical	Percent	Annual Avg. Growth %	
Total	1,478,988	1,585,026	106,038	7.2%	0.7%	460,049
High school diploma or equivalent	616,189	649,505	33,316	5.4%	0.5%	170,649
No formal educational credential	389,968	422,151	32,183	8.3%	0.8%	149,120
Bachelor's degree	239,272	262,278	23,006	9.6%	0.9%	73,952
Postsecondary non-degree award	96,667	101,833	5,166	5.3%	0.5%	25,611
Associate degree	55,434	60,195	4,761	8.6%	0.8%	16,212
Doctoral or professional degree	34,033	37,359	3,326	9.8%	0.9%	10,268
Master's degree	19,981	22,307	2,326	11.6%	1.1%	6,480
Some college, no degree	27,444	29,398	1,954	7.1%	0.7%	7,757

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

Occupational classification by years of work experience typically needed to enter the occupation is also available. This can be more than 5 years, less than 5 years or none. A third classification is available that organizes occupations by typical on-the-job training needed to attain competency. This can be long-term on-the-job training, moderate-term on-the-job training, short-term on-the-job-training, internship/residency, or none. This information is available on the KDOL Labor Market Information Services website.

Long-term projections are also available by projection region. The three regions projected to add at least 20,000 jobs over the 10 year period are the Kansas City, Northeast and South Central regions. The other four regions are estimated to gain about 10,000 jobs combined over the projection period. The Kansas City region has the highest estimated annual average growth rate at 1.3 percent.

Table 25 below, shows the long-term projections by region.

Table 25 Projections by Region 2014 - 2024					
Area	Job Numbers		Job Changes		
	Base Year 2014	Projection Year 2024	Numerical	Percent	Annual Avg. Growth %
Statewide	1,478,988	1,585,026	106,038	7.2%	0.7%
Kansas City	488,950	555,312	66,362	13.6%	1.3%
Northeast	270,489	293,196	22,707	8.4%	0.8%
South Central	332,832	355,501	22,669	6.8%	0.7%
North Central	112,377	116,559	4,182	3.7%	0.4%
Southwest	90,061	94,004	3,943	4.4%	0.4%
Northwest	71,522	73,289	1,767	2.5%	0.2%
Southeast	107,038	107,135	97	0.1%	0.0%

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Employment Projections

High Demand Jobs

High demand occupations are jobs in greatest demand by employers in Kansas. The list of these occupations is provided to assist students, educators, administrators and others in making informed decisions regarding career paths. High demand occupations have higher than average combined current and projected (short-term and long-term) demand in the state. It combines occupational projection data with education, training and wage information to give a complete picture of each occupation.

The list is compiled by measuring the number of actual and projected job openings in each occupation. These openings can be the result of growth or replacement. Openings resulting from growth occur when an industry expands requiring more workers. Openings from replacement occur when a worker decides to leave an occupation and move to another occupation or decides to stop working.

Each occupation receives a score based on the current number of openings, determined by JVS, the projected number of openings in two years as indicated in Short-Term Projections and the projected number of openings in 10 years, as calculated by Long-Term Projections. Each of these scores are added together to get a total score. A cumulative score of 30 indicates the highest demand occupations, while a score of zero shows an average demand relative to all occupations. **Table 26 below**, displays the top high demand occupations. These 13 occupations received the maximum score of 30. These occupations currently have the most openings and are projected to have the most openings in 2018 and 2024.

Occupation	Demand Score	Median Annual Wage	Education	On-the-Job Training
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	30	\$58,146	High school diploma or equivalent	Moderate-term on-the-job training
Registered Nurses	30	\$57,198	Bachelor's Degree	None
Heavy and Tractor-Trailer Truck Drivers	30	\$40,375	Postsecondary non-degree award	Short-term on-the-job training
Laborers and Freight, Stock, and Material Movers, Hand	30	\$27,891	Less than high school	Short-term on-the-job training
First-Line Supervisors of Food Preparation and Serving Workers	30	\$27,223	High school diploma or equivalent	None
Nursing Assistants	30	\$23,846	Postsecondary non-degree award	None
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	30	\$23,460	Less than high school	Short-term on-the-job training
Stock Clerks and Order Fillers	30	\$23,330	Less than high school	Short-term on-the-job training
Retail Salespersons	30	\$22,222	Less than high school	Short-term on-the-job training
Personal Care Aides	30	\$20,887	Less than high school	Short-term on-the-job training
Cashiers	30	\$18,953	Less than high school	Short-term on-the-job training
Waiters and Waitresses	30	\$18,479	Less than high school	Short-term on-the-job training
Combined Food Preparation and Serving Workers, Including Fast Food	30	\$18,472	Less than high school	Short-term on-the-job training

Source: KDOL Labor Market Information Services, High Demand Occupations

Ten of the 13 occupations in **Table 26 page 52**, require only a high school diploma or less, as noted in the education column. These occupations are attainable for workers with little to no education or training. Occupations requiring little training and no education tend to have lower wages. Those eight occupations in this list average \$25,906 per year in median wage. Because of the low wages and the fact that many of these occupations are part-time, employers are able to hire more workers. This partly explains the high demand score.

One other explanation is that there is a high level of turnover in these occupations. Many of the openings in these occupations are the result of people leaving the occupation to move to another occupation and not the result of industry growth. Furthermore, many of the occupations with the highest replacement rate are those that require only a high school education or less and little or no training.

Table 27 below, highlights the top 10 in-demand occupations that typically require one or more of the following: post-secondary education, at least one year on the job training, an internship, an apprenticeship or five years of work experience. Included in this table are the educational or training paths that lead to these occupations.

Table 27 High Demand Occupations by Education, Experience or Training 2017					
Occupation Title	Demand Score	Median Annual Wage	Education	Work Experience	On-the-job-Training
Registered Nurses	30	\$57,198	Bachelor's degree	None	None
Heavy and Tractor-Trailer Truck Drivers	30	\$40,375	Postsecondary nondegree award	None	Short-term on-the-job training
Nursing Assistants	30	\$23,846	Postsecondary nondegree award	None	None
Elementary School Teachers, Except Special Education	28	\$47,159	Bachelor's degree	None	Internship/residency
Teacher Assistants	28	\$22,994	Some college, no degree	None	None
Accountants and Auditors	27	\$58,491	Bachelor's degree	None	None
Maintenance and Repair Workers, General	27	\$34,833	High school diploma or equivalent	None	Long-term on-the-job training
General and Operations Managers	26	\$83,395	Bachelor's degree	5 years or more	None
Secondary School Teachers, Except Special and Career/Technical Education	26	\$47,904	Bachelor's degree	None	Internship/residency
Licensed Practical and Licensed Vocational Nurses	25	\$40,701	Postsecondary nondegree award	None	None

Source: KDOL Labor Market Information Services, High Demand Occupations

The average median wage of high demand occupations meeting these education or training qualifications is \$58,836. The average median wage for all high demand occupations is \$46,680. This means that the occupations that require higher levels of education or training earn more on average than the occupations that require less education and training.

Interestingly, six of the 10 occupations included in **Table 27 page 53**, are in nursing or teaching related fields. The three primary levels of nursing care, registered nurses, licensed practical nurses and nursing assistants are all on the list including two of them having the maximum demand score of 30. The average median wage for these occupations is \$40,582, well above the state median wage of \$34,455. The three teaching related professions on the list are elementary school teachers, teacher assistants and secondary school teachers. These three occupations have an average median wage of \$39,352, also above the state median wage.

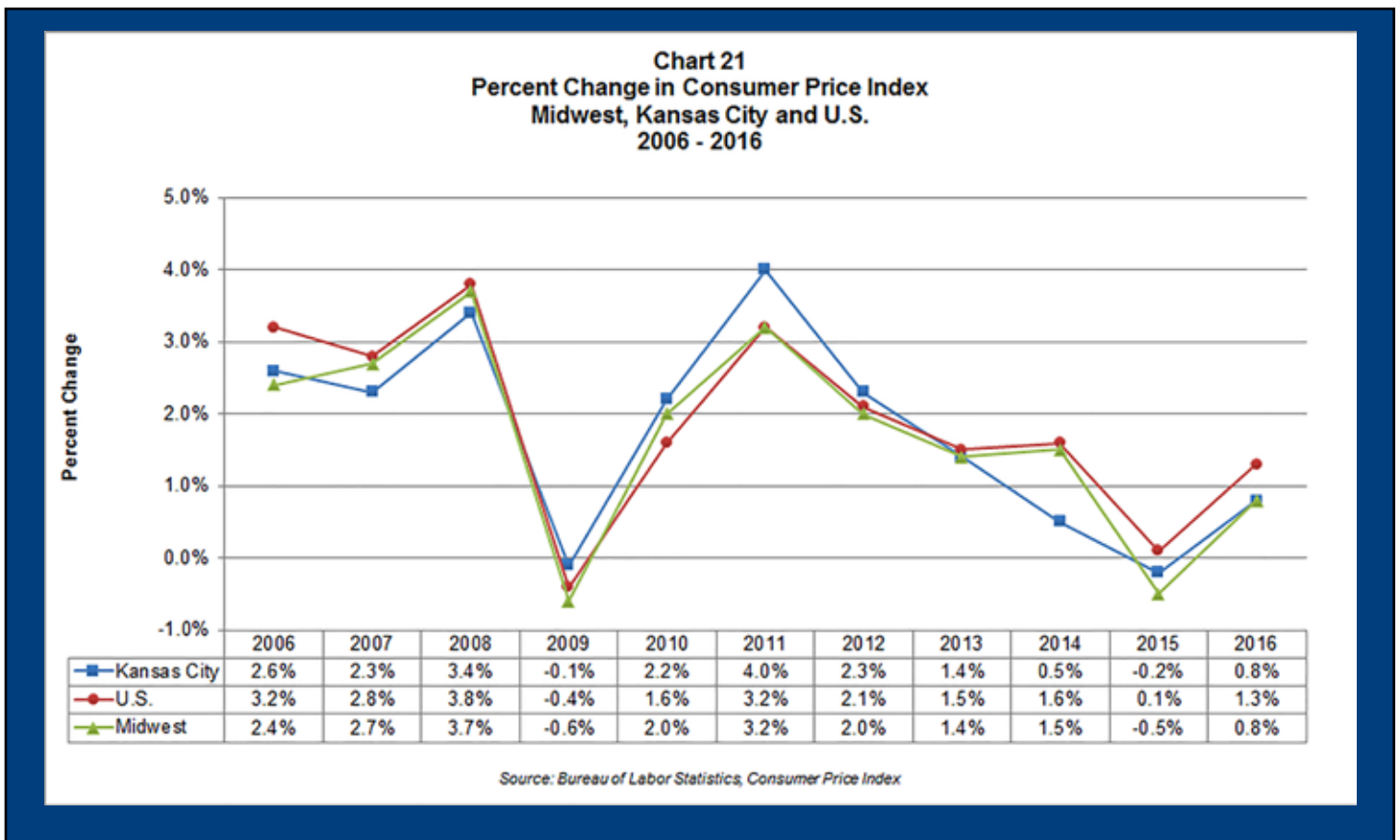
“
The average median wage for all high demand occupations is \$46,680.
”

Inflation and Real Wages

Consumer Price Index

The Consumer Price Index (CPI) is published by BLS and is a measure of the prices paid by consumers for a representative market basket. The market basket is based on goods and services commonly purchased by families. The most general measure of the CPI is the CPI-U, which is the CPI of all urban consumers. CPI-U is the most commonly used measure of inflation.

Chart 21 below, indicates the percent change in the CPI-U of three different areas – the U.S., the Midwest region, which Kansas and 11 other states are located in, and the Kansas City MSA. As seen in the chart, since 2006 inflation in all three areas has generally followed the same trend. In 2016, the Kansas City MSA and the Midwest both recorded 0.8 percent inflation while the U.S. experienced 1.3 percent inflation.



As shown in **Table 28 below**, the largest contributor to inflation in all three areas was an increase medical care prices, which increased by 4.0 percent in the Kansas City MSA and Midwest and 3.8 percent nationally. The other two categories that increased by at least two percent in both the Kansas City MSA and the U.S. and by 1.9 percent in the Midwest are housing and other goods and services. Housing prices increased due to a rise in rents and mortgage payments. Both other goods and other services recorded price increases in the other goods and services category.

Table 28 Percent Change in Consumer Price Index by Category Kansas City, Midwest, U.S. 2016			
Category	Kansas City	Midwest	U.S.
Food & Beverages	0.3%	0.3%	0.3%
Housing	2.0%	1.9%	2.5%
Apparel	-2.7%	-0.9%	0.1%
Transportation	-2.6%	-2.8%	-2.1%
Medical Care	4.0%	4.0%	3.8%
Recreation	0.2%	0.9%	0.9%
Education & Communications	-0.3%	0.4%	0.7%
Other Goods & Services	2.1%	1.9%	2.0%

Source: Bureau of Labor Statistics, Consumer Price Index

Real Wages

Wages and salaries accounted for 48.3 percent of total personal income in Kansas in 2016 and help determine the health of the economy. Since inflation can erode customer purchasing power, real wages provide a better estimate of economic health. **Table 29 next page**, lists the real average weekly wages for Kansas and the U.S. in 2016 dollars while **Chart 22 next page**, displays the over the year percent change in real average weekly wages. The real average weekly wage in Kansas decreased over the year by \$1, or 0.1 percent, to \$849 in 2016. The U.S. recorded a real average weekly wage of \$1,031, which is unchanged from one year ago. Since 2006, the Kansas real average weekly wage has grown by 5.6 percent, which is slightly behind the U.S. growth rate of 5.9 percent over the same time span.

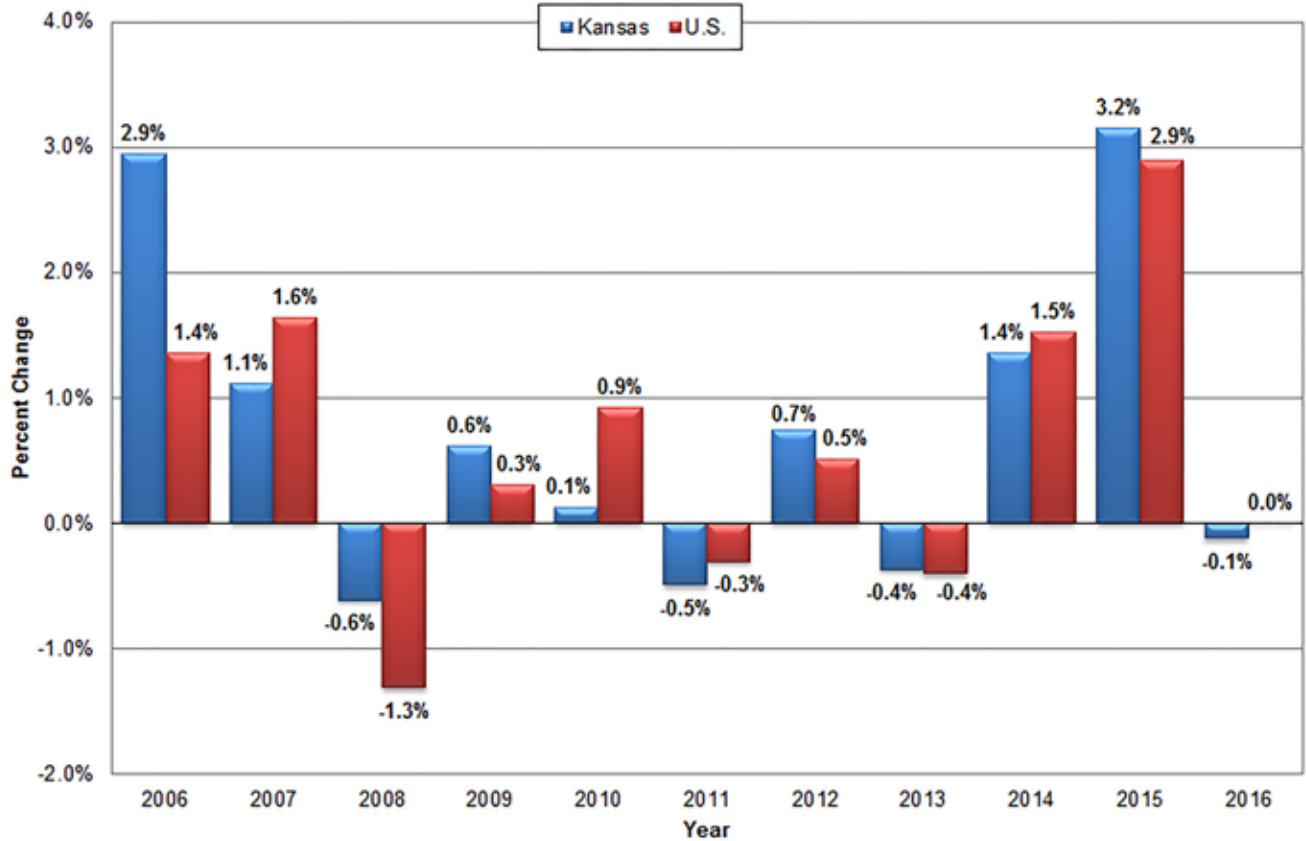
Table 29
Real Average Weekly Wages
Kansas and U.S.
2005 - 2016

	2005	2006	2007	2008	2009	2010
Kansas	\$781	\$804	\$813	\$808	\$813	\$814
U.S.	\$961	\$974	\$990	\$977	\$980	\$989
	2011	2012	2013	2014	2015	2016
Kansas	\$810	\$816	\$813	\$824	\$850	\$849
U.S.	\$986	\$991	\$987	\$1,002	\$1,031	\$1,031

Note: Wages in 2016 dollars

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment and Wages and Consumer Price Index

Chart 22
Percent Change in Real Average Weekly Wages
2006 - 2016



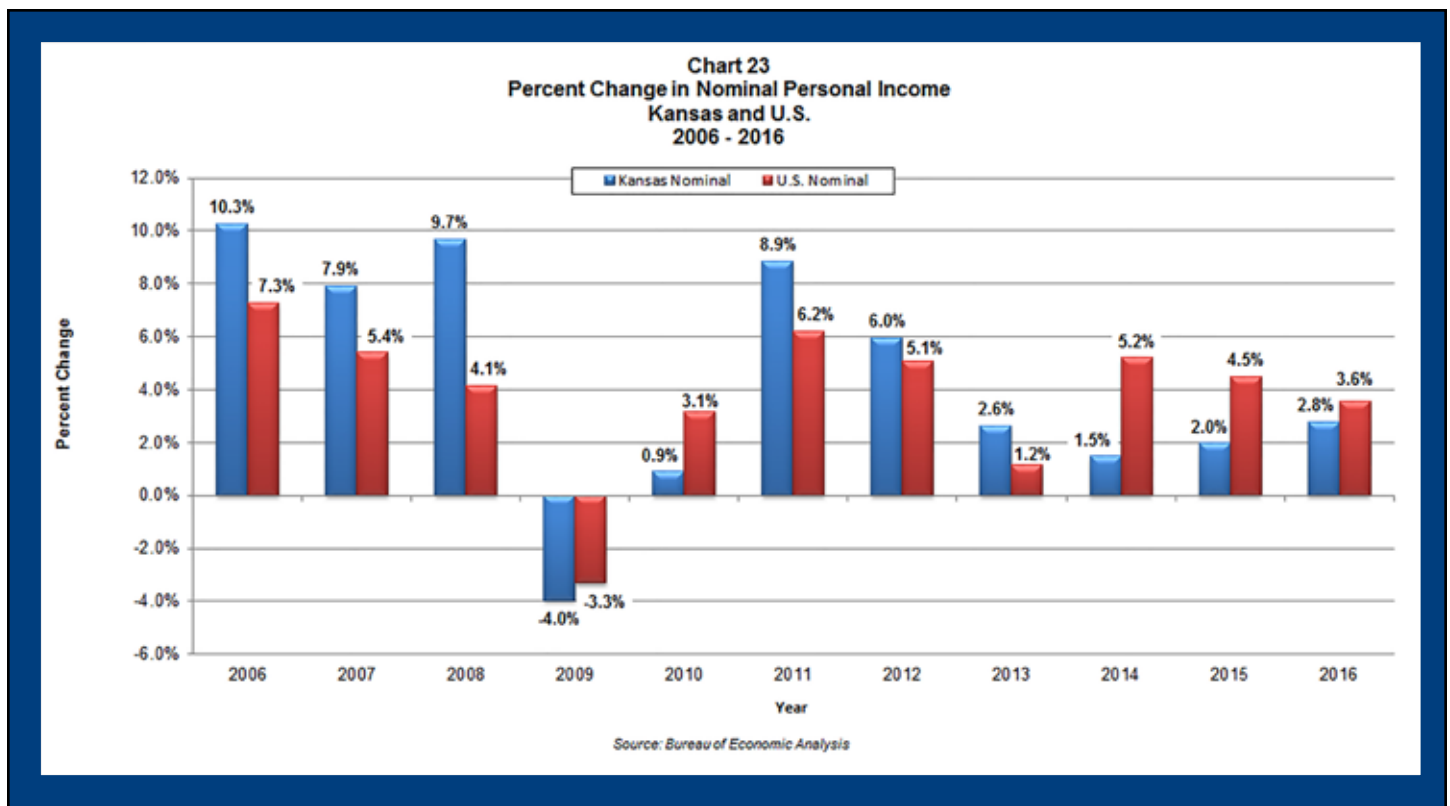
Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Quarterly Census of Employment and Wages, and Consumer Price Index

Personal Income

Personal income is an important measure of economic health and well-being. Personal income includes earnings, property income, and transfer payments.

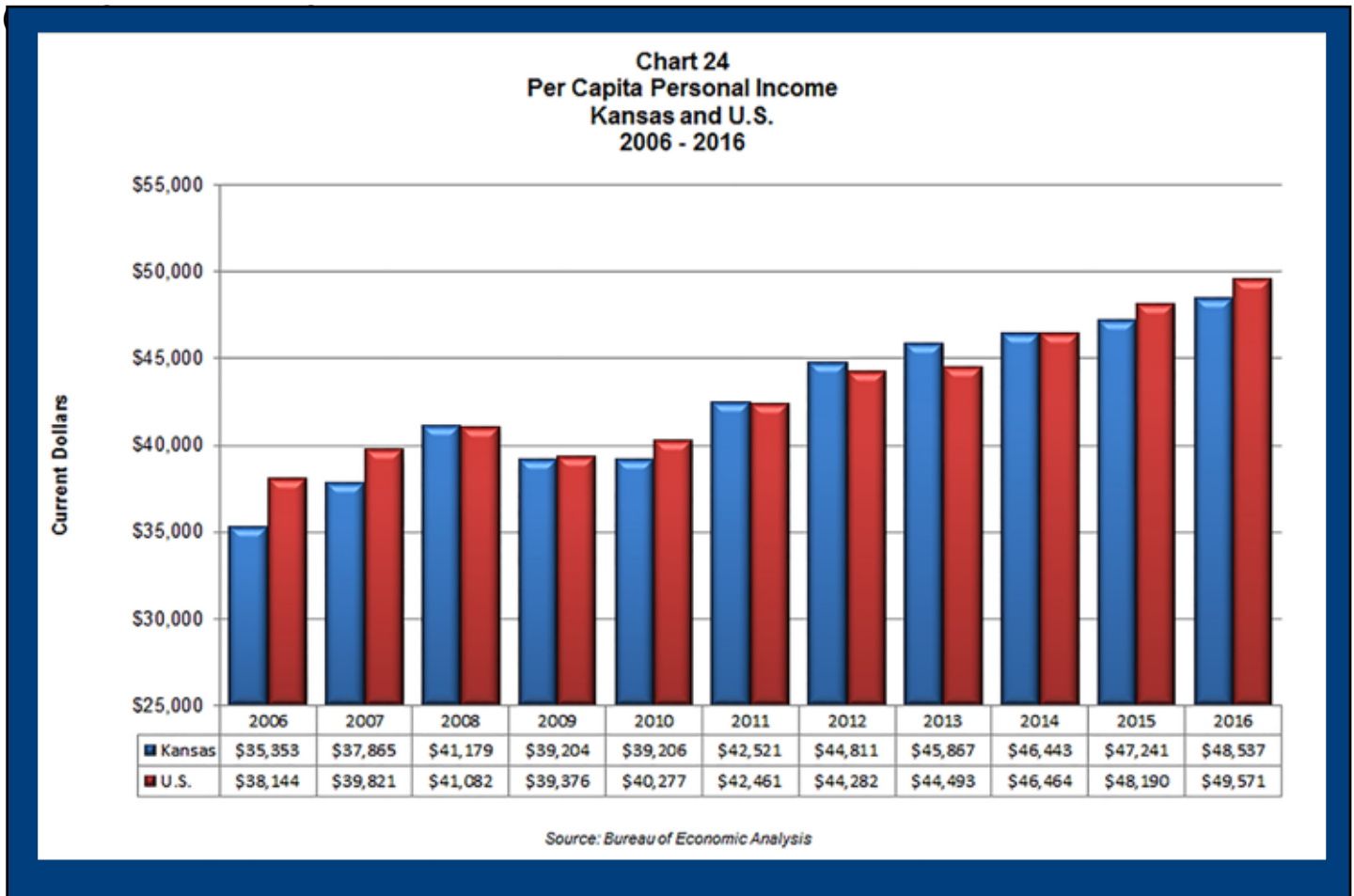
In 2016, Kansas' total personal income increased by 2.8 percent to \$141.1 billion. Nationally, personal income increased 3.6 percent to \$16 trillion. **Chart 23 below**, displays personal income growth in Kansas and the U.S. since 2006. In Kansas, almost 70 percent of the personal income growth since 2015 was due to a \$2.6 billion increase, or 2.9 percent, in net work earnings. Wages and salaries increased by \$1.5 billion while employer contributions to benefits and business owners' income also increased. The two other components of personal income also increased: income from dividends, interest and rent increased by 1.7 percent while income from personal current transfer receipts grew by 3.6 percent. Personal current transfer receipts primarily consist of government payments to individuals and nonprofit institutions, i.e. government benefit payments and grants, along with business liability payments and donations to nonprofit institutions.

Kansas ranked 39th in 2016 among the 50 states in percent change of personal income. However, Kansas' personal income growth was higher than the 2.7 percent growth for the Plains region which was the worst growth rate of any Bureau of Economic Analysis (BEA) region. The Plains region is defined by the BEA as Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota. Total personal income in Kansas has accounted for a steady proportion of the nationwide total. In 2016, Kansas' total personal income was 0.9 percent of total personal income in the U.S., the same percentage as the past decade.



Also measured is per capita personal income which shows the average share of personal income for each individual in an area. Per capita personal income is calculated by dividing total personal income by the population for an area. It measures the wealth of the population and provides a common measure for evaluating and comparing countries, states or areas.

Chart 24 below, illustrates the per capita personal income in Kansas and the U.S. In 2016, Kansas recorded a per capita personal income of \$48,537, while the U.S. recorded a per capita personal income of \$49,571. This means Kansas per capita personal income is 97.9 percent of the U.S. value. Kansas ranks 22nd out of the 50 states in terms of per capita personal income. From 2015 to 2016, Kansas' per capita income increased 2.7 percent, and the nation's increased 2.9 percent. Kansas once again outperformed the Plains region which recorded an increase of 2.3 percent.



Productivity

Productivity is the amount of output produced by one unit of input, so labor productivity is the output produced by a unit of labor. This can be measured either as productivity per worker or productivity per hour worked. This section reviews productivity per person employed in the Kansas economy, which is calculated by dividing the total output by the total number of people employed in a given year. Output is measured using real gross domestic product (GDP) in chained 2009 dollars. The number of individuals employed is estimated through the Local Area Unemployment Statistics program. Labor productivity improves when real GDP grows at a faster rate than employment.

Labor productivity is important because it impacts profits, labor demand and labor compensation. Holding all else constant, when labor productivity improves, companies' profits increase because they are able to increase outputs while still using the same amount of labor.

Labor demand is impacted by the scale and substitution effects associated with labor productivity. If wages are held constant, then the increase in productivity will lower the unit cost of labor and cause demand for labor to increase in the short run; this is the scale effect. Capital is used along with labor in the production of goods and services. Capital includes the buildings, equipment, and machinery used in the production process. In the short run it is assumed that capital is fixed, but in the long run firms can shift to using more labor and less capital; this is the substitution effect. If growth in wages is less than the growth in labor productivity, then higher labor demand will occur because labor inputs are cheaper relative to capital.

Labor compensation is impacted by labor productivity. Higher productivity is rewarded with higher compensation – wages and fringe benefits. Higher compensation leads to a higher standard of living if compensation growth exceeds the rate of inflation.

Table 30 next page, shows productivity for Kansas and the U.S. from 2005 to 2016. On average, a worker in Kansas produced \$82,310 of goods or services in 2005, and produced \$96,047 in 2016. Over this time frame, productivity in Kansas increased at an average annual rate of 1.4 percent, while productivity for the U.S. increased at an average annual rate of 0.7 percent. In 2005, productivity per worker was \$17,903 lower in Kansas than the U.S., but that gap narrowed to \$11,873 by 2016.

“ From 2005 to 2016, productivity in Kansas increased at an average annual rate of 1.4 percent. ”

Table 30 Productivity per Worker Kansas and U.S. 2005 - 2016						
	2005	2006	2007	2008	2009	2010
Kansas	\$82,310	\$85,861	\$88,805	\$90,389	\$87,692	\$90,673
U.S.	\$100,213	\$100,984	\$101,326	\$101,253	\$102,376	\$105,190
	2011	2012	2013	2014	2015	2016
Kansas	\$93,605	\$93,792	\$93,421	\$93,521	\$95,528	\$96,047
U.S.	\$106,054	\$106,172	\$106,636	\$107,244	\$108,137	\$107,920

Note: Figures in chained 2009 dollars

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics and Current Population Survey; Bureau of Economic Analysis

Changes in labor productivity can occur because of changes in: human capital, capital-labor ratio, technology, economies of scale and management practices. **Table 31 below**, shows an index of labor productivity with 2005 as the base year. The index reflects the percentage change in labor productivity since 2005. An index above 100 is a percentage increase compared to the 2005 level.

Labor productivity in Kansas increased until 2008 reaching a high of 109.8. It fell in 2009 to 106.5 and then improved in 2010 and 2011 before essentially leveling off through 2014. The last two years have seen increases with the 2016 index value measuring 116.7. Since 2005, labor productivity in Kansas increased by a total of 16.7 percent.

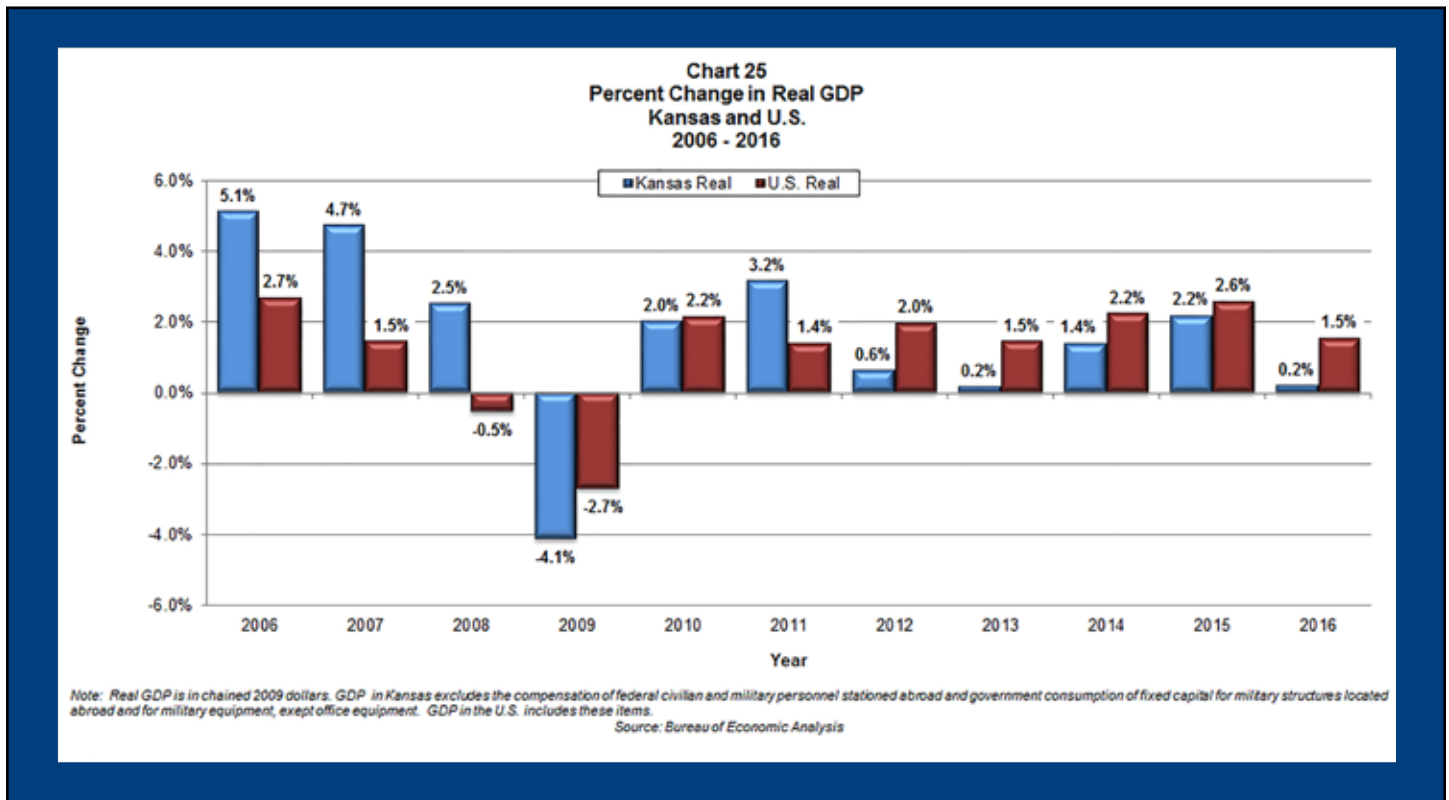
Table 31 Labor Productivity Index Kansas and U.S. 2005 - 2016						
	2005	2006	2007	2008	2009	2010
Kansas	100.0	104.3	107.9	109.8	106.5	110.2
U.S.	100.0	100.8	101.1	101.0	102.2	105.0
	2011	2012	2013	2014	2015	2016
Kansas	113.7	113.9	113.5	113.6	116.1	116.7
U.S.	105.8	105.9	106.4	107.0	107.9	107.7

Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Local Area Unemployment Statistics and Current Population Survey; Bureau of Economic Analysis

Gross Domestic Product

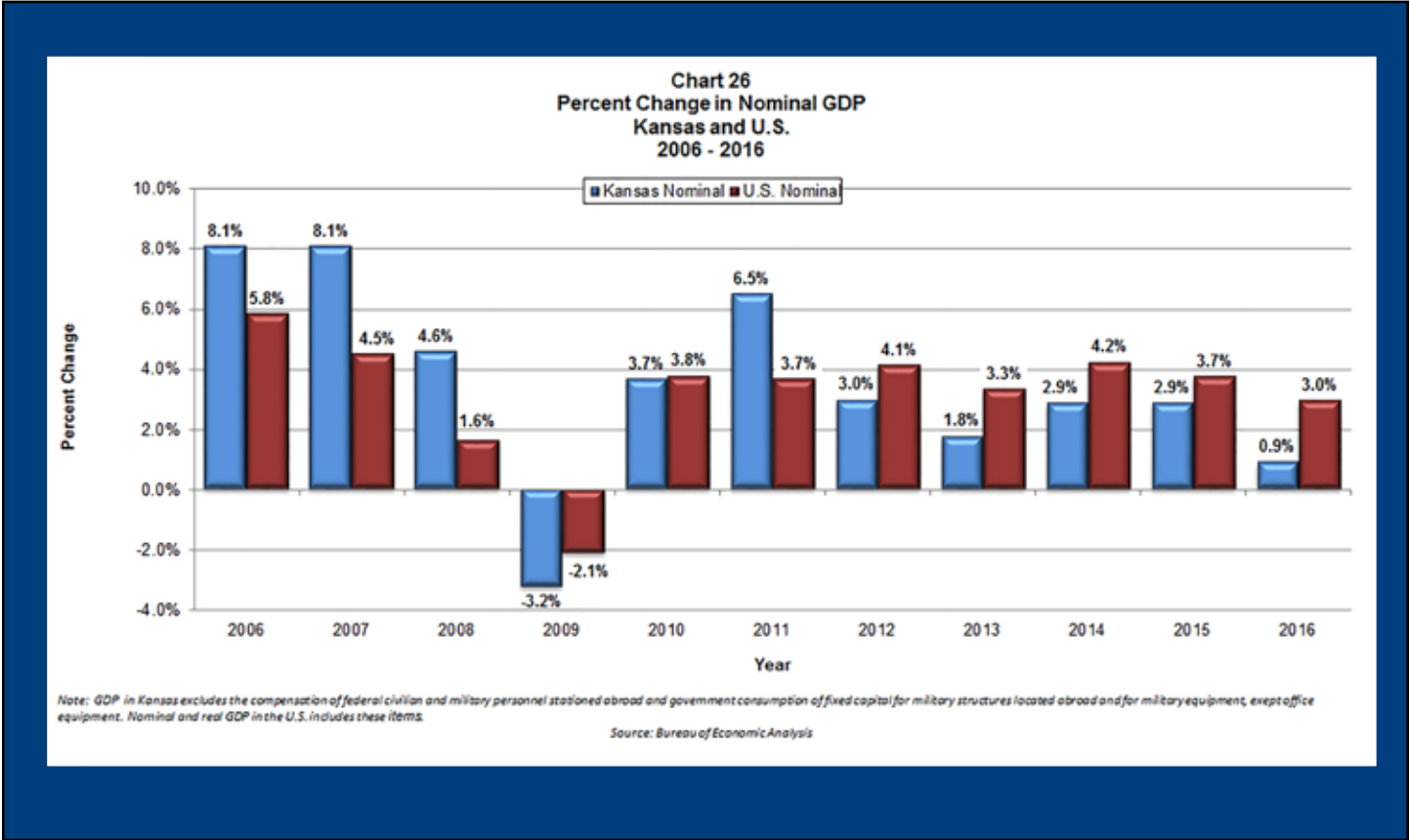
The Gross Domestic Product (GDP) measures the total economic output of an area. It is commonly used as one of the primary measures of economic performance and health of an area. There are two types of GDP discussed in this report: nominal GDP, which is measured in current dollars, and real GDP, which is adjusted for inflation. Real GDP allows better year-to-year comparisons by removing the influence inflation has on nominal GDP. In this report, real GDP is fixed to 2009 dollars.

According to estimates from the Bureau of Economic Analysis, real GDP in Kansas rose for the seventh year in a row in 2016 to \$136.6 billion. However, as shown in **Chart 25 below**, Kansas recorded a 0.2 percent increase in real GDP, which ranks 42nd among the states. The Plains region also struggled with GDP growth in 2016 as GDP grew by 0.7 percent, the second lowest growth of any region. From 2015 to 2016, the U.S. real GDP increased by 1.5 percent to \$16.3 trillion.



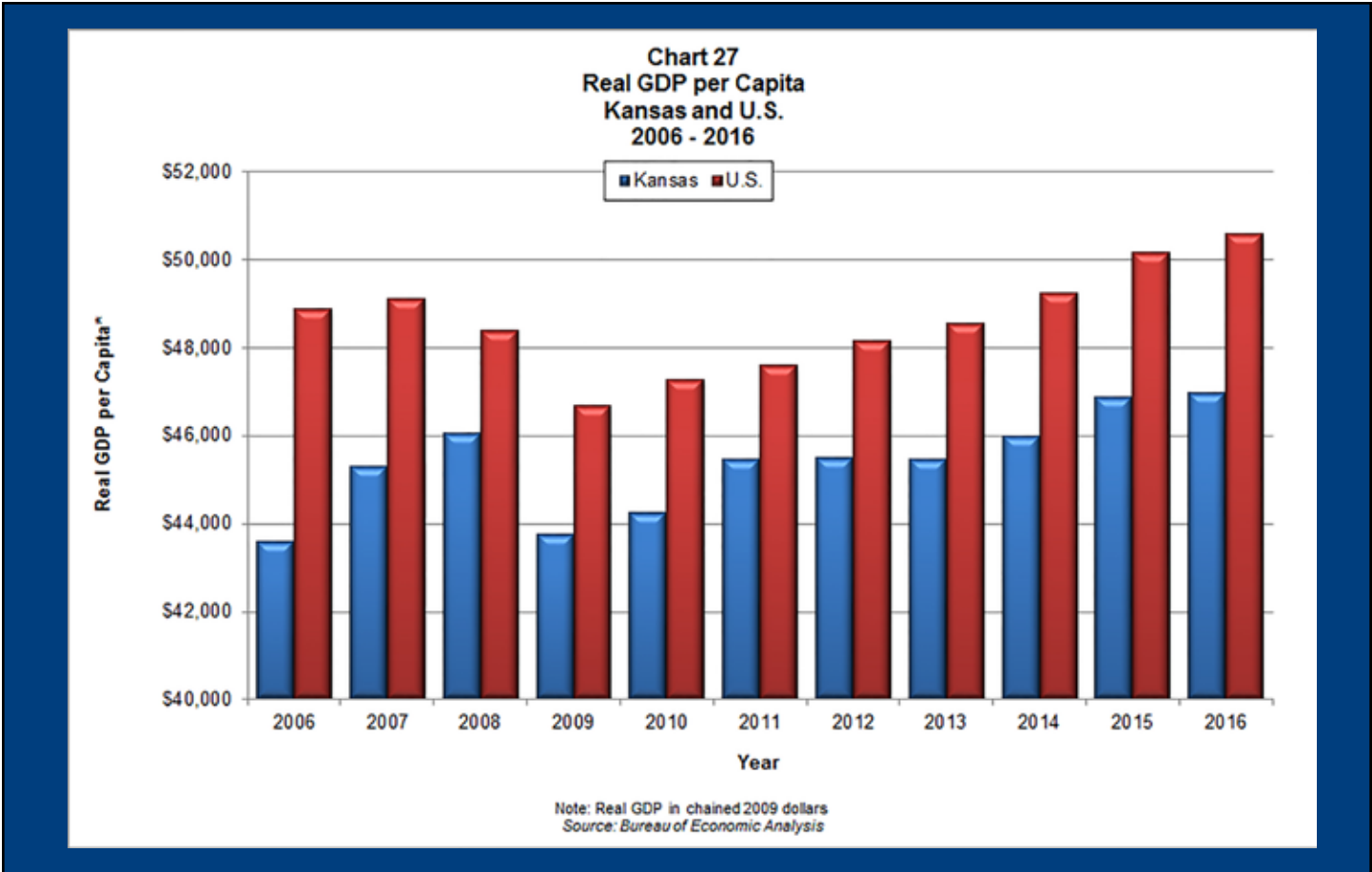
“ Real GDP allows better year-to-year comparisons by removing the influence inflation has on nominal GDP. ”

As displayed in **Chart 26 below**, Kansas' nominal GDP in 2016 was \$153.3 billion, a 0.9 percent increase. Kansas ranks 41st out of the 50 states in percent growth in nominal GDP. The Plains region nominal GDP grew by 1.7 percent in 2016. That was the second lowest growth rate of any region. In 2016, the U.S. nominal GDP increased by three percent to \$18.5 trillion.



To compare areas with different population levels, GDP per capita is calculated by dividing GDP by the population of an area. A historical look at the real GDP per capita in Kansas and the U.S. is shown in **Chart 27 next page**. Kansas recorded a real GDP per capita of \$46,982 in 2016, a 0.2 percent increase from 2015. Kansas ranks 27th out of the 50 states in real GDP per capita and ranked 38th in real GDP per capita percent growth. The U.S. real GDP per capita rose 0.8 percent to \$50,577 from 2015 to 2016.

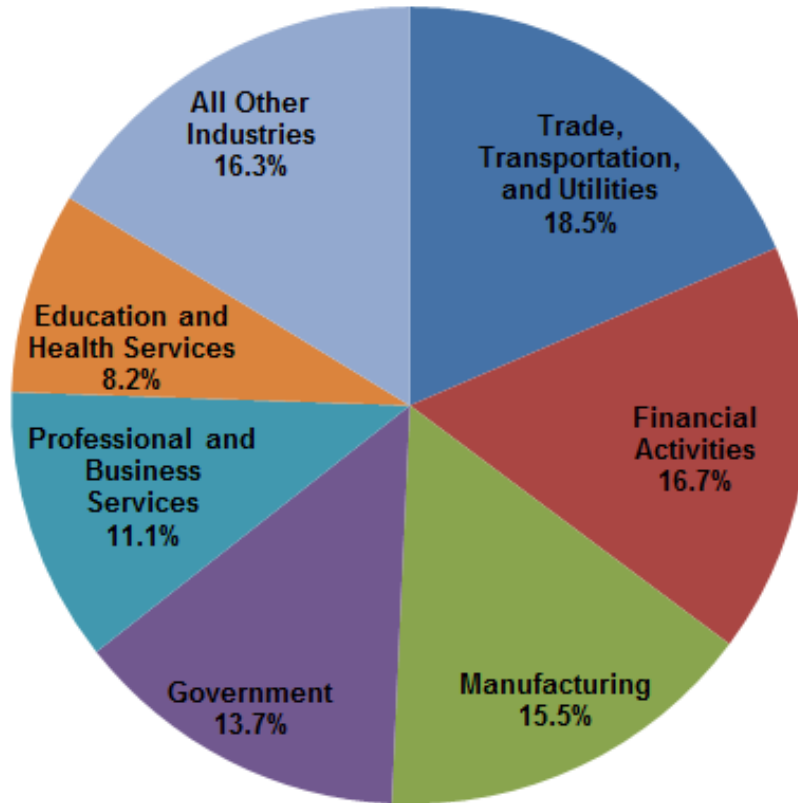
“ Kansas recorded a real GDP per capita of \$46,982 in 2016, a 0.2 percent increase from 2015. ”



Several industries contribute significantly to Kansas' nominal GDP, as shown in *Chart 28 next page*. The trade, transportation and utilities industry continued to be the largest contributor to Kansas' GDP, making up 18.5 percent of the total in 2016. The industry contributed \$28 billion to the state's GDP. Financial activities was the second largest contributor at 16.7 percent of GDP. Manufacturing, government, and professional and business services were also responsible for at least 10 percent of Kansas' GDP. The top five industries accounted for 75 percent of all nominal GDP in Kansas. This is a similar makeup to the national GDP, where the same five industries accounted for 73.8 percent of GDP.

“ The trade, transportation and utilities industry continued to be the largest contributor to Kansas' GDP, making up 18.5 percent of the total in 2016. ”

Chart 28
Nominal GDP by Industry
Kansas
2016



Source: Bureau of Economic Analysis

In Kansas, nine of the 11 major industries increased their contribution to nominal GDP from 2015 to 2016. This is shown in **Table 32 below**. The financial activities industry had the largest total and percent gain in GDP, increasing by \$1.1 billion in 2016, or 4.7 percent, with most of the increase in real estate and rental and leasing. The second largest gain in GDP was recorded in trade, transportation and utilities, which increased by \$429 million or 1.5 percent. About 70 percent of the increase was experienced in retail trade. Professional and business services GDP grew by \$280 million, or 1.7 percent, with gains in the professional, scientific and technical services sector and the administrative and support and waste management and remediation services sector offsetting losses in management of companies and enterprises.

The largest decline in GDP was recorded in natural resources and mining. The industry decreased by \$1.2 billion, or 19.6 percent, with large declines recorded in both agriculture and mining. The oil and gas industry contributes most of the GDP in the mining sector in Kansas. Since 2013, natural resources and mining GDP has decreased by 55.8 percent with a 63.1 percent decline in mining GDP and a 53.3 percent decrease in agriculture GDP. The other industry to record a GDP loss in 2016 was manufacturing, decreasing by \$140 million, or 0.6 percent, due to a decline in durable goods manufacturing GDP.

Table 32 Nominal GDP by Industry Kansas 2015 - 2016			
Industry	2015	2016	Percent Change
Financial Activities	\$24,401	\$25,549	4.7%
Other Services	\$3,186	\$3,311	3.9%
Leisure and Hospitality	\$4,636	\$4,809	3.7%
Construction	\$6,147	\$6,317	2.8%
Education and Health Services	\$12,296	\$12,528	1.9%
Professional and Business Services	\$16,787	\$17,067	1.7%
Trade, Transportation and Utilities	\$27,976	\$28,405	1.5%
Government	\$20,814	\$20,957	0.7%
Information	\$5,633	\$5,668	0.6%
Manufacturing	\$23,932	\$23,792	-0.6%
Natural Resources and Mining	\$6,037	\$4,855	-19.6%

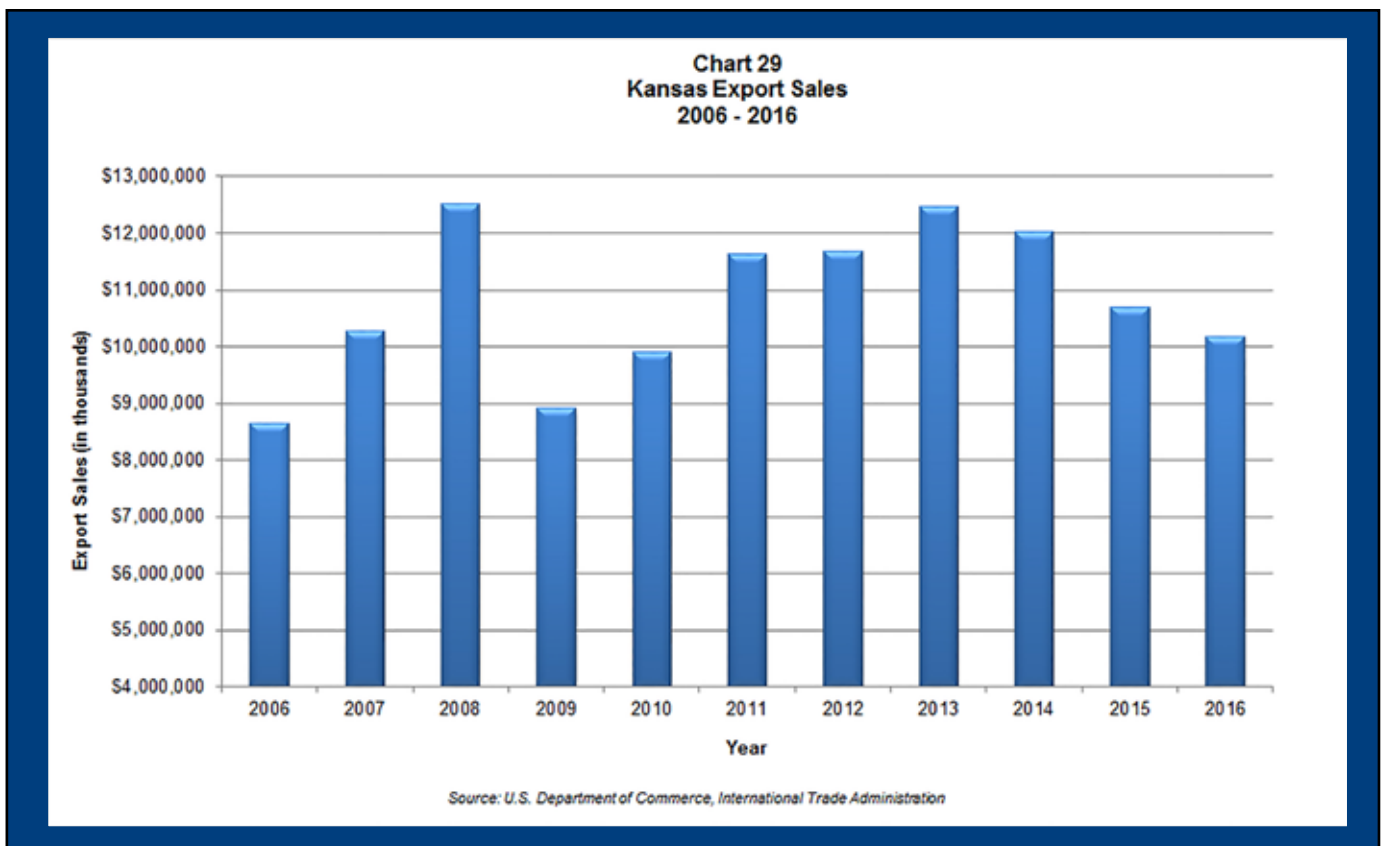
Note: Data is in millions

Source: Bureau of Economic Analysis

Kansas Exports

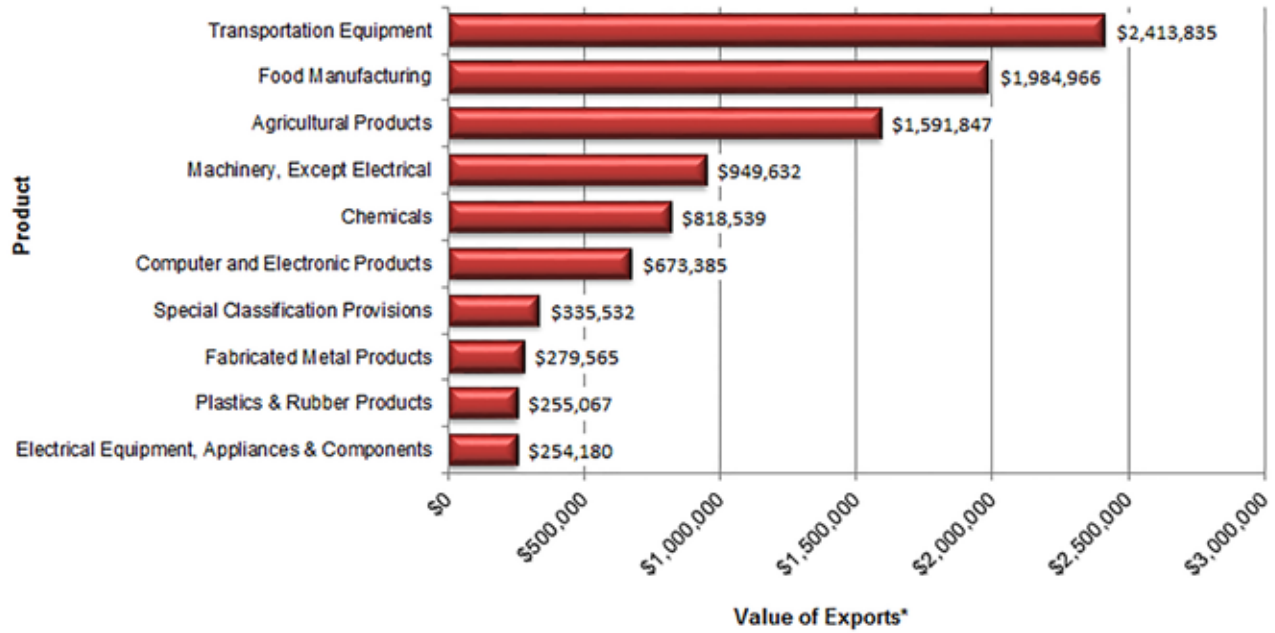
Kansas businesses compete in a global marketplace, where economic growth contributes to the rising demand for Kansas products. Exports data shows how competitive Kansas is in the global economy. When the global economy is in good shape, demand for products in which Kansas has a competitive advantage rises. The value of the U.S. dollar compared to other currencies also has an effect on exports. The value of the U.S. dollar appreciated overall, compared to most other world currencies from 2015 to 2016, making goods produced in the U.S. relatively more expensive and potentially decreasing demand for U.S. goods and services.

Kansas export sales totaled \$10.2 billion in 2016, as seen in **Chart 29 below**. This represents a \$509 million decline in export sales since 2015, or 4.8 percent. This is the third consecutive year that Kansas export sales have declined. The decline is due mostly to large declines in transportation equipment and machinery exports. However, it is the sixth consecutive year that Kansas export sales have exceeded \$10 billion. Also, export sales are 17.9 percent higher than 10 years ago.



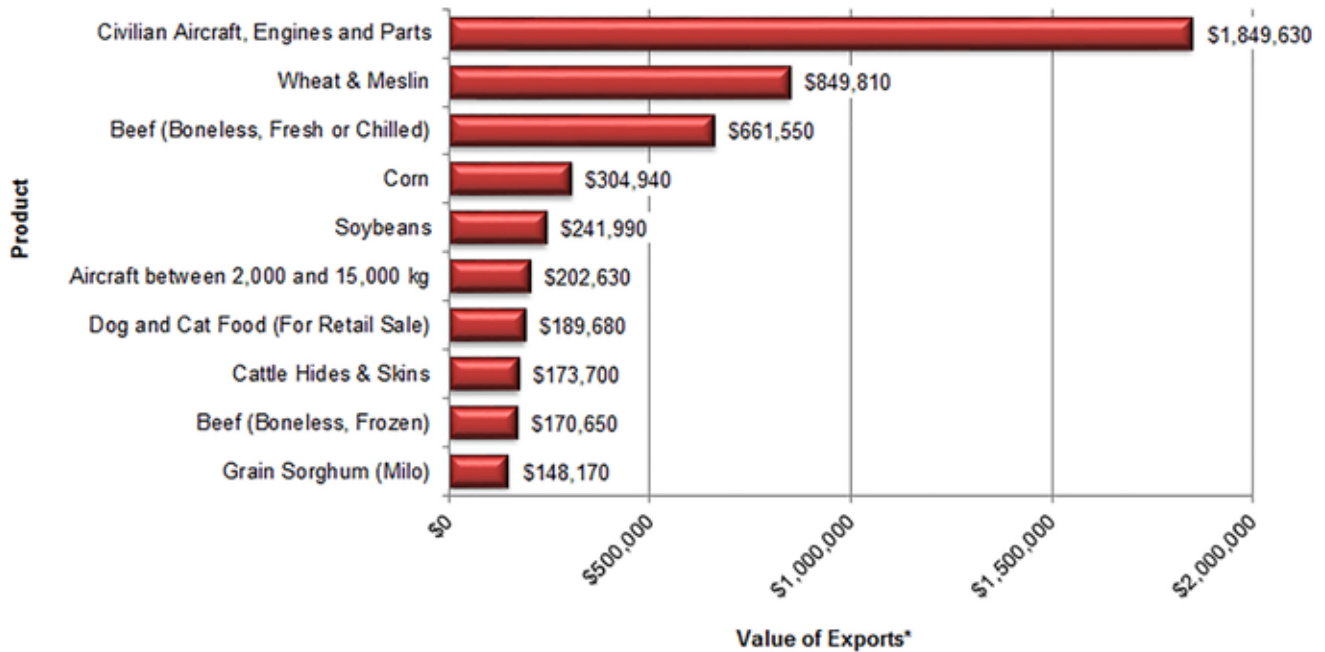
As seen in **Chart 30 next page**, the transportation equipment manufacturing sector was the sector with the highest export sales in 2016, accounting for 23.7 percent of Kansas exports. This sector includes industries that produce aerospace parts and products, motor vehicle parts and assembly, and other transportation equipment manufacturing. Export sales for this sector totaled \$2.4 billion, a decline of \$183.6 million, or 7.1 percent, from 2015. This was the largest over the year decrease in exports of any sector. Civilian aircraft, engines and parts accounted for \$1.8 billion of the sales in transportation equipment manufacturing. This represents the highest total for any individual product produced in Kansas, as displayed in **Chart 31 next page**. Another \$202.6 million in sales was in aircraft between 2,000 and 15,000 kilograms. Canada was the largest importer of Kansas transportation equipment in 2016, followed by Mexico and Singapore.

**Chart 30
Top Exporting Industries
Kansas
2016**



*In thousands
Source: U.S. Department of Commerce, International Trade Administration

**Chart 31
Top Exported Products
Kansas
2016**



*In thousands
Source: U.S. Census Bureau, Foreign Trade Statistics

The food manufacturing sector transforms livestock and agricultural products into products for intermediate or final consumption. This sector recorded the second most export sales in 2016, with \$2 billion in sales. This is a decrease from 2015 of \$56.1 million, or 2.7 percent. The decline in exports in this sector can be mostly attributed to a \$46.8 million decline in boneless beef sales. In 2016, boneless fresh or chilled beef had the third highest export sales of any product and boneless frozen beef was ninth. Japan was the largest importer of Kansas food products in 2016, followed by Mexico and Canada.

Agricultural products was third in export sales in 2016 and recorded the largest increase in sales of any sector. \$1.6 billion in export sales were recorded in this sector, an increase of \$178.9 million, or 12.7 percent. However, agricultural export sales are still down 39.1 percent from the record high recorded in 2013. Most individual agricultural products experienced sales increases in 2016 as well. Wheat was the second most exported product by sales in 2016, with \$849.8 million in sales, an increase of \$151.4 million. Corn ranked fourth in export sales at \$304.9 million and soybeans ranked fifth at \$242 million. Both corn and soybean sales were approximately 45 percent higher than in 2015. The one notable exception to the sales increases, were sales of grain sorghum (milo), which declined \$113.8 million to \$148.2 million. Mexico was the largest importer of Kansas agricultural products in 2016, followed by Brazil and Nigeria.

A significant decline in export sales also occurred in the machinery manufacturing sector. The machinery manufacturing sector was fourth in export sales in 2016 at \$949.6 million, a decline of \$169.6 million from 2015. The chemical manufacturing sector was fifth in export sales in 2016 at \$818.5 million, a slight increase of \$1.7 million from 2015. Computer and electronic product manufacturing was sixth in export sales in 2016 at \$673.4 million, a \$64.2 million decrease. The six industries detailed in this report are responsible for 82.8 percent of export sales in Kansas and have been the top six exporting industries every year data is available. **Chart 32 below**, details the export sales in those six industries from 2006 through 2016.

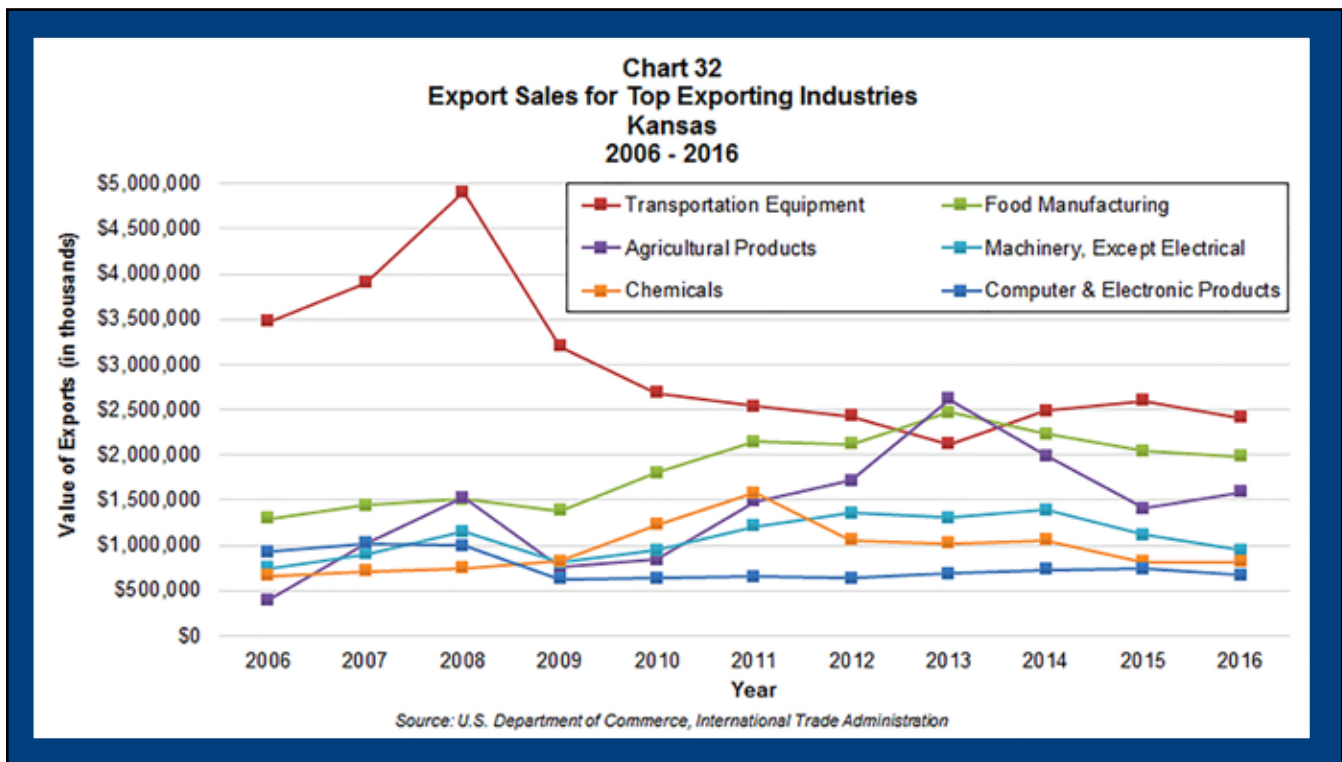


Table 33 below, shows the countries that imported the largest dollar amount of goods and services from Kansas. Mexico was the state’s largest trading partner in 2016, importing approximately \$1.9 billion in goods and services. This amounts to a five percent increase from 2015 to 2016. Approximately 84 percent of export sales are in one of four sectors: agricultural products, transportation equipment manufacturing, food manufacturing and chemical manufacturing. Mexico contributed greatly to the increase in agricultural product export sales, importing \$128.5 million more in agricultural products than in 2015.

Canada imported the second largest amount of Kansas products in 2016 with approximately \$1.8 billion in sales. This is a \$580.4 million, or 24.5 percent, drop in export sales from 2015. The decrease in exports sales occurred in most industry sectors. Exports from the transportation equipment manufacturing, food manufacturing and machinery manufacturing sectors make up 60.6 percent of export sales.

Japan was the third largest importer of Kansas products in 2016, with \$806.8 million in sales. This represents a \$96.8 million increase in exports, or 13.6 percent. Food manufacturing products make up \$541.1 million, or 67.1 percent, of the export sales. Notable sales also occurred in primary metal manufacturing, transportation equipment manufacturing and chemical manufacturing.

Table 33 Top Export Countries Kansas 2016	
County	Total Exports
Mexico	\$1,887,534
Canada	\$1,787,703
Japan	\$806,810
China	\$745,047
United Kingdom	\$431,310
Germany	\$367,748
Brazil	\$344,167
France	\$293,539
Australia	\$252,984
Singapore	\$236,034

“ Mexico was the state’s largest trading partner in 2016, importing approximately \$1.9 billion in goods and services. ”

*Note: Data is in thousands
Source: U.S. Department of Commerce,
International Trade Administration*

Are Employers Demanding More Labor? A Look at the Job Openings and Labor Turnover Survey

How many jobs will we have next month or next year? This question can be broken down into two parts: how much labor will be demanded by employers and is the labor force willing to supply that amount of labor? The intersection of these two forces falls on a specific wage rate and quantity of labor or number of jobs. The question of labor demand is important because an increase in demand for labor by employers can lead to desirable changes in the labor market including job growth, an increase in the number of hours worked per week, and wage growth. A shift in demand can be caused by a number of reasons such as a change in demand for the product or service being provided, a change in productivity of workers, a change in the number of employers in an industry, the price of other resources, or a change in technology. Essentially anything other than a change in wages. When there is a shift in demand for labor we expect to see those changes show up in labor market statistics.

BLS has been collecting labor market statistics since it was established in 1884. These statistics have been invaluable to policy analysts, economists, and anyone interested in the health of the economy. Two surveys that provide a monthly snapshot of the labor market are the Current Employment Statistics (establishment survey) and the Current Population Survey (household survey). Estimates for the number of jobs comes from the establishment survey and estimates for the number of employed and unemployed people comes from the household survey. The number of people in the labor force and the unemployment rate are derived from the measure of unemployed and employed. These reports detail important aspects of the economy including growth in jobs and changes in the number of unemployed people. The real jewel revealed from these measures is the change from month to month and year to year. Looking at each measure over time gives an idea of the slope, or trajectory, of the time series.

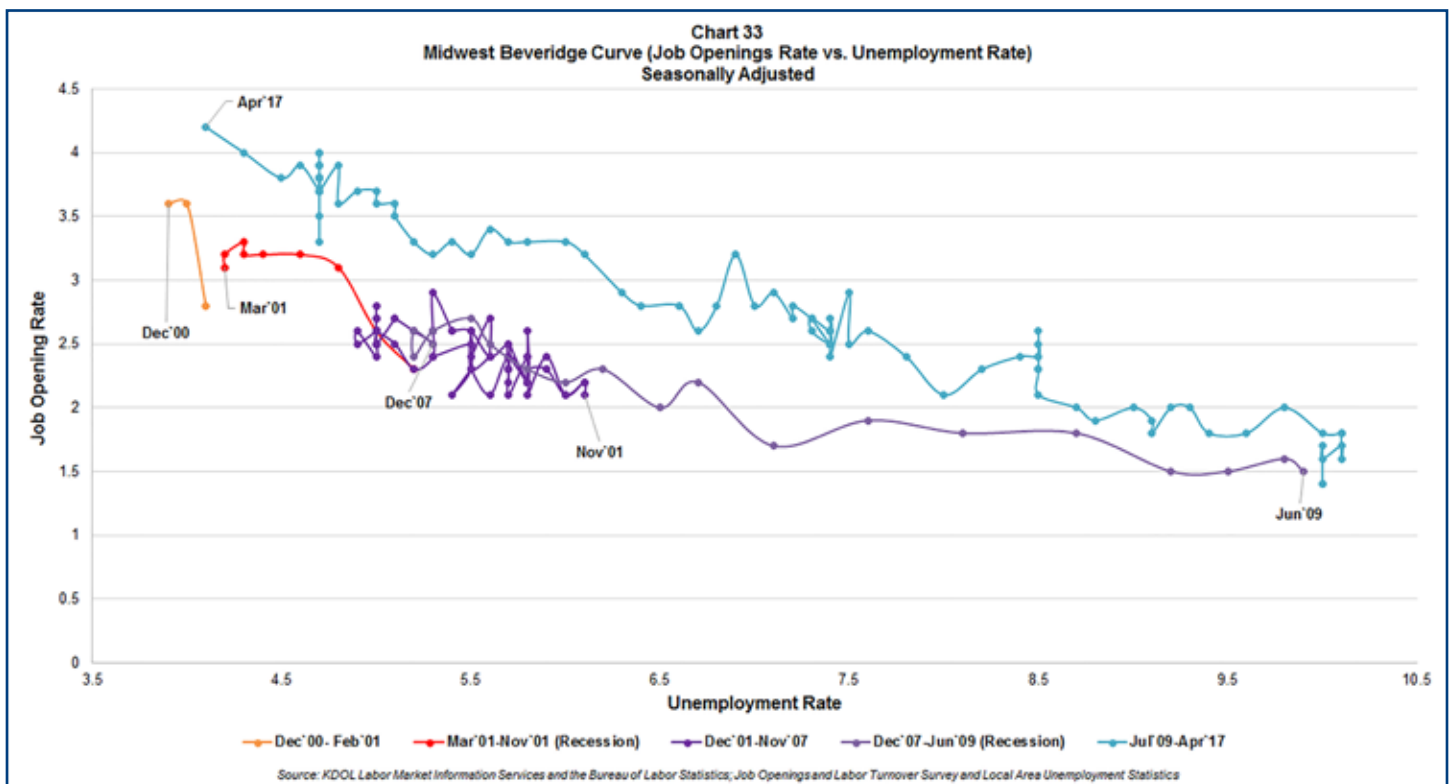
The month to month and year to year changes measured in the establishment and household surveys are net changes. For example, the household survey estimates the total number of employed people each month. These values can be used to calculate the net change in the number of employed people from one month to the next. Suppose the net change for one month is an increase of 1,000 people. Looking more closely at that increase from last month would reveal a much larger number of people who became employed and a large number of people who lost or left jobs. So in this example, if 3,000 people found jobs and 2,000 lost or left jobs, the net change is an increase of 1,000 employed people. These changes in the labor market are referred to as churn. Churn describes the constant flow of people moving between employers, into and out of the labor force, or between an employed status and unemployed status.

The Job Openings and Labor Turnover Survey (JOLTS) program was designed to measure these gross changes that are happening each month, including new hires and separations. These gross changes provide detail that is not included in the monthly job and labor force statistics estimates. The new hires reflect the number of new workers being added to the employment stock each month while the number of separations reflect the number of workers leaving the stock of employment each month.

The addition of the JOLTS program also complements the labor supply data from the household survey by providing information on demand for labor from employers. The household survey provides a snapshot each month of the number of unemployed people, employed people and the labor force. The unemployment rate is then calculated by dividing the number of unemployed by the labor force and measures the excess supply of labor. The JOLTS program includes a measure for job openings. Job openings are a count of positions employers have open on the last day of each month. The job openings series measures the level of unsatisfied demand for labor from employers. Both measures together give an idea of how the excess supply of labor compares to unsatisfied demand for labor.

In 1958 British economists J.C.R. Dow and L.A. Dicks-Mireaux observed an inverse relationship between the job opening rate and the unemployment rate. Plotting the job openings rate on the vertical axis and the unemployment rate on the horizontal axis of a chart reveals a pattern with the points plotted in the top left hand corner of the chart showing periods of economic expansion while points near the bottom right hand corner were periods of economic contraction. The points in between complete a curve now known as the Beveridge curve, named after the British economist William Henry Beveridge. The movement along the curve from top left to bottom right indicates the state of the business cycle. The position of the Beveridge curve is also telling. The curve itself can move outward (right) from the horizontal/vertical axis indicating a greater mismatch between jobs and workers. Conversely, the curve may move inward (left) toward the horizontal/vertical axis indicating a better match between jobs and workers.

The JOLTS program data is available at a couple of different geographic levels, nationwide and by region. There are four regions the Northeast, South, Midwest, and West. Kansas is included in the Midwest Region along with Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin. **Chart 33 below**, displays the beveridge curve for the midwest region.



The JOLTS program answers some important questions about the labor market, but what is the scope of the survey and how reliable are the estimates? The program collects data from a sample of 16,000 U.S. business establishments on a monthly basis. Collection of survey data for all 50 states comes through one collection center in Atlanta. All non-agricultural industries are covered including public and private sectors. JOLTS compiles results from the surveys collected and produces measures for seven data elements: total employment, job openings, hires, quits, layoffs and discharges, and other separations. Employment is defined as full-time and part-time jobs that are on the payroll during the pay period including the 12th of each month, which matches the definition used in the establishment survey.

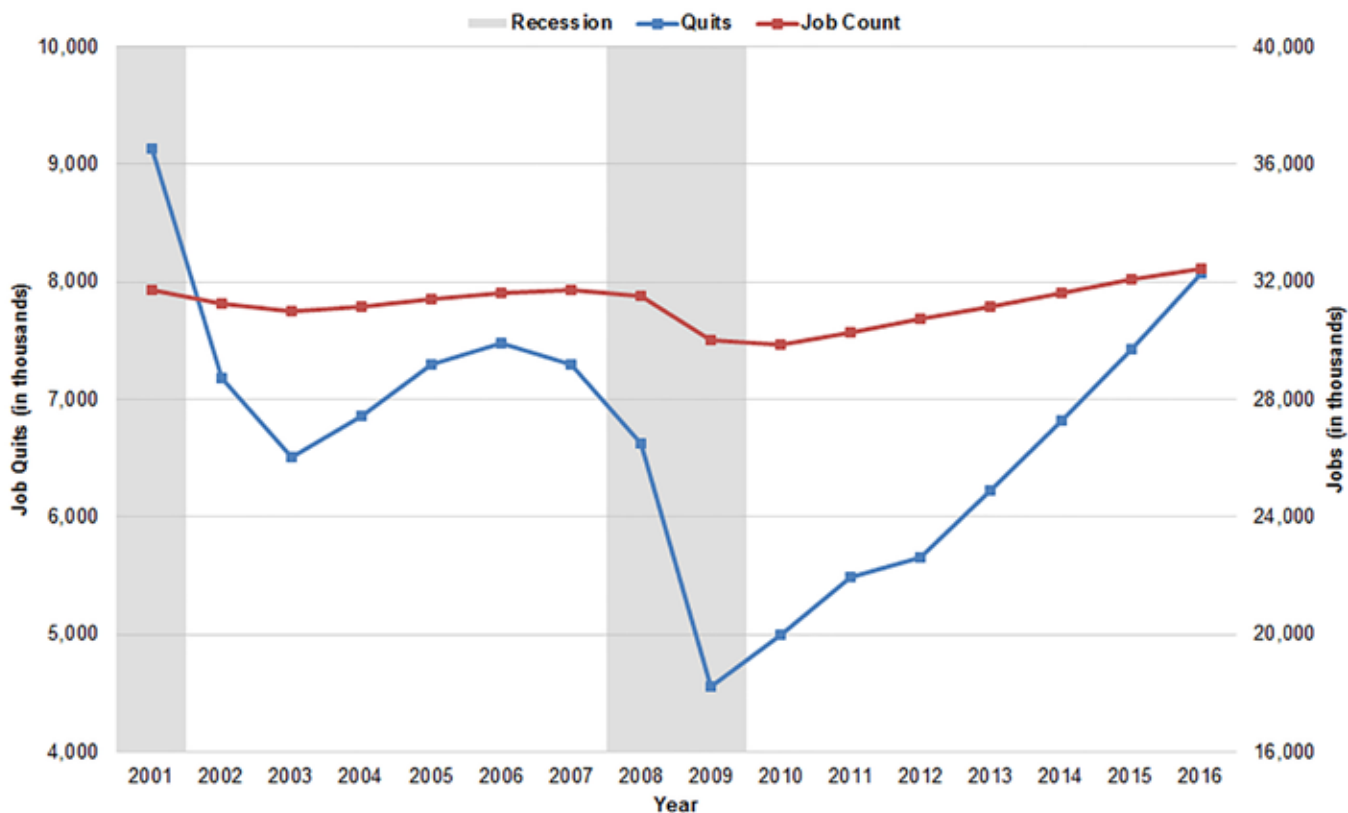
There are three criteria that must be met for a job opening. First, a specific position exists and there is work available for that position; secondly, the job could start within 30 days; and finally there is active recruiting for workers from outside the establishment location that has the opening. New hires are fairly self-explanatory, defined as all additions to the payroll during the month. It is worth noting that these can be seasonal or short-term employees and can be full or part-time workers.

Job separations are broken down into quits, layoffs, discharges and other separations. Quits are voluntary separations, excluding retirements and transfers. Layoffs and discharges are involuntary separations. Examples include discharges due to eliminated positions, mergers, downsizing, firings and terminations of seasonal employees. Finally, the category for other separations can be retirements, transfers to another location, death and separation due to an employee becoming disabled.

What does the JOLTS survey tell us about employer's current demand for labor? In July of last year the number of job openings in the nation increased to a series high of nearly six million openings. Since that time job openings have fallen slightly to 5.7 million in May. Since data is available back to December of 2000, this would indicate employers are experiencing some of the highest unmet demand for labor in 16 years and well above the prerecession high of 4.8 million openings in April 2007. In July 2009 the recession had taken hold and employers reduced the number of job openings to a low of 2.2 million. Employers in the Midwest are also demonstrating increasing demand for labor, job openings in the Midwest reached a series high of 1.4 million in April before declining slightly in May. The series has been on an increasing trend since a low point in August 2009 with 425,000 openings.

It is evident by the overall trend in the number of job openings that employers are feeling confident in the economy continuing to expand, but how do workers feel about the economy? One indication is how confident workers feel in finding another job. The JOLTS survey measures the number of job quits. Quits are voluntary separations initiated by employees. The rate of job quits can serve as a measure of workers' willingness or ability to leave jobs (JOLTS Highlights). It has been observed in past data that the number of quits tends to increase in periods of economic expansion and decrease in periods of economic contraction as seen in **Chart 34 next page**. This is because workers feel confident in their ability to find another job and increase the frequency of leaving the job they are currently working in.

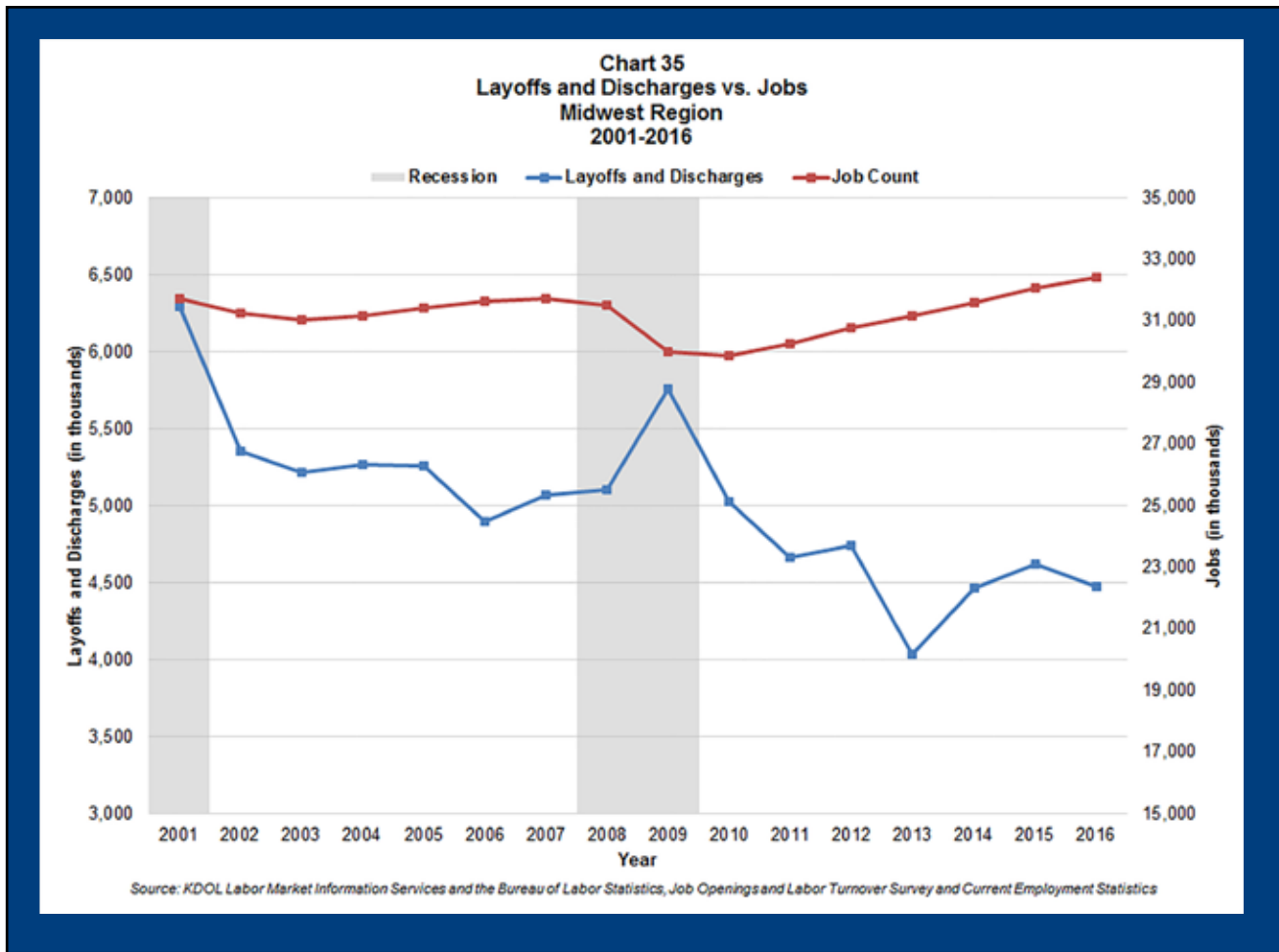
Chart 34
Job Quits vs. Jobs
Midwest Region
2001-2016



Source: KDOL Labor Market Information Services and the Bureau of Labor Statistics, Job Openings and Labor Turnover Survey and Current Employment Statistics

Quits are one type of separation initiated by the employee. Layoffs, discharges, and other separations are also measured in the JOLTS program. These separations are initiated by the employer. The number of separations initiated by the employer are countercyclical meaning they move in an opposite direction of economic growth. When the economy expands, layoffs and discharges decrease and when the economy contracts, the number of layoffs and discharges increases as seen in **Chart 35 next page**. These changes are intuitive when thinking about employers need for labor during a contracting or expanding cycle in the economy.

The total number of layoffs and discharges increased over the month to 1,661,000 in May 2017. This is in contrast to the Great Recession when the number rose as high as 2,573,000 in January 2009. The lowest level in the series (going back to 2000) happened in September of last year 1,516,000. In the Midwest there were 343,000 layoffs and discharges in May 2017. That is a decline over the year from 354,000 in May 2016. The high point for the Great Recession occurred in January 2009 at 591,000, the same time as the peak nationwide. The current low level of layoffs and discharges also provide evidence that employers currently have a robust demand for labor.



Summarizing the current JOLTS statistics, employers have a robust demand for labor and a notable portion of that demand is currently going unfilled. These conditions are inherent in an expansionary period of the business cycle. If these conditions persist, increasing competition for labor will put upward pressure on wages. This would naturally last until wage increases grow to the point that dampens labor demand. However, there may be other outside factors that lower labor demand before that natural growth in wages takes place. This could be in the form of a change in demand for the goods and services provided by employers, a change in productivity of workers, a change in the number of employers in an industry, the price of other resources, or a change in technology. Any of these factors may have an impact that changes the demand curve for employers and prevents growth in wages.

The addition of the JOLTS survey has provided valuable information to economists, policy analysts, and others. It provides a more detailed understanding of the month to month changes in the labor force and job estimates. We can now identify changes in job hiring that may not show up in month to month job growth, in cases when separations increase. The number of job openings can show the amount of unsatisfied labor demand which may signal future job growth. JOLTS data has added much needed detail to the existing set of labor market data. As months of data are added new trends can be identified and give more insight into what can be expected in the future.

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