



2008 - 2018 Kansas Occupational Outlook



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Message from the Secretary



Having a sense of what to expect in the future is important in many industries. The *Occupational Outlook* is an essential tool for many in Kansas who are trying to prepare students for their futures, educational institutions trying to determine the need for curriculum and many others. This publication should also be useful for business decisions on what a future demand might be in certain areas.

The Labor Market Information Services division of the Kansas Dept of Labor provides a significant service to decision-makers with this work product. As you study this information, you will notice that some of the long standing trends in Kansas are beginning to shift, making this tool even more important.

I hope this *Outlook* will aid you in making decisions that help to make Kansas the best place in America to do business.

A handwritten signature in cursive script that reads "Hayin Browder".

Secretary
Kansas Department of Labor

Introduction

Looking for information on what occupations and industries will be growing in the future? The Kansas Occupational Outlook is your resource. The Kansas Occupational Outlook is an assortment of employment projections for the year 2018. It projects how many jobs there will be in 2018 and in which industries and occupations these jobs will be. This release of 10-year projections is produced using 2008 as the base-year to project employment for the year 2018. The 2018 employment projections are separated into industries, such as hospitals, and occupations, such as registered nurses, to provide information to those interested in high-growth industries as well as those interested in high-growth occupations. As an added benefit, wage and education information is also provided for the occupations mentioned in the Kansas Occupational Outlook.

The Occupational Outlook projects total employment in the state of Kansas to grow by 147,720 jobs over the 10-year period. Nearly all of this growth will be in the service-providing sector, which is already the largest portion of the Kansas labor market. Employment in the goods-producing sector is projected to experience little or no growth over this 10-year period. Small gains are projected in the construction industry sector, however, those will be offset by losses in the manufacturing industry sector.

In the past, manufacturing has been the main driver of employment in the Kansas economy. In 2008 employment in manufacturing was more than 12.4 percent of all jobs in Kansas, making it the largest industry sector in the state. The 2008 to 2018 projections show a change is taking place. The health care and social assistance sector has been growing at a rapid pace and is projected to account for 12.9 percent of all Kansas jobs in the year 2018. This will make health care and social assistance the largest industry sector in the state, surpassing manufacturing by more than 30,000 jobs.

This report is divided into five sections. The first section details some of the factors considered during the projection process. The second section is statewide information that details trends in industry and occupational growth for the entire state of Kansas. The third section is titled “Regional Information” and compares seven different regions within the state. The fourth section is a review of the education and training necessary to work in the projected occupations. Finally, the fifth section contains information about the projection program itself. This section offers definitions and concepts used in the Kansas Occupational Outlook.

Factors Considered in the Projection Process

The Kansas Occupational Outlook is based on econometric projections of the long-term trends of industrial employment. One major assumption of the projections process is that the state economy will be in a state of full employment* in the projection year (2018). By assuming this, we presume that nearly all people in the labor force** are working. This means the effects on employment caused by the cyclical expansion and contraction of the economy are removed from the projection. The result is a forecast of the long-term growth rate of employment in the state of Kansas.

Future employment in the state is determined by many factors. One major factor is the number of people in the labor force. To increase employment by one, there must be two components – a position to be filled and a person to fill it. When these two components come together, employment occurs. Therefore, employment is constrained by the number of positions open to be filled as well as the number of people attempting to fill those positions.

Because the labor force is typically a relatively stable percentage of the population, population growth is an important consideration in employment growth. In 2000, the Kansas labor force was 1,405,104, and by 2010 it had grown to 1,502,313, a growth of 97,209 people or 0.7 percent annually. Over the same period the population in Kansas grew from 2,692,810 to 2,841,121. This is an increase of 148,311 people over the 10-year period, or an average of less than 15,000 people per year, which equates to 0.5 percent growth annually. This shows the labor force and the population tend to have similar growth rates. Those rates are an important consideration in the projection process.

The population has an additional impact on employment projections separate from that of the labor force. The population is an important driver of demand for goods and services produced in the state. Many goods and services produced in Kansas are also consumed in Kansas, excluding those which are exported to other states or other countries. A growing population helps create a positive impact on demand for these goods and services.

*Full Employment —An economy is at full employment when unemployment is at its natural rate. The natural rate of unemployment is that rate which the economy gravitates toward in the long run. It can be thought of as the rate that would exist if the cyclical (boom and bust) affects were removed or as a long-term average rate.

**The Labor Force consists of all people age 16 and over who are willing and able to work.

Projections by Industry Sector

Projections by Industry Sector (2-Digit NAICS Code*)

Total employment in the state of Kansas is projected to grow from 1,504,100 in 2008 to 1,651,820 in 2018, an increase of 147,720 jobs or 9.8 percent. This is an average annual growth rate of 0.9 percent, or an annual average increase of 14,772 jobs per year. This is in line with the average annual growth rate for the previous 10-year period (1998 through 2008) which also was 0.9 percent. It also follows the national employment projection, which is 10.1 percent or 1.0 percent growth annually over the 2008 to 2018 period.

Figure 1
Statewide
Employment by Industry Sector (2008-2018)

Industry Code	Industry Sector Title	Base Year Employment (2008)	Projected Year Employment (2018)	Absolute Change	Growth Rate (annual)	Total Growth (10 years)
000000	Total Employment, All Jobs	1,504,100	1,651,820	147,720	0.9%	9.8%
000671	Total Self-Employed and Unpaid Family Workers, Primary Job	95,180	99,550	4,370	0.4%	4.6%
101000	Goods-Producing	271,430	272,750	1,320	0.0%	0.5%
102000	Service-Providing	1,137,490	1,279,520	142,030	1.2%	12.5%
110000	Agriculture, Forestry, Fishing and Hunting	9,570	11,290	1,720	1.7%	18.0%
210000	Mining	9,850	8,440	-1,410	-1.5%	-14.3%
220000	Utilities	7,570	7,660	90	0.1%	1.2%
230000	Construction	65,190	71,710	6,520	1.0%	10.0%
310000	Manufacturing	186,820	181,320	-5,500	-0.3%	-2.9%
420000	Wholesale Trade	62,990	66,800	3,810	0.6%	6.0%
440000	Retail Trade	147,370	148,040	670	0.0%	0.5%
480000	Transportation and Warehousing	46,330	51,980	5,650	1.2%	12.2%
510000	Information	38,880	39,890	1,010	0.3%	2.6%
520000	Finance and Insurance	58,500	65,440	6,940	1.1%	11.9%
530000	Real Estate and Rental and Leasing	15,050	16,100	1,050	0.7%	7.0%
540000	Professional, Scientific, and Technical Services	61,970	81,450	19,480	2.8%	31.4%
550000	Management of Companies and Enterprises	13,730	15,290	1,560	1.1%	11.4%
560000	Administrative and Support and Waste Management and Remediation Services	74,750	92,730	17,980	2.2%	24.1%
610000	Educational Services	153,630	179,540	25,910	1.6%	16.9%
620000	Health Care and Social Assistance	175,550	213,180	37,630	2.0%	21.4%
710000	Arts, Entertainment, and Recreation	13,360	15,160	1,800	1.3%	13.5%
720000	Accommodation and Food Services	102,680	110,620	7,940	0.7%	7.7%
810000	Other Services (Except Government)	56,820	61,670	4,850	0.8%	8.5%
900000	Government	108,300	113,980	5,680	0.5%	5.2%

Note: Industries may not add up due to rounding. The sum of 2-digit NAICS codes (210000 through 900000) along with 000671 add up to Total Employment. The sum of 101000 (Goods-Producing) and 102000 (Service-Providing) along with 000671 add up to Total Employment.
Source: Labor Market Information Services, Kansas Department of Labor

Two major industry sectors are projected to account for 43 percent (63,540 jobs) of the total job growth in Kansas over the projection period. These are the health care and social assistance and educational services industries. In the last 10 years (2000 to 2010) health care and social assistance has been a leading contributor not only to employment but to the gross domestic product (GDP) as well. According to the Bureau of Economic Analysis, the only industry in Kansas with a higher GDP was government.

*NAICS, North American Industry Classification System

Projections by Industry Sector

The industry sector with the overall largest projected employment increase is healthcare and social assistance, with approximately 37,630 new jobs projected. This industry includes hospitals, nursing and residential care facilities and doctors' offices. Health care and social assistance is projected to be the largest industry sector in Kansas by 2018, surpassing manufacturing by more than 30,000 jobs.

One reason for the employment increase in the health care and social assistance industry sector is the aging population. According to the Kansas Department of Administration, the number of people age 55 and over is expected to grow by 88,000 from 2010 to 2020. All other age groups (0 to 54) are expected to have a net decline of approximately 27,000 over the same time period. This increases the demand on the health care industry because the older population is more likely than other age groups to use these services. Another reason the health care industry is expected to grow is the advancement in technology that gives patients access to more treatments than in the past.

The professional, scientific and technical services industry sector is projected to increase the fastest, at 31.4 percent, between 2008 and 2018. Examples of industries in this sector are legal, accounting, architectural, engineering and consulting services, and scientific research. Much of the growth in this industry sector is projected to be in the Kansas City region. In 2008 the Kansas City region accounted for 28 percent of the statewide population, however, it accounted for 55 percent of the statewide employment in professional, scientific and technical services. In 2018 the Kansas City region is projected to still account for 55 percent of the employment in professional, scientific and technical services.

Only two industry sectors are projected to decline over the projection period. These are mining and manufacturing. Mining, which includes oil and gas production, is not one of Kansas' major industry sectors today. It is expected to decline by 14.3 percent or 1,410 jobs. In 2008, manufacturing was the largest industry sector in the state, employing 186,820 people. Manufacturing in Kansas has experienced an overall declining trend since its peak employment in 1998, excluding a short period of increases (2004 to 2008) after the early 2000s recession. Following this period of increases in employment, manufacturing lost more than 27,000 jobs in 2009 and 2010. The Great Recession had a significant impact on manufacturing employment in Kansas. This loss is in addition to those losses sustained in the early 2000s recession, from which employment in manufacturing never fully recovered.

There is an important long-term structural shift occurring in the Kansas economy. Employment in the goods-producing industry sectors, such as manufacturing, have become stagnate, with an expected annual growth rate of near zero. In comparison, employment in the service-providing industry sectors is projected to grow at a rate of 1.2 percent annually. There are multiple factors contributing to the shift from goods-producing industries to service-providing industries. One of these factors is a shift in demand. The share of consumer spending devoted to manufactured goods has declined over time. Because demand has fallen, producers have slowed production, which has decreased employment. Secondly, gains in productivity have occurred in the manufacturing industry at a more rapid pace, resulting in the production of manufactured goods increasing without corresponding increases in employment. Manufacturing processes have become more automated requiring fewer workers. Finally, competition from foreign producers with lower compensation costs has resulted in an increased amount of manufacturing being done outside of the U.S.

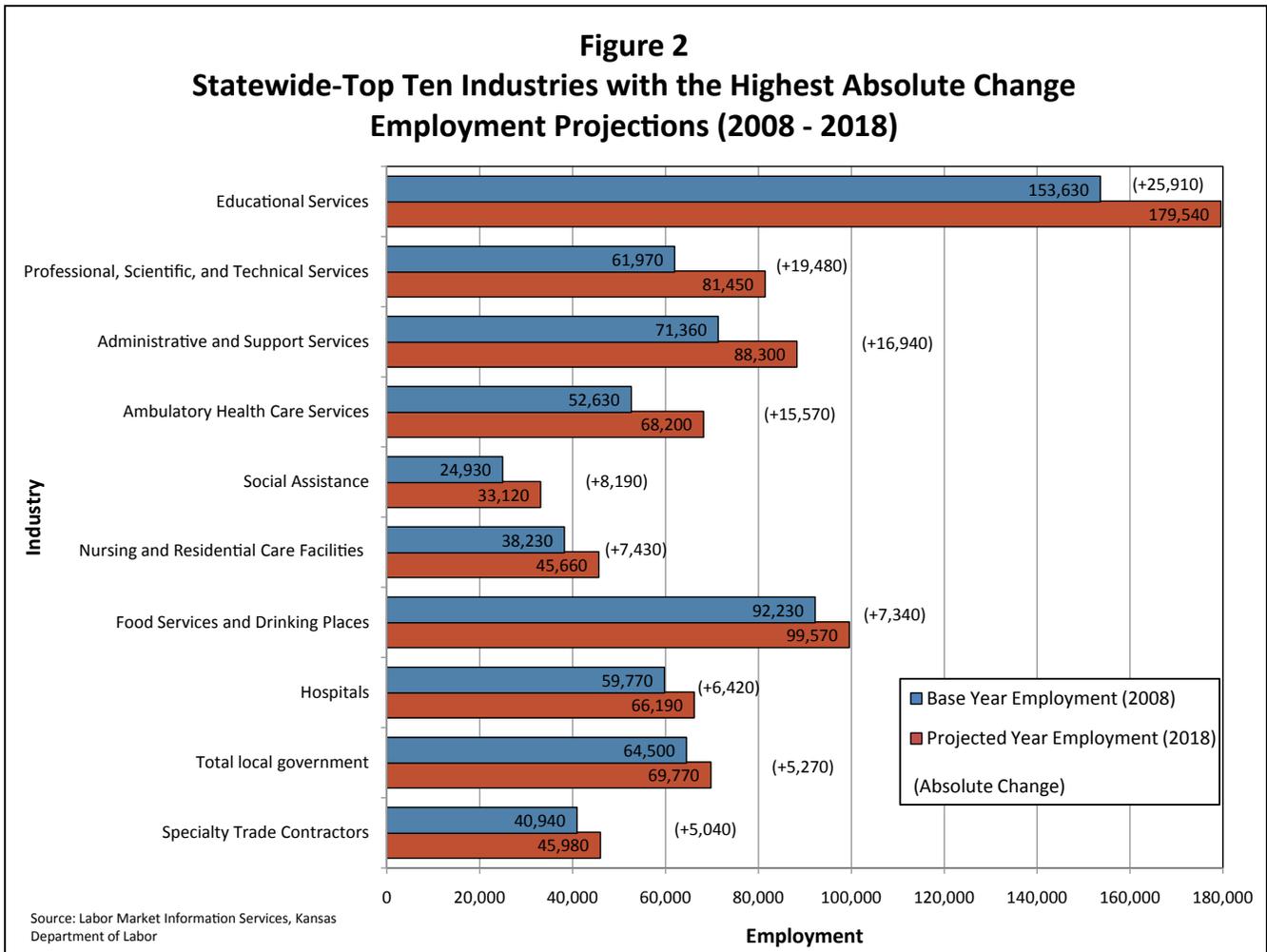
Projections by Industry

Projections by Detailed Industry (3-digit NAICS code)

Figure 2 presents the top 10 industries with the highest absolute change in employment over the 2008 to 2018 projection period. These 10 industries make up 80 percent of the total employment growth projected in the state. Interestingly, this list contains all four of the industries in the health care and social assistance industry sector. This is a good indication that there will continue to be a high demand for workers in this area.

Educational services is projected to grow more than any other industry, with 25,910 new jobs by 2018. Educational services is the industry that includes private elementary and secondary schools, as well as private colleges and junior colleges. Other sub-industries included in this industry sector are technical and trade schools and fine arts schools. In Kansas, the majority of schools are funded by state and local government. These, along with private schools, make up educational services. Current employment and projected employment in educational services is, and will continue to be, sensitive to the level of funding they receive.

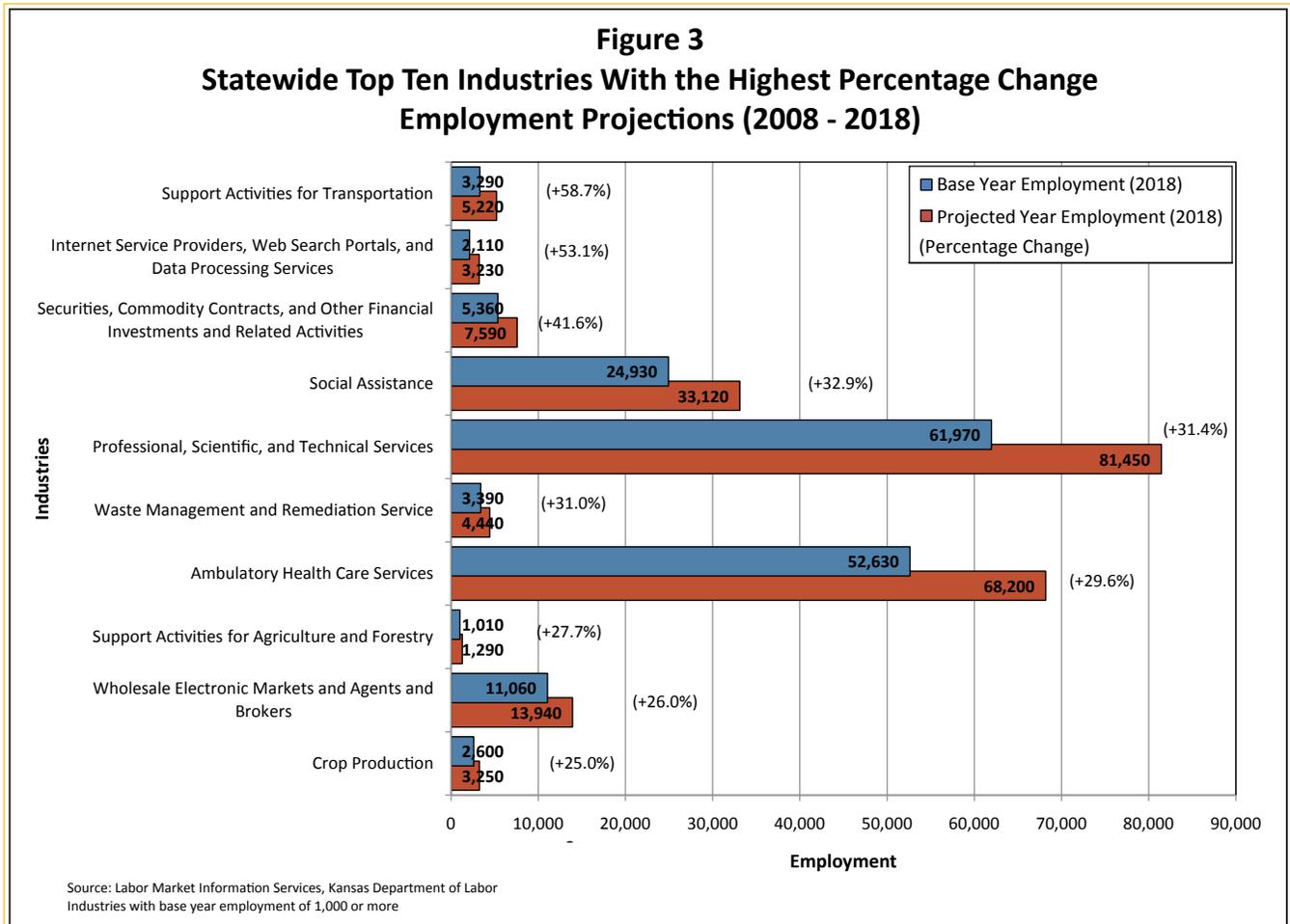
Figure 2
Statewide-Top Ten Industries with the Highest Absolute Change
Employment Projections (2008 - 2018)



Projections by Industry

Figure 3 presents the industries expected to grow the fastest over the projection period. Support activity for the transportation industry is projected to grow the fastest of any of the industries at 58.7 percent over the 2008 level. This is much faster than the statewide all industries rate of growth which is projected to be 9.8 percent. Support activities for transportation industry is a subsector of the transportation and warehousing industry sector. Included are motor vehicle towing, packing and crating, and freight transportation arrangement.

The areas within Kansas projected to grow at the fastest rate are those in the eastern portion of the state – the northeast, the southeast and the Kansas City regions. These regions have access to a more developed infrastructure of interstate highways, railroads and airports making them more conducive to transportation activity. One example of this is a new intermodal facility recently built in the Kansas City region.



Projections by Industry

The social assistance, professional, scientific and technical services, and the ambulatory healthcare services industries appear in both Figures 2 and 3, suggesting they are both growing quickly and by large amounts. This also suggests a larger share of the total employment in the future will be devoted to these three industries. Social assistance and ambulatory healthcare services are both subsectors of the healthcare and social assistance industry sector.

The social assistance industry includes individual and family services, community food and housing, emergency and other relief services, and vocational rehabilitation services. The ambulatory healthcare services industry includes physicians and dentists offices, outpatient care centers, medical and diagnostic laboratories and home healthcare services, to name a few. These industries are projected to outpace other industries, increasing their share of total employment in the future. As mentioned earlier, the factors causing this growth are the same as those in the broader health care field – an aging population and advanced technology that allows new treatments for patients.

Projections by Occupational Group

Projections by Occupational Group (2-digit SOC code*)

Employment in nearly all major occupational groups is projected to increase between 2008 and 2018. However, one occupational group that is projected to decline is production occupations. Examples of production occupations are supervisors of production workers, assemblers and fabricators, food processing workers, and metal and plastic workers. In Kansas, more than 40 percent of production workers are in one of three industries – transportation equipment manufacturing, food manufacturing and machinery manufacturing. As mentioned previously, growth in these and other manufacturing industries has been limited.

As shown in Figure 4, the occupational group with the largest increase is in the office and administrative support occupations, which is projected to increase by 19,660 jobs over the period. Office and administrative support occupations include supervisors, secretaries, financial clerks and information and record clerks.

Figure 4
Statewide
Employment by Occupational Group (2008-2018)

Occupational Code ¹	Occupational Title	Base Year Employment (2008)	Projected Year Employment (2018)	Absolute Change	Percentage Change	Openings due to Growth ²	Total Openings ²	Average Salary ³	Median Salary ³
00-0000	Total, All Occupations	1,504,100	1,651,820	147,720	9.8%	158,940	503,510	\$38,525	\$30,442
11-0000	Management Occupations	80,070	84,570	4,500	5.6%	5,050	24,030	\$87,065	\$76,057
13-0000	Business and Financial Operations Occupations	62,690	72,600	9,910	15.8%	9,940	22,580	\$58,374	\$52,913
15-0000	Computer and Mathematical Occupations	33,160	39,400	6,240	18.8%	6,460	12,670	\$64,971	\$62,067
17-0000	Architecture and Engineering Occupations	29,410	32,140	2,730	9.3%	2,800	9,030	\$66,714	\$63,159
19-0000	Life, Physical, and Social Science Occupations	12,960	15,390	2,430	18.8%	2,440	6,260	\$55,769	\$50,636
21-0000	Community and Social Services Occupations	18,140	20,960	2,820	15.5%	2,820	6,760	\$36,038	\$33,899
23-0000	Legal Occupations	9,440	10,710	1,270	13.5%	1,300	2,880	\$76,848	\$56,789
25-0000	Education, Training, and Library Occupations	104,640	123,410	18,770	17.9%	18,770	41,910	\$39,626	\$37,621
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	23,690	26,530	2,840	12.0%	3,100	8,950	\$37,243	\$32,269
29-0000	Healthcare Practitioners and Technical Occupations	75,720	90,710	14,990	19.8%	14,990	30,560	\$62,368	\$49,593
31-0000	Healthcare Support Occupations	42,870	53,660	10,790	25.2%	10,830	15,580	\$24,618	\$22,696
33-0000	Protective Service Occupations	27,730	30,740	3,010	10.9%	3,010	11,200	\$36,103	\$32,624
35-0000	Food Preparation and Serving Related Occupations	116,620	127,150	10,530	9.0%	10,540	50,690	\$19,049	\$17,201
37-0000	Building and Grounds Cleaning and Maintenance Occupations	52,810	57,850	5,040	9.5%	5,040	13,750	\$23,239	\$20,942
39-0000	Personal Care and Service Occupations	49,770	59,520	9,750	19.6%	9,790	21,600	\$21,083	\$18,872
41-0000	Sales and Related Occupations	151,630	159,470	7,840	5.2%	8,340	53,710	\$33,525	\$22,351
43-0000	Office and Administrative Support Occupations	234,000	253,660	19,660	8.4%	23,610	72,500	\$29,655	\$27,542
45-0000	Farming, Fishing, and Forestry Occupations	7,710	8,700	990	12.8%	980	3,020	\$28,331	\$25,496
47-0000	Construction and Extraction Occupations	81,050	85,460	4,410	5.4%	5,130	19,200	\$39,199	\$34,609
49-0000	Installation, Maintenance, and Repair Occupations	63,970	68,680	4,710	7.4%	4,830	17,480	\$40,983	\$38,469
51-0000	Production Occupations	127,690	127,330	-360	-0.3%	3,260	29,970	\$33,055	\$29,816
53-0000	Transportation and Material Moving Occupations	98,320	103,200	4,880	5.0%	5,940	29,200	\$31,076	\$27,465

Source: Labor Market Information Services, Kansas Department of Labor, Bureau of Labor Statistics

¹Occupational Code - 2000 Standard Occupational Classification Code

²The terms "Openings due to Growth" and "Total Openings" are defined on page 17

³Wage data from the 2010 edition of the Kansas Wage Survey

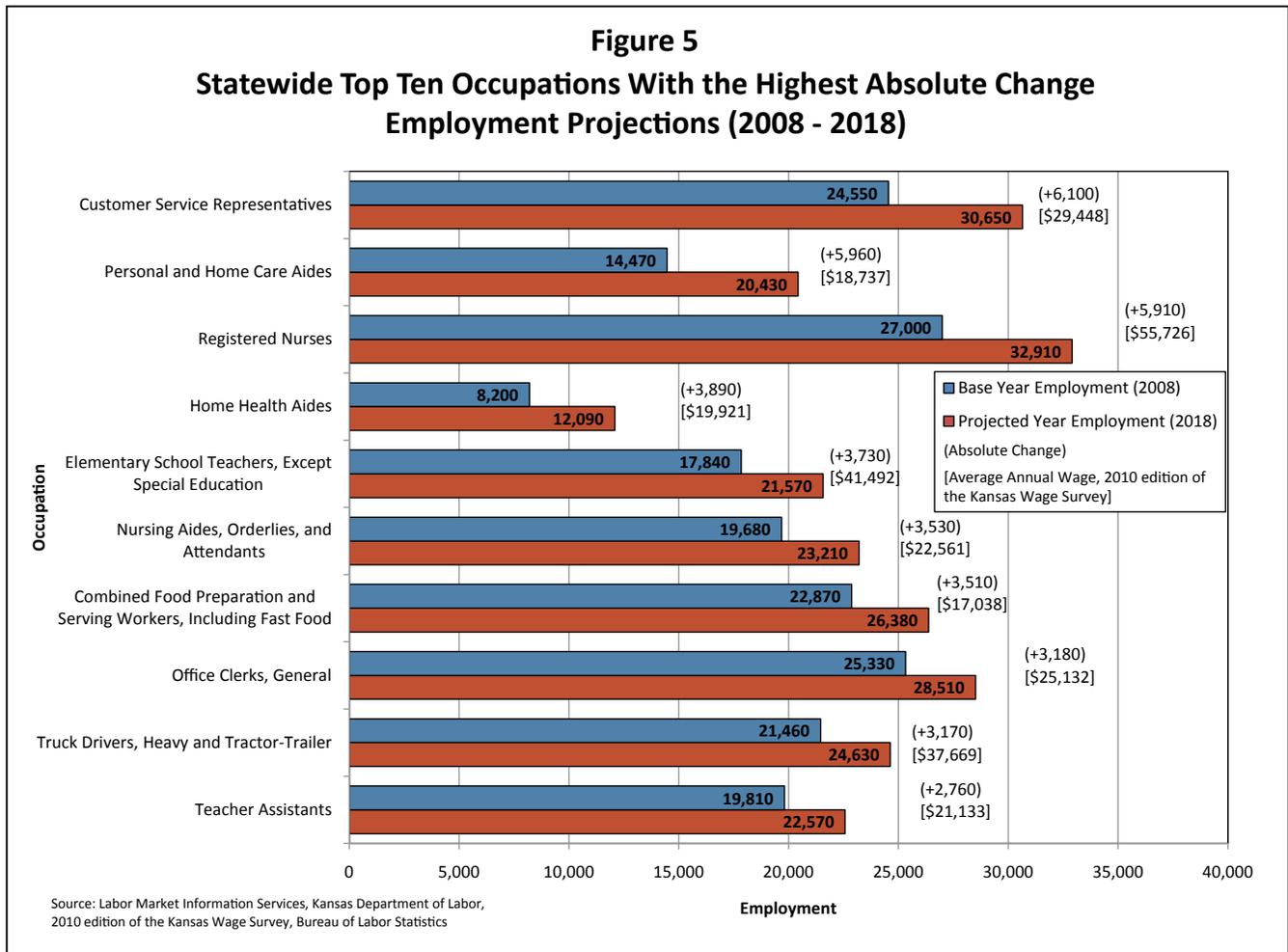
Healthcare support occupations are projected to increase the fastest, at a rate of 25.2 percent over the 10-year period. Healthcare support occupations are those occupations that support the work of the healthcare practitioners and technical occupations. Examples of healthcare support occupations are home health aides, nursing aides, orderlies, attendants and many types of therapist aides and assistants. These occupations are most prevalent in the nursing and residential care facilities industry.

*SOC, Standard Occupational Classification

Projections by Occupation

Projections by Occupation (6-digit SOC code)

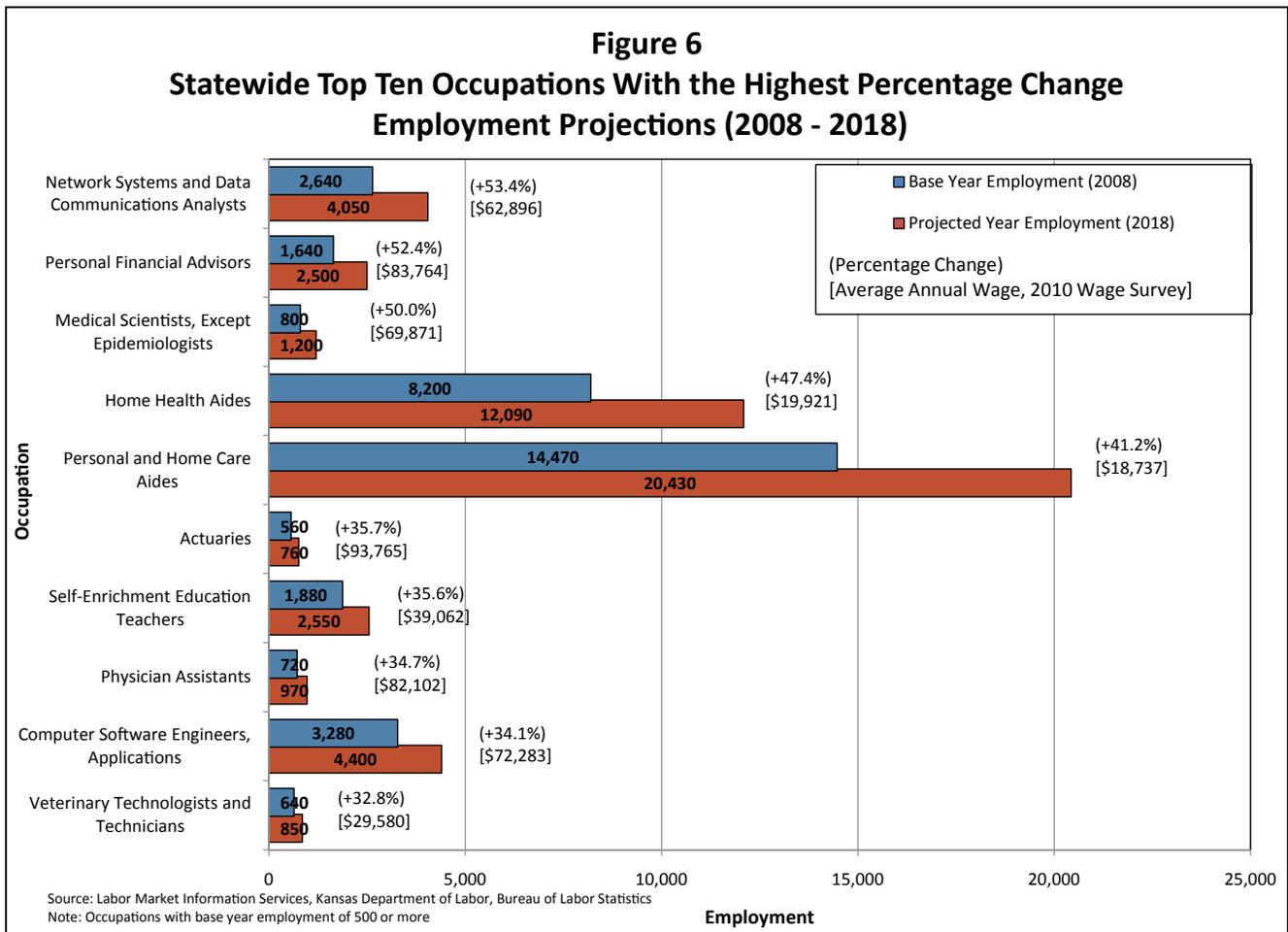
Figures 5 and 6 present the top 10 occupations in the state from 2008 to 2018 by absolute change and percentage change. The customer service representatives occupation is projected to grow the most with 6,100 new jobs by 2018. The network systems and data communications analysts occupation is projected to grow the fastest, at 53.4 percent over its 2008 level.



Two occupations—personal and home care aides and home health aides—appear on both Figures 5 and 6 suggesting they are both growing quickly and by large amounts. These occupations provide support to the elderly and those who are unable to complete daily tasks on their own. Although these occupations sound very similar, there are differences between them. Personal and home care aides are included in the personal care and service group of occupations. Employees in this occupation assist the elderly and disabled in tasks such as keeping house (doing laundry, making beds, providing meals). Eighty percent of personal and home care aides work in one of three industries – social assistance, ambulatory health care services and religious, grant making, civic, professional and similar organizations.

Projections by Occupation

Home health aides are included in the healthcare support occupations group. Home health aides also provide assistance to the elderly and disabled in their home, but they are more focused on the patient. Examples of tasks performed in this occupation are bathing, dressing and grooming. Ninety-three percent of home health aides work in the nursing and residential care facilities industry, the social assistance industry or the ambulatory healthcare services industry.



Regional Information

To create a more localized view of industry and occupational employment, the Kansas Occupational Outlook divides Kansas into seven regions (a map of the regions is shown below).

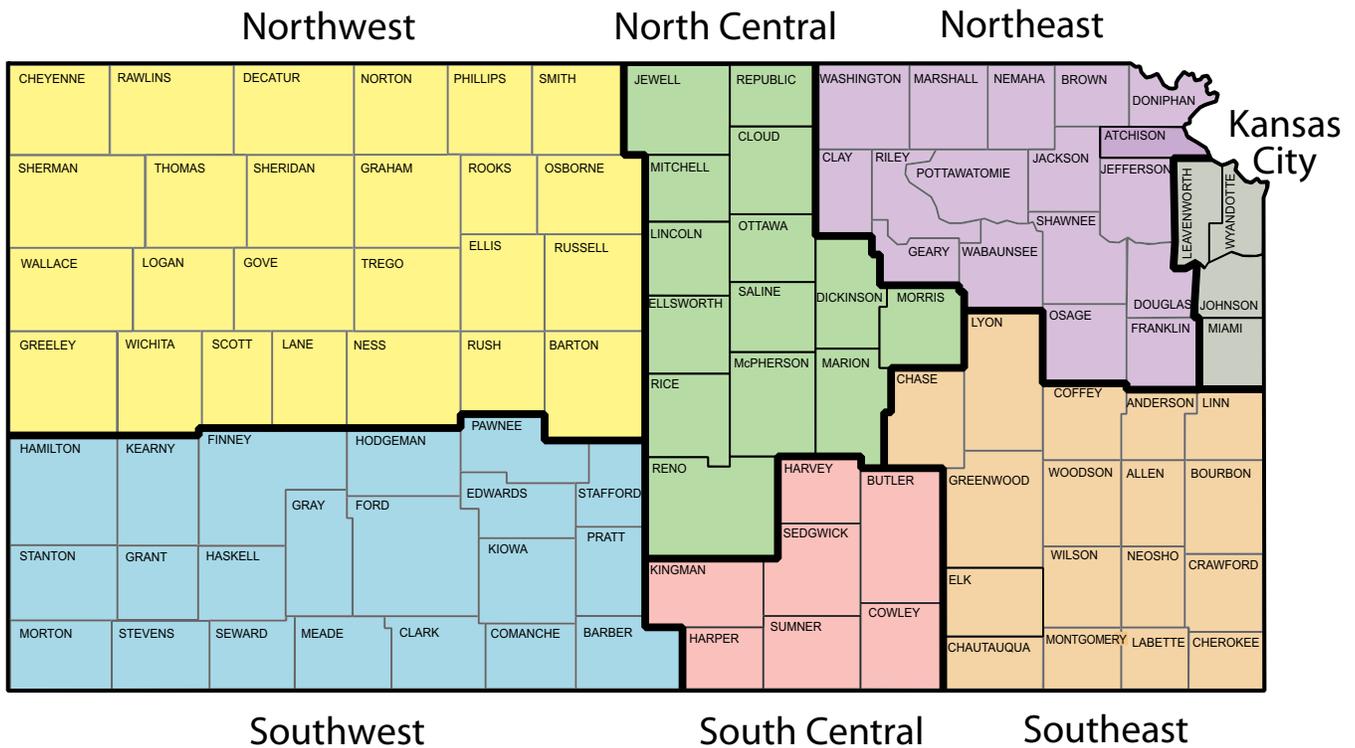
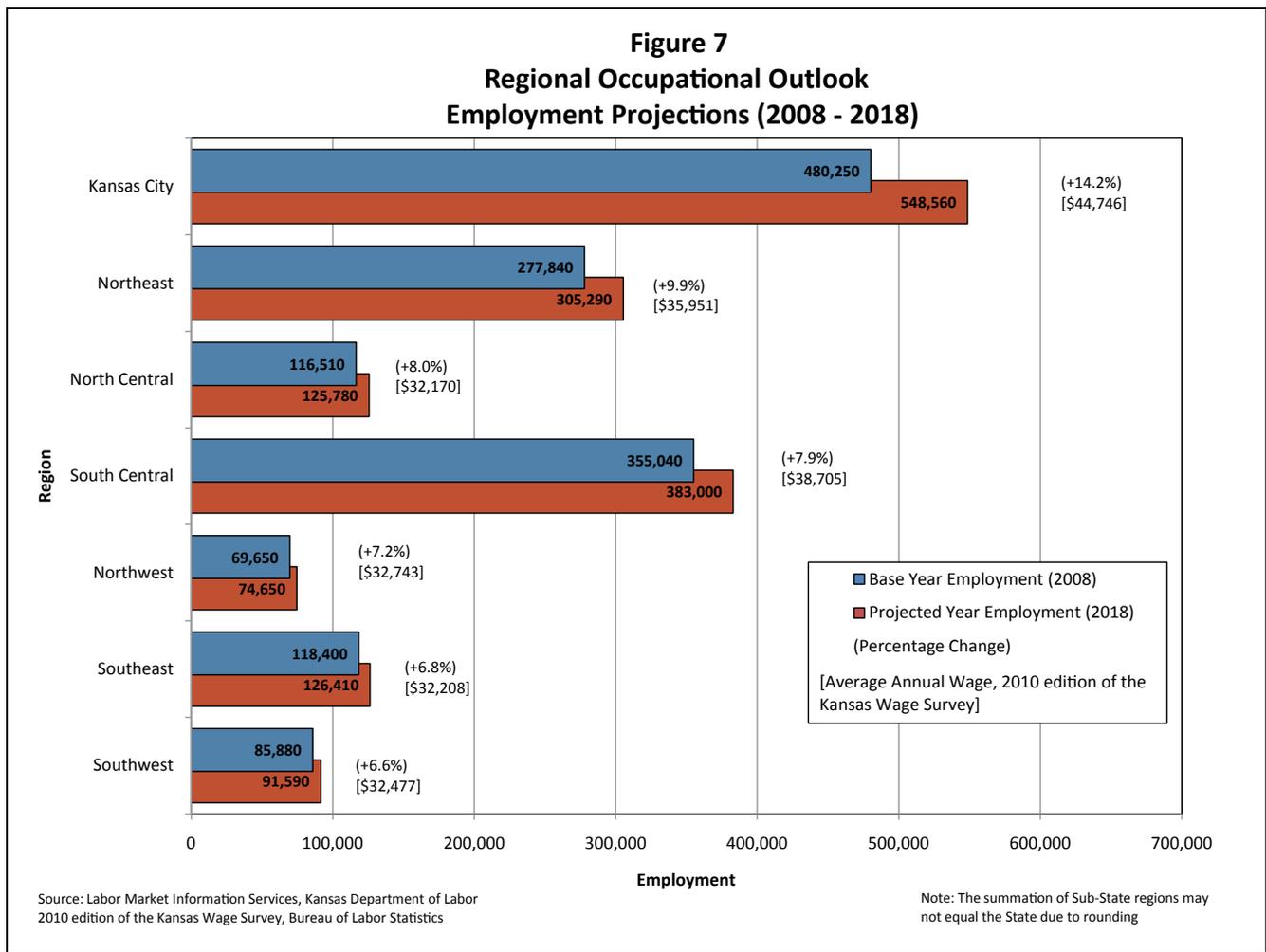


Figure 7 shows the total employment projection for each region along with the average annual wage in that area.

The Kansas City region is projected to grow at the fastest rate and add the most jobs, increasing 14.2 percent or 68,310 jobs by 2018. This region is projected to account for more than 45 percent of the total statewide job growth. According to the most recent Census Bureau estimate (2010), the Kansas City region accounted for 28.6 percent of the statewide population.

The industry sector growing the fastest in the Kansas City region is professional, scientific and technical services, with a projected growth rate of 31.2 percent and adding 10,610 jobs. The Kansas City region accounts for more than half (54.5 percent) of the statewide growth in this industry. Occupations in the professional, scientific and technical services industry sector are typically those that pay higher than average wages.

Regional Information



The southwest region is projected to grow the slowest in total employment, at 6.6 percent or 5,710 jobs over the 2008 to 2018 period. The lower-than-statewide rate of growth in the southwest region is partially due to the industry composition of the region. Fifteen percent of employment in the southwest region is in the food manufacturing industry, compared to two percent statewide. This is an industry that is projected to grow at a slower than average rate of 4.3 percent over the entire 10-year projection period. By having a large percentage of employment focused in a low-growth industry, the projection of total employment in the area is diminished.

Another factor is those industries which are growing at a fast rate statewide are not growing as fast in the southwest region. One example is the professional, scientific and technical services industry. Statewide, employment is projected to grow by 31.4 percent over the projection period. In the southwest region this industry is projected to grow by 12.9 percent. This is partially linked to the population in the region. Many of the services provided by the professional, scientific and technical services industry are used locally. Examples of these include legal, accounting and architectural services. Since the southwest area does not have a large population, demand for these services remains low. The U.S. Census Bureau

Regional Information

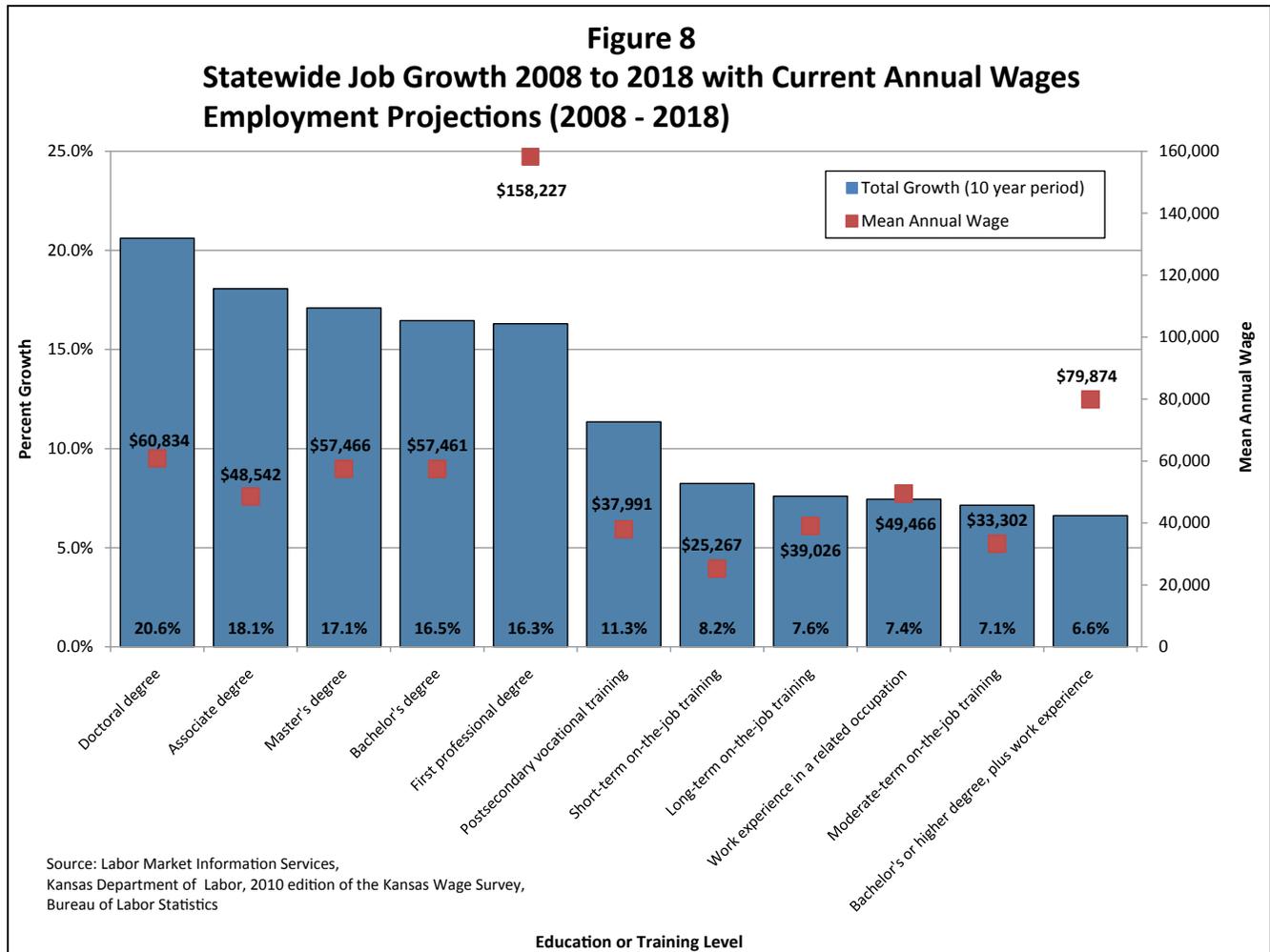
estimates the southwest region is one of four regions (north central, southwest, southeast and northwest) that has experienced population declines from 2000 to 2010.

According to population projections provided by the Kansas Department of Administration, the Kansas City region and the south central region are the only two regions that are expected to have an increase in people ages 15 through 19 from 2010 to 2020. The other five regions of the state are expected to remain flat or experience a decline in this age group from 2010 to 2020. This is significant because this is the age group that will be entering the labor force during the 2008 to 2018 projection period.

Additional information on regional projections is also available on the Kansas Department of Labor website www.dol.ks.gov/lmis/. Each region is broken down to demonstrate the top 10 industries and occupations in that region. Also included are the top 10 occupations by the number of openings per education and training category for each region.

Education and Training

Each occupation has an education or training level assigned to it by the Bureau of Labor Statistics. The education level is defined as the most significant level of education held by the people who work in that occupation. It is not intended to represent the only education level a jobholder can have for this occupation, just the most significant level. There are 11 levels of education and training as listed in Figure 8.



Jobs requiring a doctoral degree are projected to increase by the highest percentage, 20.6 percent over the 10-year projection period. Jobs in this category pay an average salary of \$60,834. Rounding out the top three categories by rate of growth are jobs requiring an associate degree at 18.1 percent growth and jobs requiring a master's degree at 17.1 percent growth. Jobs in these categories pay an average salary of \$48,542 and \$57,466 per year (see Figure 8). This wage is much higher than the average statewide wage for all occupations which is \$38,525 annually.

Education and Training

As shown in Figure 8, the fastest growing occupations in Kansas are those which require higher levels of education. As a result, the share of jobs requiring post-secondary vocational training or more is projected to increase in relation to those jobs requiring on-the-job training or work experience in a related occupation.

In 2008, 70 percent of occupations in the state did not require post-secondary training or higher. Only 30 percent of jobs required a training level of post-secondary vocational training or a higher level of training. These occupations require an associate degree, bachelor's degree, master's degree, first professional degree or doctoral degree.

Jobs requiring higher levels of education are outpacing those jobs that require less than post-secondary vocational training. In 2018, 32 percent of jobs will require post-secondary vocational training or higher, and the proportion of jobs requiring less than post-secondary vocational training (on-the-job training or work experience in a related occupation) will fall to 68 percent.

The two percent shift of jobs moving from the no post-secondary category to the post-secondary category will represent more than 77,000 additional jobs that require an associate degree, bachelor's degree, master's degree, first professional degree or doctoral degree.

More Information about the Projections Program

Occupational and industry employment projections are useful sources of information for planning and preparation of educational and training programs, assessing the needs of skilled workers in the future, studying long-range trends in occupational employment and for economic development purposes. The Kansas Occupational Outlook was funded by the U.S. Department of Labor's (DOL) Employment and Training Administration.

The creation of long-term projections consists of four principal phases:

- Create industry level historical employment trends
- Project industry level employment trends
- Create occupational employment within industries (staffing patterns)
- Project occupational level employment

Following are definitions and concepts that may be helpful in understanding the projections data:

NAICS Industry Code – North American Industry Classification System (NAICS) uses a six-digit hierarchical coding system to classify all economic activity into 20 industry sectors. Five sectors are mainly goods-producing sectors and 15 are entirely service-providing sectors. Additional information can be found at <http://www.bls.gov/bls/naics.htm>.

NAICS Industry Title – NAICS titles originate from the NAICS coding and are short descriptions of the industry sector.

Occupational Code – The Standard Occupational Classification (SOC) system provides a six-digit identifier for each occupation. Occupations are aggregated up to a major two-digit occupational code, i.e. 11-0000 Management. Additional information can be found at <http://www.bls.gov/soc/>.

Occupational Title – Titles are from the Standard Occupational Classification (SOC) system and are a generalized short description of the job duties.

Base Year Employment – The number estimated to be employed in that occupation or industry in the base year (for this study 2008).

Projected Year Employment – The number estimated to be employed in the projected year (for this study 2018).

Absolute Change – The level change in employment (absolute).

Openings Due to Growth – The openings in an occupation due to the expansion and/or creation of new business and the consequent need for additional workers.

Total Openings – The number of job openings expected in the occupation due to growth plus replacement needs.

Replacement Openings – Replacement openings include jobs available due to individuals leaving their jobs permanently because of career change, retirement, death or other reasons.

More Information about the Projections Program

Mean Wage – The mean wage for a given SOC occupation from the 2010 edition of the Kansas Wage Survey. Additional information can be found at http://www.dol.ks.gov/lmis/wagesurvey/ws2010/wagesurvey_2010.html.

Educational Requirement – The estimated educational category that best describes the most significant level of education or training needed to become qualified (however, not the only required level). Additional information can be found at <http://www.bls.gov/emp/optd/>.

Note: As the Occupational Employment Statistics (OES) survey identifies jobs by occupation not employer, individuals who change employers but stay in the same occupation fall under the category of job turnover and are not included in the growth or openings measure. Also, replacement needs can be calculated from openings information by subtracting openings due to growth from total openings. The remaining openings are considered replacements.

Occupational projections are created using current and previous employment trends and serve to illustrate likely employment patterns in the future. Because of the uncertainty involved with projecting future employment, certain assumptions, which are outlined below, were made when creating the Kansas Occupational Outlook.

1. There will be no significant emergence of employment in new occupations that are not currently defined by the SOC.
2. There will not be a major war or event that either reallocates factors of production or decreases the amount of capital stock.
3. Social and educational patterns will continue.
4. Fluctuations in the business cycle will continue to occur.
5. Workplace laws and patterns will not change significantly, i.e. an unexpected change in the minimum wage or the average workweek significantly increasing or decreasing.

Sources

The Kansas Department of Labor's Kansas Labor Information Center (KLIC),
available at <https://klic.dol.ks.gov/>

The Census Bureau,
available at www.census.gov/popest/estimates.html

The Bureau of Labor Statistics,
available at <http://www.bls.gov/emp/>

The Bureau of Economic Analysis,
available at <http://www.bea.gov/regional/index.htm>

Kansas Department of Administration,
available at <http://budget.ks.gov/ecodemo.htm>

The Bureau of Labor Statistics,
available at www.bls.gov/spotlight/2009/health_care/

The Bureau of Labor Statistics,
available at www.bls.gov/oco/cg/cgs040.htm#outlook



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