



Labor Force Analysis

Greater Lawrence Area and Douglas County, Kansas

March 2015

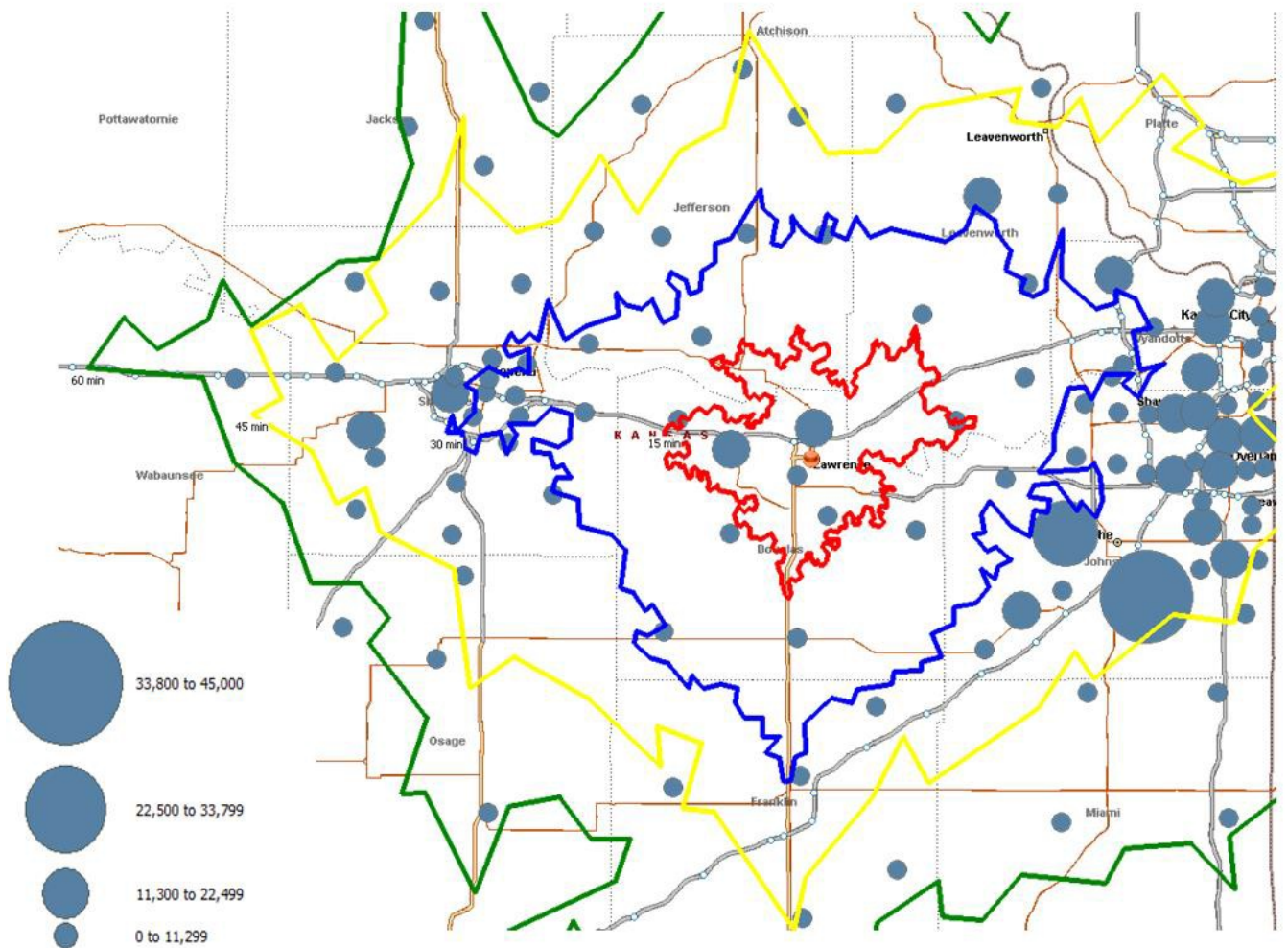
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At the request of the Economic Development Corporation of Lawrence and Douglas County, the Center for Economic Development and Business Research, part of the W. Frank Barton School of Business at Wichita State University, has completed the following report designed to identify the size and demographic composition of the labor force in the greater Lawrence area and the commuter patterns in Douglas County, Kansas.

Labor Force Data – Greater Lawrence Area

Size of the Labor Force in the Greater Lawrence Area



Within a 15 to 30 minute driving radius of downtown Lawrence the size of the labor force increases more than 125 percent, from an estimated 80,135 to 180,458 workers. Increasing the drive time from 30 to 45 minutes increases the size of the labor force by an additional 365 percent, as this distance

includes portions of both the Topeka and Kansas City metropolitan areas. However, increasing the drive time from 45 to 60 minutes is estimated to expand the labor force by only an additional 8.7 percent.

2013 Estimated Labor Force in the Greater Lawrence Area

Time from Downtown Lawrence	15 Min.	30 Min.	45 Min.	60 Min.
Population Age 16 and Over	80,135	180,458	840,048	913,330
Labor Force	55,116	124,370	590,857	638,684
Employed	50,649	113,619	545,143	590,410
Unemployed	4,467	10,751	45,714	48,274
Not in Labor Force	24,900	55,697	246,979	270,938
In Armed Forces	119	391	2,212	3,708

Source: Nielsen

The composition of occupations within the employed labor force of the greater Lawrence area remains very similar with increased drive times from the downtown area. Office staff, sales, and management account for the majority of occupations across all drive times.

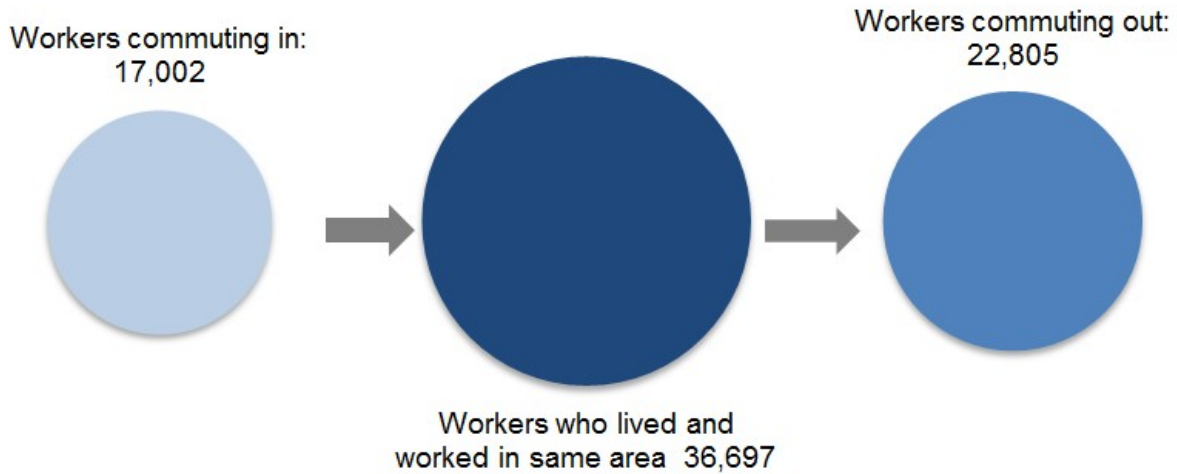
Although the size of the labor force increases considerably, people are generally employed in the same occupations within 15 minutes of downtown, as they are 60 minutes from downtown, with a few exceptions. The percent of workers in education training and library occupations decreases with increased drive times from downtown Lawrence, as does food preparation and serving-related workers. The number of workers in business and financial operations increases with increased drive times from downtown Lawrence.

Within a 60-minute drive time of downtown Lawrence, the primary occupations of the employed are similar, indicating a similar skill set among workers. However, there are demographic differences associated with longer drive times. The population beyond a 30-minute drive time from downtown Lawrence generally has a lower level of educational attainment and a higher level of household income than areas within 30 minutes.

These demographic differences indicate that although there is a significant increase in the size of the labor force between a 30 and 45 minute travel radius, there are a decreasing number of educated workers available and increasing average incomes. This generally indicates the wage needed to incentivize workers to commute into Lawrence may be higher.

Detailed tables are in Appendix A.

Commuter Patterns – Douglas County, Kansas



Douglas County Kansas - 2013

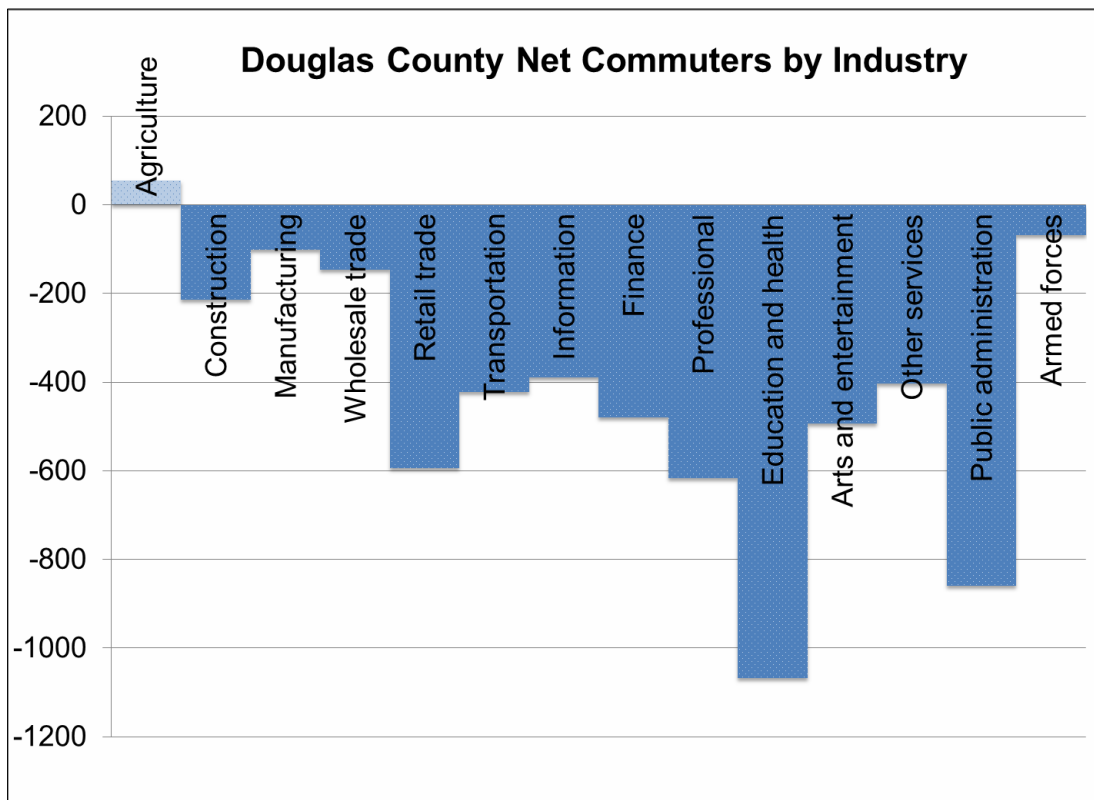
Daytime Population	
Total resident population	112,210
Total workers working in area	53,699
Workers who lived and worked in same area	36,697
Workers commuting in:	17,002
Total workers living in area	59,502
Workers who lived and worked in same area	36,697
Workers commuting out:	22,805
Total daytime population	106,407
Daytime population change due to commuting	-5,803
Worker retention	61.7%
Employment residence ratio	0.90

Source: U.S. Census Bureau, American Community Survey

An employment residence (ER) ratio is the total number of workers working in an area, relative to the total number of workers living in the area. Ratios less than 1.00 indicate there were fewer workers working in the area than living there. Douglas County's ER ratio of 0.90 indicates there were ten percent fewer workers working in the county than living in the county. Douglas County was a net exporter of workers, with an estimated decrease of 5,803 workers in the population each day due to commuting activity.

Although Douglas County was a net exporter of labor, within the county there were a significant number of workers commuting in and workers commuting out. Worker retention refers to workers who lived and worked in the same area as a percentage of total workers living in the area. This is the number of workers that are not commuting to other areas for work. Douglas County has a moderate level of worker retention at 61.7 percent.

Within each industry, it was assumed that there were both workers commuting in and out. To quantify the net migration of workers in an industry, the number of workers living in an area was subtracted from the number of workers working in an area. The result indicates the net effect of commuting. A positive number would indicate there were more workers commuting into an area than out. A negative number indicates there was more outward commuting than inward commuting.



Source: U.S. Census Bureau, 2009-2013 American Community Survey

Douglas County had a net export of workers in all industries, with the exception of agriculture. The industries with the highest number of workers leaving the area for work are education and health, and public administration. Recruiting business in education and health, retail trade and professionals is likely to have the highest impact on worker retention.

As with variances between industries, there were also differences in commuter patterns by income. Within each income bracket, it was assumed there were both workers commuting in and out. Negative numbers indicate more out-commuters, while a positive number indicates more in-commuters. Douglas County exports workers in all income brackets with the exception of those earning \$10,000 to

\$14,999. The highest percent of workers commuting out of the county are in the higher income bracket of \$75,000 or more.

Douglas County Kansas

Percent of Commuters Within Each Income Bracket	
\$1 to \$9,999 or less	↓ -14.5%
\$10,000 to \$14,999	↑ 1.2%
\$15,000 to \$24,999	↓ -7.7%
\$25,000 to \$34,999	↓ -2.2%
\$35,000 to \$49,999	↓ -22.0%
\$50,000 to \$64,999	↓ -16.2%
\$65,000 to \$74,999	↓ -5.5%
\$75,000 or more	↓ -33.0%

Source: U.S. Census Bureau, 2009-2013 American Community Survey

The import or export of a particular class of workers should not be interpreted as a strictly positive or negative event. For example, it is good to have higher income earners, which generally pay more in local taxes, living in an area. In this light an outflow of high income earners may be interpreted positively. However, an outflow of higher income earners may also indicate that local industries are not providing higher wage jobs. Similarly, an inflow of low income workers may indicate the area does not have affordable housing available, or it may indicate a particularly high level of low wage jobs available in the area. The data provided here gives insights as to the flow of commuters in an area, but additional data would be needed to understand the reasons for the commuter flow in a specific area.

Labor Force Participation – Douglas County

The labor force participation rate is the labor force as a percentage of the civilian non-institutional population. This is a measure of the people in an area that are economically active. The labor force is comprised of those employed persons and those persons 16 years and older that are unemployed and have looked for work in the past four weeks. At an average of 71 percent, the labor force participation rates in Douglas County were above the national average rates, which ranged between 64 and 65 percent.

Douglas County Labor Force Participation Rate

	2009	2010	2011	2012	2013
Male	73.8%	72.6%	73.5%	73.4%	72.8%
Female	69.0%	68.6%	69.1%	69.0%	68.3%
Total	71.3%	70.6%	71.3%	71.2%	70.5%

Source: U.S. Census Bureau American Community Survey

There has been an overall decrease in employment of 3.9 percent between 2010 and 2013, with the majority of this decline happening between 2009 and 2010. There have been modest increases in employment between 2011 and 2013, but not enough to offset the previous decreases.

There are three factors effecting the change in employment overtime. Workers move into and out of the area, migration. Workers choose to be active in the labor market, or not, participation. Then there are also workers that are active in the labor market, but have been unable to find employment, unemployment.¹

Douglas County Change in Employment

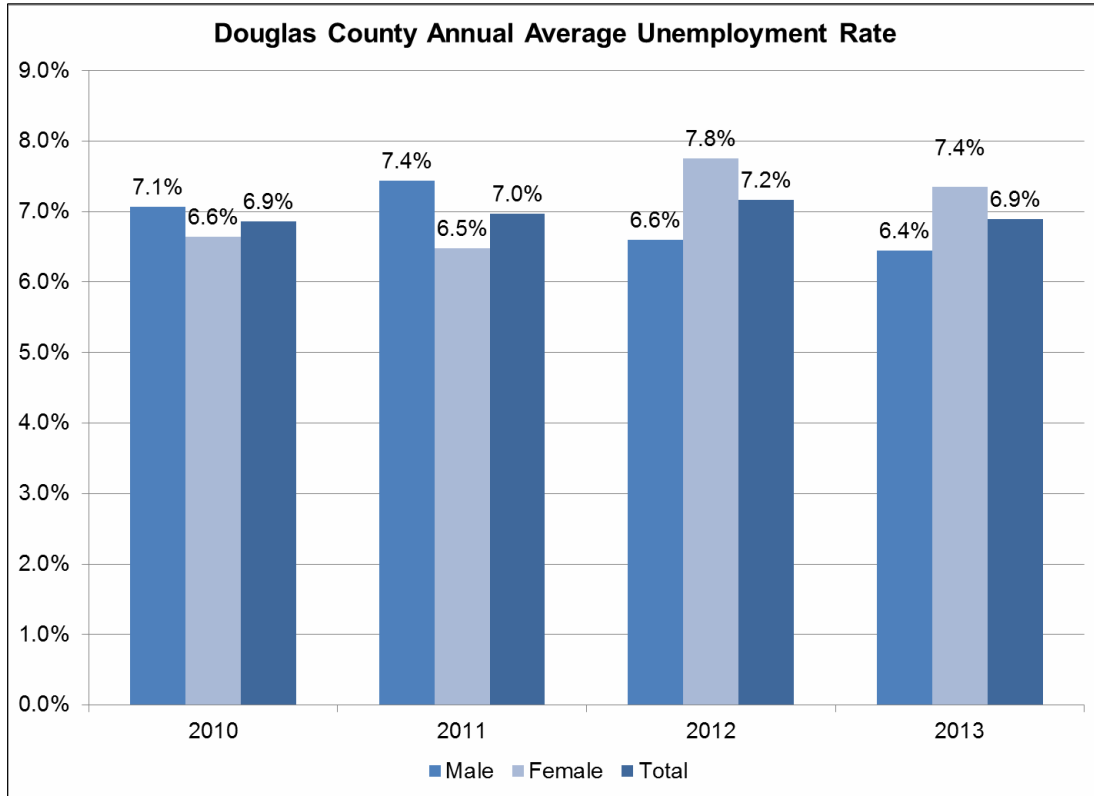
	2010	2011	2012	2013	Total
Change in Employment	-6.2%	1.5%	0.6%	0.3%	-3.9%
Due to Migration	-5.1%	0.8%	0.9%	0.9%	-2.4%
Due to Participation	-1.0%	0.9%	-0.1%	-0.9%	-1.1%
Due to Change in Unemployed	0.1%	0.2%	0.2%	-0.3%	0.3%

Source: U.S. Census Bureau American Community Survey

Between 2009 and 2013 all three of these factors were changing in a ways that would indicate a soft labor market in Douglas County. During this time there was a net out-migration of workers; more workers left the area than moved into the area, of 2.4 percent. At the same time fewer workers living in the area chose to participate in the labor market, decreasing employment by 1.1 percent. Also over this time, the unemployment rate remained relatively stable. These three factors together indicate a soft labor market that would put downward pressure on wages. Lower wages can be helpful to employers in keeping costs low, but potentially problematic for employees.

The overall annual average unemployment rate in Douglas County has not changed significantly between 2010 and 2013, a further indication of a loose labor market. However, during that time there has been a decrease in the annual average unemployment among the male population and an increase in the annual average unemployment in the female population.

¹ The overall change in employment is calculated by adding the change due to migration and the change due to participation, and subtracting the change due to unemployment.



Source: U.S. Census Bureau, American Community Survey

In Douglas County, unemployment rates are the highest in younger workers. This is consistent across all years. The unemployment rate for those workers between 35 and 44 year is somewhat lower, and then the unemployment rate tends to increase again for those workers between 45 and 54 years. There is very low unemployment among older workers in the Douglas County area.

Douglas County Annual Average Unemployment Rate by Age

	2009	2010	2011	2012	2013
16 to 19 years:	20.2%	24.4%	26.3%	28.5%	25.0%
20 and 21 years:	8.4%	9.0%	11.0%	9.9%	8.4%
22 to 24 years:	7.5%	8.3%	7.6%	7.2%	7.0%
25 to 29 years:	5.1%	5.9%	5.4%	6.8%	7.7%
30 to 34 years:	4.5%	4.3%	5.0%	6.7%	6.7%
35 to 44 years:	3.4%	2.3%	2.7%	3.1%	3.8%
45 to 54 years:	3.3%	4.8%	5.3%	5.7%	6.0%
55 to 59 years:	3.7%	6.0%	4.2%	3.6%	4.6%
60 and 61 years:	4.1%	4.8%	4.0%	5.3%	4.4%
62 to 64 years:	5.3%	4.1%	4.0%	3.1%	2.1%

Source: U.S. Census Bureau American Community Survey

To summarize, based on the size and demographic composition of the labor force in the greater Lawrence area and the commuter patterns in Douglas County, it is possible to draw the following conclusions.

- The labor force data indicates the labor market in the Lawrence area has been somewhat loose since 2010, indicating a surplus of available workers. There has been an overall decrease in the annual average level of employment of 3.9 percent.
- There is a significant increase in the size of the labor force between 30 and 45 minutes around downtown Lawrence. However, demographic differences in the outlying areas indicate it may take higher wages to incentivize workers to make the commute.
- Douglas County is a net exporter of workers, with a significant level of both inward and outward commuters. There is a moderate level of worker retention. Recruiting business in education and health, retail trade and professionals is likely to have the highest impact on worker retention.
- The unemployed segment of the Douglas County labor force is generally young, under 35 years of age. Recruiting businesses that employ this demographic group is likely to have the highest impact on unemployment.

Appendix A

2013 Estimated Employed Population Age 16 and Over by Occupation

Time from Downtown Lawrence	15 Min.		30 Min.		45 Min.		60 Min.	
Office and Administrative Support	7,088	13.5%	17,323	14.8%	83,875	15.0%	89,834	14.8%
Education, Training, and Library	6,854	13.1%	11,142	9.5%	38,248	6.8%	41,359	6.8%
Sales and Related Occupations	5,293	10.1%	11,242	9.6%	62,171	11.1%	67,758	11.2%
Management , Including Farmers and Farm	5,080	9.7%	11,228	9.6%	60,788	10.9%	66,614	11.0%
Food Preparation and Serving Related	4,457	8.5%	7,900	6.7%	31,725	5.7%	33,780	5.6%
Healthcare Practitioners and Technical	3,068	5.9%	6,607	5.6%	34,156	6.1%	36,927	6.1%
Service : Personal Care and Service	2,367	4.5%	4,114	3.5%	18,457	3.3%	19,956	3.3%
Production	1,860	3.6%	5,467	4.7%	25,923	4.6%	28,255	4.7%
Construction and Extraction	1,795	3.4%	6,137	5.2%	24,338	4.4%	26,900	4.4%
Transportation and Material Moving	1,777	3.4%	6,073	5.2%	27,528	4.9%	29,849	4.9%
Building and Grounds Cleaning, and Maintenance	1,751	3.3%	4,147	3.5%	16,755	3.0%	18,072	3.0%
Arts, Design, Entertainment, Sports, and Media	1,656	3.2%	2,503	2.1%	10,232	1.8%	10,964	1.8%
Business and Financial Operations	1,631	3.1%	4,338	3.7%	31,375	5.6%	33,939	5.6%
Computer and Mathematical	1,496	2.9%	2,832	2.4%	20,164	3.6%	21,200	3.5%
Life, Physical, and Social Science	1,064	2.0%	1,592	1.4%	4,746	0.9%	4,994	0.8%
Community and Social Services	1,062	2.0%	2,473	2.1%	10,263	1.8%	10,914	1.8%
Installation, Maintenance, and Repair	950	1.8%	3,599	3.1%	13,835	2.5%	15,256	2.5%
Healthcare Support	916	1.8%	2,901	2.5%	12,971	2.3%	14,073	2.3%
Architecture and Engineering	749	1.4%	1,636	1.4%	12,102	2.2%	12,987	2.1%
Protective Service	664	1.3%	2,085	1.8%	10,753	1.9%	11,626	1.9%
Legal	642	1.2%	1,264	1.1%	7,660	1.4%	8,551	1.4%
Farming, Fishing, and Forestry	195	0.4%	589	0.5%	1,662	0.3%	1,899	0.3%

Source: Nielsen

2013 Estimated Population by Age

Time from Downtown Lawrence	15 Min.		30 Min.		45 Min.		60 Min.	
Total Estimated Population	95,778		226,801		1,084,767		1,181,012	
Age 0 to 4	5,245	5.5%	15,036	6.6%	78,740	7.3%	85,133	7.2%
Age 5 to 9	5,012	5.2%	14,458	6.4%	75,611	7.0%	82,759	7.0%
Age 10 to 14	4,592	4.8%	14,101	6.2%	75,100	6.9%	82,895	7.0%
Age 15 to 17	2,466	2.6%	8,272	3.7%	45,638	4.2%	50,479	4.3%
Age 18 to 20	10,706	11.2%	15,854	7.0%	44,713	4.1%	47,838	4.1%
Age 21 to 24	13,445	14.0%	20,059	8.8%	62,694	5.8%	66,881	5.7%
Age 25 to 34	16,157	16.9%	32,156	14.2%	147,553	13.6%	156,846	13.3%
Age 35 to 44	10,764	11.2%	26,980	11.9%	141,953	13.1%	154,980	13.1%
Age 45 to 54	9,671	10.1%	27,903	12.3%	148,465	13.7%	163,601	13.9%
Age 55 to 64	8,957	9.4%	25,989	11.5%	131,089	12.1%	143,471	12.2%
Age 65 to 74	4,926	5.1%	14,834	6.5%	74,827	6.9%	82,533	7.0%
Age 75 to 84	2,498	2.6%	7,571	3.3%	39,111	3.6%	42,836	3.6%
Age 85 and over	1,339	1.4%	3,588	1.6%	19,273	1.8%	20,760	1.8%
Age 16 and over	80,135	83.7%	180,458	79.6%	840,048	77.4%	913,330	77.3%
Age 18 and over	78,463	81.9%	174,934	77.1%	809,678	74.6%	879,746	74.5%
Age 21 and over	67,757	70.7%	159,080	70.1%	764,965	70.5%	831,908	70.4%
Age 65 and over	8,763	9.2%	25,993	11.5%	133,211	12.3%	146,129	12.4%
2012 Median Age	29		33		36		36	
2012 Average Age	34		36		37		37	

Source: Nielsen

2013 Estimated Population Age 25 and Over by Educational Attainment

Time from Downtown Lawrence	15 Min.		30 Min.		45 Min.		60 Min.	
Total Population Age 25 and Over	54,312		139,021		702,271		765,027	
Less than 9th grade	834	1.5%	4,296	3.1%	24,086	3.4%	25,287	3.3%
Some High School, no diploma	2,448	4.5%	8,203	5.9%	33,950	4.8%	36,300	4.7%
High School Graduate (or GED)	9,298	17.1%	36,371	26.2%	164,492	23.4%	182,207	23.8%
Some College, no degree	9,967	18.4%	30,024	21.6%	154,618	22.0%	168,678	22.1%
Associate Degree	3,690	6.8%	10,169	7.3%	48,448	6.9%	52,675	6.9%
Bachelor's Degree	15,477	28.5%	30,030	21.6%	174,790	24.9%	189,382	24.8%
Master's Degree	7,473	13.8%	12,803	9.2%	72,081	10.3%	78,003	10.2%
Professional School Degree	2,005	3.7%	3,128	2.3%	18,603	2.7%	20,463	2.7%
Doctorate Degree	3,120	5.7%	3,997	2.9%	11,203	1.6%	12,032	1.6%

Source: Nielsen

2013 Estimated Households by Household Income

Time from Downtown Lawrence	15 Min.		30 Min.		45 Min.		60 Min.	
Total Households	38,408		88,403		424,422		458,724	
Less than \$15,000	6804	17.7%	14118	16.0%	47,202	11.1%	49,860	10.9%
\$15,000 to \$24,999	5212	13.6%	10995	12.4%	42,868	10.1%	45,535	9.9%
\$25,000 to \$34,999	3980	10.4%	9390	10.6%	41,468	9.8%	44,083	9.6%
\$35,000 to \$49,999	5397	14.1%	12545	14.2%	57,759	13.6%	62,172	13.6%
\$50,000 to \$74,999	6806	17.7%	16477	18.6%	83,072	19.6%	89,882	19.6%
\$75,000 to \$99,999	4113	10.7%	10380	11.7%	57666	13.6%	63,030	13.7%
\$100,000 to \$124,999	2408	6.3%	6444	7.3%	36777	8.7%	40,340	8.8%
\$125,000 to \$149,999	1176	3.1%	3069	3.5%	20660	4.9%	22619	4.9%
\$150,000 to \$199,999	1526	4.0%	2887	3.3%	20276	4.8%	22325	4.9%
\$200,000 to \$249,999	393	1.0%	830	0.9%	6223	1.5%	6898	1.5%
\$250,000 to \$499,999	491	1.3%	1008	1.1%	8111	1.9%	9135	2.0%
\$500,000 or more	102	0.27%	260	0.29%	2340	0.55%	2845	0.62%
Average Household Income	\$60,583		\$61,797		\$74,391		\$72,623	
Median Household Income	\$43,916		\$46,596		\$56,896		\$57,708	

Source: Nielsen