Chapter 4 Oklahoma Demographic, Socio-economic, Land Use, and Travel Characteristics

Introduction

Transportation systems are a vital and necessary part of society. From a rudimentary network of footpaths to the most sophisticated urban multi-modal systems, transportation networks enable people to gain access goods and services. As societies grow and evolve, more complex demands for people and goods movement require more sophisticated transportations systems. This Plan anticipates these needs. As such, it is essential to monitor changes in the population's demographic and socio-economic characteristics as well as the physical development patterns of where people live and work. Keeping abreast of changes enables ODOT to meet existing transportation needs better and establish transportation plans which will support future growth and economic development.

This chapter summarizes the demographic and socio-economic characteristics for Oklahoma, primarily focused at the county or ODOT division levels as shown in **Figure 4-1.** It presents data on the current population and employment, identifies trends that have developed over the past five to fifteen years, and discusses future projections to 2035. The chapter also discusses land use in Oklahoma and concludes with a summary of the State's travel and vehicle fleet characteristics.

Population

Population Growth

Between 1990 and 2000, Oklahoma's population grew from 3,145,585 to 3,450,654, about one percent annually. During this same decade, the national population grew by 1.3 percent annually. From 2000 to 2007, the State's population growth decreased slightly to 0.7 percent per year, which mirrors a similar drop in the U.S. population growth to approximately one percent per year.

Source: ODOT

Figure 4-1. Map of Counties in ODOT Divisions

In the future, the projected population for Oklahoma in 2035 is 4,307,600. This is an increase of 24.8 percent since 2000, which will account for 1.1 percent of the U.S. projected population of 389,531,000. With U.S. population projected to grow by 38.4 percent from 2000 to 2035, these numbers illustrate that population growth in Oklahoma is expected to be slower than the U.S. as a whole.

Table 4-1 presents population and population projection for 1990, 2000, 2007, 2030, and 2035 for the eight ODOT Divisions. Oklahoma has four Metropolitan Areas (MA): Oklahoma City MA, Tulsa MA, Lawton MA, and Ft. Smith MA.[1] An MA is defined as a large population nucleus (a place with a minimum of 50,000 persons or a Census-Bureau-defined urbanized area), along with adjacent counties, that has a population with a high degree of economic and social integration. **Table 4-2** lists the metropolitan counties within each MA.

Table 4-3 displays the historic, current, and projected population data for the four MAs. The Oklahoma City MA, the largest of the four, included over 1,175,727 residents in 2007 and is projected to increase to 1,345,400 in 2035.

Table 4-1. Population by ODOT Division

ODOT Division	Total Population				
	1990	2000	2007	2030	2035*
Division 1	266,468	300,406	317,048	397,400	413,500
Division 2	209,612	227,762	233,156	284,800	295,000
Division 3	411,546	463,116	497,047	574,700	591,400
Division 4	899,275	986,633	1,050,309	1,169,000	1,195,400
Division 5	139,165	134,901	130,442	153,100	156,300
Division 6	76,853	77,974	75,898	99,200	103,200
Division 7	301,861	314,351	318,508	368,300	377,300
Division 8	840,805	945,511	985,715	1,146,100	1,175,500
State	3,145,585	3,450,654	3,608,123	4,192,600	4,307,600

Source: Oklahoma Department of Commerce (1990–2030).
*State and most local authorities will not develop 2035 population projections until data from the 2010 Census become available. 2035 projections were estimated by assuming that the projected growth rate for 2025-2030 would continue in 2030-2035.

Table 4-2. Metropolitan Areas

MA	Metropolitan County
Oklahoma City	Canadian, Cleveland, Logan, McClain, Oklahoma, and Pottawatomie
Tulsa	Creek, Osage, Rogers, Tulsa and Wagoner
Lawton	Comanche
Ft. Smith	Sequoyah

Source: ODOT.

Table 4-3. Metropolitan Area Population and Population Projection

MA	2000 Population	2007 Population Estimate	Growth per Year 2000 to 2007	2030 Population Projection	2035 Population Projection*
Oklahoma City	1,083,346	1,175,727	1.2 %	1,312,900	1,345,400
Tulsa	803,235	848,580	0.8 %	970,300	993,400
Lawton	114,996	113,931	-0.1 %	139,200	142,700
Ft Smith	38,972	40,926	0.7%	52,600	54,900

Source: Oklahoma Department of Commerce (1990–2030).
*State and most local authorities will not develop 2035 population projections until data from the 2010 Census become available. 2035 projections were estimated by assuming that the projected growth rate for 2025-2030 would continue in 2030-2035.

Non-metropolitan areas consist of either micropolitan or rural counties. Micropolitan counties must have at least one urban cluster of at least 10,000 but less than 50,000 population, while rural counties have below 50,000 with no urban cluster. **Figure 4-2** shows the counties considered metropolitan, micropolitan, and rural.

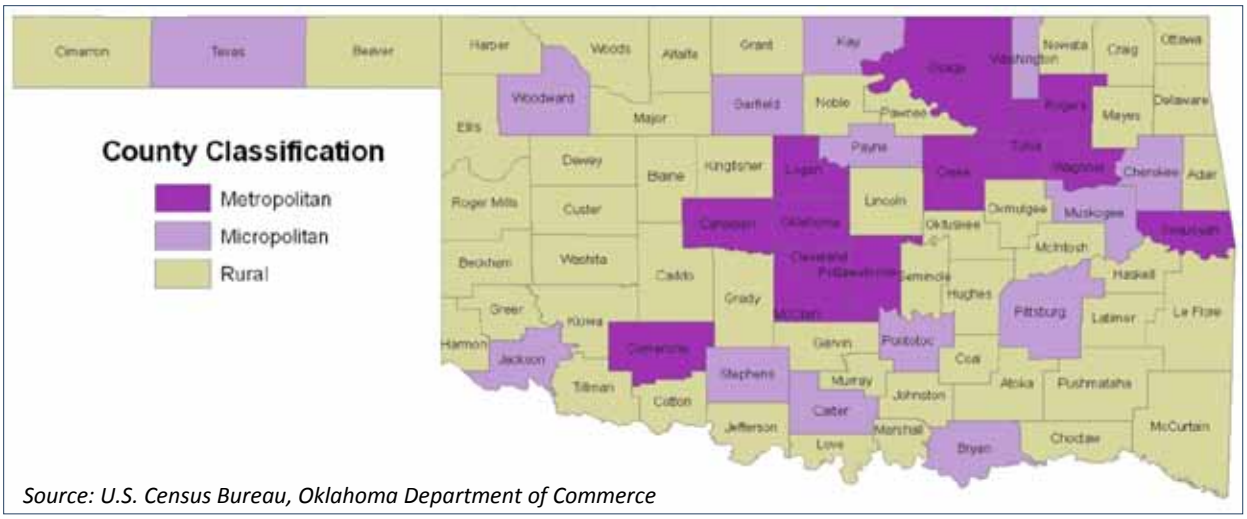
As Table 4-3 indicates, Oklahoma's population is highly concentrated in metropolitan areas. Nearly 2.2 million people out of a statewide total population of approximately 3.6 million were estimated to reside in MAs in 2007. This reflects a long-term historical trend of shifting the State's population from non-metropolitan to metropolitan areas. Oklahoma's metropolitan area population increased from approximately 43 percent of State population in 1950 to approximately 61 percent in 2000. Current projections for 2030 and 2035 estimate that approximately 59 to 60 percent of the State's population will live in metropolitan areas.

Figure 4-3 illustrates the annual population growth rates for counties in Oklahoma between 1990 and 2000. The map highlights areas of particularly high growth in the counties near the MAs in the eastern part of Oklahoma and low to growth or decline in the primarily rural counties in the western portion of the State.

Figure 4-4 illustrates the growth rates for counties in Oklahoma between 2000 and 2007. The map shows how the growth trends found in the previous decade have stabilized in the following seven years.

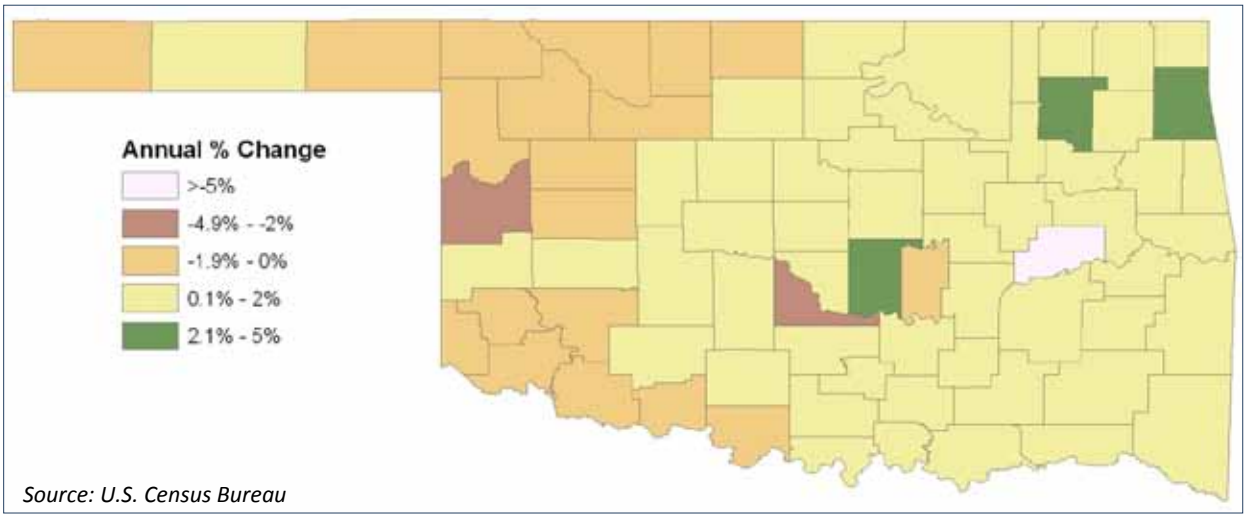
Birth Rates, Life Expectancy, and Migration

In the decades prior to 2000, the birth rate[2] declined in both Oklahoma and the nation. However, between 2002 and 2007, the trend started to reverse and the birth rate increased in both Oklahoma and the U.S. In Oklahoma, the rate rose from 68.8 to 74.7 births per 1,000 women of childbearing age (15 to 44 years), and in the U.S. it rose from 64.8 to 68.4. Life expectancy both in Oklahoma and the nation has significantly increased over the past decades. In 1970 the national life expectancy rate was 70.8 years, which has steadily increased to 78.1 years in 2008. Although life expectancy in Oklahoma increased from 71.5 years in 1970 to 75.1 years in 1990, it has remained at this level through 2007.[3]



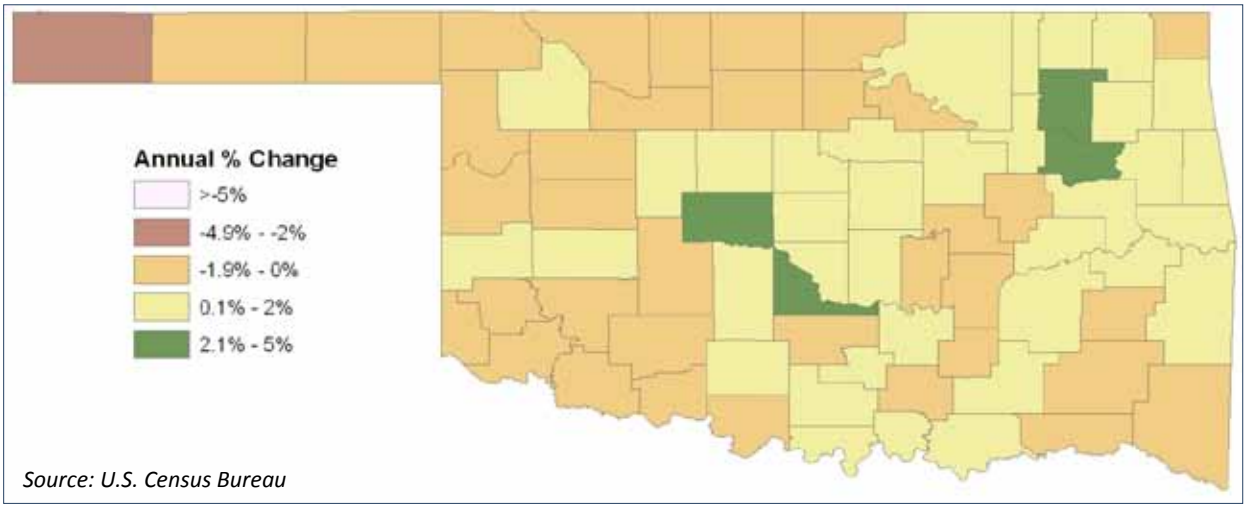
Source: U.S. Census Bureau, Oklahoma Department of Commerce

Figure 4-2. County Population Classification



Source: U.S. Census Bureau

Figure 4-3. Annual Population Change by County, 1990 to 2000



Source: U.S. Census Bureau

Figure 4-4. Annual Population Change by County, 2000 to 2007

Migration in and out of Oklahoma has historically had significant influence on the State's population, although it is highly unpredictable. During economic growth periods in Oklahoma, most notably the oil boom between 1975 and 1983, the State received an increased inflow of population. In the period between 1970 and 1980, a total of 293,500 more people came than left, the migration accounting for nearly two-thirds of Oklahoma's total increase. Brief economic downturns inevitably have resulted in increased out-migration; but overall, Oklahoma has demonstrated stable to small positive gain in migration into versus out of the State in recent years.

Race and Ethnicity

Race, usually classified as White, African American, Native American, Asian/Pacific Islander, or Other, and ethnicity are considered separate and distinct identities. Thus, in addition to their race or races, individuals are categorized by membership in one of two ethnicities: Hispanic or Not Hispanic.

In 1990, the population in Oklahoma was predominately White, with the largest minority group being Native American. In the past 17 years, both of these groups have experienced declining growth, while the percentage of Asian/Pacific Islander and Other minorities is increasing. "Other" minorities includes any other responses to race, such as two or more races, multiracial, mixed, interracial, or a Hispanic/Latino group (not a race group because considered ethnicity). During this same time period, the percentage of African Americans has remained steady. Individuals with Hispanic origin are the fastest growing minority group in Oklahoma. **Table 4-4** presents the percentage race and ethnic composition of Oklahoma's population from 1990 to 2007.

Table 4-4. Race and Ethnicity of the Oklahoma Population, 1990-2007

Race	1990	2000	2007
White	82.2%	76.6 %	74.9 %
African American	7.2 %	7.4 %	7.5 %
Native American	8.2 %	8.1 %	6.8 %
Asian /Pacific Islander	1.0%	1.4 %	1.7 %
Other	1.3 %	7.4 %	9.1 %
Ethnicity	1990	2000	2007
Hispanic Origin	2.6 %	5.1 %	7.2 %
Non-Hispanic Origin	97.4 %	94.9%	92.8 %

Source: U.S. Census Bureau.

Minority groups in Oklahoma are primarily urban residents. With the exception of Native Americans, the majority of each minority population resides in metropolitan areas. Detailed data are presented in **Table 4-5.**

Table 4-5. Distribution of Race and Ethnicity by Metropolitan/Non-Metropolitan Areas, 2007

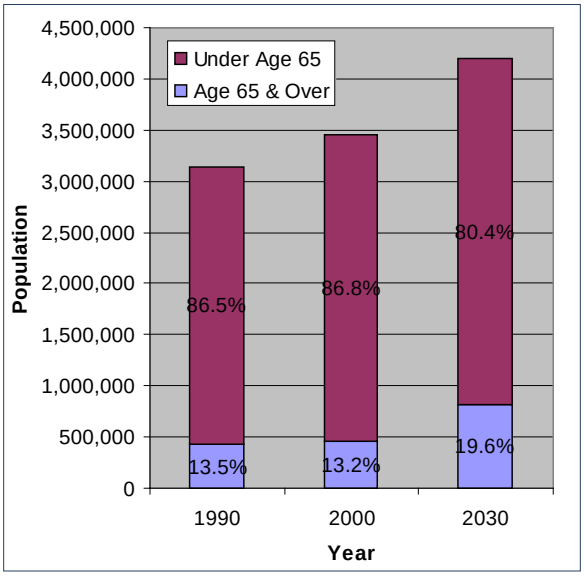
Race	Metropolitan	Non-Metropolitan	Total
White	46.2 %	28.7 %	74.9 %
African American	6.1 %	1.4 %	7.5 %
Native American	2.9 %	3.9 %	6.8 %
Asian/Pacific Islander	1.4 %	0.3 %	1.7 %
Other	5.7 %	3.4 %	9.1 %
Ethnicity	Metropolitan	Non-Metropolitan	Total
Hispanic Origin	5.1 %	2.1 %	7.2 %
Non-Hispanic Origin	57.2 %	35.6 %	92.8 %

Source: U.S. Census Bureau.

Age Distribution

Oklahoma has experienced notable growth in its aging population. In 1990, the median age in Oklahoma was 33. This has increased to 36 in 2007. The 1990 U.S. Census shows that 13.5 percent of the State's population was age 65 or older and 25.9 percent were under 18 years. These percentages have remained

fairly constant until present. However, while Oklahoma's total population is estimated to grow by approximately 19 percent between 2007 and 2035, the population of individuals age 65 and over is predicted to increase by over 60 percent from 2007 to 2030.[4] **Figure 4-5** displays the projected growth in the 65 and over age group. Oklahoma's age 65 and over population comprised 13.5 percent of total population in 1990 and 13.2 percent in 2000, compared to 12.6 percent and 12.4 percent in 1990 and 2000, respectively, for the entire U.S. According to Census Bureau projections, the percentages for Oklahoma and the U.S. will be roughly the same in 2030—19.6 percent in Oklahoma and 19.3 percent for the U.S.



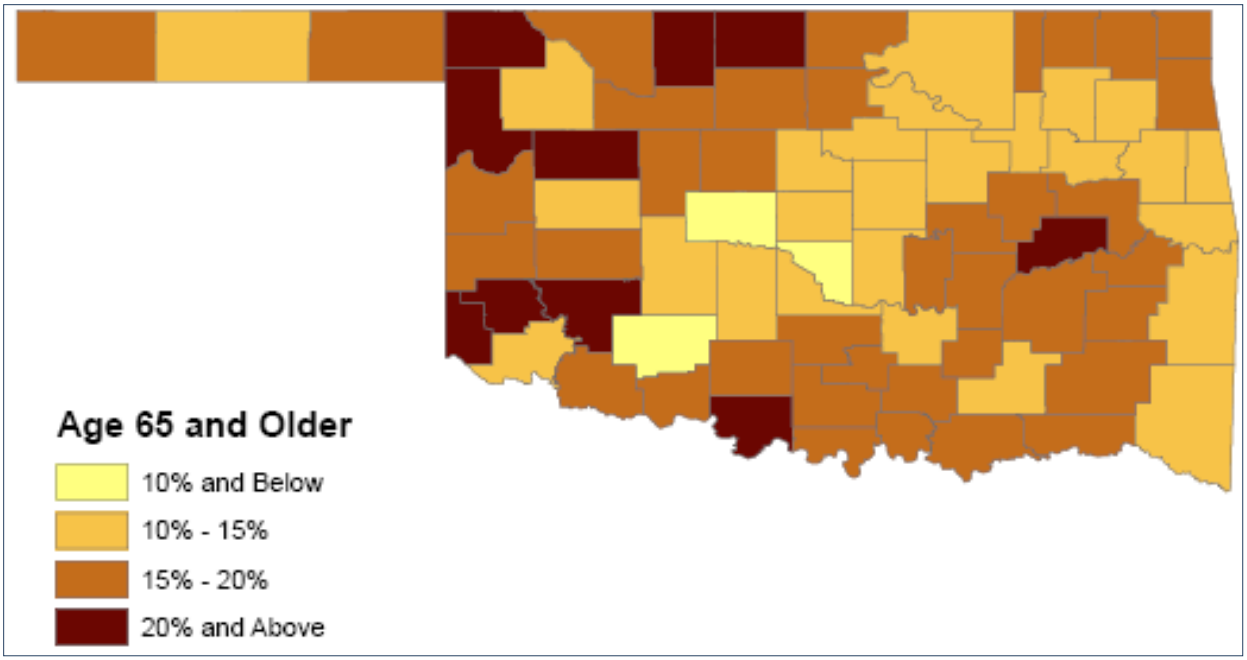
Source: U.S. Census Bureau.

Figure 4-5. Population Age 65 and Over from 1990 to 2030

Figure 4-6 illustrates the percentages of individuals age 65 and over by county. The map indicates that counties with the highest proportions of elderly (20 percent or more) are in rural areas. Counties with age 65 and over populations between 15 and 20 percent are in rural or micropolitan areas. Although actual numbers of older residents are higher in metropolitan areas (because total population is higher), an aging population is notably more typical of rural and micropolitan areas.

An indication of Oklahoma's aging population can be found when examining the growth rate of Oklahomans age 15 years and under. Between 1990 and 2000, this age group grew by 0.4 percent per year. This growth occurred in metropolitan areas. For non-metropolitan areas, the age group declined by 0.1 percent annually.

Between 2000 and 2005, the group age 15 and under declined by 0.7 percent annually for the State as a whole. Decline occurred in both metropolitan and non-metropolitan areas. A similar trend can be found in the proportion of youth to the total Oklahoma population, which has declined steadily since 1990. In 1990, 22.5 percent of the State's population was less than 15 years of age, by 2000 the figure had dropped to 21.2 percent and in 2005 the number had further decreased to 19.9 percent. The decline of this demographic occurred in both metropolitan and non-metropolitan areas.



Source: U.S. Census Bureau

Figure 4-6. Oklahoma Population, Age 65 and Over by County, 2000

Transportation Implications of an Aging Population

As the aging population increases, it is important to consider the elderly's specialized mobility needs. There are a growing number of older individuals driving more miles and later in life. Measures to accommodate elderly drivers include installing larger signs with larger letters, establishing protected left-turn signal phases at high-volume intersections, improving intersection design, enhancing traffic control measures (particularly in work zones), and developing more visible roadway delineation, among others. The aging population who no longer drives may rely increasingly on public transportation. These individuals may also require special assistance from transit providers which make it more difficult to meet elderly needs. While reliable, fixed-route systems are unable to offer demand-responsive transportation opportunities.

Older users who are unable to walk long distances are limited to services and activities in close proximity to transit stops. Demand-response and paratransit services, on the other hand, attempt to fulfill this challenge by offering types of door-to-door service between origins and destinations.

Education

In 1990, 74.6 percent of Oklahoma's population were high school graduates (compared to 75.2 percent in the U.S.), and 17.8 percent had a bachelor's degree or higher (20.3 percent in the U.S.). By 2000, 84.2 percent of the population was high school graduates (U.S., 80.4 percent) and 22.2 percent had a bachelor's degree or higher (U.S., 24.4 percent). In 2007, 84.8 percent of the State's population held a high school diploma or an equivalency (U.S., 84.5 percent), and those with a bachelor's degree or higher had increased to 22.8 percent (U.S., 27.5 percent). **Table 4-6** presents data on educational attainment from 1990 to 2007.

Table 4-6. Education Attainment for Ages 25 to 64, 1990 to 2007

Educational Attainment	Year		
	1990	2000	2007
Less than High School	25.4 %	15.8 %	15.2 %
High School	30.5 %	33.1 %	33.1 %
Some College	21.3 %	22.3 %	22.3%
Associate Degree	5.0 %	6.6 %	6.7%
Bachelor's Degree	11.8 %	15 %	15.2%
Graduate/Professional Degree	6.0 %	7.3 %	7.6%

Source: U.S. Census Bureau.

Employment

Oklahoma employed over 1.6 million people in 2007, with 1.56 million non-farm employees. The largest employer for the State is consistently the government, both state and local. **Table 4-7** shows the trends from 2000 to 2007 for non-farm employees.

Oklahoma's unemployment rate closely follows economic cycles of boom and bust within the State, but it is less dependent on national economic trends. This is illustrated by Oklahoma's 1.6 percent job growth rate in 2007 while the national economy slowed. In early 2008, 21 states reported job losses while Oklahoma continued to create jobs.[5]

The State's employment figures account for individuals in the labor force—those individuals actively seeking work. The unemployment rate has fluctuated around four percent between 1990 and 2007 but has consistently been lower than the national rate, as shown in **Table 4-8.**

As shown by **Figure 4-7,** unemployment rates are expected to increase over the short term, peaking at 8.0 percent in 2010, as various sectors of the economy continue to contract. The Oklahoma economy is expected to have begun its rebound in the latter half of 2010, which will lead the State's job growth at an average annual increase of 3.3 percent through 2014.

Long-term economic growth relies on available labor, which is measured by the labor force participation rate. Growth in the labor force is influenced by an increase in labor force participation and population growth.

Both the nation's and Oklahoma's labor force participation rates have remained relatively constant since 2000, at approximately 66 percent and 64 percent, respectively. While Oklahoma's labor force participation rate is consistently below the national rate, the difference is approximately two percent.

Income and Poverty Status

Table 4-9 shows the change in median household income and poverty for Oklahoma. Between 2000 and 2007, the median household income in Oklahoma increased from $33,417 to $41,551. During the same time period, the percent of individuals in poverty also increased from 13.8 percent to 15.8 percent.[6] Comparatively, the median household income for the United States rose from $41,994 in 2000 to $50,233 in 2007, while the percent of individuals in poverty across the nation rose from 11.3 percent to 12.5 percent. While the percent of those in poverty in Oklahoma has decreased for the past three years after a notable spike in 2005 and 2006, the 2007 rate was significantly higher than that of 2000.

On the whole, the poverty rate in non-metropolitan Oklahoma is higher than in metropolitan areas. In 2007, non-metropolitan areas experienced a poverty rate of 18.5 percent compared to a rate of 14.3 percent for metropolitan areas. Nevertheless, pockets of high poverty rates are found in metropolitan areas. In 2007, Oklahoma County had the State's highest poverty rate of 22.1 percent.

Table 4-7. Oklahoma Employment, 2000 to 2007

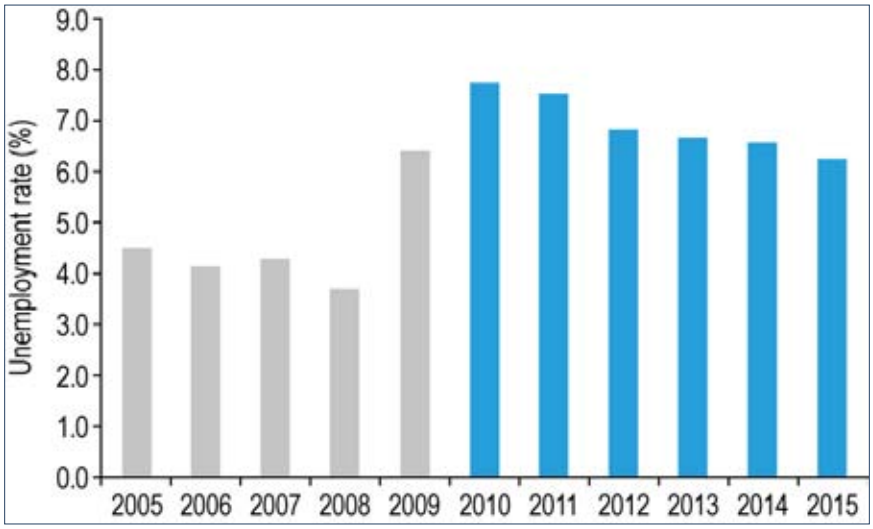
Employment	2000	2001	2002	2003	2004	2005	2006	2007
Total Non-farm Employment	1,480	1,494	1,474	1,445	1,461	1,499	1,540	1,566

Source: Bureau of Economic Analysis (BEA), 2009 (in thousand persons).

Table 4-8. Percentage Employment in Oklahoma, 1990 to 2007

Year	In Labor Force	Employed	Unemployed (Oklahoma)	Unemployed (U.S.)
1990	62.5 %	57.1 %	4.2 %	5.6 %
2000	63.9 %	59.7 %	3.7 %	4.0 %
2005	64.4 %	61.8 %	4.3 %	5.1 %
2006	64.4 %	61.9 %	3.8 %	4.6 %
2007	63.3 %	60.5 %	4.3 %	4.6 %

Source: Oklahoma Employment Security Commission; U.S. Department of Labor, Bureau of Labor Statistics.



Source: Global Insight Regional Economic Forecast Services, February 2009 (projected rates); Oklahoma Employment Security Commission, 2010 (past rates)

Figure 4-7. Projected Unemployment Rate for Oklahoma

Table 4-9. Median Income and Poverty Rates in Oklahoma 2000 to 2007

	2000	2001	2002	2003	2004	2005	2006	2007
Median Household Income	$33,417	$34,912	$35,313	$35,634	$37,109	$37,020	$38,753	$41,551
Percent in Poverty (individuals)	13.8 %	14.4 %	14.5 %	14.7 %	14 %	16.4 %	16.7 %	15.8 %

Source: U.S. Census Bureau.

Transportation Implications of Increasing Poverty Rates

The rise in the percent of the State's individuals considered in poverty suggests an increase in the transit-dependent population. With less disposable income, individuals or households may not be able to afford a personal automobile and be more reliant on public transportation for their mobility needs.

ODOT is undertaking a transit study as part of this Plan. It will identify ways the State's existing public transit systems can coordinate services across providers more effectively to offer passengers additional mobility choices across the State.

Land Use Trends

Land use is so closely interrelated with transportation systems that it is difficult to determine which has a stronger effect on shaping the other. Since each land use type has specific accessibility requirements and transportation provides the accessibility, development will take place along transportation corridors that provide suitable access. Likewise, as more development occurs in an area, suitable transportation systems are necessary to accommodate the activities generated by such development.

Oklahoma is primarily rural. Of the State's 77 counties, 29 have more than two percent of their land base classified as urban, and only seven counties have more than five percent of their land base classified as urban. For the ODOT Divisions, two ODOT Divisions (Division 4 and Division 8) have less than 95 percent of their lands classified as rural. **Table 4-10** shows the percentage of population living on urban versus rural land by ODOT Division.

The State generally classifies counties as urban or rural. Urban areas consist of the metropolitan and micropolitan counties within Oklahoma.[7] Rural areas include the rural counties. This classification takes into account the population or population density of these areas.

Urban Areas

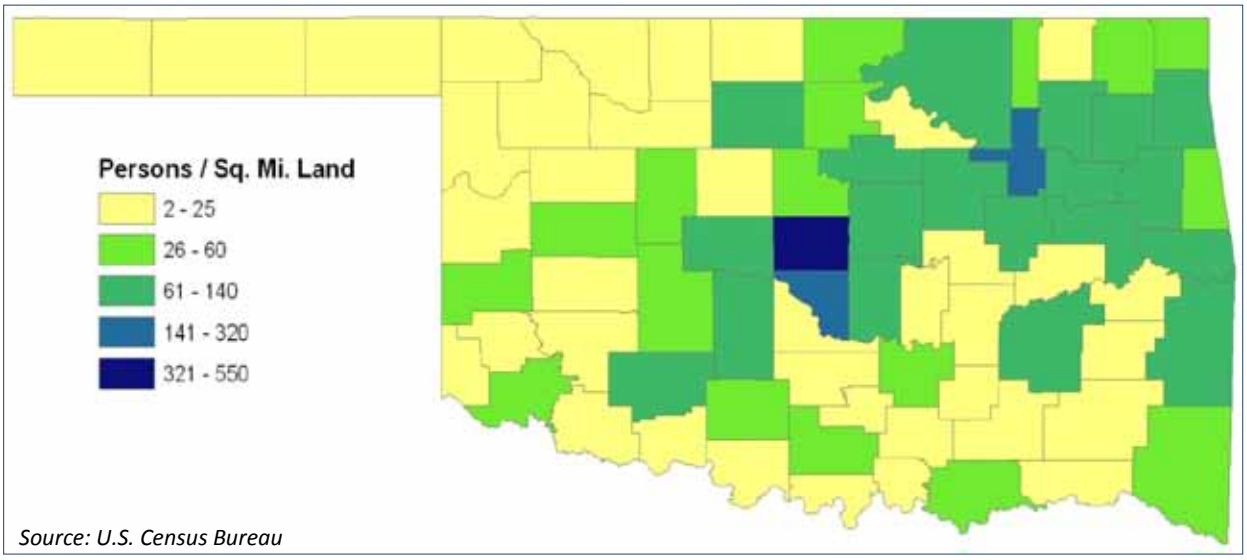
Oklahoma's population has shifted significantly to these urban areas over the past 15 years. **Figure 4-8** illustrates the population density for Oklahoma counties in 2007. The metropolitan areas of Oklahoma City and Tulsa have noticeably higher population densities than the rest of the State. Other urban areas include counties classified as micropolitan counties, which include the smaller cities in Oklahoma. Figure 4-8 shows the population densities for the smaller urban areas.

Table 4-11 shows the total population and population projections for urban counties by ODOT Division. With the exception of Texas County, all urban areas are projected to experience between one and two percent population growth between 2007 and 2035. Texas County is predicted to increase in population by four percent.

Table 4-10. Percentage of Population on Urban versus Rural Land by ODOT Division

ODOT Division	2000		2005		2015 Projected		2025 Projected		2030 Projected	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Division 1	45.3	54.7	45.4	54.6	45.4	54.6	45.3	54.7	45.2	54.8
Division 2	21.1	78.9	21.1	78.9	21.0	79.0	20.8	79.2	20.8	79.2
Division 3	57.8	42.2	58.7	41.3	59.7	40.3	60.1	39.9	60.3	39.7
Division 4	79.3	20.7	79.3	20.7	79.3	20.7	79.4	20.6	79.3	20.7
Division 5	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
Division 6	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
Division 7	51.1	48.9	51.7	48.3	52.4	47.6	52.7	47.3	52.8	47.2
Division 8	80.6	19.4	80.6	19.4	80.3	19.7	79.9	20.1	79.7	20.3

Source: Oklahoma Department of Commerce.
Data are not available in this format for subsequent years.



Source: U.S. Census Bureau

Figure 4-8. 2007 Population Density by County

Table 4-11. Population Projection for Urban Counties by ODOT Division

ODOT Division	Urban Counties (Metropolitan and Micropolitan)	Population of Urban Counties					
		2000	2007	2015	2025	2030	2035*
1	Sequoyah, Wagoner, Cherokee, Muskogee	208,435	224,161	241,200	262,500	272,400	282,700
2	Bryan, Pittsburg	80,487	83,934	89,100	95,300	98,400	101,600
3	Cleveland, McClain, Pottawatomie, Pontotoc	336,420	372,758	386,000	412,100	424,300	437,000
4	Canadian, Logan, Oklahoma, Payne, Garfield, Kay	956,152	1,020,420	1,053,200	1,107,200	1,131,800	1,157,000
5	Jackson	28,439	25,686	31,000	32,700	33,400	34,100
6	Texas, Woodward	38,593	39,564	49,100	56,300	59,800	63,600
7	Comanche, Carter, Stephens	203,799	204,670	219,700	230,900	235,900	241,000
8	Creek, Osage, Rogers, Tulsa, Washington	794,740	831,215	874,800	922,800	942,600	962,800

Source: Oklahoma Department of Commerce (1990–2030).
*State and most local authorities will not develop 2035 population projections until data from the 2010 Census become available. 2035 projections were estimated by assuming that the projected growth rate for 2025-2030 would continue from 2030 to 2035.

The following section describes the overall land use vision and patterns occurring in the metropolitan areas.

Oklahoma City The *2000–2020 Oklahoma City Comprehensive Plan* builds on the guidelines presented in prior city comprehensive plans and focuses on stronger mandates to revitalize the central area of Oklahoma City, improve its appearance, and restore a sense of community. For urban growth areas, the Plan specifically encourages "development at higher residential densities than in the past" and encourages infill and mixed-use development and development along or within major activity corridors and major activity centers. Infill development is also recommended for traditional neighborhoods, along with context-appropriate revitalization and adaptive reuse. The Plan states that its primary goal is to support the central role of the downtown area for employment, culture, urban residential, and entertainment.

Guidelines and recommendations contained in the *2000–2020 Oklahoma City Comprehensive Plan* actively encourage a change in the direction of growth trends in Oklahoma City. By encouraging higher densities and infill development, the Plan seeks to rein in urban sprawl and create a better sense of community.

Tulsa The City of Tulsa is in the process of updating the *Tulsa Metropolitan Area Comprehensive Plan—Vision 2000,* which was completed in 1987. This regional plan guides development decisions and land use priorities in the greater Tulsa area. Vision 2000 supports areas of mixed use development and initiatives to support the central business district (CBD) as the regional center for commercial, office, and employment activity. The plan also recommends cluster development as opposed to strip development and calls for designating corridors or special development zones to support a fixed guideway system. Pedestrian needs are supported by recommending a pathway system that connects schools, shopping, and key activity areas. The plan also recommends improving facilities to encourage walking as the principal travel mode downtown.

Lawton Current land use patterns in Lawton are characterized by strip commercial development along major roadways, high levels of multi-family residential development, and sprawled single-family suburban residential development. The *2008 Lawton Growth Management Plan* found that these land use influences and trends will continue for the foreseeable future because of economic factors, such as tax revenue and existing zoning codes. Research for the growth management plan found that fiscal inflexibilities associated with Oklahoma's municipal finance laws allow for area cities to encourage and develop strip-like commercial corridors as their primary source of sales tax revenues for their community's operations. The Plan also states that over the past 20 years, Lawton has primarily focused on developing new residential and commercial areas at its urban fringe. As a result, downtown districts began declining in property value, community significance, and overall quality.

Fort Smith The *Fort Smith Comprehensive Plan (2002)* guides the City of Fort Smith in planning land use, development, and local transportation facilities for the City and its extraterritorial jurisdiction in Arkansas. However, Fort Smith's city limits and extraterritorial jurisdiction end at the Oklahoma State line, and other authorities are responsible for planning in Le Flore and Sequoyah Counties, Oklahoma, which represent that portion of the Fort Smith Metropolitan Statistical Area located within Oklahoma. The planning area for the Bi-State Metropolitan Planning Organization (BSMPO) includes a

significant portion of those two Oklahoma counties. The Oklahoma cities of Arkoma, Moffett, Muldrow, Pocola, Roland, and Spiro lie within the BSMPO planning area. A proposed expansion of BSMPO boundaries would incorporate the cities of Poteau and Sallisaw, Oklahoma, into the planning area.

The *BSMPO Planning Area 2030 Land Use Plan* defines commercial corridors. Commercial corridors are designated along I-40 in the Roland and Muldrow areas, State Highway 64B through Muldrow, State Highway 112 in Arkoma and Pocola, and U.S. 271/State Highway 9 in Spiro.

Commercial centers are also designated in Moffett and south of the intersection of US-271/State Highway 9 with State Highway 112 North in Pocola. The remainder of the planning area in Oklahoma is designated for residential use and development.

Public Transportation and Land Use

Four urban public transportation organizations operate in Oklahoma: Oklahoma City METRO Transit and Metro Transit of Norman serve the Oklahoma City MA; Metropolitan Tulsa Transit Authority serves the Tulsa MA, and the Lawton Area Transit System, serving the Lawton MA. The Oklahoma City and Tulsa systems are established and have recently considered transit needs in the future. The Lawton Area Transit System service is the newest of the four and began operating in April 2002. All four public transportation organizations offer transportation for the general public and specialized services for the elderly and disabled. Additional information regarding the two largest systems follows.

Oklahoma City Between June 2004 and December 2005 the Oklahoma City MA and the Central Oklahoma Transportation and Parking Authority developed a fixed-guideway transit study, called the *2030 System Plan Vision.* The study revisited some of the issues and recommendations of the *Oklahoma Fixed Guideway System Study* conducted by ODOT and ACOG in the mid-1990s. The Vision Plan evaluated nine transit technologies to identify which would be most suited to the Oklahoma City MA: conventional bus service, HOV lanes, bus rapid transit (BRT), light rail transit (LRT), historic streetcar, modern streetcar, commuter rail, heavy rail, and monorail.

The plan recommends improved connectivity between transit modes throughout the region. In particular, this would be achieved through a new downtown intermodal transit station where commuter rail, BRT, downtown streetcar, and local bus service would combine within the proposed I-40 redevelopment corridor. These transit improvements would allow for better connectivity of Oklahoma City's activity centers, enhance economic development opportunities, and improve mobility. These improvements have the potential for affecting land uses supportive of more mixed-use and higher-density developments.

Tulsa In September 2003, the Metropolitan Tulsa Transit Authority undertook a study to identify opportunities for the Tulsa transit system to be more responsive to existing transportation patterns to increase ridership, improve cost efficiency, and improve ridership productivity. As the project commenced, it was expanded to include a longer-range element of improved transit service in the Tulsa region and to add a regional service element to the program.

A second study, initiated by the Metropolitan Tulsa Transit Authority in October 2006, evaluated the feasibility of mass transit between Broken Arrow and Tulsa. Specifically,

the study considered commuter rail, BRT, and HOV dedicated bus lanes.

The project team found that both commuter rail and BRT merited further review and analysis based on both fiscal and technical practicality. The result of the long range planning effort provides an opportunity to reshape development and land use patterns.

Rural Areas

In 2007, 22.3 percent of Oklahoma's population resided in rural areas. Between 2000 and 2007, 39 of Oklahoma's 77 counties lost population. All but five of the counties which lost population were rural counties.[8] Between 2007 and 2035, it is estimated that one county will lose population and 11 counties will experience minimal gains, less than 0.25 percent annual growth. **Table 4-12** presents population and population projections for Oklahoma to 2035.

Recent Growth Trends and Projected Growth Areas

Over the past seventeen years, Oklahoma's population has shifted from rural to urban areas. **Table 4-13** presents a breakdown for the years 1990, 2000 and 2007 and the data clearly shows an urbanizing trend for Oklahoma residents. Of additional note to the 2007 urban figure of 77.7 percent, approximately 20 percent of these numbers lived in micropolitan counties.

Population growth has also been focused in metropolitan areas. While the State's population growth between 2000 and 2007 was 0.7 percent annually, the population in metropolitan counties increased by 0.8 percent annually. In addition to the growth experienced in Tulsa and Oklahoma Counties, the counties adjacent to the Arkansas border and the Texas border have experienced population growth in response to economic development in the two adjacent states.

Travel and Vehicle Data

Table 4-14 and **Table 4-15** present travel characteristics for Oklahoma and the U.S. between 1980 and 2007. Both tables indicate a significant increase in the numbers of vehicles on the road, the number of drivers, highway capacity, and vehicle miles of travel (VMT). Between 1980 and 1990, the VMT in Oklahoma increased by 7.3 percent. The following decade, the VMT increased by 44 percent, and again by 8.2 percent between 2000 and 2007.

Similarly, the percent increase of VMT across the nation was 40.4 percent between 1980 and 1990, 28.1 percent between 1990 and 2000, and 10.3 percent between 2000 and 2007. Between 1980 and 2007, VMT increased by 67.6 percent for Oklahoma and 99.6 percent for the U.S. **Figure 4-9** shows the percent change for VMT for Oklahoma and the United States.

When comparing VMT to the number of licensed drivers, the figures follow the same trends for both Oklahoma and the U.S., although Oklahoma's growth is significantly lower than the nation. Between 1980 and 2007, the number of licensed drivers increased by 16.6 percent in Oklahoma and 41.9 percent in the U.S.

Table 4-12. Population Projection for Rural Counties by ODOT Division

ODOT Division	Rural Counties	Population of Rural Counties					
		2000	2007	2015	2025	2030	20351
Division 1	Adair, Haskell, McIntosh, Okmulgee	91,971	92,887	107,700	119,400	125,000	130,800
Division 2	Atoka, Choctaw, Latimer, La Flore, McCurtain, Marshall, Pushmataha	147,275	149,222	166,200	179,800	186,400	193,400
Division 3	Coal, Garvin, Hughes, Johnston, Lincoln, Okfuskee, Seminole	126,696	124,289	137,700	146,400	150,400	154,400
Division 4	Grant, Kingfisher, Noble	30,481	29,889	33,600	36,000	37,200	38,400
Division 5	Beckham, Blaine, Custer, Dewey, Greer, Harmon, Kiowa, Roger Mills, Tillman, Washita	106,462	104,756	112,300	117,200	119,700	122,200
Division 6	Alfalfa, Beaver, Cimarron, Ellis, Harper, Major, Woods	39,381	36,334	39,000	39,200	39,400	39,600
Division 7	Caddo, Cotton, Grady, Jefferson, Love, Murray	110,552	113,838	121,000	128,600	132,400	136,300
Division 8	Craig, Delaware, Mayes, Nowata, Ottawa, Pawnee	150,771	154,500	176,400	194,700	203,500	212,700

Source: Oklahoma Department of Commerce (2007–2030).

[1]The State of Oklahoma and most local authorities will not develop 2035 population projections until data from the 2010 Census become available. The 2035 projections were estimated by assuming that the projected growth rate for 2025-2030 would continue in 2030-2035.

Table 4-13. Population Statistics for State, Urban and Rural Areas

	Oklahoma	Urban Areas	Rural Areas
1990 Population	3,148,035	2,371,694	776,341
1990 Percent of State Total	100.0 %	75.4 %	24.6 %
2000 Population	3,450,654	2,647,065	803,589
2000 Percent of State Total	100.0 %	76.7 %	23.3 %
2007 Population	3,608,123	2,802,408	805,715
2007 Percent of State Total	100.0 %	77.7 %	22.3 %
1990-2000 Annual Percent Change	0.9 %	1.1 %	0.4 %
2000-2007 Annual Percent Change	0.7 %	0.8 %	~0

Source: Oklahoma Department of Commerce.

Table 4-14. Travel Characteristics for Oklahoma

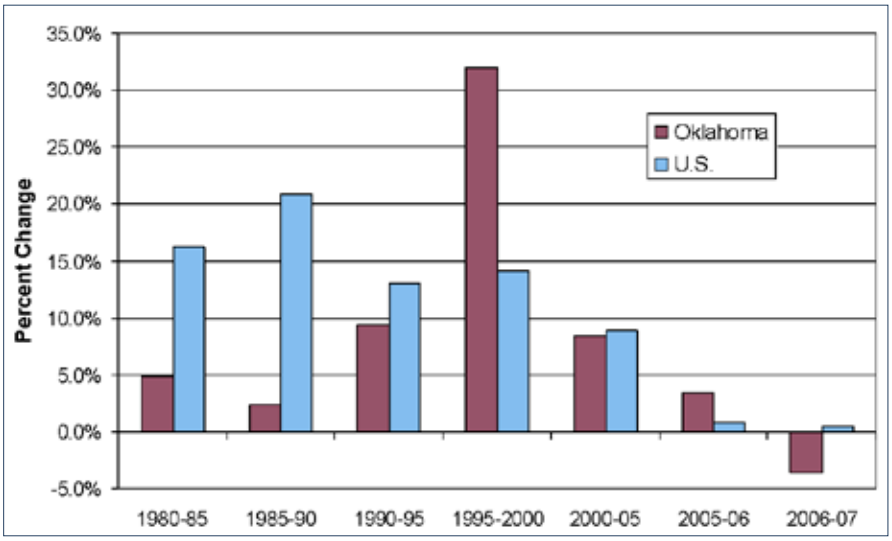
Year	Population	Registered Vehicles	Licensed Drivers	Miles of Road	Annual Vehicle Miles Traveled (in thousands)
1980	3,025,487	2,717,363	2,016,965	108,776	27,331,000
1985	3,271,333	3,067,681	2,187,408	110,407	28,657,000
1990	3,145,585	3,100,908	2,288,997	111,330	29,335,000
1995	3,308,000	3,361,753	2,357,733	112,518	32,070,000
2000	3,450,654	3,587,263	2,320,524	112,634	42,343,000
2005	3,536,000	3,756,014	2,413,559	112,938	45,922,000
2006	3,579,212	3,815,059	2,286,322	113,085	47,510,000
2007	3,608,123	3,786,391	2,351,969	112,922	45,819,700

Source: ODOT HPMS data, Oklahoma Tax Commission, Oklahoma Department of Public Safety.

Table 4-15. Travel Characteristics for the U.S.

Year	Population	Registered Vehicles	Licensed Drivers	Miles of Road	Annual Vehicle Miles Traveled (in thousands)
1980	228,289,000	161,490,159	145,000,000	3,859,837	1,527,295,000
1985	238,948,000	177,133,282	157,000,000	3,863,912	1,774,826,000
1990	248,790,925	193,057,376	167,000,000	3,866,926	2,144,362,000
1995	263,909,000	205,427,212	177,000,000	3,912,344	2,422,823,000
2000	276,059,000	225,821,241	191,000,000	3,951,101	2,764,484,000
2005	296,410,400	247,421,120	201,000,000	4,011,628	3,009,218,000
2006	298,988,100	250,851,833	202,810,438	4,033,011	3,033,753,000
2007	301,621,157	247,264,605	205,741,845	4,048,518	3,049,027,000

Source: U.S. Census Bureau, U.S. DOT, FHWA.



Source: PB, FHWA.

Figure 4-9. VMT Percentage Change, Oklahoma and U.S. from 1980 to 2007

Comparing individual driving characteristics, Oklahoma trends differ from the U.S. During 1980, each licensed driver in Oklahoma accounted for 13.6 VMT, which increased to 19.5 VMT in 2007. For the nation as a whole, licensed drivers accounted for 10.5 VMT in 1980, which increased to 14.8 VMT in 2007.

Similarly, in 1980 Oklahomans owned approximately 1.3 vehicles per licensed driver and there was 0.9 vehicle per person. By 2007, this had increased to 1.6 vehicles per licensed driver and 1.1 vehicles per person. For the nation as a whole in 1980, approximately 1.1 vehicles per licensed driver and 0.7 vehicle per person existed. By 2007, the number of vehicles per licensed driver had risen modestly to 1.2, and the number of vehicles per person decreased to 0.8. Thus, Oklahoma has more vehicles per licensed driver and more per person than the national average.

Accident Characteristics

Between 1980 and 2000, the number of crashes in Oklahoma fluctuated, as did the number of fatal accidents. **Table 4-16** shows this. However, the fatality rate per million miles traveled decreased dramatically from 3.6 to 1.6. Between 2000 and 2006, the total number of accidents decreased steadily but the number of fatalities fluctuated, as did the fatality rate per million miles traveled.

Preliminary data released for 2007 indicate that crash fatalities decreased 1.4 percent between 2006 and 2007. This puts Oklahoma's fatal crash rate at 1.04 per 5,000 persons or 1.38 per 5,000 licensed drivers.

Table 4-16. Crash Data for Oklahoma, 1980 to 2006

Year	Total Crashes	Fatal Crashes	Fatalities per Million VMT
1980	77,660	832	3.6
1985	81,073	661	2.6
1990	71,438	567	2.2
1995	77,712	601	2.1
2000	78,645	586	1.6
2005	75,511	708	1.7
2006	75,408	668	1.6

Source: Oklahoma Highway Safety Office.

Speeding was the highest cause of fatal crashes; Oklahoma County had the highest number of fatal crashes by county, and Oklahoma City had the highest number of fatal crashes by metropolitan area. However, only 28.7 percent of fatal crashes occurred in urban areas.

The Oklahoma Highway Safety Office releases an annual summary of crash data which provides figures for the total number of crashes, crashes by type, persons involved, and location. These reports consistently find that significantly more total crashes occur in the State's urban areas but that more fatal crashes occur in rural areas. For example, 71.3 percent of fatal crashes in 2007 occurred in rural Oklahoma, and 73.2 percent of total crashes in 2005 occurred in urban counties. Another trend being found is that crashes attributed to using a cellular telephone while driving is increasing steadily.

State Commuting Trends

The 2000 Census indicated that 23.8 percent of Oklahoma's employed residents worked in one county and lived in another. In Wagoner County, located southeast of Tulsa, 75.5 percent of workers commuted to other counties for work and 24.5 percent worked in Wagoner County. As such, Wagoner County claimed the highest percent of commuters working in another county and the lowest percent of individuals working in their county of residence.

Oklahoma County received the highest number of workers commuting into the county; most commuters were traveling from Cleveland and Canadian counties. Correspondingly, Cleveland County had the highest number of workers commuting to work in other counties.

The 2000 U.S. Census shows 81.8 percent of Oklahoma workers drove alone to work, 11 percent carpooled, 0.5 percent used public transit, 2.1 percent walked, and 1.7 percent used some other form of transportation to work. The remaining 2.9 percent of workers worked from home.

A report released by the Oklahoma Department of Commerce in 2006 noted that between 1970 and 2000, the number of workers in the State increased 62 percent while the number of commuters crossing county lines to work grew 241 percent. The report indicated that Tulsa's Central Business District (CBD) had a daytime population of 33,590 but only 3,506 permanent residents, and Oklahoma City's CBD had a daytime population of 24,115 but only 3,995 permanent residents. Recent increases in

downtown housing may change this, which the 2010 census will reveal.

Other commuting statistics available from the U.S. Census Bureau's *2007 American Community Survey for Oklahoma* indicate that 92.4 percent of Oklahomans drove to work in a car, truck, or van; 80.5 percent drove alone; and 11.9 percent carpooled. Oklahoma posted relatively low figures for alternative commuting modes, with 0.5 percent having used public transportation, 1.9 percent having walked, and 1.3 percent having used other modes. The remaining 3.9 percent worked at home.

Oklahoma Vehicle Fleet Characteristics

According to the Federal Highway Administration, of the registered private and commercial vehicles in Oklahoma in 2007, 50.1 percent were automobiles and 49.2 percent were trucks. Within the truck category, 50.0 percent were classified as pickups, 12.0 percent were vans, 26.0 percent were sport utility vehicles, and less than one percent was classified as other. Between 1997 and 2007, the total number of registered trucks increased by approximately three percent. Within the truck category, the proportion of pickups decreased by 12.0 percent, the proportion of vans decreased by two percent, and the proportion of sport utility vehicles increased by 12.0 percent.

As a whole, all truck classes have lower fuel efficiency than passenger vehicles. The trend towards purchasing trucks over passenger vehicles, and in particular sport utility vehicles, illustrates the tendency of consumers to give scant consideration to vehicle fuel economy ratings when fuel prices are relatively low. However, with the exponential jump in oil prices through 2007 and 2008, anecdotal evidence points to a sharp decline in the demand for low fuel efficiency vehicles; a significant increase in the demand for smaller, more fuel efficient passenger vehicles; and a marked interest in alternative fuel vehicles.

In 2008, Oklahoma demonstrated its commitment to encouraging consumers to purchase alternative fuel vehicles by passing legislation. It provided a one-time income tax credit for clean-burning fuel motor vehicles placed in service after 1990 and qualified electric motor vehicles (battery electric and hybrids) placed in service after 1995. Additional legislation in 2008 legalized the operation of medium-speed electric vehicles on Oklahoma roads with a posted speed limit of 45 miles per hour or less.

In 2009, the Oklahoma Legislature passed HB 1952. It authorized the Department of Central Services to build alternate fuel stations for state agencies and vehicle fleets of schools and city and county governments. Oklahoma currently has 28 alternative fuel stations.

Chapter 4 Endnotes

[1] Shared MA with Arkansas.

[2] The birth rate used here is the "general fertility rate," which is the total number of live births per every 1,000 women of childbearing age (15 to 44 years).

[3] U.S. Department of Health and Human Services, National Center for Health Statistics

[4] Data are not currently available to show the age distribution trends through 2035.

[5] Oklahoma State University, 2008 Economic Outlook

[6] The Oklahoma poverty level in 2007 was $20,650 for a family of four. The federal poverty level for a family of four in 2007 was approximately $21,300.

[7] See Figure 4-2.

[8] Rural is classified as a county with a population less than 50,000 with no urban cluster. See Figure 4-2.