

## Chapter 11

### Household Vehicles and Characteristics

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	<i>1970</i>	<i>5.5%</i>
	<i>1980</i>	<i>17.5%</i>
	<i>1990</i>	<i>17.3%</i>
	<i>2000</i>	<i>18.3%</i>
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	<i>Person-miles</i>	<i>827 billion</i>



*Vehicle-miles are growing at a faster rate than vehicles and more than twice the rate of population. See Table 11.2 for vehicles per capita and vehicle-miles per capita.*

**Table 11.1**  
**Population and Vehicle Profile, 1950–2000**

Year	Resident population <sup>a</sup> (thousands)	Total households (thousands)	Number of vehicles in operation (thousands)	Total vehicle-miles (millions)	Number of licensed drivers (thousands)	Number of civilian employed persons (thousands)
1950	151,868	43,554	43,256	458,246	62,194	58,918
1955	165,069	47,874	55,804	605,646	74,686	62,170
1960	179,979	52,799	66,582	718,762	87,253	65,778
1965	193,526	57,251	82,067	887,812	98,502	71,088
1970	203,984	63,401	98,136	1,109,724	111,543	78,678
1975	215,465	71,120	120,054	1,327,664	129,791	85,846
1980	227,225	80,776	139,832	1,527,295	145,295	99,303
1985	237,924	86,789	157,048	1,774,826	156,868	107,150
1986	240,133	88,458	162,094	1,834,872	159,487	109,597
1987	242,289	89,479	167,193	1,921,204	161,975	112,440
1988	244,499	91,061	171,741	2,025,962	162,853	114,968
1989	246,819	92,830	175,960	2,096,487	165,555	117,342
1990	249,464	93,347	179,299	2,144,362	167,015	118,793
1991	252,153	94,312	181,438	2,172,050	168,995	117,718
1992	255,030	95,689	181,519	2,247,151	173,125	118,492
1993	257,783	96,391	186,315	2,296,378	173,149	120,259
1994	260,327	97,107	188,714	2,357,588	175,403	123,060
1995	262,803	98,990	193,441	2,422,696	176,628	124,900
1996	265,229	99,627	198,294	2,485,848	179,539	126,708
1997	267,784	101,018	201,071	2,561,695	182,709	129,558
1998	270,248	102,528	205,043	2,631,522	184,980	131,463
1999	272,691	103,874	209,509	2,691,056	187,170	133,488
2000	275,130	104,705	213,300	2,749,803	190,625	135,208
<i>Average annual percentage change</i>						
1950–2000	1.2%	1.8%	3.2%	3.6%	2.3%	1.7%
1990–2000	1.0%	1.2%	1.8%	2.5%	1.3%	1.3%

**Source:**

Resident population, total households, and civilian employed persons - U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States—2001*, 121st edition, Washington, DC, 2001, pp. 8, 49, 367, and annual. (Additional resources: [www.census.gov](http://www.census.gov))

Vehicles in operation - The Polk Company. **FURTHER REPRODUCTION PROHIBITED.** (Additional resources: [www.polk.com](http://www.polk.com))

Licensed drivers and vehicle-miles - U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2000*, Tables DL-20 and VM-1, and annual. (Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov))

<sup>a</sup>Estimates as of July 1. Includes Armed Forces stationed in the United States.



*In 2000 there were 1.12 vehicles for every licensed driver in the U.S. Vehicle-miles per capita have nearly reached 10,000 miles.*

**Table 11.2**  
**Population and Vehicle Ratios, 1950–2000**

Year	Vehicles per capita	Vehicle-miles per capita	Licensed drivers per household	Vehicles per licensed driver	Vehicles per civilian employed persons	
1950	0.28	3,029	1.43	0.70	0.73	
1955	0.34	3,656	1.56	0.75	0.90	
1960	0.37	3,994	1.65	0.76	1.01	
1965	0.42	4,587	1.72	0.83	1.15	
1970	0.48	5,440	1.76	0.88	1.25	
1975	0.56	6,162	1.82	0.92	1.40	
1980	0.62	6,722	1.80	0.96	1.41	
1985	0.66	7,460	1.81	1.00	1.47	
1986	0.68	7,641	1.80	1.02	1.48	
1987	0.69	7,929	1.81	1.03	1.49	
1988	0.70	8,286	1.79	1.05	1.49	
1989	0.71	8,494	1.78	1.06	1.50	
1990	0.72	8,596	1.79	1.07	1.51	
1991	0.72	8,614	1.79	1.07	1.54	
1992	0.71	8,811	1.81	1.05	1.53	
1993	0.72	8,908	1.80	1.08	1.55	
1994	0.72	9,056	1.81	1.08	1.53	
1995	0.74	9,219	1.78	1.10	1.55	
1996	0.75	9,372	1.80	1.10	1.56	
1997	0.75	9,566	1.81	1.10	1.55	
1998	0.76	9,737	1.80	1.11	1.56	
1999	0.77	9,870	1.80	1.12	1.57	
2000	0.78	9,995	1.82	1.12	1.58	
		<i>Average annual percentage change</i>				
1950–2000	2.1%	2.4%	0.5%	0.9%	1.6%	
1990–2000	0.8%	1.5%	0.2%	0.5%	0.5%	

**Source:**

Resident population, total households, and civilian employed persons - U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States–2001*, 121st edition, Washington, DC, 2001, pp. 8, 49, 367, and annual. (Additional resources: [www.census.gov](http://www.census.gov))

Vehicles in operation - The Polk Company. **FURTHER REPRODUCTION PROHIBITED.** (Additional resources: [www.polk.com](http://www.polk.com))

Licensed drivers and vehicle-miles - U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2000*, Tables DL-20 and VM-1, and annual. (Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov))





*Transportation (18.8%) is second only to housing (31.1%) as the largest expenditure for the average household. In 2000, approximately 17.4% of transportation expenditures were for purchasing gasoline and motor oil. There is an average of two vehicles per household.*

**Table 11.3**  
**Average Annual Expenditures of Households by Income, 2000<sup>a</sup>**

	All households	Income before taxes								
		Less than \$5,000	\$5,000–\$9,999	\$10,000–\$14,999	\$15,000–\$19,999	\$20,000–\$29,999	\$30,000–\$39,999	\$40,000–\$49,999	\$50,000–\$69,999	\$70,000 and over
Total expenditures	\$40,238	\$17,946	\$15,703	\$21,199	\$24,331	\$29,852	\$35,609	\$42,323	\$49,245	\$75,964
		Percentage of total expenditures <sup>b</sup>								
Food <sup>c</sup>	14.6%	15.9%	16.7%	15.1%	16.2%	16.1%	15.4%	15.6%	14.4%	12.4%
Housing	31.1%	37.2%	35.4%	35.7%	32.9%	31.4%	31.2%	30.4%	30.3%	30.2%
Apparel and services	5.0%	5.0%	5.4%	3.8%	4.8%	4.7%	4.7%	4.7%	4.8%	5.3%
Transportation	18.8%	16.7%	16.5%	20.6%	19.1%	19.2%	20.5%	20.6%	19.6%	17.6%
<b>Vehicle purchases (net outlay)</b>	<b>8.6%</b>	<b>5.3%</b>	<b>7.5%</b>	<b>10.7%</b>	<b>8.7%</b>	<b>8.5%</b>	<b>9.5%</b>	<b>10.1%</b>	<b>9.0%</b>	<b>7.9%</b>
<b>Gasoline and motor oil</b>	<b>3.3%</b>	<b>4.1%</b>	<b>3.3%</b>	<b>3.5%</b>	<b>3.8%</b>	<b>3.6%</b>	<b>3.8%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>2.7%</b>
<b>Other vehicle expenditures</b>	<b>5.8%</b>	<b>5.8%</b>	<b>4.6%</b>	<b>5.4%</b>	<b>5.5%</b>	<b>6.1%</b>	<b>6.2%</b>	<b>6.2%</b>	<b>6.2%</b>	<b>5.7%</b>
<b>Public transportation</b>	<b>1.1%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.3%</b>
Health care	5.3%	5.5%	8.8%	9.0%	8.1%	6.8%	5.6%	5.1%	4.7%	3.8%
Entertainment	4.9%	5.5%	4.1%	4.7%	3.7%	4.7%	4.7%	4.7%	5.1%	5.1%
Personal Insurance & pensions	10.7%	1.8%	2.1%	2.8%	4.4%	6.4%	8.4%	10.2%	12.3%	15.6%
Others <sup>d</sup>	9.7%	12.4%	10.8%	8.1%	10.8%	10.8%	9.5%	8.7%	8.8%	10.0%
Households <sup>e</sup> (thousands)	81,454	3,627	7,183	8,037	6,677	12,039	9,477	7,653	11,337	15,424
Percentage of households	100%	4.5%	8.8%	9.9%	8.2%	14.8%	11.6%	9.4%	13.9%	18.9%
Average number of vehicles in HH	2.0	1.0	0.9	1.3	1.5	1.8	2.1	2.3	2.5	2.8

**Source:**

U.S. Department of Labor, Bureau of Labor Statistics, web site: [www.bls.gov/pub/special.requests/ce/share/2000/income.txt](http://www.bls.gov/pub/special.requests/ce/share/2000/income.txt), February 2002. (Additional resources: [www.bls.gov](http://www.bls.gov))

<sup>a</sup> Public assistance monies are included in reported income. Data for those reporting income.

<sup>b</sup> Percentages may not sum to totals due to rounding.

<sup>c</sup> Includes alcoholic beverages.

<sup>d</sup> Includes personal care, reading, education, tobacco and smoking supplies, cash contributions, and miscellaneous items.

<sup>e</sup> The term household refers to a "consumer unit," which is defined differently than households on Table 11.1.

*Household vehicle ownership shows a dramatic increase from 1960 to 1990. In 1960, nearly 79% of households owned less than two vehicles; by 1990, it declined to 45%. Census data prior to 1990 indicated that the majority of households owned one vehicle; in 1990 that changed to two vehicles.*

**Table 11.4**  
**Household Vehicle Ownership, 1960–2000 Census**  
**(percentage)**

	No vehicles	One vehicle	Two vehicles	Three or more vehicles	Total vehicles <sup>a</sup>
1960	21.53%	56.94%	19.00%	2.53%	54,766,718
1970	17.47%	47.71%	29.32%	5.51%	79,002,052
1980	12.92%	35.53%	34.02%	17.52%	129,747,911
1990	11.53%	33.74%	37.35%	17.33%	152,380,479
2000	9.35%	33.79%	38.55%	18.31%	179,417,526

**Source:**

U. S. Department of Transportation, Volpe National Transportation Systems Center, *Journey-to-Work Trends in the United States and its Major Metropolitan Area, 1960–1990*, Cambridge, MA, 1994, p. 2-2.

2000 data - U.S. Bureau of the Census, American Fact Finder, factfinder.census.gov, Table QT-04, August 2001.

(Additional resources: [www.census.gov](http://www.census.gov))

<sup>a</sup>Estimates using Census Bureau data; these data on the total number of vehicles do not match the figures on Table 11.1. The figures on Table 11.1, from R.L. Polk and Company, are the preferred data.



## 1995 Nationwide Personal Transportation Survey

The 1995 Nationwide Personal Travel Survey (NPTS) is a national survey designed to collect data on the nature and characteristics of personal travel. The definition of a trip in the NPTS is “any one-way travel from one address to another by private motor vehicle, public transportation, bicycle, or walking.” Excluded from the survey are jogging and walking for exercise, as is all bicycling and walking for individuals under 5 years of age. The survey collects detailed data on household trips, their purposes and the transportation modes used. The NPTS is sponsored by several agencies of the U.S. Department of Transportation and is conducted approximately every seven years. Since each of the surveys differ somewhat in terminology, survey procedure, and target population, one should be cautious when comparing statistics from one survey to the next. Improved methodologies used in the collection of the trip information in the 1995 NPTS make it impossible to compare these data with past NPTS survey data. Thus, the 1990 NPTS trip data have been adjusted to make it comparable with the latest survey. Both the original 1990 data and the adjusted 1990 data are shown in tables comparing trip information. The 1995 trip data should only be compared to the adjusted 1990 trip data, and the original trip 1990 data should be compared with previous surveys. Additional analyses can be done on the 1995 NPTS data through the Internet site: [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts).

**Table 11.5**  
**Demographic Statistics**  
**1969, 1977, 1983, 1990, and 1995 NPTS**

	1969	1977	1983	1990	1995	Percent change 1969-95
Persons per household	3.16	2.83	2.69	2.56	2.63	-17%
Vehicles per household	1.16	1.59	1.68	1.77	1.78	53%
Workers per household	1.21	1.23	1.21	1.27	1.33	10%
Vehicles per worker	0.96	1.29	1.39	1.40	1.34	40%
Average vehicle trip length (miles)	8.89	8.34	7.90	8.98	9.06	2%

**Source:**

U.S. Department of Transportation, Federal Highway Administration, *1990 Nationwide Personal Transportation Survey: Summary of Travel Trends*, FHWA-PL-92-027, Washington, DC, March 1992, Table 2. Data for 1995 were generated from the Internet site [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts).  
(Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov))

**Note:**

Average vehicle trip length for 1990 and 1995 is calculated using only those records with trip mileage information present. The 1969 survey does not include pickups and other light trucks as household vehicles.



*The 1995 NPTS data should be compared only to the 1990 adjusted data due to survey methodology improvements in collecting trip information. The original 1990 data are comparable to all previous surveys; however, comparisons should always be made with caution because of differing survey methodologies.*

**Table 11.6**  
**Average Annual Vehicle-Miles, Vehicle Trips and**  
**Trip Length per Household**  
**1969, 1977, 1983, 1990, and 1995 NPTS**

	Journey-to-work <sup>a</sup>	All trips
<i>Average annual vehicle-miles per household</i>		
1969	4,183	12,423
1977	3,815	12,036
1983	3,538	11,739
1990 original	4,853	15,100
1990 adjusted	4,853	18,161
1995	6,492	20,895
<i>Average annual vehicle trips per household</i>		
1969	445	1,396
1977	423	1,442
1983	414	1,486
1990 original	448	1,702
1990 adjusted	448	2,077
1995	553	2,321
<i>Average vehicle trip length (miles)</i>		
1969	9.4	8.9
1977	9.0	8.4
1983	8.5	7.9
1990 original	11.0	9.0
1990 adjusted	11.0	8.9
1995	11.8	9.1

**Source:**

U.S. Department of Transportation, Federal Highway Administration, *1990 Nationwide Personal Transportation Survey: Summary of Travel Trends*, FHWA-PL-92-027, Washington, DC, March 1992, Table 7. Data for 1995 were generated from the Internet site [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts). 1990 adjusted data - Oak Ridge National Laboratory, Oak Ridge, TN, August 1998. (Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov), [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))

<sup>a</sup>It is believed that the methodology changes in the 1995 NPTS did not affect journey-to-work trips; therefore, no adjustment is necessary.



*The 1995 NPTS data should be compared only to the 1990 adjusted data due to survey methodology improvements in collecting trip information. The original 1990 data are comparable to all previous surveys; however, comparisons should always be made with caution because of differing survey methodologies.*

**Table 11.7**  
**Average Annual Person-Miles Traveled (PMT), Person Trips and Trip Length**  
**per Household by Selected Trip Purposes**  
**1983, 1990, and 1995 NPTS**

	Journey-to-work <sup>a</sup>	Shopping	Social and recreational	All purposes <sup>b</sup>
<i>Average annual PMT per household</i>				
1983	4,586	2,567	8,964	22,802
1990 original	5,637	2,674	8,567	24,803
1990 adjusted	5,637	3,343	11,308	30,316
1995	7,740	4,659	10,571	34,459
<i>Average annual person trips per household</i>				
1983	537	474	728	2,628
1990 original	539	504	662	2,673
1990 adjusted	539	630	874	3,262
1995	676	775	953	3,828
<i>Average person trip length (miles)</i>				
1983	8.5	5.4	12.3	8.7
1990 original	10.7	5.4	13.2	9.5
1990 adjusted	10.7	5.4	13.2	9.5
1995	11.6	6.1	11.3	9.1

**Source:**

U.S. Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Study, Public Use Tapes, Washington, DC. Data for 1995 were generated from the Internet site [www.cta.ornl.gov/npts](http://www.cta.ornl.gov/npts). 1990 adjusted data - Oak Ridge National Laboratory, Oak Ridge, TN, August 1998. (Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov), [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))

**Note:**

Average person trip length for 1990 and 1995 is calculated using only those records with trip mileage information present. "All purposes" includes unreported trip purposes.

<sup>a</sup>It is believed that the methodology changes in the 1995 NPTS did not affect journey-to-work trips; therefore, no adjustment is necessary.

<sup>b</sup>Includes trip purposes not shown on this table.



*In 1995 vehicle-miles traveled (vmt) for a three-person household is nearly 25,000 miles. The number of drivers in a household makes a big difference in vmt, as does the presence of children in the household. Households with children have 46% more vmt than households without children.*

**Table 11.8**  
Average Number of Vehicles and Vehicle Travel per Household,  
1990 and 1995 NPTS

Number of Drivers	Average number of vehicles per household		Average vehicle-miles traveled per household	
	1990	1995	1990	1995
1	1.5	1.2	15,200	11,000
2	2.1	2.1	22,900	22,600
3	2.9	2.8	29,400	30,100
4 or more	3.8	3.6	40,500	39,600
<b>Household size</b>				
1 person	1.2	1.2	11,400	10,800
2 persons	1.9	1.9	19,300	19,400
3 persons	2.2	2.2	23,700	24,800
4 persons	2.4	2.3	25,300	25,600
5 persons	2.4	2.3	24,900	27,200
6 or more persons	2.7	2.5	29,200	27,900
<b>Household urban status</b>				
Urban	1.9	1.6	19,000	16,500
Rural	2.1	2.0	22,200	22,600
<b>Household composition</b>				
With children	2.2	2.2	24,100	25,000
Without children	1.8	1.8	17,600	17,100
<b>All households</b>	<b>1.8</b>	<b>1.8</b>	<b>18,300</b>	<b>18,700</b>

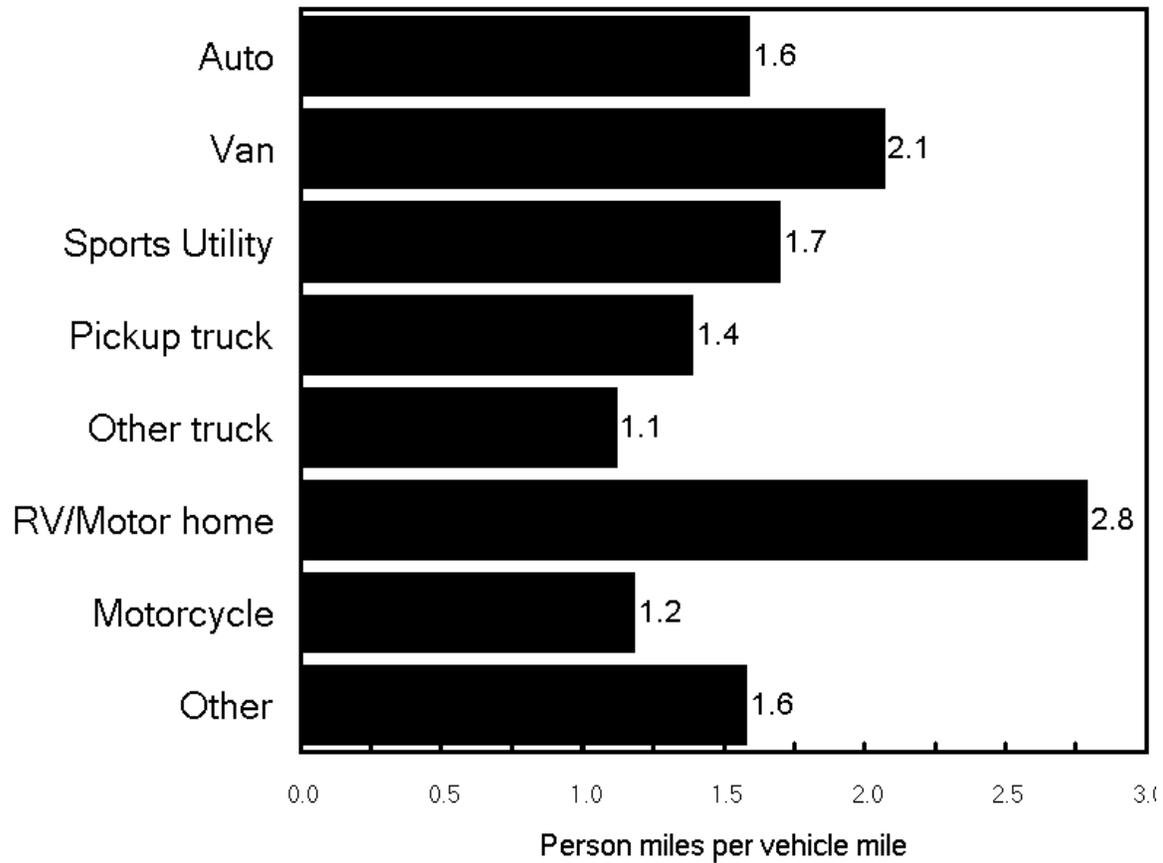
**Source:**

Generated from the Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey Public Use Files, Washington, DC, 2000. (Additional resources: [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))



*Vans and sport utility vehicles have higher vehicle occupancies than automobiles. RV's and motor homes have the highest vehicle occupancy.*

**Figure 11.1. Average Vehicle Occupancy by Vehicle Type, 1995 NPTS**



**Source:**

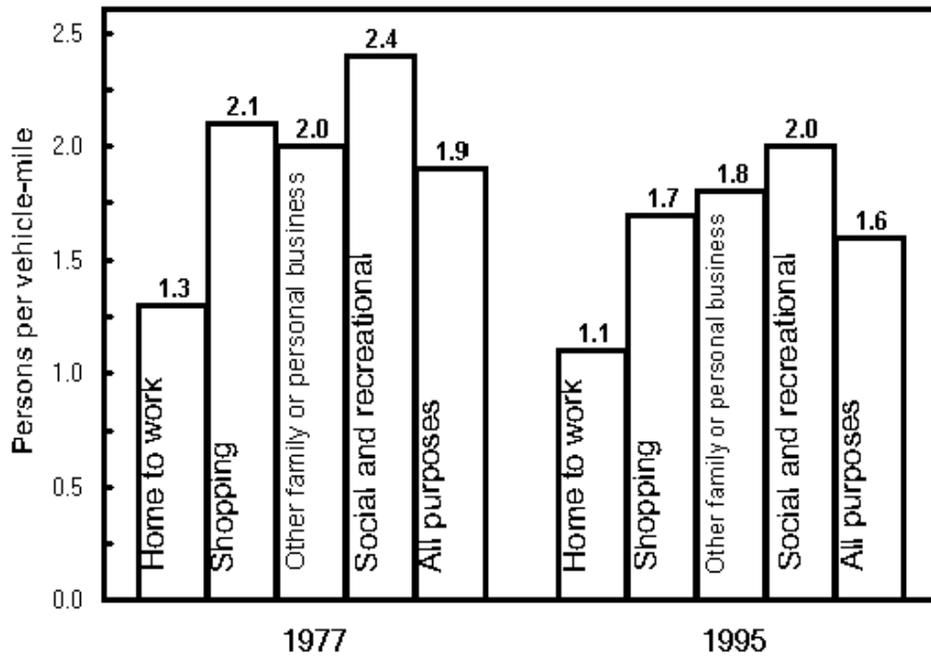
U.S. Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey, Washington, DC, 1997.

(Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov), [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))



*The average vehicle occupancy, calculated as person-miles per vehicle-mile, is highest for social and recreational purposes. The highest vehicle occupancy levels for all purposes were in 1977. The increase in number of vehicles per household and the decrease in average household size could have contributed to the decline since then.*

**Figure 11.2. Average Vehicle Occupancy by Trip Purpose  
1977 and 1995 NPTS**



**Source:**

U.S. Department of Transportation, Federal Highway Administration, *1990 Nationwide Personal Transportation Survey: Summary of Travel Trends*, FHWA-PL-92027, Washington, DC, March 1992, Figure 6. Data from 1995 were generated from the public use file.

(Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov), [www.cta.ornl.gov/npts](http://www.cta.ornl.gov/npts))



*Less than 27% of all household vehicle-miles are trips to or from work. Errands such as family and personal business and shopping (combined) make up almost a third of vehicle travel. One quarter of all trips 75 miles or longer (one way) were for the purpose of visiting friends or relatives.*

**Table 11.9**  
**Vehicle-Miles by Trip Purpose, 1995 NPTS**

Purpose of trip	Daily trip vehicle-miles (<75 miles one-way)	Long trip vehicle-miles (\$75 miles one-way)	Total trip vehicle-miles
To or from work	31.1%	4.2%	26.8%
Work-related business	6.7%	14.7%	7.9%
Shopping	13.4%	3.5%	11.9%
Other family or personal business	20.6%	14.2%	19.6%
School/church	3.8%	3.1%	3.7%
Doctor/dentist	1.5%	1.3%	1.5%
Vacation	1.0%	10.0%	2.4%
Visit friends or relatives	9.4%	25.7%	12.0%
Other social or recreational	12.4%	22.3%	13.9%
Other	0.1%	1.1%	0.3%
Not ascertained	0.0%	0.0%	0.0%
<b>All (millions)</b>	<b>2,068,368</b>	<b>385,997</b>	<b>2,454,365</b>

**Source:**

U.S. Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey web site: [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts).



*As households owned more vehicles, the average annual miles for the most frequently driven vehicle increased. For example, the most frequently driven vehicle in five-vehicle households was driven 26% more per year than the one in two-vehicle households (21,177 miles vs. 16,804 miles).*

**Table 11.10**  
**Average Annual Miles per Vehicle by Household Vehicle Ownership, 1995 NPTS**

Vehicle <sup>a</sup>	One-vehicle household	Two-vehicle household	Three-vehicle household	Four-vehicle household	Five-vehicle household
#1	12,379	16,804	18,853	20,724	21,177
#2	-	8,322	9,806	11,311	12,880
#3	-	-	4,555	6,395	7,319
#4	-	-	-	3,218	4,177
#5	-	-	-	-	2,321
<b>Average</b>	<b>12,379</b>	<b>12,855</b>	<b>11,604</b>	<b>11,100</b>	<b>10,372</b>

**Source:**

Generated from the Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey Public Use Files, Washington, DC, 1998. (Additional resources: [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))

**Table 11.11**  
**Average Age of Vehicles by Household Vehicle Ownership, 1995 NPTS**

Vehicle <sup>a</sup>	One-vehicle household	Two-vehicle household	Three-vehicle household	Four-vehicle household	Five-vehicle household
#1	7.48	6.45	6.74	7.01	7.35
#2	-	8.54	8.55	8.68	9.54
#3	-	-	12.25	11.36	11.89
#4	-	-	-	14.52	14.60
#5	-	-	-	-	17.81
<b>Average</b>	<b>7.48</b>	<b>7.42</b>	<b>8.93</b>	<b>10.03</b>	<b>11.62</b>

**Source:**

Generated from the Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey Public Use Files, Washington, DC, 1998. (Additional resources: [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))

<sup>a</sup>Vehicles are ranked by descending annual miles driven.



*Historically, the data from the Nationwide Personal Transportation Survey (NPTS) are based on estimates reported by survey respondents. For the 1995 survey, odometer data was also collected. These data indicate that respondents overestimate the number of miles driven in a year.*

**Table 11.12**  
**Average Annual Miles Per Household Vehicle by Vehicle Age**

Vehicle age (years)	1983 self-reported	1990 self-reported	1995 self-reported	1995 odometer
Under 1	8,200	19,600	15,900	<b>15,600</b>
1	15,200	16,800	16,800	<b>14,500</b>
2	16,800	16,600	15,500	<b>14,800</b>
3	14,500	14,700	14,400	<b>13,800</b>
4	13,000	13,600	14,100	<b>12,900</b>
5	12,100	12,900	13,500	<b>12,700</b>
6	11,300	13,200	13,200	<b>12,400</b>
7	10,000	12,400	12,800	<b>11,600</b>
8	9,800	12,600	12,200	<b>11,300</b>
9	9,000	11,500	12,200	<b>11,200</b>
10 and older	7,300	9,200	8,900	<b>9,000</b>
<b>All household vehicles</b>	<b>10,400</b>	<b>12,500</b>	<b>12,200</b>	<b>11,800</b>

**Source:**

Nationwide Personal Transportation Study—1983: D. Klinger and J. Richard Kuzmyak, COMSIS Corporation, Personal Travel in the United States, Volume 1: 1983–84 Nationwide Personal Travel Study, prepared for the U.S. Department of Transportation, Washington, DC, August 1986, Table 4-22, p.4-21. 1990: Generated from the 1990 Nationwide Personal Transportation Study Public Use Tape, March 1992. 1995: Generated from the Internet site: [www-cta.ornl.gov/npts](http://www.cta.ornl.gov/npts).

(Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov), [www.eia.doe.gov](http://www.eia.doe.gov))

**Note:**

Data include all household vehicles, and have been rounded to the nearest hundred.



*In 1995 the average journey-to-work speed was faster, but the travel time still increased, due to an increase in the average travel distance. Journeys-to-work using public transportation continued to take twice as long as private transportation, though there is only a slight difference in travel distance.*

**Table 11.13**  
**Journey-to-Work Statistics**  
**1983, 1990, and 1995 NPTS<sup>a</sup>**

Year	Private transportation	Public transportation	Other <sup>b</sup>	Total
<i>Average travel time<sup>c</sup> (Index: 1983 Private = 1.00)</i>				
1983	1.00	2.26	0.60	1.03
1990	1.09	2.34	0.70	1.11
1995	1.14	2.39	1.07	1.18
<i>Average trip length (Index: 1983 Private = 1.00)</i>				
1983	1.00	1.33	0.16	0.96
1990	1.24	1.44	0.25	1.20
1995	1.33	1.45	0.92	1.30
<i>Average speed (Index: 1983 Private = 1.00)</i>				
1983	1.00	0.59	0.25	0.93
1990 <sup>d</sup>	1.15	0.60	0.25	1.10
1995 <sup>d</sup>	1.17	0.64	0.86	1.15

**Source:**

U.S. Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Study, Public Use Tapes, Washington, DC. Data for 1995 were generated from the Internet site [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts). (Additional resources: [www.fhwa.dot.gov](http://www.fhwa.dot.gov), [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts))

<sup>a</sup>It is believed that the methodology changes in the 1995 NPTS did not affect journey-to-work trips; therefore, no adjustment is necessary.

<sup>b</sup>Includes airplane, Amtrak, taxi, bicycle, school bus, moped, walk and other.

<sup>c</sup>Does not include time spent waiting for transportation.

<sup>d</sup>Does not include segmented trips.



According to the U.S. Census data, the percentage of workers who car pooled has dropped from 19.7% in 1980 to 11.2% in 2000. The percent of workers using public transit declined from 6.4% to 5.3% in the ten year period between 1980 and 1990, but stayed relatively the same from 1990 to 2000 (5.2%). The average travel time increased by 2.6 minutes from 1980 to 2000.

**Table 11.14**  
**Means of Transportation to Work, 1980, 1990 and 2000 Census**

Means of transportation	1980 Census		1990 Census		2000 Census	
	Number of workers (thousands)	Share	Number of workers (thousands)	Share	Number of workers (thousands)	Share
Private vehicle	81,258	84.1%	99,593	86.5%	111,554	87.5%
<i>Drove alone</i>	62,193	64.4%	84,215	73.2%	97,247	76.3%
<i>Car pooled</i>	19,065	19.7%	15,378	13.4%	14,307	11.2%
Public transportation	6,175	6.4%	6,070	5.3%	6,575	5.2%
<i>Bus or trolley bus<sup>a</sup></i>	3,925	4.1%	3,445	3.0%	3,572	2.8%
<i>Streetcar or trolley car<sup>a</sup></i>	<sup>b</sup>	<sup>b</sup>	78	0.1%	88	0.1%
<i>Subway or elevated</i>	1,529	1.6%	1,755	1.5%	1,981	1.6%
<i>Railroad</i>	554	0.6%	574	0.5%	696	0.5%
<i>Ferryboat</i>	<sup>b</sup>	<sup>b</sup>	37	0.0%	43	0.0%
<i>Taxicab</i>	167	0.2%	179	0.2%	194	0.2%
Motorcycle	419	0.4%	237	0.2%	158	0.1%
Bicycle	468	0.5%	467	0.4%	563	0.4%
Walked only	5,413	5.6%	4,489	3.9%	3,413	2.7%
Other means	703	0.7%	809	0.7%	1,099	0.9%
Worked at home	2,180	2.3%	3,406	3.0%	4,075	3.2%
Total workers	96,617	100.0%	115,070	100.0%	127,437	100.0%
Average travel time (minutes)	21.7		22.4		24.3	

**Source:**

1980-1990 data - Provided by the Journey-to-Work and Migration Statistics Branch, Population Division, U.S. Bureau of the Census

2000 data - U.S. Bureau of the Census, American Fact Finder, factfinder.census.gov, Tables QT-03 and P047, August 2001. (Additional resources: www.census.gov)

<sup>a</sup> This category was "Bus or streetcar" in 1980.

<sup>b</sup> Data are not available.



*More than half of workers had 15-29 minute commutes in 1990, but that dropped to 35% by 2000. The share of workers commuting less than 15 minutes increased the most in the ten-year period (14 percentage points), but the share of workers commuting 30 minutes or more also saw small increases.*

**Table 11.15**  
**Workers by Commute Time, 1990 and 2000 Census**

Commute time	1990	2000
Less than 15 minutes	15.9%	30.1%
15–29 minutes	51.6%	36.3%
30–39 minutes	14.7%	15.7%
40–59 minutes	9.0%	10.7%
60 minutes or more	5.9%	7.3%
Average travel time (minutes)	22.4	24.3

**Source:**

1990 - U. S. Department of Transportation, Volpe National Transportation Systems Center, *Journey-to-Work Trends in the United States and its Major Metropolitan Area, 1960–1990*, FHWA-PL-94-012, Cambridge, MA, 1994, p. 2-6.

2000 - U.S. Bureau of the Census, American Fact Finder, [factfinder.census.gov](http://factfinder.census.gov), Tables QT-03 and P048, August 2001.

(Additional resources: [www.census.gov](http://www.census.gov))



*Sales of bicycles with wheel sizes of 20-inches and over have grown at an average annual rate of 1.5% from 1981 to 2000. The largest growth in bicycle sales, however, were bicycles with wheel sizes under 20 inches which grew at an average annual rate of 6.7%.*

**Table 11.16**  
**Bicycle Sales, 1981–2000**  
**(millions)**

	Wheel sizes under 20 inches	Wheel sizes of 20 inches and over	All wheel sizes
1981	a	8.9	a
1982	a	6.8	a
1983	a	9.0	a
1984	a	10.1	a
1985	a	11.4	a
1986	a	12.3	a
1987	a	12.6	a
1988	a	9.9	a
1989	a	10.7	a
1990	a	10.8	a
1991	a	11.6	a
1992	3.7	11.6	15.3
1993	3.8	13.0	16.8
1994	4.2	12.5	16.7
1995	4.1	12.0	16.1
1996	4.5	10.9	15.4
1997	4.2	11.0	15.2
1998	4.7	11.1	15.8
1999	5.9	11.6	17.5
2000	6.2	11.9	18.1
	<i>Average annual percentage change</i>		
1981–2000	a	1.5%	a
1992–2000	6.7%	0.3%	2.1%

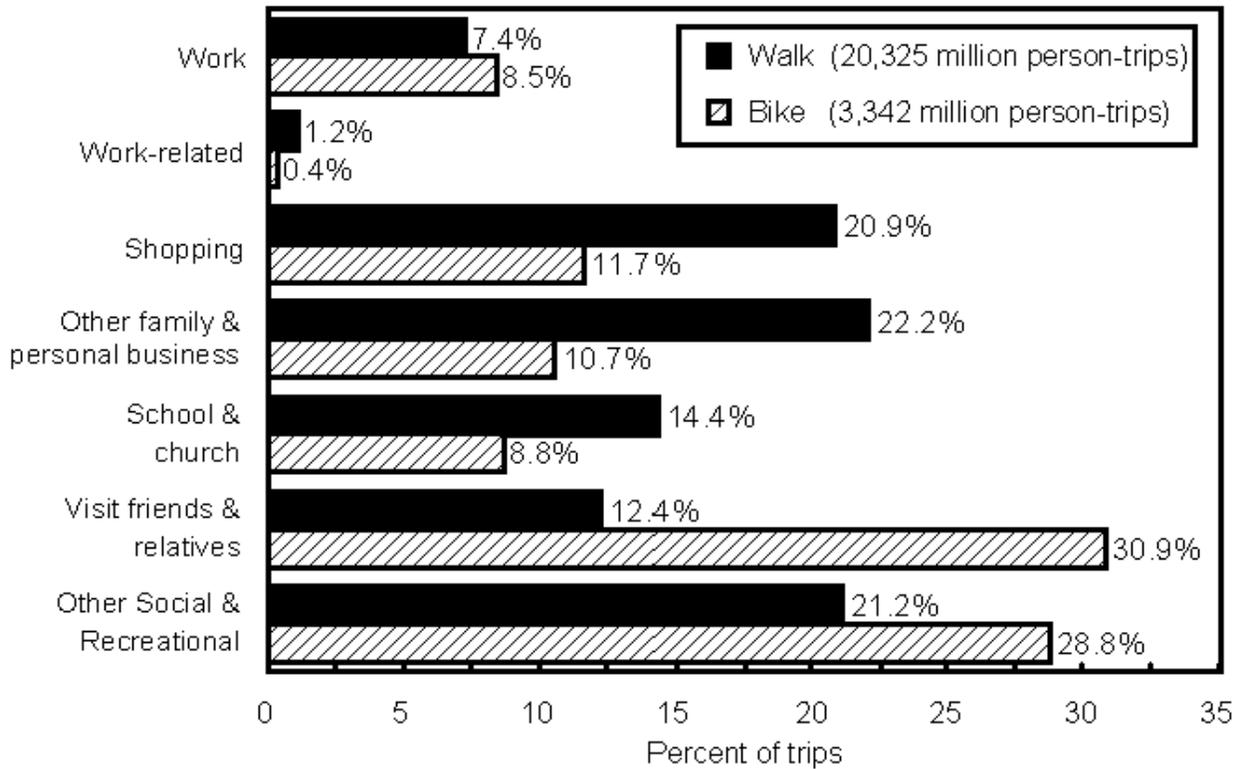
**Source:**

1981–1996: Bicycle Manufacturers Association. 1997–on: The Bicycle Council.  
(Additional resources: [www.nbda.com](http://www.nbda.com))

<sup>a</sup> Data are not available.



**Figure 11.3 Walk and Bike Trips by Trip Purpose, 1995 NPTS**



**Source:**

U.S. Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey web site: [www-cta.ornl.gov/npts](http://www-cta.ornl.gov/npts).

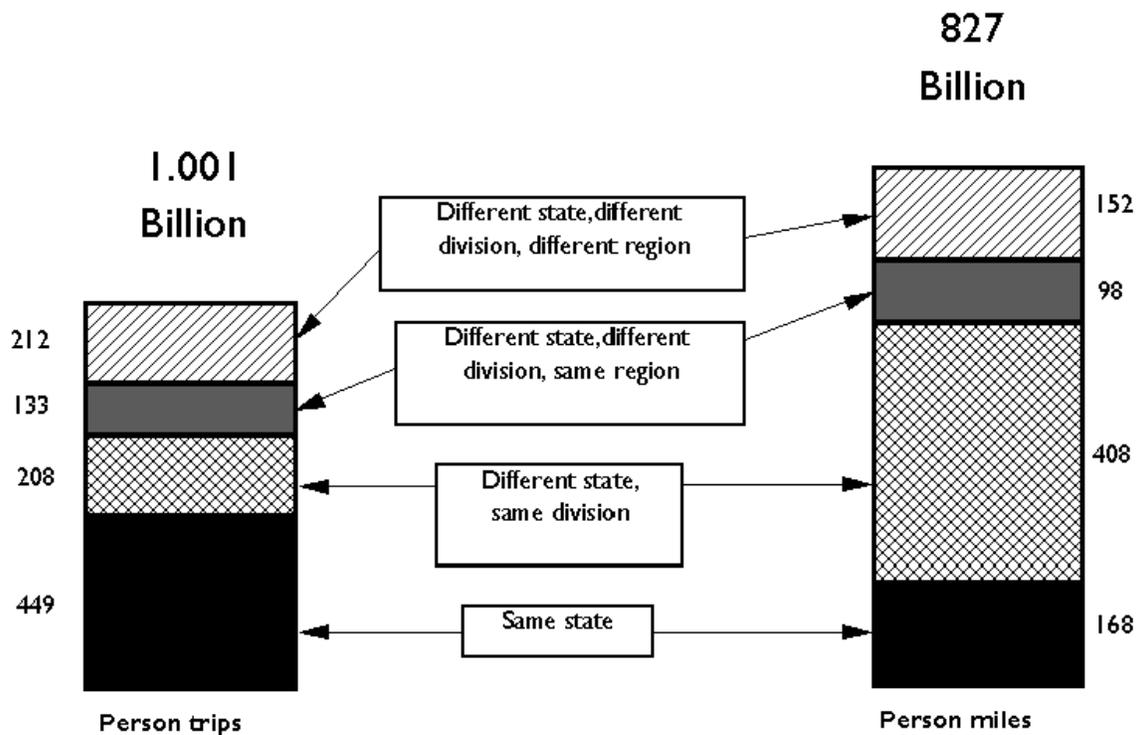


### 1995 American Travel Survey

The American Travel Survey (ATS) was conducted by the Bureau of Transportation Statistics, U.S. Department of Transportation, to obtain information about the long-distance travel of persons living in the United States. Approximately 80,000 randomly selected households were interviewed for the survey, which collected information about all trips of 100 miles or more, one-way, taken by household members in 1995. The ATS data provide detailed information on state-to-state travel, as well as travel to and from metropolitan areas by mode of transportation.

For additional information about the American Travel Survey, contact the Bureau of Transportation Statistics at (202) 366-3282 or visit the following Internet site: [www.bts.gov/ats](http://www.bts.gov/ats)

Figure 11.4 Long-Distance Trips by Destination, 1995



**Source:**

U.S. Department of Transportation, Bureau of Transportation Statistics, *1995 American Travel Survey Profile*, Washington, DC, October 1997, p. 2. (Additional resources: [www.bts.gov/ats](http://www.bts.gov/ats))

**Note:**

Definitions of divisions and regions are in Appendix C.



*Personal-use vehicles are by far the most predominant means of transportation on long-distance trips (100 miles or more, one way); two-thirds of those personal vehicle trips are pleasure trips.*

**Table 11.17**  
**Long-Distance Trips<sup>a</sup> by Mode and Purpose, 1995**

Principal means of transportation	Main purpose of trip					
	Business	Pleasure		Total pleasure	Personal business	Total
		<i>Visit friends or relatives</i>	<i>Leisure</i>			
Person trips (thousands)						
Personal use vehicle	151,697	283,153	254,186	537,339	124,791	813,858
Commercial airplane	67,083	41,881	31,581	73,462	15,386	155,936
Intercity bus	286	1,830	690	2,519	439	3,244
Charter or tour bus	1,281	1,198	9,253	10,451	2,514	14,247
Train	1,342	2,004	944	2,948	704	4,994
Ship, boat, or ferry	68	43	483	525	20	614
<b>Total person-trips</b>	<b>224,835</b>	<b>330,755</b>	<b>299,355</b>	<b>630,110</b>	<b>146,338</b>	<b>1,001,31</b>
Percentage						
Personal use vehicle	18.6	34.8	31.2	66.0	15.3	100.0
Commercial airplane	43.0	26.9	20.3	47.1	9.9	100.0
Intercity bus	8.8	56.4	21.3	77.7	13.5	100.0
Charter or tour bus	9.0	8.4	64.9	73.4	17.6	100.0
Train	26.9	40.1	18.9	59.0	14.1	100.0
Ship, boat, or ferry	11.1	7.0	78.7	85.5	3.3	100.0
<b>Total</b>	<b>22.5</b>	<b>33.0</b>	<b>29.9</b>	<b>62.9</b>	<b>14.6</b>	<b>100.0</b>

**Source:**

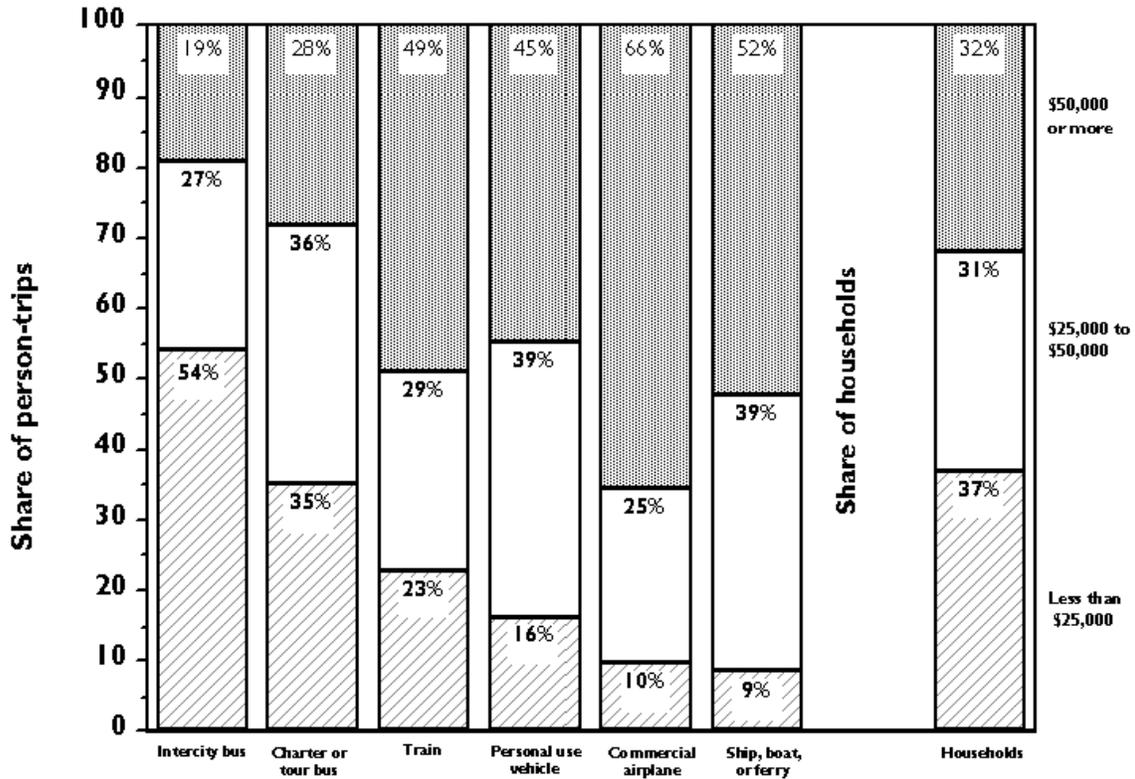
U.S. Department of Transportation, Bureau of Transportation Statistics, *1995 American Travel Survey Profile*, Washington, DC, October 1997, p. 13. (Additional resources: [www.bts.gov/ats](http://www.bts.gov/ats))

<sup>a</sup>A long-distance trip is any trip of 100 miles or more, one way.



*Those with a household income of less than \$25,000 account for more than half (54%) of intercity bus person-trips. Those with a household income of \$50,000 or more account for two-thirds (66%) of commercial airplane person-trips.*

**Figure 11.5. Shares of Long-Distance Person Trips by Mode and Household Income, 1995**



**Source:**

U.S. Department of Transportation, Bureau of Transportation Statistics, *1995 American Travel Survey Profile*, Washington, DC, October 1997, p. 8.

U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 117<sup>th</sup> Edition, Washington, DC, 1997, p. 465.

(Additional resources: [www.bts.gov/ats](http://www.bts.gov/ats), [www.census.gov](http://www.census.gov))

