

Chapter 10

Household Vehicles and Characteristics

Summary Statistics

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Table 10.1
Population and Vehicle Profile, 1950-96

Year	Resident population ^a (thousands)	Total households (thousands)	Number of vehicles in operation (thousands)	Number of licensed drivers (thousands)	Number of civilian employed persons (thousands)	Vehicles per capita	Vehicle-miles per capita	Licensed drivers per household	Vehicles per licensed driver	Vehicles per civilian employed persons
1950	151,868	43,554	43,256	62,194	58,918	0.29	3,029	1.43	0.70	0.73
1955	165,069	47,874	55,804	74,686	62,170	0.34	3,656	1.56	0.75	0.90
1960	179,979	52,799	66,582	87,253	65,778	0.36	3,994	1.65	0.76	1.01
1965	193,526	57,251	82,067	98,502	71,088	0.42	4,587	1.72	0.83	1.15
1970	203,984	63,401	98,136	111,543	78,678	0.48	5,440	1.76	0.88	1.25
1975	215,465	71,120	120,054	129,791	85,846	0.56	6,162	1.82	0.92	1.40
1980	227,225	80,776	139,832	145,295	99,303	0.62	6,722	1.80	0.96	1.41
1981	229,466	82,368	141,908	147,075	100,397	0.62	6,767	1.79	0.96	1.41
1982	231,664	83,527	143,854	150,234	99,526	0.62	6,885	1.80	0.96	1.45
1983	233,792	83,918	147,104	154,389	100,834	0.63	7,069	1.83	0.95	1.46
1984	235,825	85,407	152,162	155,424	105,005	0.65	7,295	1.82	0.98	1.45
1985	237,924	86,789	157,048	156,868	107,150	0.66	7,457	1.81	1.00	1.47
1986	240,133	88,458	162,094	159,487	109,597	0.68	7,655	1.80	1.02	1.48
1987	242,289	89,479	167,193	161,975	112,440	0.69	7,929	1.81	1.03	1.49
1988	244,499	91,061	171,741	162,853	114,968	0.70	8,286	1.79	1.05	1.49
1989	246,819	92,830	175,960	165,555	117,342	0.71	8,494	1.78	1.06	1.50
1990	249,398	93,347	179,299	167,015	118,793	0.72	8,598	1.79	1.07	1.51
1991	252,106	94,312	181,438	168,995	117,718	0.72	8,614	1.79	1.07	1.54
1992	255,011	95,689	181,519	173,125	118,492	0.71	8,781	1.81	1.05	1.53
1993	257,795	96,391	186,315	173,149	120,259	0.72	8,909	1.80	1.08	1.55
1994	260,372	97,107	188,714	175,403	123,060 ^b	0.72	9,055	1.81	1.08	1.53
1995	262,890	98,990	193,441	176,628	124,900 ^b	0.74	9,216	1.78	1.10	1.55
1996	265,284	99,627	198,294	179,539	126,708 ^b	0.75	9,357	1.80	1.10	1.56
					<i>Average annual percentage change</i>					
1950-96	1.2%	1.8%	3.4%	2.3%	1.7%	2.1%	2.5%	0.5%	1.0%	1.7%
1986-96	1.0%	1.2%	2.0%	1.2%	1.5%	1.0%	2.0%	0.0%	0.8%	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*, 117th edition, Washington, DC, 1997, pp. 8, 59, 397, and annual. (Additional resources: <http://www.census.gov>)

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

Licensed drivers and vehicle-miles - U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 1996*, Tables DL-1C and VM-1, and annual. (Additional resources: <http://www.fhwa.dot.gov>)

^aEstimates as of July 1. Includes Armed Forces stationed in the United States.

^bData are not comparable to earlier years due to changes in definitions and methodology. See original source for more details.

Transportation (18.2%) is second only to housing (31.5%) as the largest expenditure for the average household. In 1995, approximately 17% of transportation expenditures were for purchasing gasoline and motor oil. There is an average of two vehicles per household.

Table 10.2
Average Annual Expenditures of Households by Income, 1995^a

	Income before taxes									
	All households	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	\$33,610	\$14,718	\$14,156	\$18,911	\$22,619	\$26,732	\$33,324	\$38,496	\$48,844	\$69,303
	Percentage of total expenditures ^b									
Food ^c	14.9%	17.6%	17.6%	17.3%	17.9%	16.0%	14.9%	15.3%	13.7%	12.6%
Housing	31.5%	38.6%	38.5%	35.7%	32.8%	31.5%	31.4%	29.2%	29.6%	30.6%
Apparel and services	5.3%	4.6%	5.3%	4.9%	5.2%	5.5%	5.0%	5.4%	5.0%	5.5%
Transportation	18.2%	13.3%	14.3%	17.6%	17.8%	19.8%	19.2%	19.5%	19.7%	17.0%
Vehicle purchases (net outlay)	8.0%	3.6%	5.2%	7.5%	7.5%	9.3%	8.4%	9.0%	8.8%	7.4%
Gasoline and motor oil	3.0%	3.2%	3.2%	3.3%	3.3%	3.4%	3.4%	3.2%	3.1%	2.4%
Other vehicle expenditures	6.1%	5.6%	4.9%	5.8%	6.1%	6.2%	6.4%	6.4%	6.8%	5.8%
Public transportation	1.1%	1.0%	1.0%	1.0%	0.9%	0.9%	1.0%	0.8%	1.0%	1.5%
Health care	5.2%	5.7%	8.5%	7.9%	7.1%	6.5%	5.0%	5.1%	4.4%	3.6%
Entertainment	5.0%	4.9%	4.7%	4.7%	4.0%	4.5%	5.3%	5.0%	5.1%	5.4%
Personal Insurance & pensions	1.3%	1.3%	1.3%	1.4%	1.3%	1.4%	1.4%	1.4%	1.2%	1.1%
Others ^d	18.7%	14.0%	9.9%	10.6%	13.9%	14.9%	17.9%	19.2%	21.3%	24.1%
Households (thousands)	83,364	4,687	9,787	8,725	7,724	12,643	10,648	8,191	10,378	10,582
Percentage of households	100%	5.6%	11.6%	11.5%	9.2%	15.0%	12.6%	9.7%	12.3%	12.5%
Average number of vehicles in HH	2.0	1.0	0.9	1.3	1.6	1.9	2.3	2.5	2.7	2.8

Source:

U.S. Department of Labor, Bureau of Labor Statistics, *Consumer Expenditure Survey: Interview Survey, 1995*. Washington, DC, 1997. (Additional resources: <http://www.bls.gov>)

^a Public assistance monies are included in reported income.

^b Percentages may not sum to totals due to rounding.

^c Includes alcoholic beverages.

^d Includes personal care, reading, education, tobacco and smoking supplies, cash contributions, and miscellaneous items.



Table 10.3
Average Number of Vehicles and Vehicle Travel per Household,
1991 and 1994 RTECS

Number of Drivers	Average number of vehicles per household		Average vehicle-miles traveled per household	
	1991	1994	1991	1994
1	1.2	1.2	10,900	12,300
2	2.0	2.0	21,400	23,200
3	2.6	2.8	30,700	33,100
4 or more	3.1	3.4	36,700	43,000
Household size				
1 person	1.2	1.2	10,600	11,600
2 persons	1.8	1.8	17,700	20,000
3 persons	2.0	2.1	22,300	25,200
4 persons	2.2	2.2	26,200	26,600
5 persons	2.1	2.2	23,600	26,300
6 or more persons	1.9	2.3	22,600	30,900
Household urban status				
Urban	1.8	1.8	18,800	20,700
Central city	1.6	1.7	15,900	18,000
Suburban	1.9	1.9	20,400	22,300
Rural	1.9	1.9	19,500	22,500
Household composition				
With children	2.0	2.0	22,800	24,800
Without children	1.7	1.7	16,500	18,900
Total	1.8	1.8	18,900	21,100

Source:

1991-U.S. Department of Energy, Energy Information Administration, *Household Vehicles Energy Consumption 1994*, Washington, DC, 1996, pp. 48, 49.

1994-Personal Communication, U.S. Department of Energy, Energy Information Administration, Office of Markets and End Use, Energy End Use Division.

(Additional resources: <http://www.eia.doe.gov>)



Table 10.4
Statistics for Household Vehicles by Vehicle Type, 1985, 1988, 1991, and 1994 RTECS

Type of vehicle	Number of vehicles ^a (millions)				Average annual miles per vehicle (thousands)				Average fuel economy (mpg)			
	1985	1988	1991	1994	1985	1988	1991	1994	1985 ^b	1988	1991	1994
Passenger car	106.6	109.3	108.3	106.4	9.9	10.4	10.6	11.3	17.2	19.7	21.1	21.9
Pickup truck	21.2	25.9	25.9	28.8	9.4	9.4	10.0	11.1	13.5	15.3	15.8	16.3
Mini van	^c	2.2	5.1	8.1	^c	12.7	12.7	13.4	^c	19.4	19.6	19.7
Large van	4.7	4.7	2.6	3.4	10.5	9.8	10.1	11.7	13.2	13.1	13.7	13.8
Utility vehicle	3.7	4.8	7.3	9.5	10.6	11.8	11.6	12.7	12.7	15.4	16.2	16.3
Other ^d	1.1	0.7	^c	^c	6.0	4.9	^c	^c	9.6	8.3	^c	^c

Source:

1985 and 1988 estimates are based on data provided on the following public use tapes: U.S. Department of Energy, Energy Information Administration, *1985 Residential Transportation Energy Consumption Survey*, and *1988 Residential Transportation Energy Consumption Survey*, Washington, DC, 1987 and 1990.

1991 estimates: U.S. Department of Energy, Energy Information Administration, *Household Vehicles Energy Consumption 1991*, Washington, DC, 1993, pp. 29, 46, 52.

1994 estimates: Personal Communication, U.S. Department of Energy, Energy Information Administration, Office of Markets and End Use, Energy End Use Division.

(Additional resources: <http://www.eia.doe.gov>)

^aThese data are survey estimates; data are not the same as R. L. Polk estimates of the number of vehicles.

^bFuel economy data from the 1985 RTECS is not **directly** comparable to data from later years because of a change in methodology.

^cData are not available.

^dIncludes motor homes.



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 9% more per year than the one in two-vehicle households (16,542 miles vs. 15,172 miles).

Table 10.5
Average Annual Miles per Vehicle by Household Vehicle Ownership, 1994 RTECS

Vehicle ^a	One-vehicle household	Two-vehicle household	Three-vehicle household	Four-vehicle household	Five-vehicle household
#1	11,284	15,172	15,599	17,410	16,542
#2	-	7,694	9,057	10,270	10,160
#3	-	-	5,188	6,693	7,620
#4	-	-	-	5,036	5,219
#5	-	-	-	-	3,609
Average	11,284	12,014	11,329	11,728	11,144

Source:

Generated from the Department of Energy, Energy Information Administration, 1994 Residential Transportation Energy Consumption Survey Public Use Files, Washington, DC, May 1997.
(Additional resources: <http://www.eia.doe.gov>)

Table 10.6
Average Age of Vehicles by Household Vehicle Ownership, 1994 RTECS

Vehicle ^a	One-vehicle household	Two-vehicle household	Three-vehicle household	Four-vehicle household	Five-vehicle household
#1	7.63	6.67	7.16	6.33	6.76
#2	-	8.75	8.52	7.76	7.92
#3	-	-	10.80	10.61	10.68
#4	-	-	-	11.68	15.86
#5	-	-	-	-	24.64
Average	7.63	7.55	8.29	8.15	9.29

Source:

Generated from the Department of Energy, Energy Information Administration, 1994 Residential Transportation Energy Consumption Survey Public Use Files, Washington, DC, May 1997.
(Additional resources: <http://www.eia.doe.gov>)

^aVehicles are ranked by descending annual miles driven.



Table 10.7
Distribution of Vehicles by Vehicle Age and Household Vehicle Ownership, 1994 RTECS

Vehicle age	One-vehicle households	Two-vehicle households	Three-vehicle households	Four-vehicle households	Five-vehicle households	Total households
Vehicle 1						
New	1.45%	2.28%	0.76%	0.56%	0.14%	5.23%
2-5	5.81%	8.18%	3.97%	1.34%	0.56%	20.10%
6-10	7.02%	8.49%	4.06%	1.69%	0.44%	21.84%
11-15	2.54%	2.58%	1.46%	0.42%	0.12%	7.17%
16-20	1.20%	0.98%	0.57%	0.17%	0.14%	3.09%
21+	0.46%	0.35%	0.16%	0.03%	0.02%	1.05%
Vehicle 2						
New		1.11%	0.35%	0.25%	0.05%	1.84%
2-5		4.45%	2.88%	1.05%	0.26%	8.80%
6-10		6.29%	3.72%	1.79%	0.61%	12.46%
11-15		2.55%	1.59%	0.51%	0.19%	4.96%
16-20		1.28%	0.62%	0.20%	0.08%	2.19%
21+		1.02%	0.42%	0.10%	0.00%	1.60%
Vehicle 3						
New			0.13%	0.06%	0.02%	0.21%
2-5			1.06%	0.47%	0.21%	1.82%
6-10			1.00%	0.97%	0.34%	2.45%
11-15			0.85%	0.49%	0.10%	1.47%
16-20			0.66%	0.21%	0.14%	1.01%
21+			0.40%	0.26%	0.10%	0.85%
Vehicle 4						
New				0.02%	0.00%	0.02%
2-5				0.28%	0.02%	0.36%
6-10				0.14%	0.05%	0.29%
11-15				0.15%	0.23%	0.42%
16-20				0.12%	0.12%	0.30%
21+				0.15%	0.08%	0.27%
Vehicle 5						
New					0.00%	0.03%
6-10					0.02%	0.05%
11-15					0.00%	0.05%
21+					0.03%	0.07%
Total	18.47%	39.57%	24.65%	11.44%	4.07%	100.00%

Source:

Generated from the Department of Energy, Energy Information Administration, 1994 Residential Transportation Energy Consumption Survey Public Use Files, Washington, DC, May 1997.

(Additional resources: <http://www.eia.doe.gov>)



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 10.8
Household Vehicle Ownership, 1960–90 Census
(percentage)

	No vehicles	One vehicle	Two vehicles	Three or more vehicles	Total vehicles ^a
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

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. (Additional resources: <http://www.census.gov>)

^aCompiled by the Census Bureau, these data on the total number of vehicles do not match the figures on Table 4.1. The figures on Table 4.1, from R.L. Polk and Company, are the preferred data.



1995 Nationwide Personal Travel 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: <http://www-cta.ornl.gov/npts>.

Table 10.9
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 <http://www-cta.ornl.gov/npts>.
(Additional resources: <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 10.10
Average Annual Vehicle-Miles, Vehicle Trips and
Trip Length per Household
1969, 1977, 1983, 1990, and 1995 NPTS

	Journey-to-work ^a	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 <http://www-cta.ornl.gov/npts>. 1990 adjusted data - Oak Ridge National Laboratory, Oak Ridge, TN, August 1998. (Additional resources: <http://www.fhwa.dot.gov>, <http://www-cta.ornl.gov/npts>)

^aIt 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 10.11
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 ^a	Shopping	Social and recreational	All purposes ^b
<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 <http://www-cta.ornl.gov/npts>. 1990 adjusted data - Oak Ridge National Laboratory, Oak Ridge, TN, August 1998. (Additional resources: <http://www.fhwa.dot.gov>, <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.

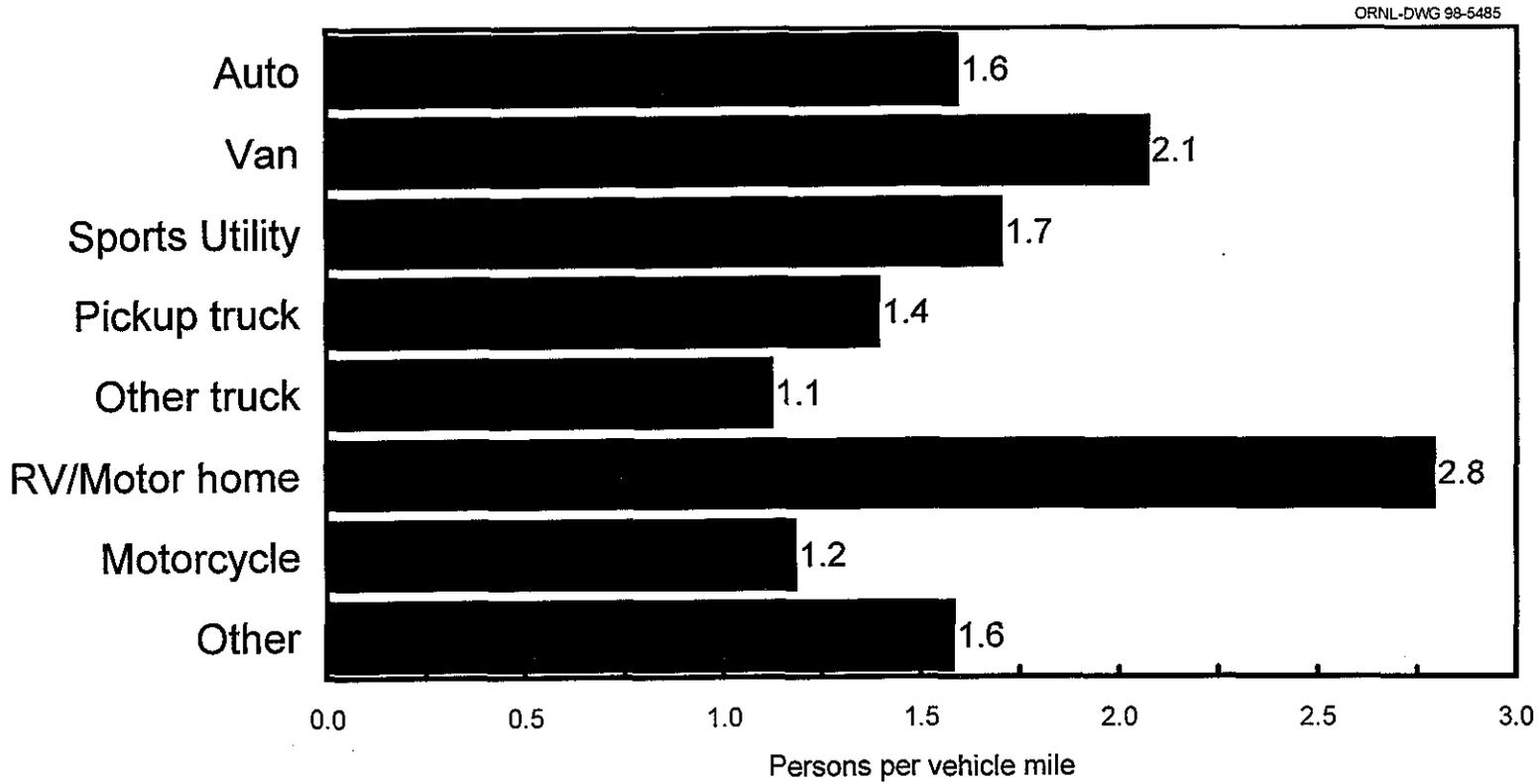
^aIt is believed that the methodology changes in the 1995 NPTS did not affect journey-to-work trips; therefore, no adjustment is necessary.

^bIncludes trip purposes not shown on this table.





Figure 10.1. Average Vehicle Occupancy by Vehicle Type, 1995 NPTS



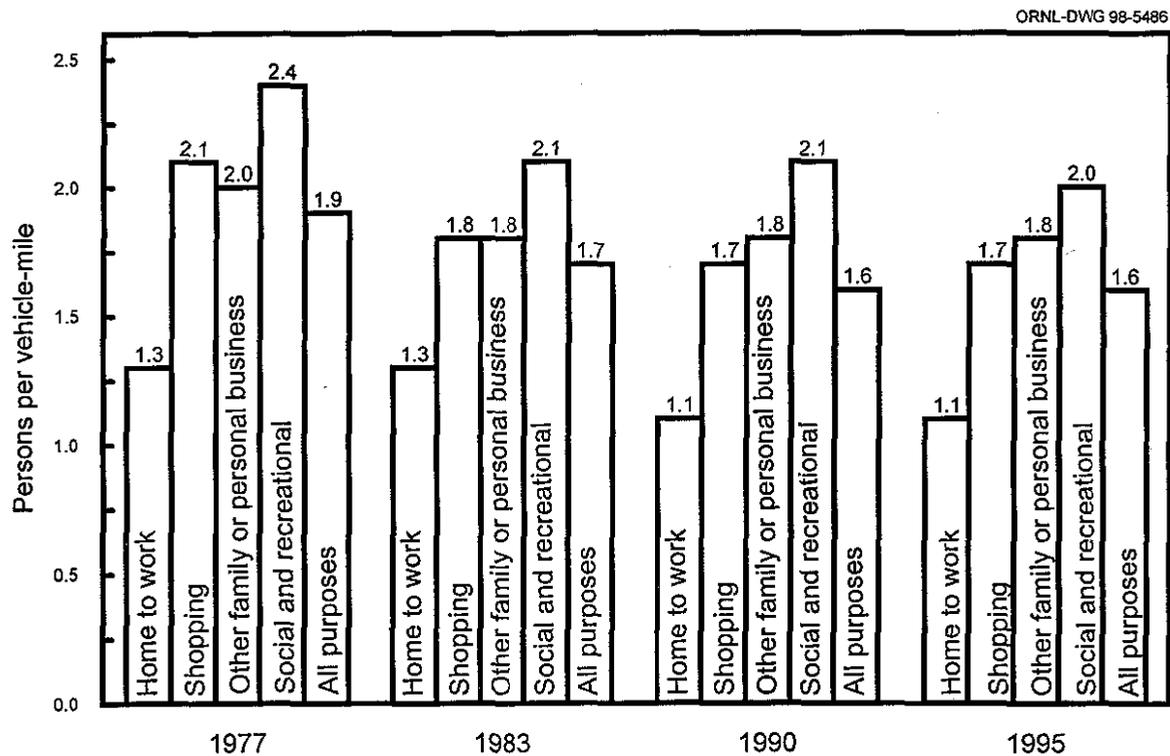
Source:

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

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

The average vehicle occupancy, calculated as person-miles per vehicle-mile, was nearly identical in 1990 and 1995 for every trip purpose. The highest vehicle occupancy levels were in 1977. The increased number of vehicles per household and the decrease in average household size could have contributed to the decline since then.

**Figure 10.2. Average Vehicle Occupancy by Trip Purpose
1977, 1983, 1990, 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: <http://www.fhwa.dot.gov>, <http://www-cta.ornl.gov/npts>)





Historically, the data from the Nationwide Personal Transportation Study (NPTS) are based on estimates reported by survey respondents. For the 1995 survey, odometer data was also collected. The Residential Transportation Energy Consumption Survey (RTECS) data has always been collected from odometer readings. These data indicate that respondents may overestimate the number of miles driven in a year.

Table 10.12
Average Annual Miles Per Household Vehicle by Vehicle Age

Vehicle age (years)	National Personal Transportation Study				Residential Transportation Energy Consumption Survey				
	1983 self-reported	1990 self-reported	1995 self-reported	1995 odometer	1983 odometer	1985 odometer	1988 odometer	1991 odometer	1994 odometer
Under 1	8,200	19,600	15,900	15,600	13,400	12,700	12,900	13,400	15,220
1	15,200	16,800	12,200	11,200	13,000	13,000	13,400	14,100	14,250
2	16,800	16,600	12,200	11,300	12,700	12,600	12,600	12,600	13,740
3	14,500	14,700	12,800	11,600	12,100	12,400	12,100	13,200	13,080
4	13,000	13,600	13,200	12,400	11,300	11,100	11,500	13,300	12,500
5	12,100	12,900	13,500	12,700	9,700	10,600	10,600	12,200	12,560
6	11,300	13,200	14,100	12,900	9,700	10,000	10,800	11,200	12,290
7	10,000	12,400	14,400	13,800	9,500	9,700	10,000	10,700	12,030
8	9,800	12,600	15,500	14,800	8,700	8,900	10,300	11,400	10,915
9	9,000	11,500	16,800	14,500	8,400	8,600	8,900	10,000	10,950
10 and older	7,300	9,200	8,900	9,000	8,700	8,400	7,500	7,200	9,780
All vehicles	10,400	12,500	12,200	11,800	9,400	9,900	10,200	10,600	11,400

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: <http://www.cta.oml.gov/npts>.

Residential Transportation Energy Consumption Survey—Personal communication with Energy Information Agency, Office of Markets and End Use, Energy End Use Division.

(Additional resources: <http://www.fhwa.dot.gov>, <http://www.eia.doe.gov>)

Note:

Data include all household vehicles. Data have been rounded to the nearest hundredth.

In 1995 the average journey-to-work was faster (miles per hour increased to 34.6), but the travel time still increased, probably 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 10.13
Journey-to-Work Statistics
1983, 1990, and 1995 NPTS^a

Year	Private transportation	Public transportation	Other	Total
<i>Average travel time (minutes)^b</i>				
1983	17.6	39.8	10.6	18.2
1990	19.1	41.1	12.4	19.6
1995	20.1	42.0	18.8	20.7
<i>Average trip length (miles)</i>				
1983	8.9	11.8	1.4	8.5
1990	11.0	12.8	2.2	10.7
1995	11.8	12.9	8.2	11.6
<i>Average speed (miles per hour)</i>				
1983	30.2	17.8	7.6	28.2
1990 ^c	34.7	18.2	7.6	33.3
1995 ^c	35.4	19.3	25.9	34.6

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

^aIt is believed that the methodology changes in the 1995 NPTS did not affect journey-to-work trips; therefore, no adjustment is necessary.

^bDoes not include time spent waiting for transportation.

^cDoes 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 13.4% in 1990. The percent of workers using public transit declined from 6.4% to 5.3% during the same time period. The average travel time increased by 0.7 minutes from 1980 to 1990.

Table 10.14
Means of Transportation to Work, 1980 and 1990 Census

Means of transportation	1980 Census		1990 Census	
	Number of workers	Percentage	Number of workers	Percentage
Private vehicle	81,258,496	84.1%	99,592,932	86.5%
Drove alone	62,193,449	64.4%	84,215,298	73.2%
Car pooled	19,065,047	19.7%	15,377,634	13.4%
Public transportation	6,175,061	6.4%	6,069,589	5.3%
Bus or trolley bus ^a	3,924,787	4.1%	3,445,000	3.0%
Streetcar or trolley car ^a	b	b	78,130	0.1%
Subway or elevated	1,528,852	1.6%	1,755,476	1.5%
Railroad	554,089	0.6%	574,052	0.5%
Ferryboat	b	b	37,497	0.0%
Taxicab	167,133	0.2%	179,434	0.2%
Other means	703,273	0.7%	808,582	0.7%
Motorcycle	419,007	0.4%	237,404	0.2%
Bicycle	468,348	0.5%	466,856	0.4%
Walked only	5,413,248	5.6%	4,488,886	3.9%
Worked at home	2,179,863	2.3%	3,406,025	3.0%
Total workers	96,617,296	100.0%	115,070,274	100.0%
Average travel time (minutes)	21.7		22.4	

Source:

Data provided by the Journey-to-Work and Migration Statistics Branch, Population Division, U.S. Bureau of the Census. (Additional resources: <http://www.census.gov>)

^aThis category was "Bus or streetcar" in 1980.

^bData are not available.



Table 10.15
National and Metropolitan Area Comparisons of Journey-to-Work Statistics, 1990 Census

	National	Metropolitan areas ^a
Workers per household	1.25	1.31
Workers per vehicle	0.76	0.82
Average travel time (minutes)	22.38	25.20
Commute length (percentage)		
Less than 15 minutes	15.87%	11.45%
15–29 minutes	51.64%	49.22%
30–39 minutes	14.66%	17.48%
40–59 minutes	9.01%	11.77%
60 minutes or more	5.86%	7.52%
Mode (percentage)		
Drive alone	73.19%	70.75%
Percentage car pooled	13.36%	12.69%
Public transit	5.27%	8.98%
Motorcycle	0.21%	0.21%
Walk	3.90%	3.76%
Bicycle	0.41%	0.43%
Other	0.70%	0.62%
Work at home	2.96%	2.57%
Time workers leave home (percentage)		
5:00 AM–6:59 AM	26.04%	25.49%
7:00 AM–8:29 AM	41.87%	42.44%
8:30 AM–9:59 AM	10.28%	11.57%
All other departures	18.85%	17.93%

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*, FHWA-PL-94-012, Cambridge, MA, 1994, p. 2-6. (Additional resources: <http://www.census.gov>)

^aMetropolitan areas over 1 million population. There were 39 such areas in the 1990 Census.

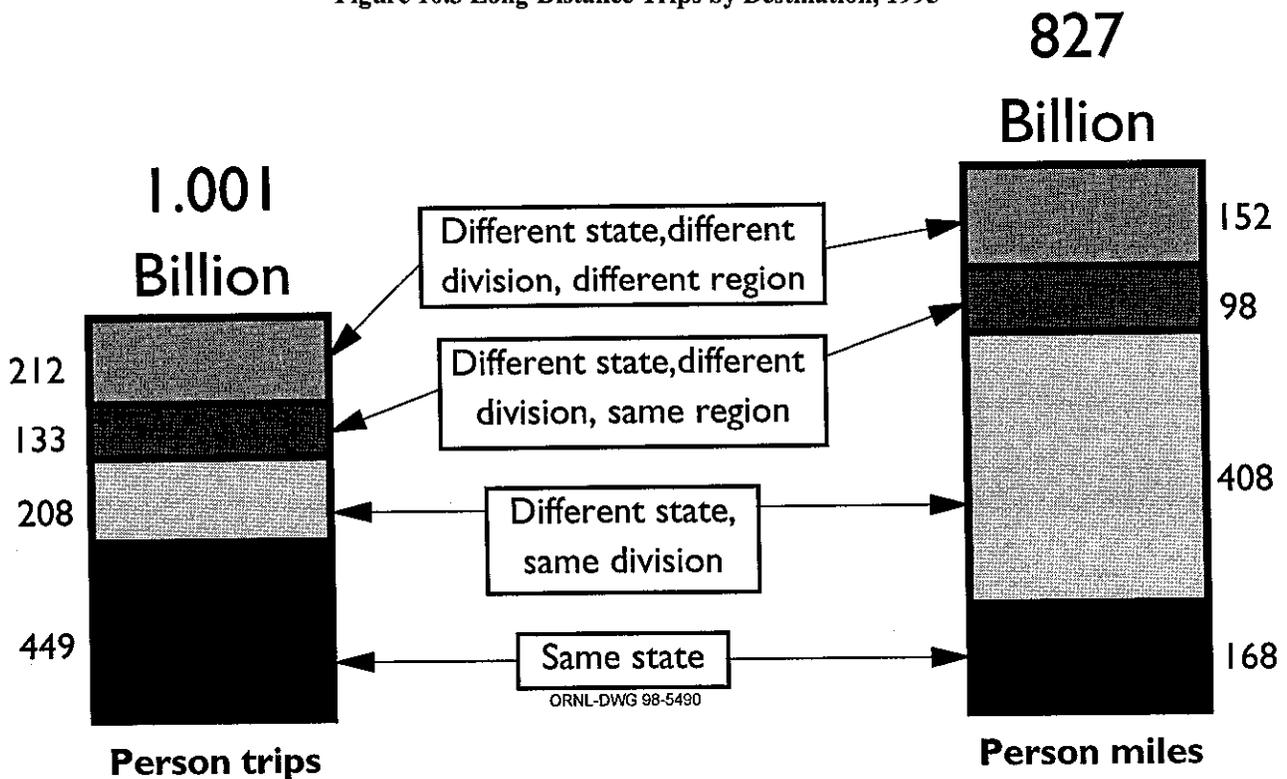


1995 American Travel Survey

The American Travel Survey (ATS) was conducted by the Bureau of Transportation Statistics 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: <http://www.bts.gov/ats>

Figure 10.3 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: <http://www.bts.gov/ats>)

Note:
 Definitions of divisions and regions are in Appendix C.



Table 10.16
Long-Distance Trips^a by Mode and Purpose

Principal means of transportation	Main purpose of trip					
	Business	Pleasure			Personal business	Total
		Visit friends or relatives	Leisure	Total		
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
Total	224,835	330,755	299,355	630,110	146,338	1,001,319
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
Total	22.5	33.0	29.9	62.9	14.6	100.0

Source:

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

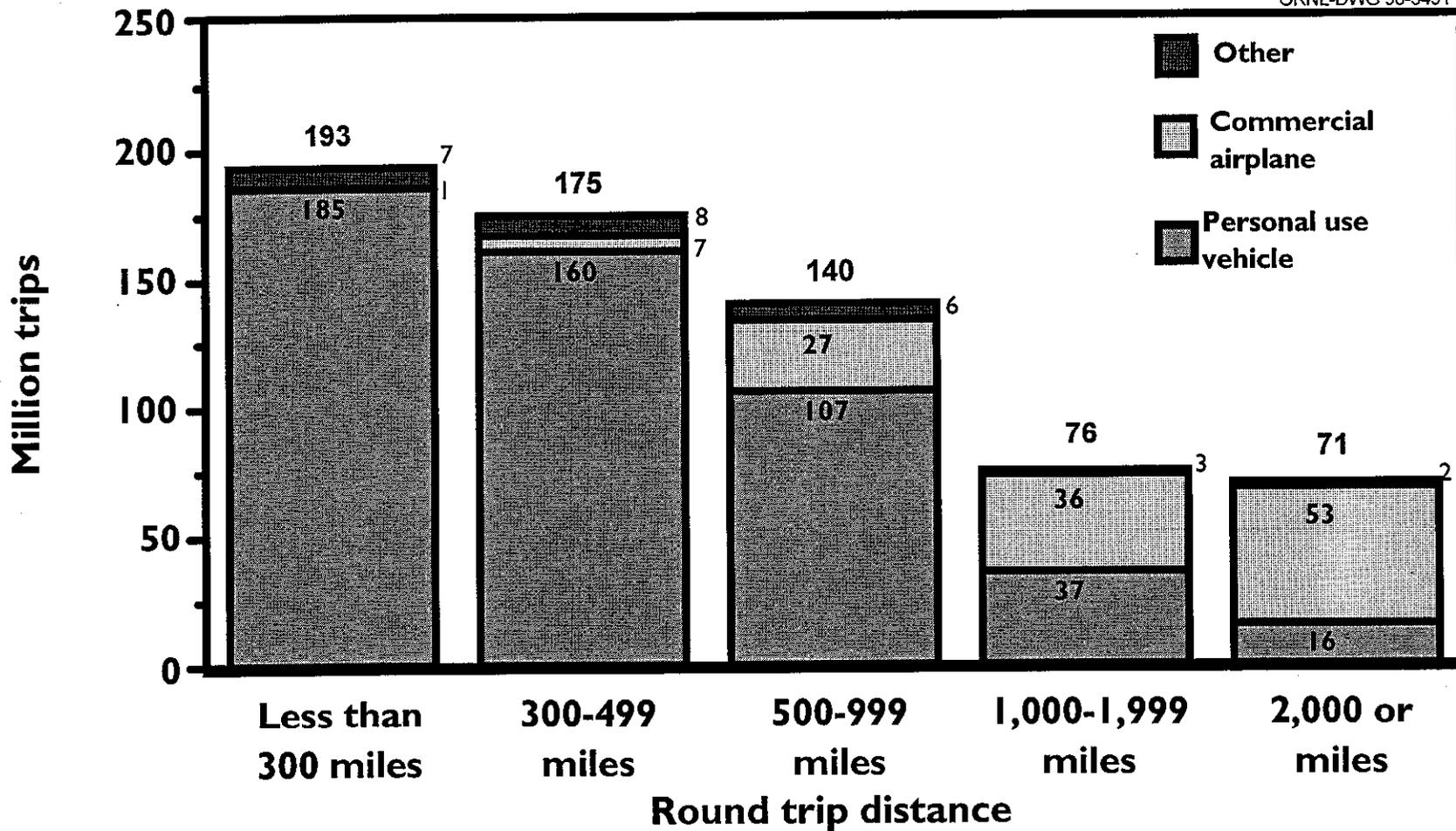
^aA long-distance trip is any trip of 100 miles or more, one way.





Figure 10.4. Long-Distance Household Trips by Mode and Trip Distance, 1995

ORNL-DWG 98-5491

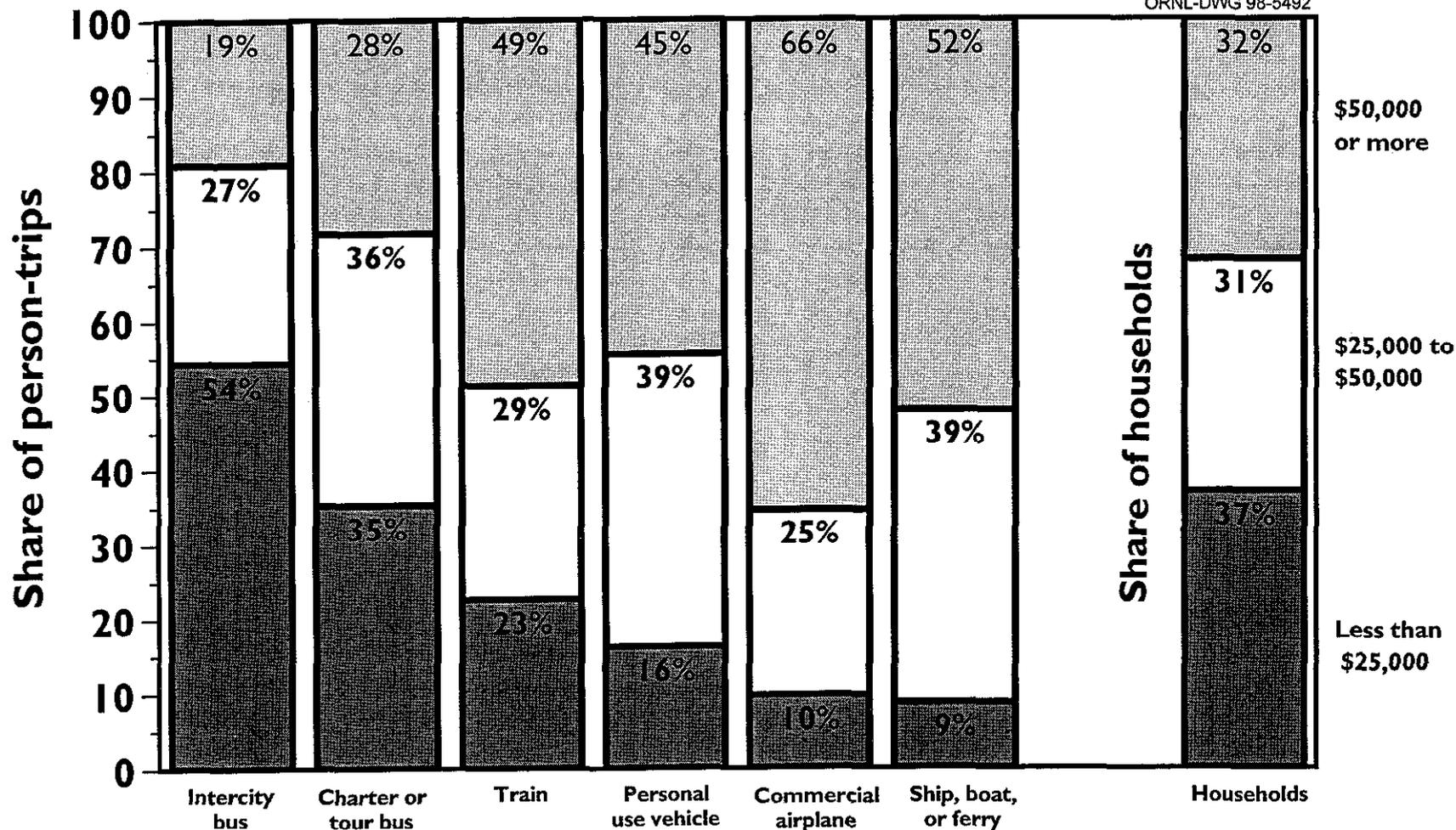


Source:

U.S. Department of Transportation, Bureau of Transportation Statistics, 1995 American Travel Survey Profile, Washington, DC, October 1997, p. 3.
(Additional resources: <http://www.bts.gov/ats>)

Figure 10.5. Shares of Long-Distance Person Trips by Mode and Household Income, 1995

ORNL-DWG 98-5492



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*, 117th Edition, Washington, DC, 1997, p. 465.

(Additional resources: <http://www.bts.gov/ats>, <http://www.census.gov>)



