

Chapter 8

Household Vehicles and Characteristics

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	<i>1980</i>	<i>17.5%</i>
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Vehicle-miles are growing at a faster rate than vehicles and more than twice the rate of population. See Table 8.2 for vehicles per capita and vehicle-miles per capita.

Table 8.1
Population and Vehicle Profile, 1950–2006

Year	Resident population ^a (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	151,326	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	249,623	93,347	179,299	2,144,362	167,015	118,793
1991	252,981	94,312	181,438	2,172,050	168,995	117,718
1992	256,514	95,689	181,519	2,247,151	173,125	118,492
1993	259,919	96,391	186,315	2,296,378	173,149	120,259
1994	263,126	97,107	188,714	2,357,588	175,403	123,060
1995	266,278	98,990	193,441	2,422,696	176,628	124,900
1996	269,394	99,627	198,294	2,485,848	179,539	126,708
1997	272,647	101,018	201,071	2,561,695	182,709	129,558
1998	275,854	102,528	205,043	2,631,522	184,980	131,463
1999	279,040	103,874	209,509	2,691,056	187,170	133,488
2000	282,217	104,705	213,300	2,746,925	190,625	136,891
2001	285,226	108,209	216,683	2,797,287	191,276	136,933
2002	288,126	109,297	221,027	2,855,508	194,296	136,485
2003	290,796	111,278	225,882	2,890,450	196,166	137,736
2004	293,638	112,000	231,398	2,964,788	198,889	139,252
2005	296,507	113,343	237,697	2,989,430	200,549	141,730
2006	299,398	114,384	244,022	3,014,116	202,810	144,427
<i>Average annual percentage change</i>						
1950–2006	1.2%	1.7%	3.1%	3.4%	2.1%	1.6%
1996–2006	1.1%	1.4%	2.1%	1.9%	1.2%	1.3%

Sources:

Resident population and civilian employed persons - U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States–2008*, Washington, DC, 2008, tables 2, 58, 569, and annual. (Additional resources: www.census.gov)

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

Licensed drivers and vehicle-miles - U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2006*, Tables DL-1C and VM-1, and annual. (Additional resources: www.fhwa.dot.gov)

^a Estimates as of July 1. Includes Armed Forces in the United States.



Vehicle-miles per capita reached 10,000 miles in 2004. There were 1.69 vehicles for every employed civilian in the United States in 2006.

Table 8.2
Vehicles and Vehicle-Miles per Capita, 1950–2006^a

Year	Vehicles per capita	Vehicle-miles per capita	Vehicles per civilian employed persons
1950	0.286	3,029	0.73
1955	0.338	3,656	0.90
1960	0.370	3,994	1.01
1965	0.424	4,587	1.15
1970	0.481	5,440	1.25
1975	0.560	6,191	1.40
1980	0.615	6,722	1.41
1985	0.660	7,460	1.47
1986	0.675	7,641	1.48
1987	0.690	7,929	1.49
1988	0.702	8,286	1.49
1989	0.713	8,494	1.50
1990	0.718	8,590	1.51
1991	0.717	8,586	1.54
1992	0.708	8,760	1.53
1993	0.717	8,835	1.55
1994	0.717	8,960	1.53
1995	0.726	9,098	1.55
1996	0.736	9,228	1.56
1997	0.737	9,396	1.55
1998	0.743	9,540	1.56
1999	0.751	9,644	1.57
2000	0.756	9,733	1.56
2001	0.760	9,807	1.58
2002	0.767	9,911	1.62
2003	0.777	9,940	1.64
2004	0.788	10,097	1.66
2005	0.802	10,082	1.68
2006	0.815	10,067	1.69
<i>Average annual percentage change</i>			
1950–2006	1.9%	2.2%	1.5%
1996–2006	1.0%	0.9%	0.8%

Sources:

Resident population and civilian employed persons - U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States–2008*, Washington, DC, 2008, tables 2, 569, and annual.

(Additional resources: www.census.gov)

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

Vehicle-miles - U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2006*, Table VM-1 and annual. (Additional resources: www.fhwa.dot.gov)

^a Includes all vehicles (light and heavy).



Transportation (17.6%) is second only to housing (33.8%) as the largest expenditure for the average household. In 2006, approximately 26.1% of transportation expenditures were for purchasing gasoline and motor oil. There is an average of 1.9 vehicles per household.

Table 8.3
Average Annual Expenditures of Households by Income, 2006^a

	All households	Income before taxes			
		Less than \$5,000	\$5,000–\$9,999	\$10,000–\$14,999	\$15,000–\$19,999
Total expenditures	\$48,398	\$20,709	\$16,751	\$20,612	\$24,422
		Percentage of total expenditures ^b			
Food ^c	12.6%	14.7%	17.1%	15.0%	14.9%
Housing	33.8%	39.8%	42.1%	39.7%	38.5%
Apparel and services	3.9%	6.1%	5.3%	3.3%	3.5%
Transportation	17.6%	15.5%	12.6%	16.0%	14.6%
Vehicle purchases (net outlay)	7.1%	5.6%	2.9%	6.1%	3.9%
Gasoline and motor oil	4.6%	4.7%	4.7%	4.8%	5.2%
Other vehicle expenditures	4.9%	4.3%	4.0%	4.3%	4.5%
Public transportation	1.0%	0.9%	1.0%	0.8%	0.9%
Health care	5.7%	5.0%	5.7%	8.4%	9.1%
Entertainment	4.9%	4.1%	4.6%	4.0%	4.5%
Personal Insurance & pensions	10.9%	2.2%	1.9%	2.5%	3.3%
Others ^d	9.5%	12.5%	9.7%	10.1%	10.6%
Households ^e (thousands)	118,843	4,572	6,247	7,585	7,671
Percentage of households	100%	3.8%	5.3%	6.4%	6.5%
Average number of vehicles in HH	1.9	0.8	0.7	1.0	1.2

Source:

U.S. Department of Labor, Bureau of Labor Statistics, web site: www.bls.gov/cex/2006/standard/income.pdf, October 2007. (Additional resources: www.bls.gov)

^a Public assistance monies are included in reported income. Data for those reporting 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.

^e The term household refers to a “consumer unit,” which is defined differently than households on Table 8.1.



Table 8.3 (Continued)
Average Annual Expenditures of Households by Income, 2006^a

	Income before taxes				
	\$20,000- \$29,999	\$30,000- \$39,999	\$40,000- \$49,999	\$50,000- \$69,999	\$70,000 and over
Total expenditures	\$29,042	\$35,108	\$39,573	\$50,086	\$82,294
	Percentage of total expenditures ^b				
Food ^c	14.2%	13.4%	13.5%	13.0%	11.3%
Housing	37.0%	35.0%	35.3%	33.2%	32.2%
Apparel and services	3.9%	3.7%	4.0%	4.0%	3.7%
Transportation	17.4%	19.3%	17.3%	18.8%	17.6%
Vehicle purchases (net outlay)	6.4%	7.9%	5.6%	7.2%	7.7%
Gasoline and motor oil	5.4%	5.4%	5.4%	5.2%	4.0%
Other vehicle expenditures	4.9%	5.2%	5.5%	5.4%	4.7%
Public transportation	0.7%	0.8%	0.7%	1.0%	1.2%
Health care	8.3%	7.1%	6.6%	6.0%	4.6%
Entertainment	4.0%	4.5%	4.7%	4.7%	5.3%
Personal Insurance & pensions	5.4%	7.2%	9.4%	10.5%	14.1%
Others ^d	8.7%	8.7%	8.0%	8.9%	10.0%
Households ^e (thousands)	14,232	13,304	11,446	17,674	36,112
Percentage of households	12.0%	11.2%	9.6%	14.9%	30.4%
Average number of vehicles in HH	1.5	1.7	1.9	2.3	2.8

Source:

U.S. Department of Labor, Bureau of Labor Statistics, web site: www.bls.gov/cex/2006/standard/income.pdf, October 2007. (Additional resources: www.bls.gov)

^a Public assistance monies are included in reported income. Data for those reporting 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.

^e The term household refers to a "consumer unit," which is defined differently than households on Table 8.1.



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 8.4
Household Vehicle Ownership, 1960–2000 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
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)

^a Estimates using Census Bureau data; these data on the total number of vehicles do not match the figures on Table 8.1. The figures on Table 8.1, from R.L. Polk and Company, are the preferred data.



2001 National Household Travel Survey Daily Trip Data

The Department of Transportation (DOT) collected data on daily trips in 1969, 1977, 1983, 1990 and 1995 via the Nationwide Personal Transportation Survey (NPTS). Data on longer trips were collected in 1977 and 1995 via the American Travel Survey (ATS). For 2001, the DOT combined the collection of long trip and daily trip data into one survey – the 2001 National Travel Household Travel Survey (NHTS).

The NHTS is the nation's inventory of daily and long-distance travel. The survey includes demographic characteristics of households, people, vehicles, and detailed information on daily and longer-distance travel for all purposes by all modes. NHTS survey data are collected from a sample of U.S. households and expanded to provide national estimates of trips and miles by travel mode, trip purpose, and a host of household attributes.

The NHTS was designed to continue the NPTS and ATS series, but as with all data surveys, caution should be used when comparing statistics from one survey to another due to changes in terminology, survey procedures, and target population. The 2001 survey collected data on trips of children under 5 years of age, while the previous NPTS did not. Improved methodologies first used in the collection of trip information in the 1995 NPTS make it difficult to compare these data with past NPTS survey data. Thus, the 1990 NPTS trip data have been adjusted to make it comparable with the later surveys.

The Nationwide Household Travel Survey will be conducted in 2008.
The 2001 survey data are the latest available at the current time.

Table 8.5
Demographic Statistics from the 1969, 1977, 1983, 1990, 1995 NPTS and 2001 NHTS

	1969	1977	1983	1990	1995	2001	Percent change 1969–2001
Persons per household	3.16	2.83	2.69	2.56	2.63	2.58	-18%
Vehicles per household	1.16	1.59	1.68	1.77	1.78	1.89	63%
Workers per household	1.21	1.23	1.21	1.27	1.33	1.35	12%
Licensed drivers per household	1.65	1.69	1.72	1.75	1.78	1.77	7%
Vehicles per worker	0.96	1.29	1.39	1.40	1.34	1.39	45%
Vehicles per licensed driver	0.70	0.94	0.98	1.01	1.00	1.06	52%
Average vehicle trip length (miles)	8.89	8.34	7.90	8.98	9.06	9.87	11%

Sources:

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 and 2001 were generated from the Internet sites www-cta.ornl.gov/npts, and nhts.ornl.gov.
(Additional resources: 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.



Due to methodology improvements in collecting trip information, the 2001 and 1995 data should be compared only to the 1990 adjusted data. The original 1990 data are comparable to all previous surveys; however, comparisons should always be made with caution because of differing survey methodologies.

Table 8.6
Average Annual Vehicle-Miles, Vehicle Trips and
Trip Length per Household
1969, 1977, 1983, 1990, 1995 NPTS and 2001 NHTS

	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
2001	5,724	21,171
<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
2001	479	2,171
<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
2001	12.2	9.9

Sources:

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. 1990 adjusted data - Oak Ridge National Laboratory, Oak Ridge, TN, August 1998. 2001 NHTS data were generated from the Internet site nhts.ornl.gov. (Additional resources: www.fhwa.dot.gov, www.cta.ornl.gov/npts)

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



In 2001 vehicle-miles traveled (vmt) for a three-person household is over 28,000 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 74% more vmt than households without children.

Table 8.7
Average Number of Vehicles and Vehicle Travel per Household,
1990 NPTS and 2001 NHTS

	Average number of vehicles per household		Average vehicle-miles traveled per household	
	1990	2001	1990	2001
Number of Licenced Drivers				
1	1.5	1.2	15,200	9,700
2	2.1	2.2	22,900	25,800
3	2.9	3.0	29,400	37,900
4 or more	3.8	3.8	40,500	47,200
Household size				
1 person	1.2	1.0	11,400	7,500
2 persons	1.9	2.0	19,300	21,200
3 persons	2.2	2.3	23,700	28,400
4 persons	2.4	2.4	25,300	28,600
5 persons	2.4	2.4	24,900	33,200
6 or more persons	2.7	2.5	29,200	33,800
Household urban status				
Urban	1.9	1.8	19,000	19,300
Rural	2.1	2.3	22,200	28,400
Household composition				
With children	2.2	2.2	24,100	28,300
Without children	1.8	1.7	17,600	16,700
All households	1.8	1.9	18,300	21,200

Source:

Generated from the Department of Transportation, Federal Highway Administration, Nationwide Personal Transportation Survey Public Use Files, Washington, DC, 2000 and the National Household Travel Survey Internet site: nhts.ornl.gov. (Additional resources: www.cta.ornl.gov/npts)



Table 8.8
Trip Statistics by Trip Purpose, 2001 NHTS

Trip Purpose	Share of trips	Share of vehicle-miles traveled	Trip length (miles)	Trip duration (minutes)
To/from work	22.1%	27.0%	12.1	22.3
Work-related business	4.1%	8.4%	20.3	30.9
Shopping	21.1%	14.5%	6.7	14.4
Other family/personal business	24.7%	18.7%	7.5	15.2
School/church	4.9%	3.7%	7.5	15.8
Medical/dental	2.2%	2.2%	9.9	20.7
Vacation	0.4%	1.8%	47.4	59.6
Visit friends/relatives	6.3%	9.4%	14.9	24.4
Other social/recreational	13.7%	13.2%	9.6	18.2
Other	0.5%	1.0%	18.1	31.4
All	99.9%	100.0%	9.9	18.7

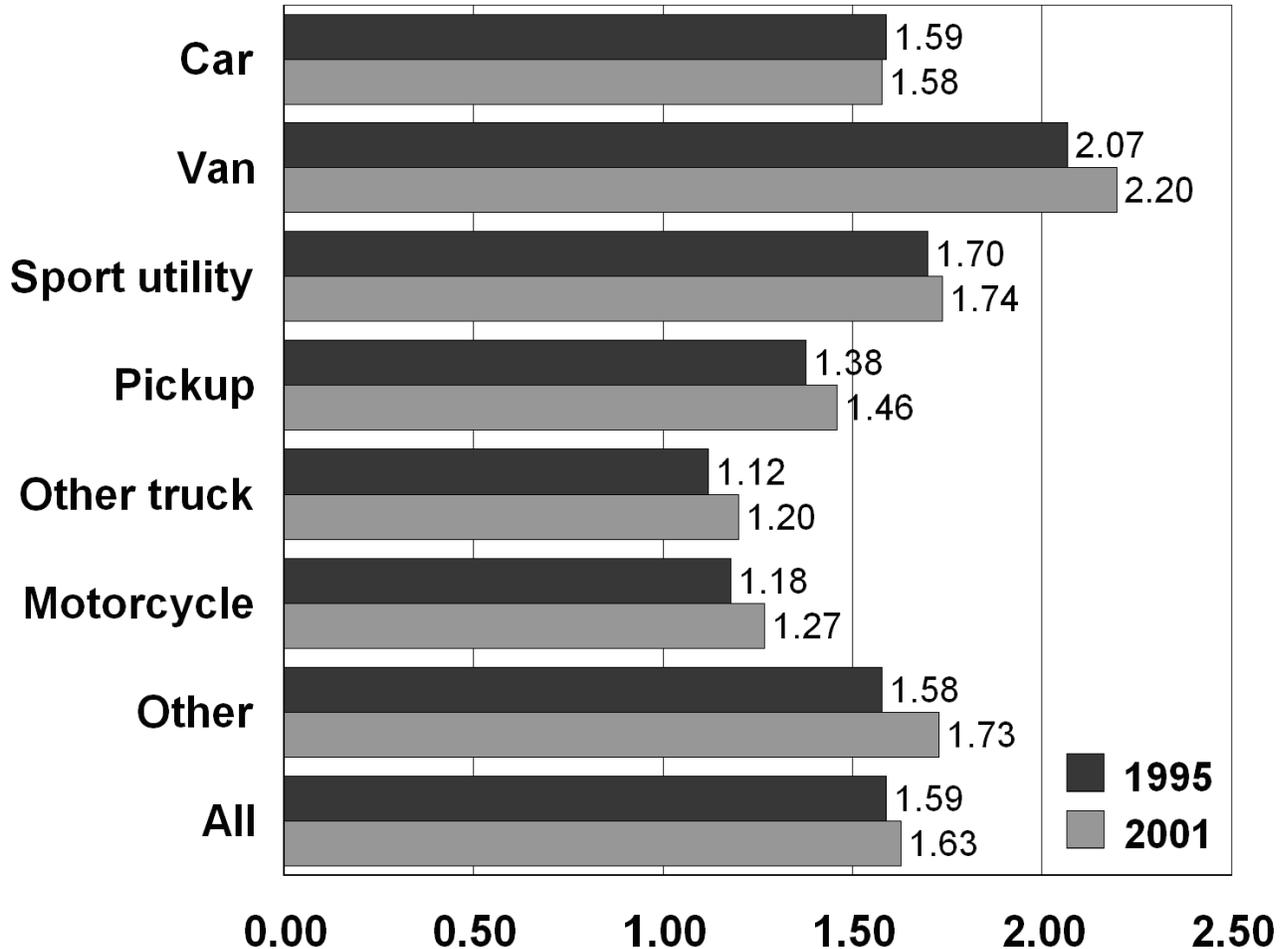
Source:

Generated from the National Household Travel Survey Internet site: nhts.ornl.gov.



While car occupancy declined slightly from 1995 to 2001, all other vehicle types showed increased occupancy. Vans and sport utility vehicles have higher vehicle occupancies than cars.

Figure 8.1. Average Vehicle Occupancy by Vehicle Type, 1995 NPTS and 2001 NHTS



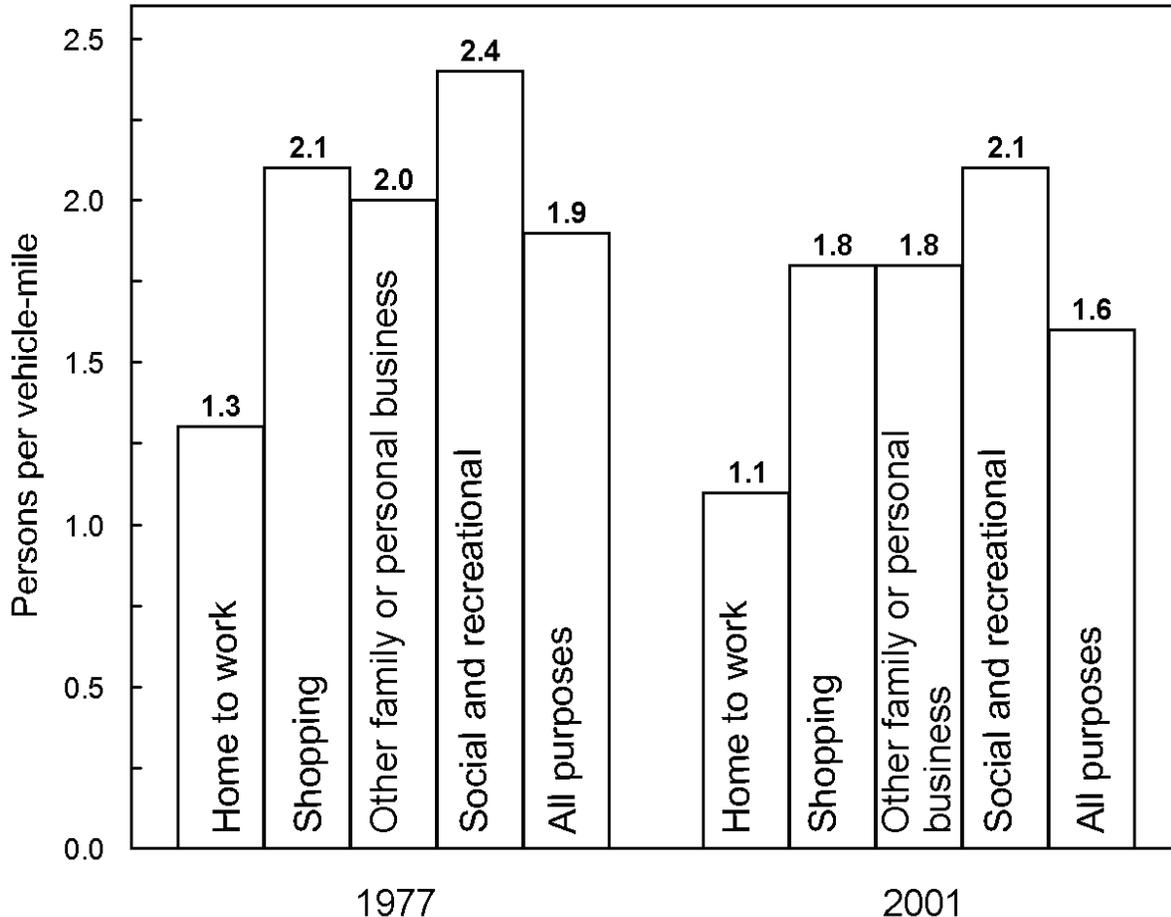
Sources:

U.S. Department of Transportation, Federal Highway Administration, 1995 Nationwide Personal Transportation Survey, Washington, DC, 1997, and 2001 National Household Travel Survey, Washington, DC, 2004. (Additional resources: www.fhwa.dot.gov, www-cta.ornl.gov/npts, nhts.ornl.gov)



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 8.2. Average Vehicle Occupancy by Trip Purpose
1977 NPTS and 2001 NHTS**



Sources:

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 2001 NHTS were generated from the Internet site nhts.ornl.gov, June 2003. (Additional resources: www.fhwa.dot.gov, nhts.ornl.gov)



The 1990 household survey reports the highest average annual miles per vehicle. These data show that younger vehicles are typically driven more miles than older vehicles.

Table 8.9
Average Annual Miles Per Household Vehicle by Vehicle Age

Vehicle age (years)	1983 self-reported	1990 self-reported	1995 self-reported	2001 self-reported
Under 1	8,200	19,600	15,900	15,500
1	15,200	16,800	16,800	14,300
2	16,800	16,600	15,500	14,000
3	14,500	14,700	14,400	13,100
4	13,000	13,600	14,100	12,500
5	12,100	12,900	13,500	12,000
6	11,300	13,200	13,200	11,800
7	10,000	12,400	12,800	11,600
8	9,800	12,600	12,200	10,900
9	9,000	11,500	12,200	10,800
10 and older	7,300	9,200	8,900	7,400
All household vehicles	10,400	12,500	12,200	11,100

Sources:

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. 2001: Generated from the Internet site: nhts.ornl.gov. (Additional resources: www.fhwa.dot.gov, www.eia.doe.gov)

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



Historically, the data from the Nationwide Personal Transportation Survey (NPTS) are based on estimates reported by survey respondents. For the 1995 NPTS and the 2001 National Household Travel Survey (NHTS), odometer data were also collected. The 1995 data indicate that respondents overestimate the number of miles they drive in a year, but the 2001 data do not show that same trend.

Table 8.10
Self-Reported vs. Odometer Average Annual Miles, 1995 NPTS and 2001 NHTS

Vehicle age (years)	1995 self-reported	1995 odometer	2001 self-reported	2001 odometer
Under 1	15,900	15,600	15,500	14,500
1	16,800	14,500	14,300	14,200
2	15,500	14,800	14,000	13,700
3	14,400	13,800	13,100	14,100
4	14,100	12,900	12,500	13,400
5	13,500	12,700	12,000	12,900
6	13,200	12,400	11,800	12,400
7	12,800	11,600	11,600	12,100
8	12,200	11,300	10,900	11,300
9	12,200	11,200	10,800	10,500
10 and older	8,900	9,000	7,400	8,100
All household vehicles	12,200	11,800	11,100	11,800

Source:

Generated from the Internet site: www-cta.ornl.gov/npts and 2001 NHTS public use file.

Note: Survey methodology on odometer reading data differs from 1995 to 2001 data.



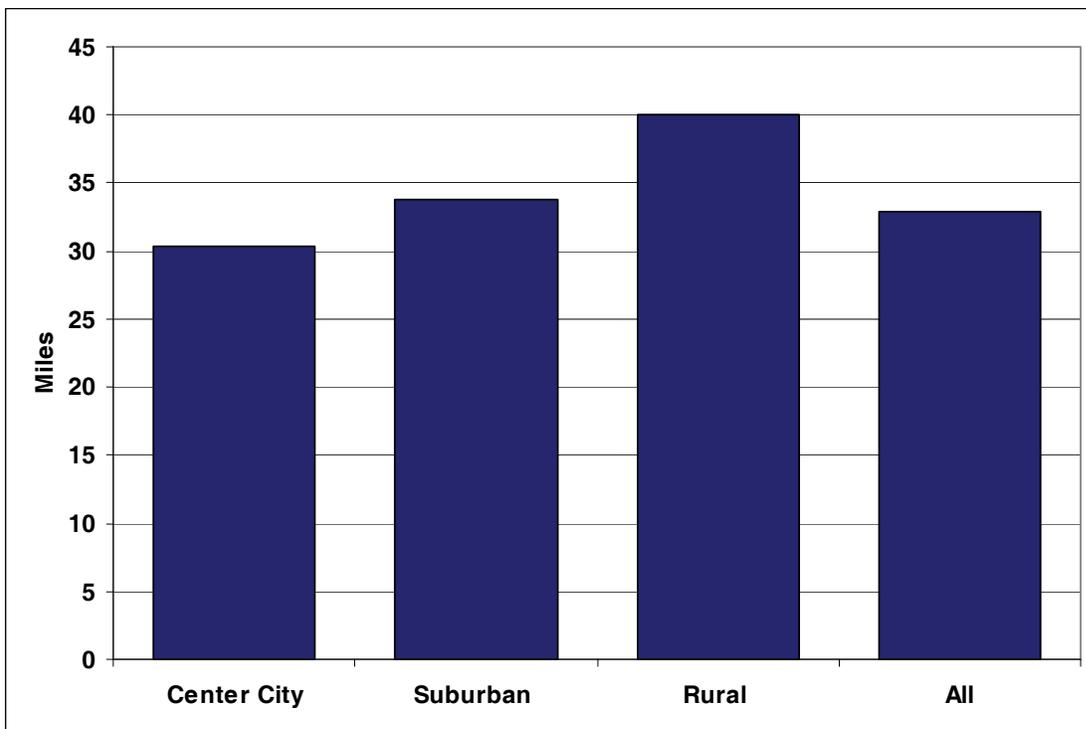
Table 8.11
Household Vehicle Trips, 2001 NHTS

	Number of daily vehicle trips	Average vehicle trip length (miles)	Daily vehicle miles of travel
1990	3.3	8.9	28.5
1995	3.6	9.1	32.1
2001	3.4	9.9	32.7

Source:

U.S. Department of Transportation, *Summary of Travel Trends, 2001 Household Travel Survey*, December 2004, p. 12.

Figure 8.3. Average Daily Miles Driven (per Driver), 2001 NHTS



Source:

National Household Travel Survey, nhts.ornl.gov



Table 8.12
Daily Vehicle Miles of Travel (per Vehicle) by Number of Vehicles in the Household, 2001 NHTS

Number of household vehicles	Miles
1	25.6
2	27.5
3	24.2
4	23.0
5	21.1
More than 5	18.4
All	25.2

Source:
 2001 National Household Travel Survey,
nhts.ornl.gov

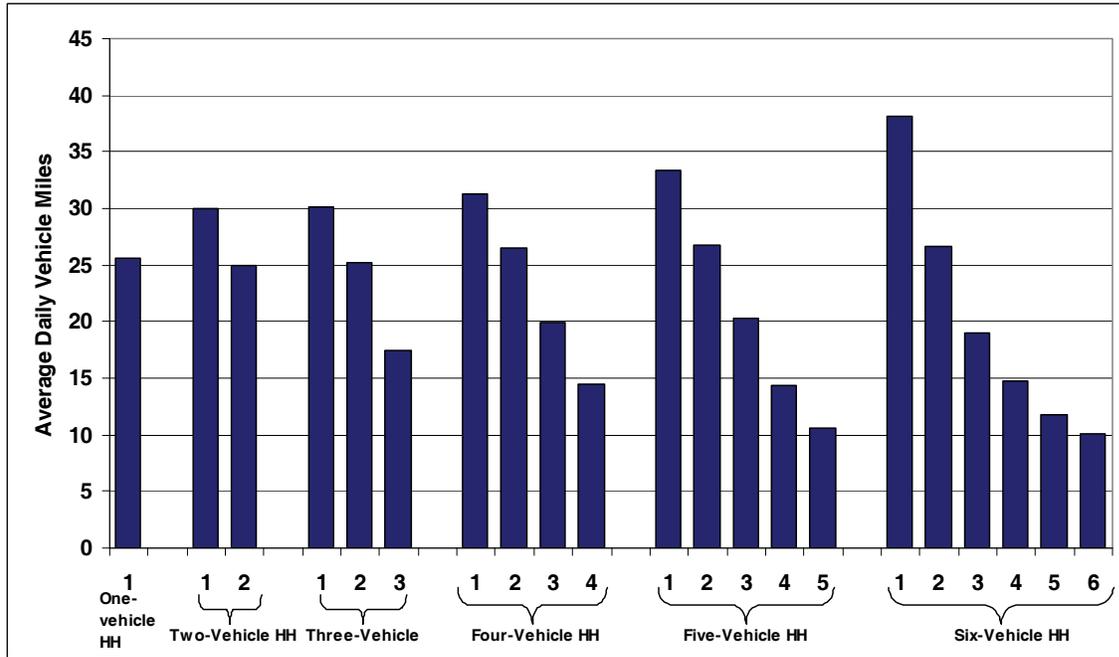
Table 8.13
Daily and Annual Vehicle Miles of Travel and Average Age for Each Vehicle in a Household, 2001 NHTS

Vehicle number	Average daily miles	Average annual miles	Average age (years)
One-vehicle household			
1	25.6	9,339	8.2
Two-vehicle household			
1	30.0	10,966	5.5
2	24.9	9,090	10.0
Three-vehicle household			
1	30.1	10,983	5.1
2	25.2	9,202	9.2
3	17.4	6,359	13.6
Four-vehicle household			
1	31.3	11,407	5.0
2	26.5	9,668	8.4
3	20.0	7,282	12.7
4	14.5	5,278	15.6
Five-vehicle household			
1	33.4	12,181	4.9
2	26.8	9,793	8.2
3	20.3	7,423	11.6
4	14.4	5,237	15.6
5	10.6	3,863	16.6
Six-vehicle household			
1	38.2	13,946	5.2
2	26.7	9,737	9.3
3	19.1	6,955	13.3
4	14.8	5,396	15.2
5	11.7	4,286	17.6
6	10.1	3,685	18.5

Source:
 2001 National Household Travel Survey, nhts.ornl.gov

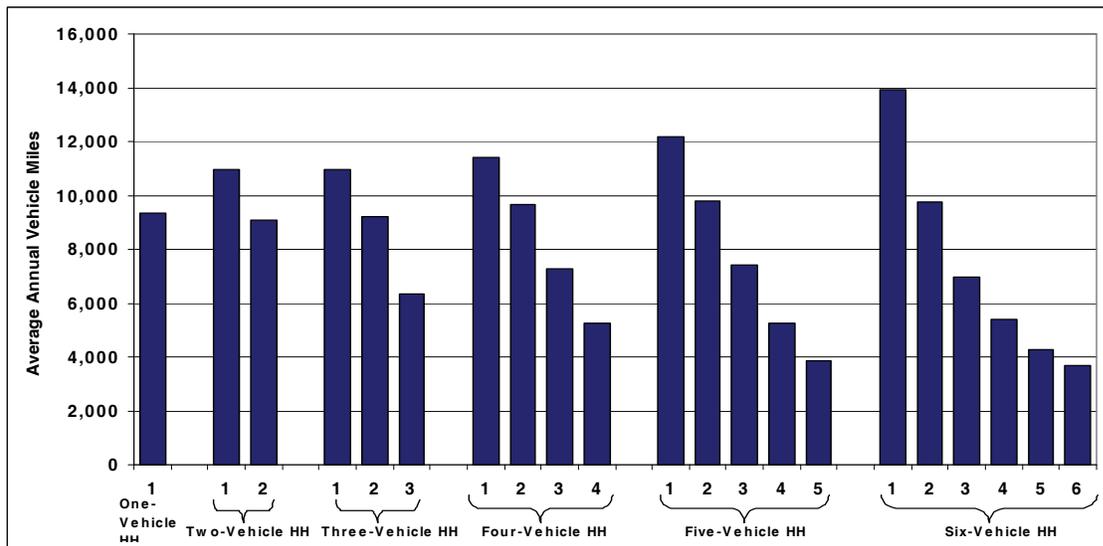


Figure 8.4. Daily Vehicle Miles of Travel for Each Vehicle in a Household, 2001 NHTS



Source:
2001 National Household Travel Survey, nhts.ornl.gov

Figure 8.5. Annual Vehicle Miles of Travel for Each Vehicle in a Household, 2001 NHTS



Source:
2001 National Household Travel Survey, nhts.ornl.gov



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 8.14
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^a</i>	3,925	4.1%	3,445	3.0%	3,572	2.8%
<i>Streetcar or trolley car^a</i>	^b	^b	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>	^b	^b	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	

Sources:

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)

^a This category was "Bus or streetcar" in 1980.

^b Data are not available.



Table 8.15
U.S. Travel Statistics as a Function of Daily Distance Driven

Daily distance (miles)	0-20	20-40	>40	All
Trip share (%)	60.0	21.4	18.6	100.0
Share of time spent	40.8	23.5	35.7	100.0
Share of total	28.1	23.3	48.6	100.0
Miles per hour	21.1	31.3	42.3	31.1
Miles per trip	4.2	9.4	23.4	9.0

Source:

Santini, Danilo J. and Anant D. Vyas, "How to Use Life Cycle Analysis Comparisons of PHEVs to Competing Powertrains." Original Data: 2001 National Household Travel Survey.

Table 8.16
Characteristics of U.S. Daily per Vehicle Driving vs. Dwelling Unit Type and Density

	Share of vehicles in density type	Hours per vehicle per day	Average vehicle speed (miles/hour)	Miles per vehicle per day
All classes detached single	79.0%	1.24	31.4	39.0
All classes other	21.0%	1.28	29.3	37.3
<1,000/sq. mile detached single	84.2%	1.27	34.3	43.5
<1,000/sq. mile all other	15.8%	1.30	33.1	42.8
1,000-4,000/sq. mile detached single	80.2%	1.21	29.3	35.5
1,000-4,000/sq. mile all other	19.8%	1.24	29.7	36.8
4,000-10,000/sq. mile detached single	72.9%	1.19	27.1	32.3
4,000-10,000/sq. mile all other	27.1%	1.25	26.6	33.2
10,000-25,000/sq. mile detached single	46.5%	1.31	23.3	30.6
10,000-25,000/sq. mile all other	53.5%	1.32	23.7	31.3
>25,000/sq. mile detached single	20.5%	1.41	20.1	28.5
>25,000/sq. mile all other	79.5%	1.40	20.8	29.1

Source:

Vyas, Anant, Danilo Santini, Michael Duoba, and Mark Alexander, "Plug-In Hybrid Electric Vehicles: How Does One Determine Their Potential for Reducing U.S. Oil Dependence?" Original Data: 2001 National Household Survey.



Table 8.17
Housing Unit Characteristics, 2005

Type of Housing Unit	Share of occupied housing units	% with garage or carport
New construction (< = 4 years)	5.5%	79.3%
Manufactured/mobile homes	6.4%	30.3%
With physical problems ^a	5.7%	37.9%
All other	82.4%	65.8%
Geographic Location (Census Region)		
Northeast	18.7%	49.0%
Midwest	22.9%	72.0%
South	36.5%	54.8%
West	21.9%	77.6%
Type of Location		
MSA - Central City	29.2%	53.7%
MSA - Suburbs	48.5%	69.1%
Outside MSA	22.3%	60.4%

Source:

Vyas, Anant, Danilo Santini, Michael Duoba and Mark Alexander, "Plug-In Hybrid Electric Vehicles: How Does One Determine Their Potential for Reducing U.S. Oil Dependence?" Original Data: 2005 American Housing Survey.

^a Physical problems include problems with plumbing, heating, electric, upkeep, and/or hallways. For detailed definitions of "moderate" and "severe" physical problems, see *American Housing Survey for the United States, 1993*, page A-13.



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 8.18
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

Sources:

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, Tables QT-03 and P048, August 2001. (Additional resources: www.census.gov)



Sales of bicycles with wheel sizes of 20-inches and over have grown at an average annual rate of 1.4% from 1981 to 2006. The largest growth in bicycle sales, however, were bicycles with wheel sizes under 20 inches which grew at an average annual rate of 2.0%.

Table 8.19
Bicycle Sales, 1981–2006
 (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	9.0	11.9	20.9
2001	5.4	11.3	16.7
2002	5.9	13.6	19.5
2003	5.6	12.9	18.5
2004	5.3	13.0	18.3
2005	5.8	14.0	19.8
2006	5.5	12.7	18.2
<i>Average annual percentage change</i>			
1981–2006	a	1.4%	a
1996–2006	2.0%	1.5%	1.7%

Source:

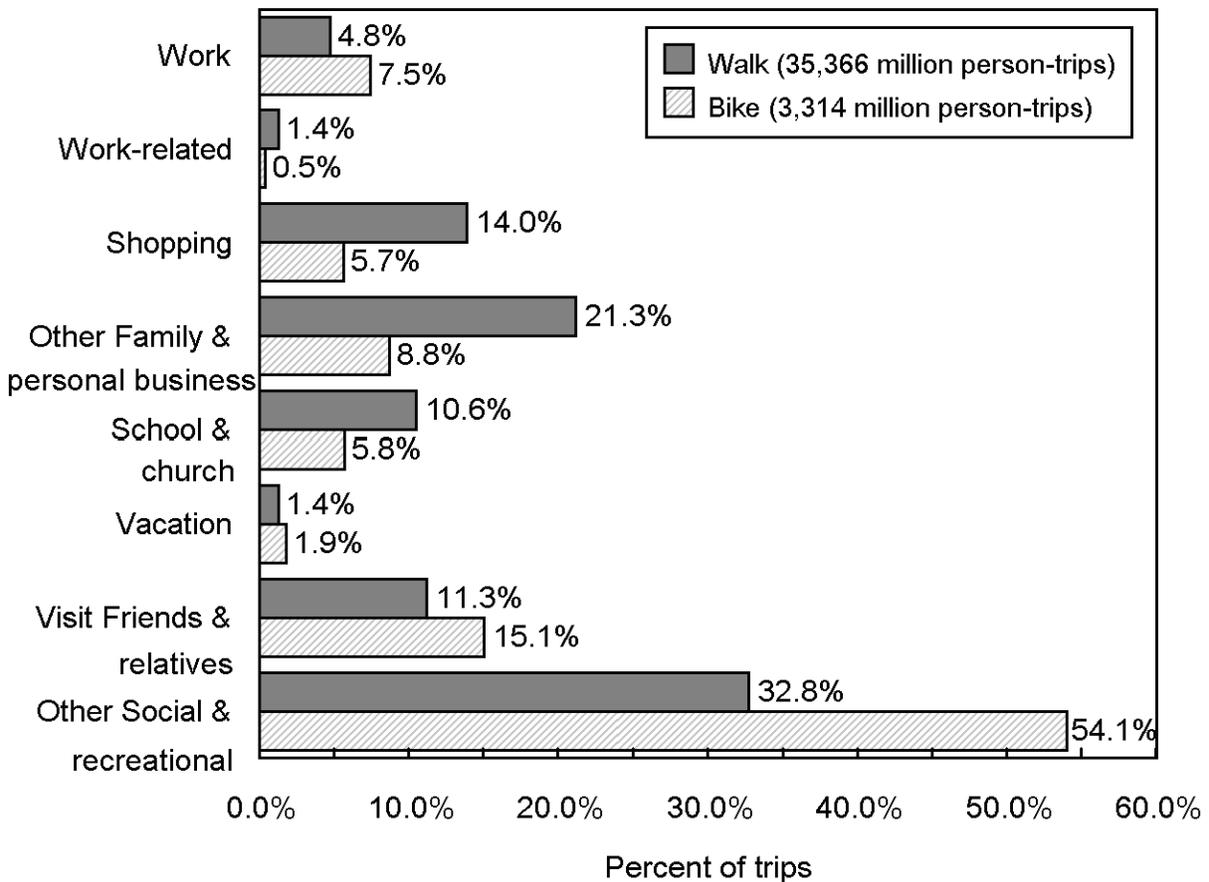
1981–1996: Bicycle Manufacturers Association. 1997–on: The Bicycle Council.
 (Additional resources: www.nbda.com)

^a Data are not available.



In 2001, 4.8% of walk trips and 7.5% of bike trips were to/from work. More than half of all bike trips were for social/recreational purposes. Fourteen-percent of walk trips were shopping trips.

Figure 8.6. Walk and Bike Trips by Trip Purpose, 2001 NHTS



Source:

U.S. Department of Transportation, Federal Highway Administration, National Household Travel Survey
web site: nhts.ornl.gov.



In 2008 only data on daily trips will be collected in the NHTS. The 2001 data are still the latest available on long-distance trips.

Long Distance Trips – 2001 National Household Travel Survey

The 2001 National Household Travel Survey (NHTS) collected data on long-distance trips as well as everyday travel. The everyday travel data is a continuation of the Nationwide Personal Transportation Survey (NPTS), while the long-distance travel data is a continuation of the American Travel Survey (ATS) which was collected in 1977 and 1985. The survey collected trip-related data such as mode of transportation, duration, distance and purpose of trip. It also gathered demographic, geographic, and economic data for analysis purposes.

A long-distance trip is defined as a trip of 50 miles or more, one-way. Long-trip data from the 2001 NHTS were released in the summer of 2004. For additional information about the 2001 NHTS data, contact the Bureau of Transportation Statistics at 202-366-3282 or visit the following Internet site: www.bts.gov/programs/national_household_travel_survey.



Table 8.20
Long-Distance Trip^a Characteristics, 2001 NHTS

Trip characteristic	Person trips		Person miles	
	(thousands)	(percent)	(thousands)	(percent)
Total	2,554,068	100.0	1,138,322,697	100.0
Principal means of transportation:				
Personal use vehicles	2,310,376	90.5	735,882,255	64.7
Airplane	165,039	6.5	367,888,741	32.3
Commercial airplane	158,880	6.2	361,717,015	31.8
Bus ^b	52,962	2.1	23,747,433	2.1
Intercity bus	3,456	0.1	1,765,696	0.2
Charter, tour, or school bus	45,952	1.8	21,019,942	1.9
Train	20,672	0.8	9,266,373	0.8
Round trip distance:				
100 to 300 miles	1,688,358	66.1	284,586,370	25.0
300 to 499 miles	373,550	14.6	143,571,597	12.6
500 to 999 miles	261,802	10.3	180,669,482	15.9
1,000 to 1,999 miles	125,665	4.9	178,629,838	15.7
2,000 miles or more	104,694	4.1	350,865,409	30.8
Mean (miles)	446	^c	^c	^c
Median (miles)	206	^c	^c	^c
Calendar quarter:				
1 st quarter	566,502	22.2	246,556,190	21.7
2 nd quarter	653,310	25.6	298,154,812	26.2
3 rd quarter	734,878	28.8	341,021,290	30.0
4 th quarter	599,378	23.5	252,590,405	22.2
Main purpose of trip:				
Commuting	329,395	12.9	65,877,968	5.8
Other business	405,866	15.9	242,353,212	21.3
Personal/leisure	1,406,411	55.1	667,471,358	58.7
Personal business	322,645	12.6	130,020,982	11.4
Other	88,230	3.5	32,031,679	2.8
Nights away from home:				
None	1,454,847	57.0	304,469,524	26.8
1 to 3 nights	808,281	31.7	414,219,147	36.4
4 to 7 nights	214,464	8.4	269,265,597	23.7
8 or more nights	76,475	3.0	150,368,429	13.2
Destination:				
Within Census division	2,077,810	81.4	549,651,116	48.3
Across Census division, within Census	196,890	7.7	134,930,113	11.9
Across Census region	279,367	10.9	453,741,468	39.9

Source:

U.S. Bureau of Transportation Statistics and the U.S. Federal Highway Administration, 2001 National Household Transportation Survey.

^a A long-distance trip is defined as a trip of 50 miles or more, one-way.

^b Includes other types of buses.

^c Not applicable.



