

Chapter 6

Journey To Work and Work-Related Trips



Between 1969 and 1990:

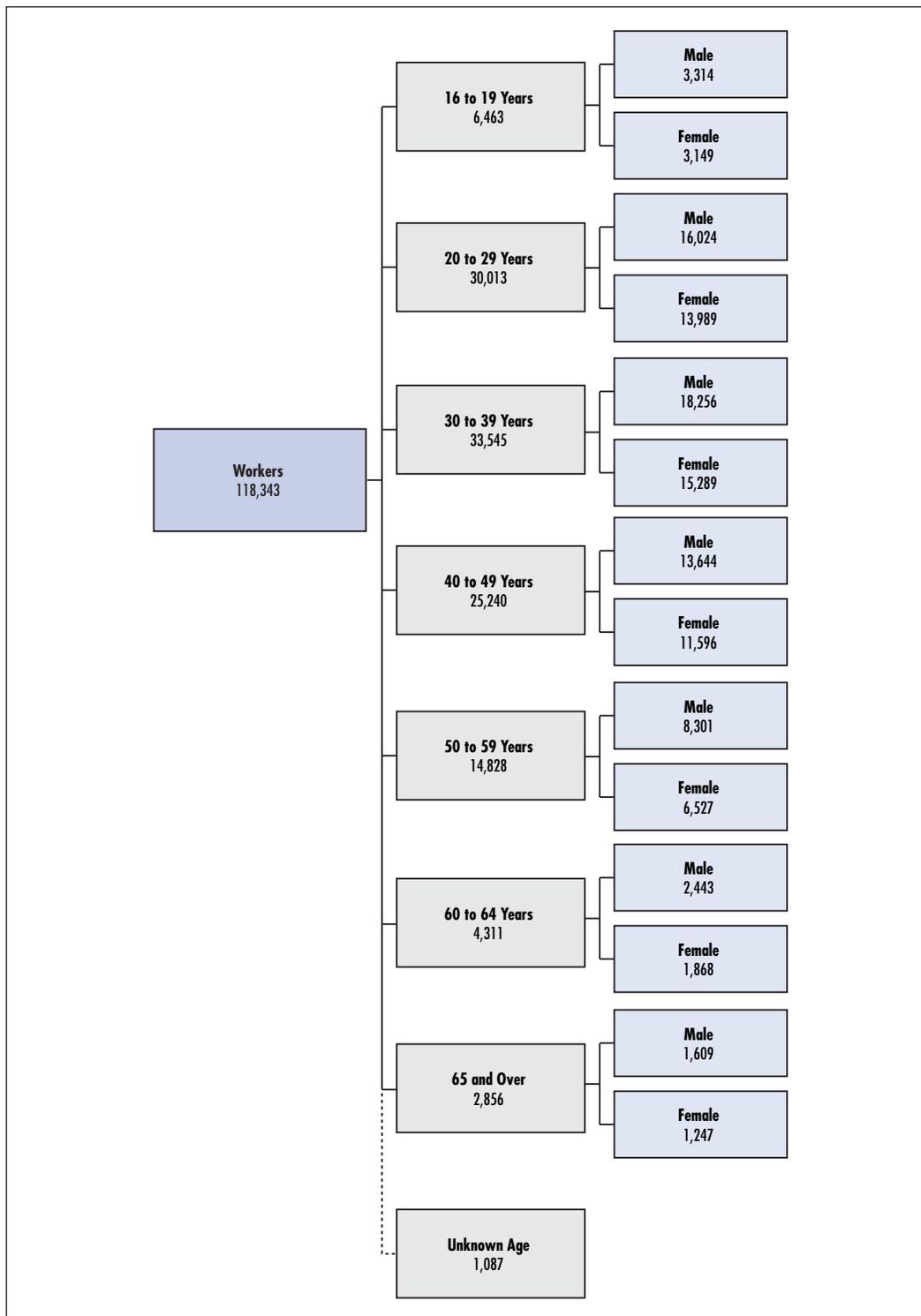
- Workers increased by 56%, while the population only increased by 21%.
- There were 42 million new workers, with 36% of them men and 64% of them women.

In 1990:

- The average trip to work was 10.7 miles (26% longer than 1983 trips) and the average travel time was 20 minutes (about the same as in 1983).
- Eighty-three percent of all workers travelled to work by private vehicle, with 71% driving alone and 12% carpooling.
- Two-thirds of all work trips were 10 miles or less and only 12% of trips to work were more than 20 miles.

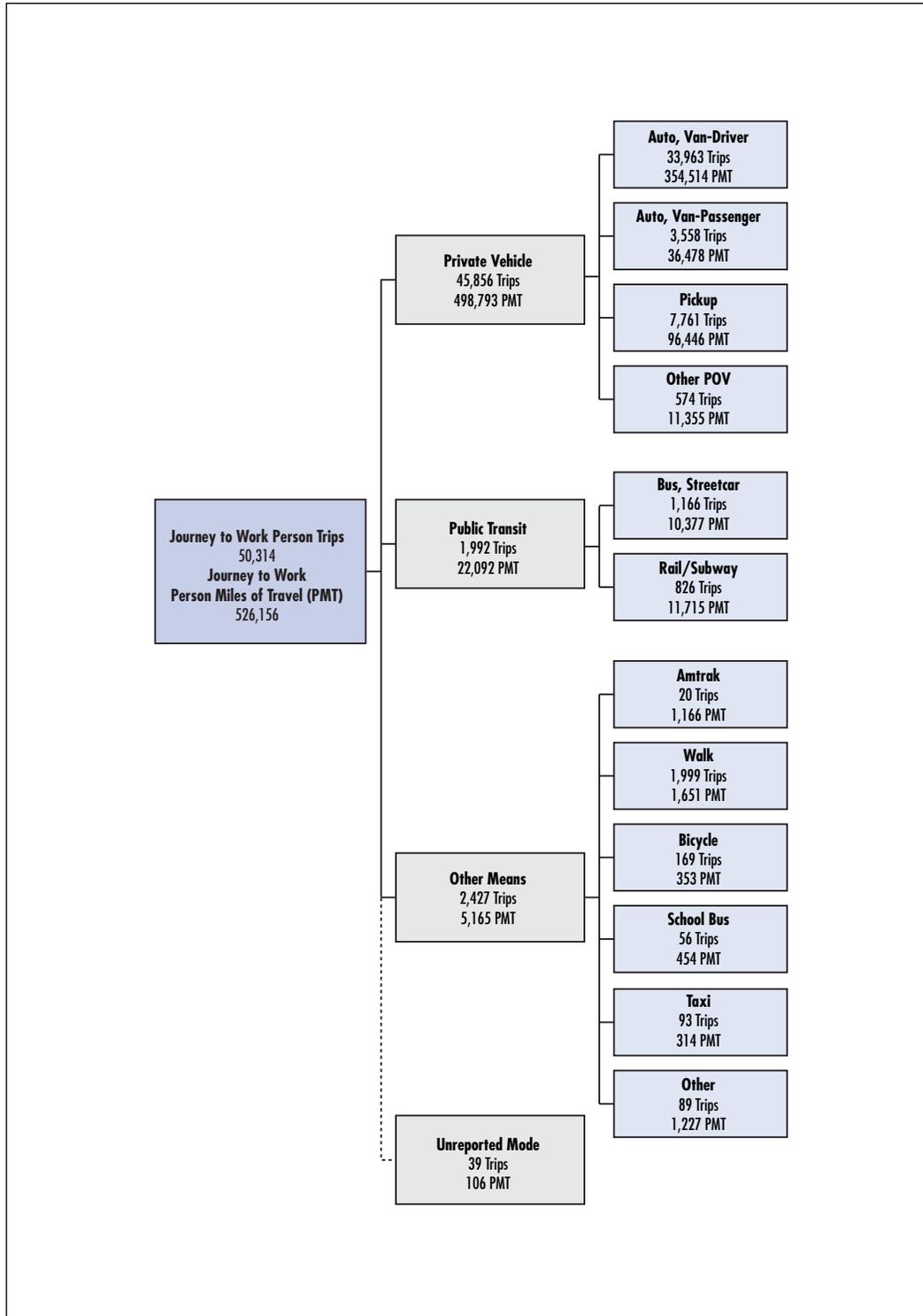
1990 WORKERS BY AGE AND SEX

(THOUSANDS)



1990 JOURNEY TO WORK PERSON TRIPS AND MILES OF TRAVEL BY MODE

(MILLIONS)

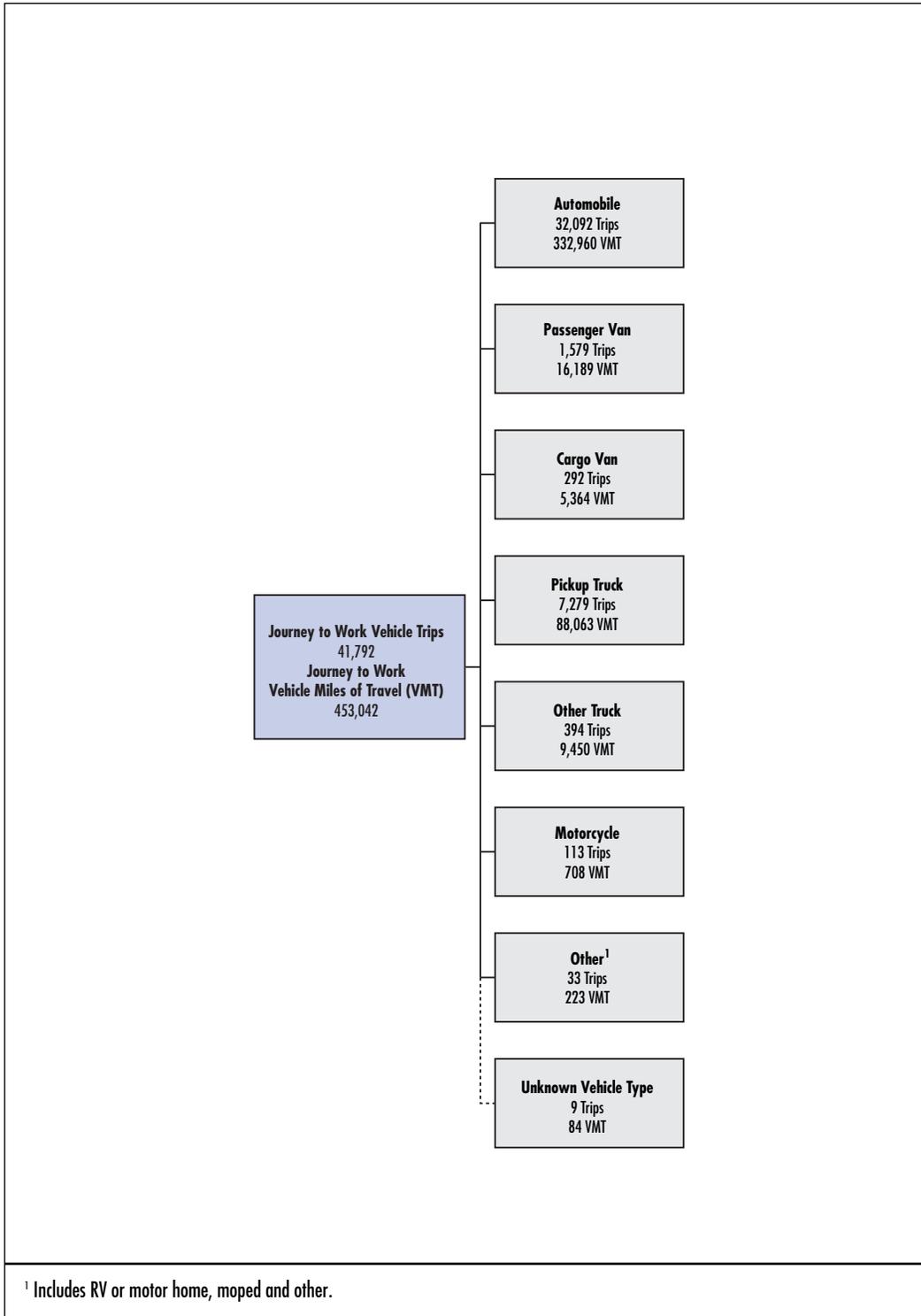


JOURNEY TO WORK AND WORK-RELATED TRIPS

1990 JOURNEY TO WORK VEHICLE TRIPS AND MILES OF TRAVEL BY VEHICLE TYPE

(MILLIONS)

JOURNEY TO WORK AND WORK-RELATED TRIPS



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Chapter 6 Journey To Work and Work-Related Trips

STATISTICS on journey to work and work-related trips are presented in this chapter. Journey to work refers to a one-way trip from one's home to a place where one reports to work, or from work back to home. Work-related trips are not considered journey to work trips. Trips related to business activities, such as trips to attend a meeting, a professional convention or to purchase supplies, are referred to as work-related trips. A person is considered employed, or a worker, if he/she worked for pay, either full time or part time, during the week before the interview.

Questions on journey to work trips were asked in two different sections of the 1990 NPTS questionnaire. First, an individual was asked how he/she usually travelled to and from work during the previous week. This information is on the typical or usual travel mode. The same individual was then asked to report all trips taken during the sampled day (travel day). If that individual went to work that day, then information was recorded on trips travelling to and from work that day. If the individual used a different mode travelling to and from work on the sampled day than what he/she would usually use, then the mode actually used for the journey to work trip on the sampled day was different from the so-called usual mode for the journey to work trip. Throughout this chapter, the term "usual mode" will be used to distinguish statistics based on data on the usual mode from those based on data on actual mode.

Increase in number of workers

From 1969 to 1990, the number of workers increased by 56 percent, which was two and a half times the 21 percent increase in the total population. This difference reflects, in part, the increase of working-age individuals in the population and the increased participation by women in the labor force. While 37 percent of all females 16 years or older were employed in 1969, the corresponding percentage in 1990 increased to 56 percent. In contrast, the percentage of males employed remained stable from 1969 to 1990, about 75 percent.

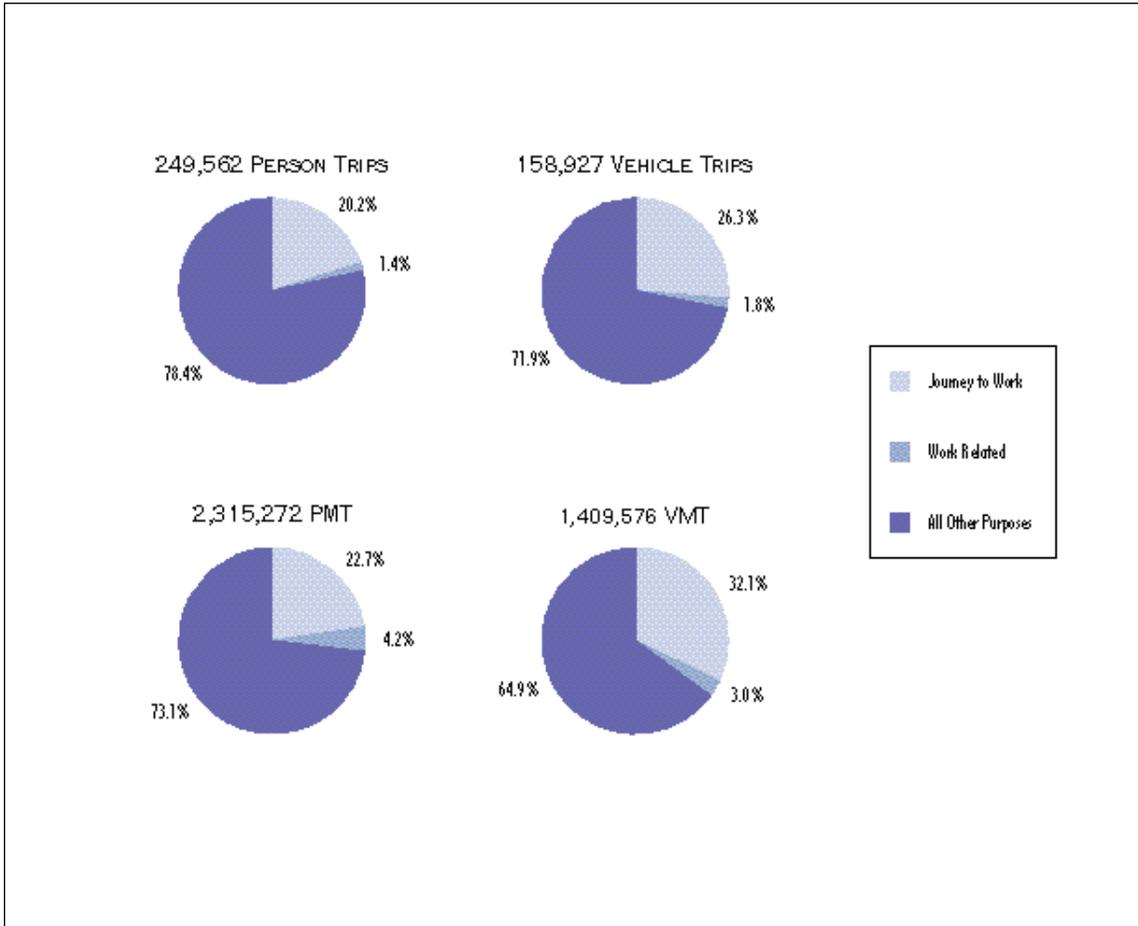
Magnitude of journey to work and work-related travel

The 1990 NPTS estimated that there were 50 billion journey to work trips in 1990, which amounted to more than 526 billion person miles of travel (23 percent of total person miles) and 453 billion vehicle miles of travel (32 percent of total vehicle miles) (Figure 6.1). Journey to work and work-related travel accounted for 27 percent of the total number of person trips on weekdays. However, the corresponding percentage on weekends is only one-tenth of the percentage on weekdays (2.8 percent).

The proportion of journey to work trips increased as household income increased. On average, there were 500 journey to work trips per household; and more than 420 journey to work trips per worker per year. For lower income households (less than \$10,000 a year), 12 percent of their annual person trips were for travelling to and from work, while 21 percent of total trips by households with income greater than \$40,000 were for travelling to and from work.

FIGURE 6.1

STATISTICS ON TRAVEL BY TRIP PURPOSE
1990 NPTS
(MILLIONS)



Mode preference for travelling to and from work

The great majority of workers commuted to work using privately-owned vehicles (POV). Female workers used public transportation slightly more than male workers and they also travelled to and from work as passengers in privately owned vehicles more than males. Workers 60 years or older were more likely to commute using public transit and other means of transportation, including walking, than younger workers. Public transit and means of travel other than POV were also common among the youngest workers (20 years or younger).

The percentage of workers who commuted using public transportation increased as the population size of a metropolitan area increased.

Commuting patterns

The average length of journey to work trips was 10.7 miles, with segmented trips¹ longer than non-segmented trips. Workers residing inside the central city of a Metropolitan Statistical Area (MSA) took a significantly greater number of segmented trips than workers residing elsewhere.

Journey to work trips by public transit were the longest, both in miles and in minutes, when compared to trips by other modes of transportation. On average, commute speed increased from 1983 to 1990 with the increase by privately owned vehicles being the most notable.

Improvement in commute speed was partially a result of the continued development of suburban and exurban residential areas which allowed travelling to and from

work at faster speeds. The improved speeds contributed to a slightly shorter commute time although the commuting distance increased from 8.5 miles in 1983 to 10.7 miles in 1990. In addition, mode shifts from carpooling and public transit to single-occupant vehicles also played a role in the decline in commute time.

Temporal patterns of commuting

Weekday journey to work trips peaked between 6 and 9 a.m. and between 4 and 7 p.m., but diminished considerably after 7 p.m. Journey to work trips on weekends, on the other hand, peaked around 4 p.m. and remained fairly high until 1 a.m.

More than half of weekday morning travel before 9 a.m. was for journey to work trips. However, journey to work trips were, as expected, considerably less prevalent in morning traffic during weekends. Between 85 percent to 95 percent of weekend travel that occurred after 9 a.m. was not related to work.

¹ See Page 4-50 of Volume 1 of the 1990 Nationwide Personal Transportation Survey Databook for detailed explanations of segmented trips.

The number of workers increased by 56% from 1969 to 1990, while the total population increased by only 21%. This difference reflects, in part, the increase in the percentage of working-age individuals, as well as

increased participation by women in the work force. In 1969, an average worker drove 3,441 miles commuting to work that, as compared to 3,828 miles in 1990, representing an increase of 11% over the time period.

TABLE 6.1

SUMMARY STATISTICS ON JOURNEY TO WORK AND WORK-RELATED TRAVEL
1969, 1977, 1983 AND 1990 NPTS¹

	1969	1977	1983	1990
Persons (000)	197,213	213,141	229,453	239,416
Workers (000)	75,758	93,019	103,244	118,343
Journey to Work Trips				
Annual Person Trips (000,000)	37,638	43,767	46,493	50,314
Annual Vehicle Trips (000,000)	27,844	31,886	35,271	41,792
Annual VMT (000,000)	260,716	287,710	301,644	453,042
Work-Related Trips				
Annual Person Trips (000,000)	**	7,624	5,283	3,529
Annual Vehicle Trips (000,000)	3,840	5,768	3,679	2,845
Annual VMT (000,000)	61,299	68,978	42,090	42,336

¹ For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

** Indicates data not available.

FIGURE 6.2

SUMMARY STATISTICS ON JOURNEY TO WORK PERSON TRIPS
1969, 1977, 1983 AND 1990 NPTS

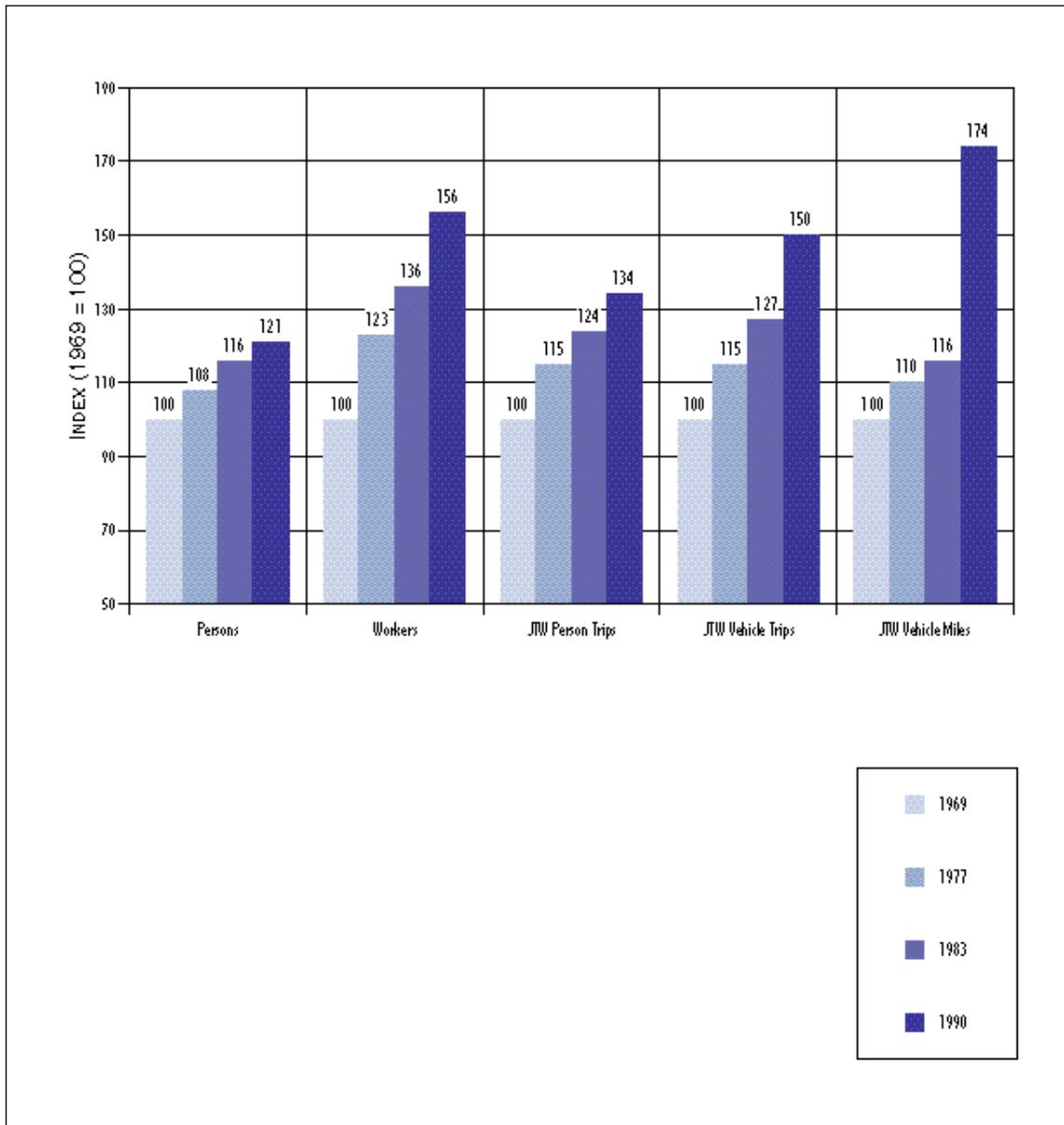


TABLE 6.2

**SUMMARY STATISTICS ON WORKERS AND THEIR TRAVEL
1990 NPTS AND 1990 CENSUS DATA**

	1990 Census Data	1990 NPTS
Number of Workers (000)	115,070	118,343
% Male	54.7	54.1
% Female	45.3	45.9
Workers as a Percent of Population	46.27	49.43
Workers per Household	1.25	1.27
Workers per Vehicle	0.76	0.72
Workers' Average Commute Time to Work (minutes)	22.4	20.0
Distribution of Workers by Usual Mode of Transportation to Work (000)		
Private Vehicle¹	99,593	97,838
	(86.5%)	(82.7%)
% Drive Alone	73.2	70.7 ²
% Carpool	13.4	12.0 ²
Motorcycle	242	306
	(0.2%)	(0.3%)
Public Transit³	5,890	5,951
	(5.1%)	(5.0%)
Walked to Work	4,489	4,416
	(3.9%)	(3.7%)
Other⁴	1,450	2,981
	(1.3%)	(2.5%)
Worked at Home	3,406	Unknown
	(3.0%)	
Unknown	0	6,851
	(0.0%)	(5.8%)
<p>Source: 1990 Census Data: U.S. Department of Transportation, Federal Highway Administration, <i>Journey-to-Work Trends in the United States and its Major Metropolitan Areas, 1960-1990, 1994</i>, Tables 2-1 & 2-4, pp. 2-2 & 2.6.</p> <p>¹ Includes car, truck, jeep and van.</p> <p>² This percentage is calculated based on data on the first journey to work trip taken on the respondent's sample day. This does not include 40,270,122 (41.2%) persons usually driving a private vehicle to work, whose carpooling status on the sample day is unknown.</p> <p>³ Includes bus, trolley, streetcar, subway, railroad and ferry.</p> <p>⁴ Includes bicycle, taxicab and other means.</p>		

The great majority of workers commuted to work using privately owned vehicles. Female workers used public transportation slightly more than male workers.

TABLE 6.3

NUMBER OF WORKERS BY SEX AND USUAL MODE OF COMMUTING¹
1990 NPTS
(THOUSANDS)

Note: See Limitations of Data on Transit² in Chapter 1, Section 5

	Male	Female	TOTAL ³
Private Vehicle			
Car, Truck, Jeep, and Van	53,482 (83.6%)	44,342 (81.6%)	97,838 (82.7%)
Motorcycle	306 (0.5%)	** (0.0%)	306 (0.3%)
Subtotal - Private	53,788 (84.0%)	44,342 (81.6%)	98,143 (82.9%)
Public Transportation			
Bus or Trolley	1,644 (2.6%)	1,913 (3.5%)	3,557 (3.0%)
Subway/Rail	1,279 (2.0%)	1,066 (2.0%)	2,344 (2.0%)
Other Public	47 (0.1%)	* (0.0%)	50 (0.0%)
Subtotal - Public	2,970 (4.6%)	2,981 (5.5%)	5,951 (5.0%)
Other Means			
Taxi	67 (0.1%)	90 (0.2%)	157 (0.1%)
Bicycle	322 (0.5%)	107 (0.2%)	429 (0.4%)
Walk	2,358 (3.7%)	2,058 (3.8%)	4,416 (3.7%)
Other	1,120 (1.8%)	1,275 (2.3%)	2,395 (2.0%)
Subtotal - Other	3,867 (6.0%)	3,530 (6.5%)	7,397 (6.3%)
TOTAL³	63,996 (100.0%)	54,334 (100.0%)	118,343 (100.0%)
ALL MODES	54.1	45.9	100.0

¹ Mode categories were selected to conform with decennial Census categories.

² Estimates of "usual" transit use are based on 1321 workers who reported that their typical means to work was bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

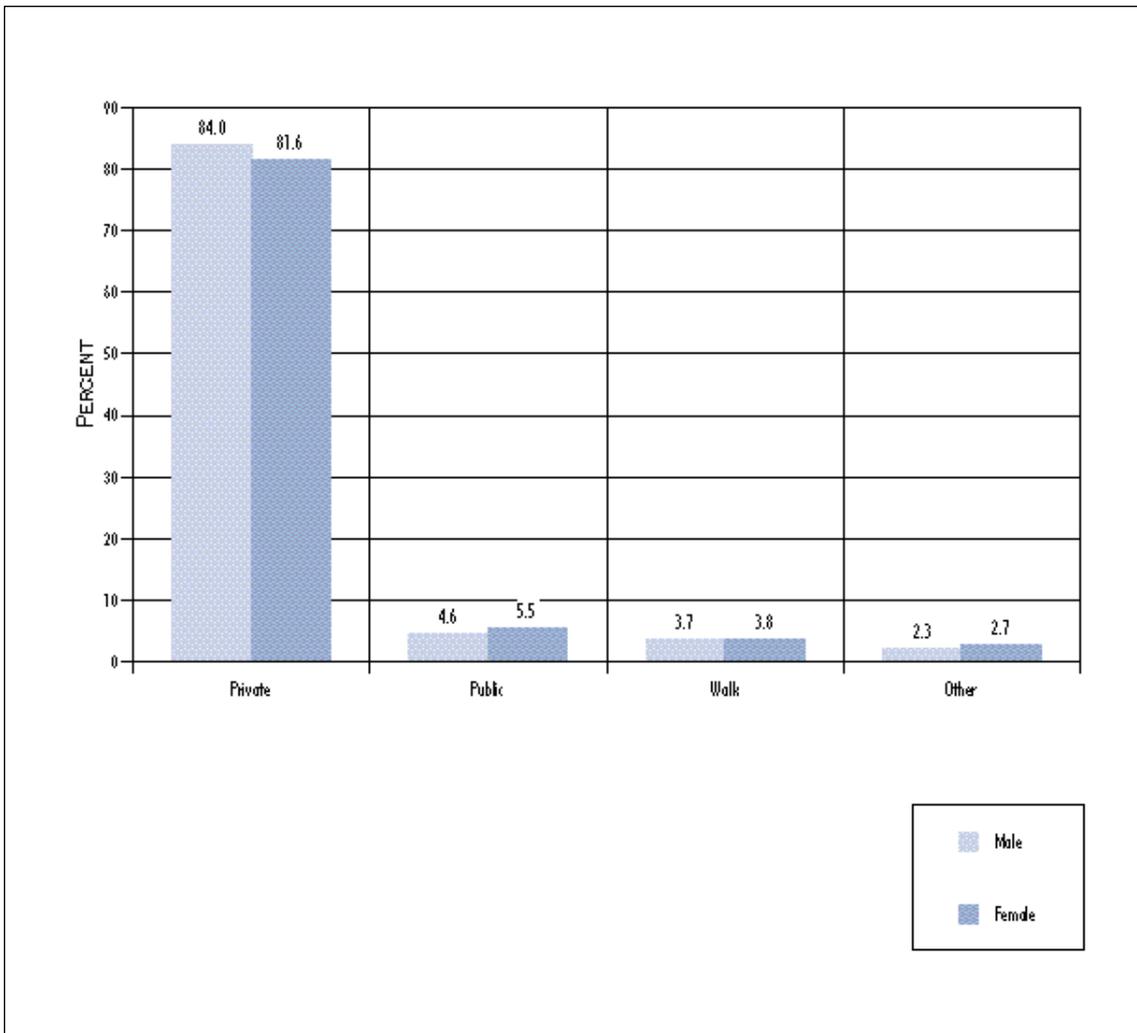
³ Includes workers whose sex, usual mode of transportation or both were unreported.

* Indicates insufficient data reported.

** Indicates no data reported.

FIGURE 6.3

DISTRIBUTION OF WORKERS BY SEX AND USUAL MODE OF COMMUTING
1990 NPTS
(THOUSANDS)



The use of private vehicles for commuting was about the same for all age groups until workers reached the age of 60. Workers 60 years or older tended to use more public transit and other means of transportation,

including walking, than younger workers. Using public transit and other means of travel for commuting was also common among workers younger than 20 years old.

TABLE 6.4

**NUMBER OF WORKERS BY WORKER'S AGE AND USUAL MODE OF COMMUTING
1990 NPTS
(THOUSANDS)**

Note: See Limitations of Data on Transit¹ in Chapter 1, Section 5

	16-19	20-29	30-39	40-49	50-59	60-64	65+	TOTAL ²
Private Vehicle	5,166	24,885	28,314	21,283	12,246	3,331	2,042	98,143
	(79.9%)	(82.9%)	(84.4%)	(84.3%)	(82.6%)	(77.3%)	(71.5%)	(82.9%)
Public Transportation	336	1,931	1,385	1,149	614	251	188	5,951
	(5.2%)	(6.4%)	(4.1%)	(4.6%)	(4.1%)	(5.8%)	(6.6%)	(5.0%)
Other Means	620	1,758	1,998	1,334	837	379	412	7,397
	(9.6%)	(5.9%)	(6.0%)	(5.3%)	(5.6%)	(8.8%)	(14.4%)	(6.3%)
TOTAL²	6,463	30,013	33,545	25,240	14,827	4,311	2,856	118,343
	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)
% of Workers by Age	5.5%	25.4%	28.3%	21.3%	12.5%	3.6%	2.4%	100.0%

¹ Estimates of "usual" transit use are based on 1321 workers who reported that their typical means to work was bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

² Includes workers whose age, usual mode of transportation or both were unreported.

Workers between the ages of 20 and 50 took more than three quarters of the estimated 50 billion annual journey to work trips. This pattern was similar for men and women. On aver-

age, male workers took slightly more journey to work trips than female workers, 429 compared to 420 trips per year, respectively.

TABLE 6.5

NUMBER OF JOURNEY TO WORK PERSON TRIPS BY WORKER'S SEX AND AGE
1990 NPTS
(THOUSANDS)

Age	Male	Female	TOTAL
5-15	170,841 (0.6%)	168,937 (0.7%)	339,778 (0.7%)
16-19	1,312,638 (4.8%)	1,094,891 (4.8%)	2,407,529 (4.8%)
20-29	6,988,786 (25.4%)	6,090,232 (26.7%)	13,079,018 (26.0%)
30-39	8,024,968 (29.2%)	6,586,128 (28.8%)	14,611,096 (29.0%)
40-49	5,900,358 (21.5%)	4,964,292 (21.7%)	10,864,650 (21.6%)
50-59	3,457,222 (12.6%)	2,536,644 (11.1%)	5,993,866 (11.9%)
60-64	891,144 (3.2%)	744,514 (3.3%)	1,635,658 (3.3%)
65+	565,216 (2.1%)	376,533 (1.6%)	941,749 (1.9%)
TOTAL	27,474,321 (100.0%)	22,835,631 (100.0%)	50,314,271 (100.0%)
All Ages	54.6%	45.4%	100.0%
No. of Workers	63,996 (54.1%)	54,334 (45.9%)	118,343 (100.0%)
Trips per Worker	429	420	425

¹ Includes trips where worker's age was unreported.

While the majority of workers, both male and female, drove themselves to work, female workers rode to work as passengers of a privately owned vehicle more frequently than

male workers. Female workers also tended to commute using public transit more than their male counterparts.

TABLE 6.6

NUMBER OF JOURNEY TO WORK PERSON TRIPS BY SEX AND ACTUAL MODE OF COMMUTING¹
1983 AND 1990 NPTS²
(THOUSANDS)

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

Mode	Male		Female		TOTAL ⁴	
	1983	1990	1983	1990	1983	1990
Private Vehicle - Driver	20,639,563 (75.7%)	23,366,048 (85.0%)	12,439,840 (64.7%)	18,412,617 (80.6%)	33,079,403 (71.1%)	41,782,983 (83.0%)
Private Vehicle - Passengers	3,410,565 (12.5%)	1,748,889 (6.4%)	4,151,131 (21.6%)	2,324,588 (10.2%)	7,561,696 (16.3%)	4,073,477 (8.1%)
Public Transportation	951,223 (3.5%)	1,021,843 (3.7%)	1,146,386 (6.0%)	990,044 (4.3%)	2,097,609 (4.5%)	2,011,887 (4.0%)
Walk	1,318,106 (4.8%)	1,034,708 (3.8%)	1,012,680 (5.3%)	964,587 (4.2%)	2,330,785 (5.0%)	1,999,294 (4.0%)
Other	255,864 (0.9%)	284,748 (1.0%)	160,005 (0.8%)	122,918 (0.5%)	415,869 (0.9%)	407,665 (0.8%)
TOTAL⁴	27,271,019 (100.0%)	27,474,321 (100.0%)	19,222,600 (100.0%)	22,835,631 (100.0%)	46,493,619 (100.0%)	50,314,271 (100.0%)

¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983.

² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

⁴ Includes trips where sex, mode of transportation or both were unreported.

FIGURE 6.4

DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY MODE OF COMMUTING
1983 AND 1990 NPTS

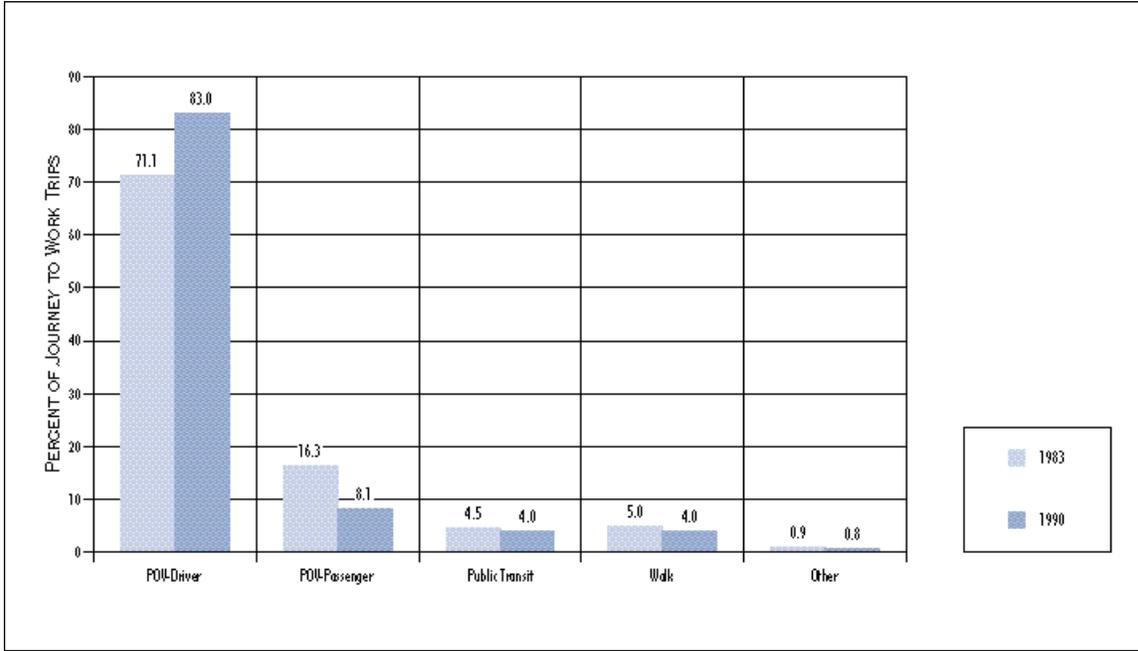
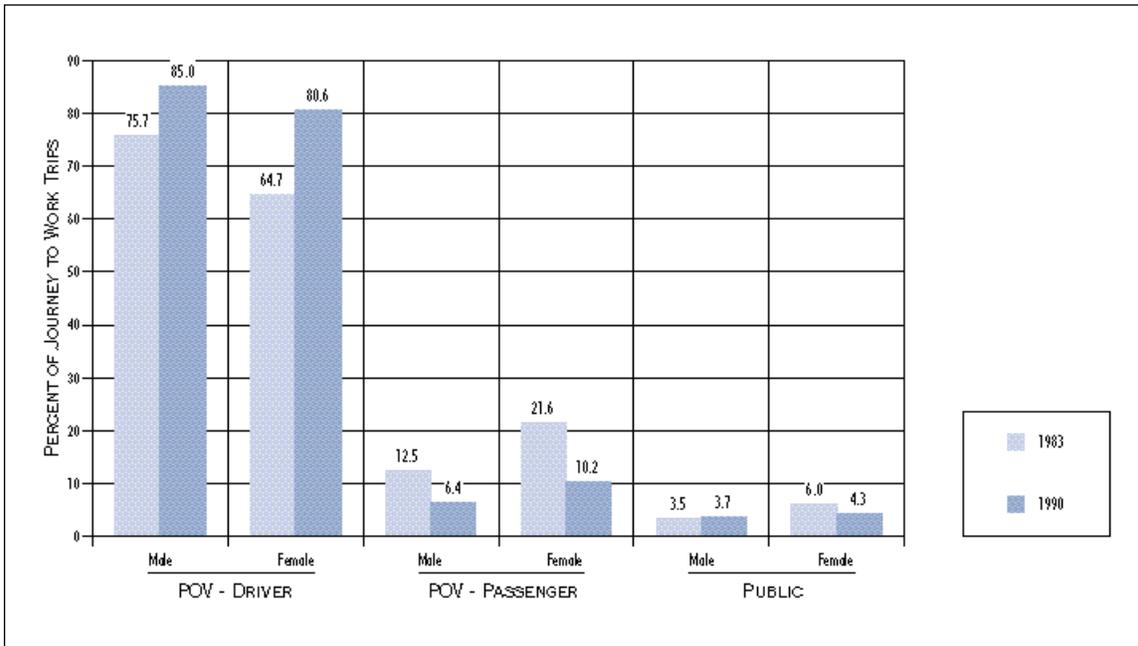


FIGURE 6.5

DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY SEX AND MODE OF COMMUTING
1983 AND 1990 NPTS



The proportion of workers residing in MSA's with population greater than 3 million increased from 16.0% in 1977 to 32.2% in 1990. This increase indicates the growth of metropolitan areas as well as the migration of the labor force from small and non-metropoli-

tan areas to large metropolitan areas. The comparison between 1983 and 1990 data can be misleading since the definition of MSA's changed between 1983 and 1990 (see Appendix B).

TABLE 6.7

**NUMBER OF WORKERS BY MSA SIZE
1977, 1983 AND 1990 NPTS'
(THOUSANDS)**

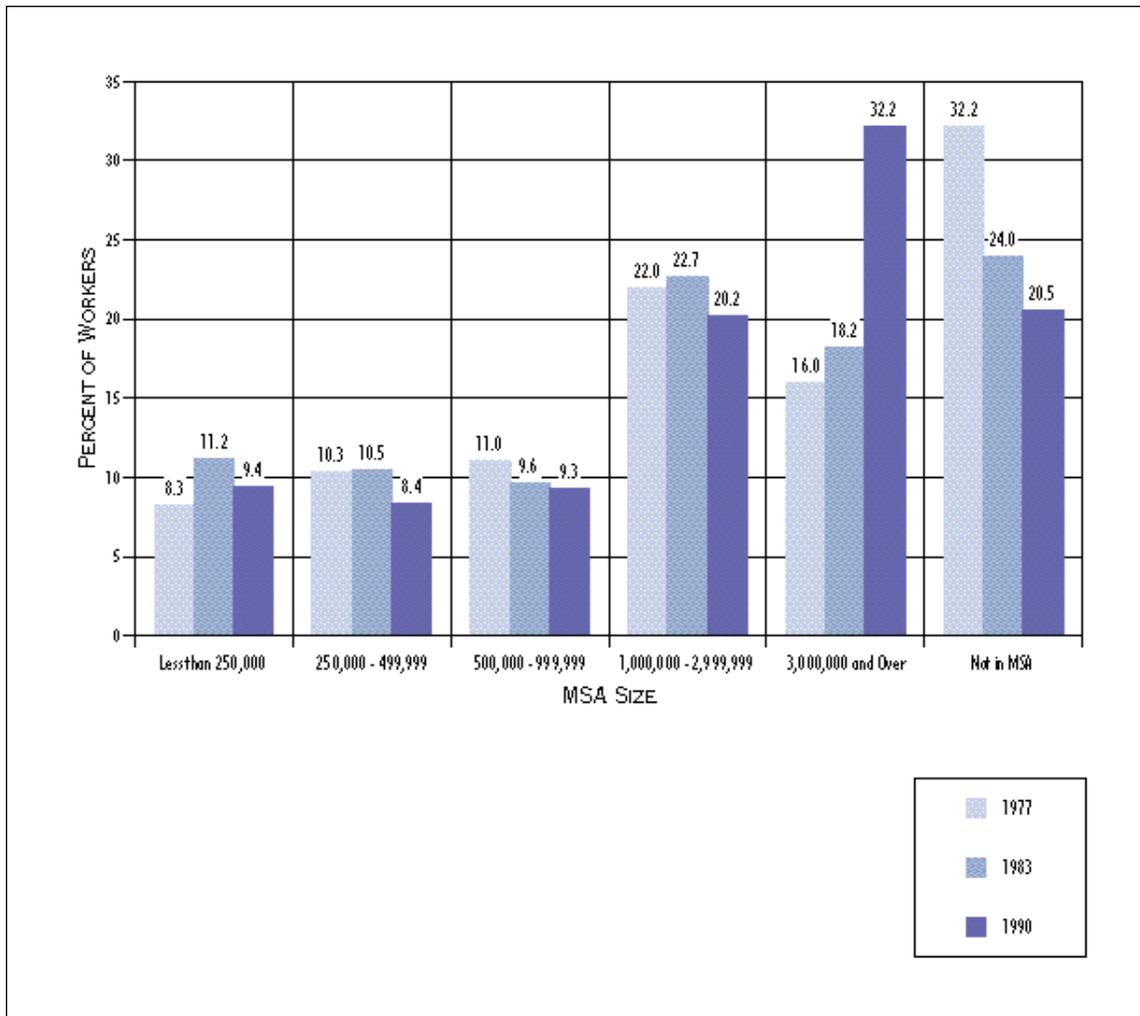
	Less than 250,000	250,000 - 499,999	500,000 - 999,999	1,000,000 - 2,999,999	3,000,000 and Over	Not in MSA	TOTAL
1977	7,883 (8.3%)	9,586 (10.3%)	10,280 (11.0%)	20,434 (22.0%)	14,884 (16.0%)	29,952 (32.2%)	93,019 (100.0%)
1983	11,612 (11.2%)	10,812 (10.5%)	9,931 (9.6%)	23,465 (22.7%)	18,740 (18.2%)	24,774 (24.0%)	103,244² (100.0%)
1990	11,148 (9.4%)	9,981 (8.4%)	11,003 (9.3%)	23,880 (20.2%)	38,067 (32.2%)	24,264 (20.5%)	118,343 (100.0%)

¹ For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

² Includes 3.8% of workers living in MSA's, but location in MSA is unknown.

FIGURE 6.6

DISTRIBUTION OF WORKERS BY MSA SIZE
1977, 1983 AND 1990 NPTS



The percentage of workers who usually commuted using privately owned vehicles was less in larger MSA's. In other words, the percentage of workers usually using public tran-

sit for journey to work trips was greater in larger MSA's, reaching almost 11% of workers in metropolitan areas with a population greater than 3 million.

TABLE 6.8

**NUMBER OF WORKERS BY MSA SIZE AND USUAL MODE OF COMMUTING
1990 NPTS
(THOUSANDS)**

Note: See Limitations of Data on Transit¹ in Chapter 1, Section 5

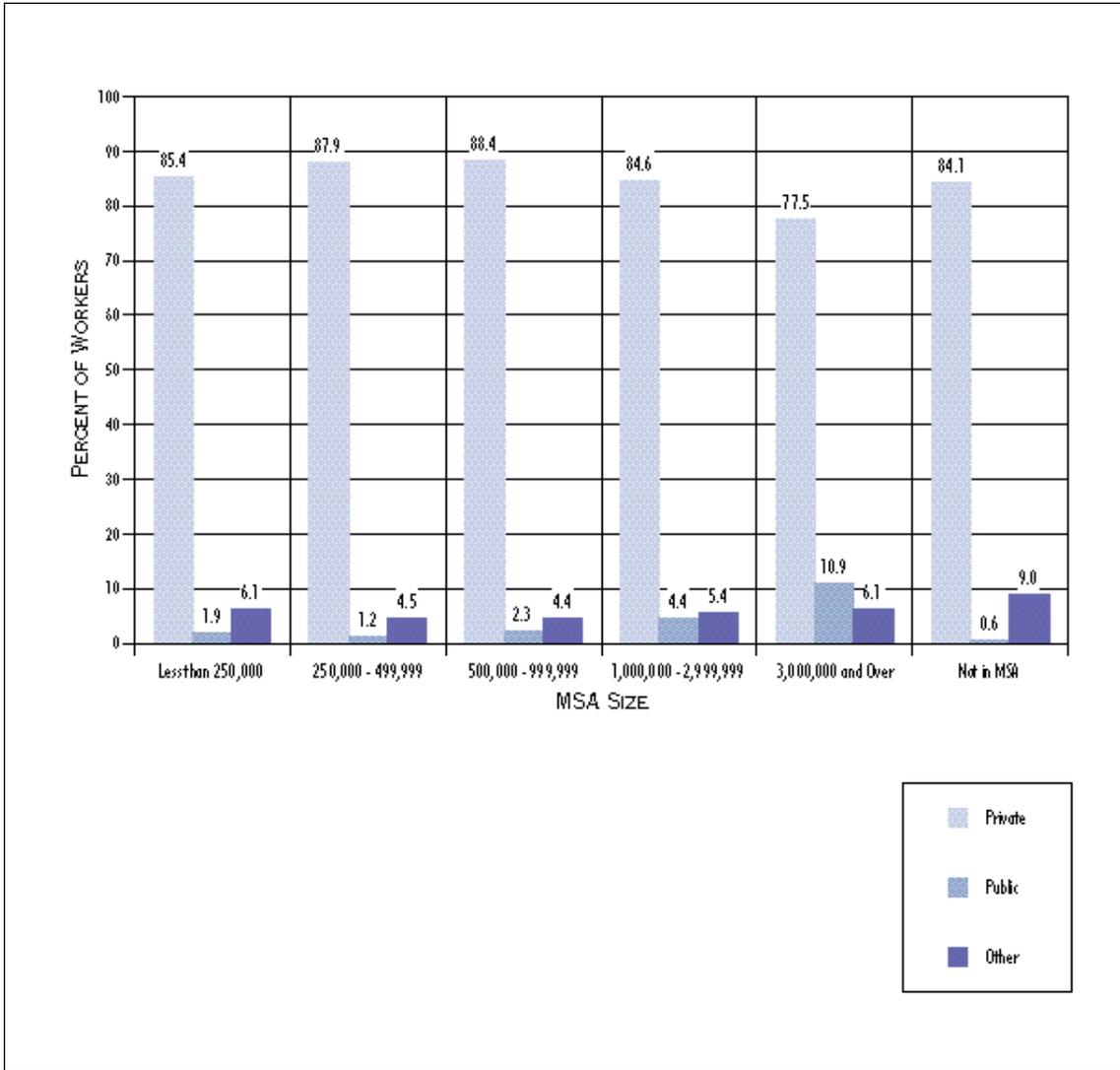
	Less than 250,000	250,000- 499,999	500,000- 999,999	1,000,000- 2,999,999	3,000,000 and Over	Not in MSA	TOTAL
Private Vehicle	9,522	8,774	9,729	20,194	29,507	20,416	98,143
	(85.4%)	(87.9%)	(88.4%)	(84.6%)	(77.5%)	(84.1%)	(82.9%)
Public Transportation	216	118	248	1,054	4,165	149	5,951
	(1.9%)	(1.2%)	(2.3%)	(4.4%)	(10.9%)	(0.6%)	(5.0%)
Other Means	682	448	479	1,299	2,315	2,173	7,397
	(6.1%)	(4.5%)	(4.4%)	(5.4%)	(6.1%)	(9.0%)	(6.3%)
TOTAL²	11,148	9,981	11,003	23,880	38,066	24,264	118,343
	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

¹ Estimates of "usual" transit use are based on 1321 workers who reported that their typical means to work was bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

² Includes workers whose usual mode of transportation was unreported.

FIGURE 6.7

DISTRIBUTION OF WORKERS BY MSA SIZE AND USUAL MODE OF COMMUTING
1990 NPTS



Traffic congestion is typically a more serious problem in more densely populated areas. This table presents commute distances and speeds by different population density categories. People living in the densest areas

(with at least 7,500 people per square mile) have a commute distance almost 25% shorter than those living in the least dense areas; however, their commute trips took 35% more time.

TABLE 6.9
AVERAGE TRAVEL TIME, TRIP LENGTH AND SPEED OF COMMUTE PERSON TRIPS BY POPULATION DENSITY
1990 NPTS

Population Density ¹	Average Commute Trip Distance (miles)	Average Commute Travel Time ² (minutes)	Average Commute Speed ³ (miles per hour)	Percent of Person Trips	Percent of Households
Less than 2,000	11.40	18.94	36.43	63.0	61.3
2,000-3,999	9.95	19.85	30.99	14.9	14.8
4,000-7,499	9.43	20.38	29.11	12.6	12.8
7,500 or more	8.73	25.60	23.65	9.5	11.1
TOTAL	10.65	19.95	33.32	100.0	100.0
¹ Population density is calculated as persons per square mile for the zip code in which the household is located.			³ Average commuting speed is calculated using nonsegmented trips only.		
² Includes both travel time and time spent waiting for transportation.					

The number of workers increased 27.2% from 1977 to 1990. The data show that in 1990, a greater proportion of workers resided inside the central cities of MSA's than in 1977. However, this is largely due to the difference

in the definition of central city between 1983 and 1990 (see Appendix B). Workers who resided in non-MSA areas decreased by 19% from 1977 to 1990.

TABLE 6.10

NUMBER OF HOUSEHOLDS AND WORKERS BY PLACE OF RESIDENCE
1977, 1983 AND 1990 NPTS¹
(THOUSANDS)

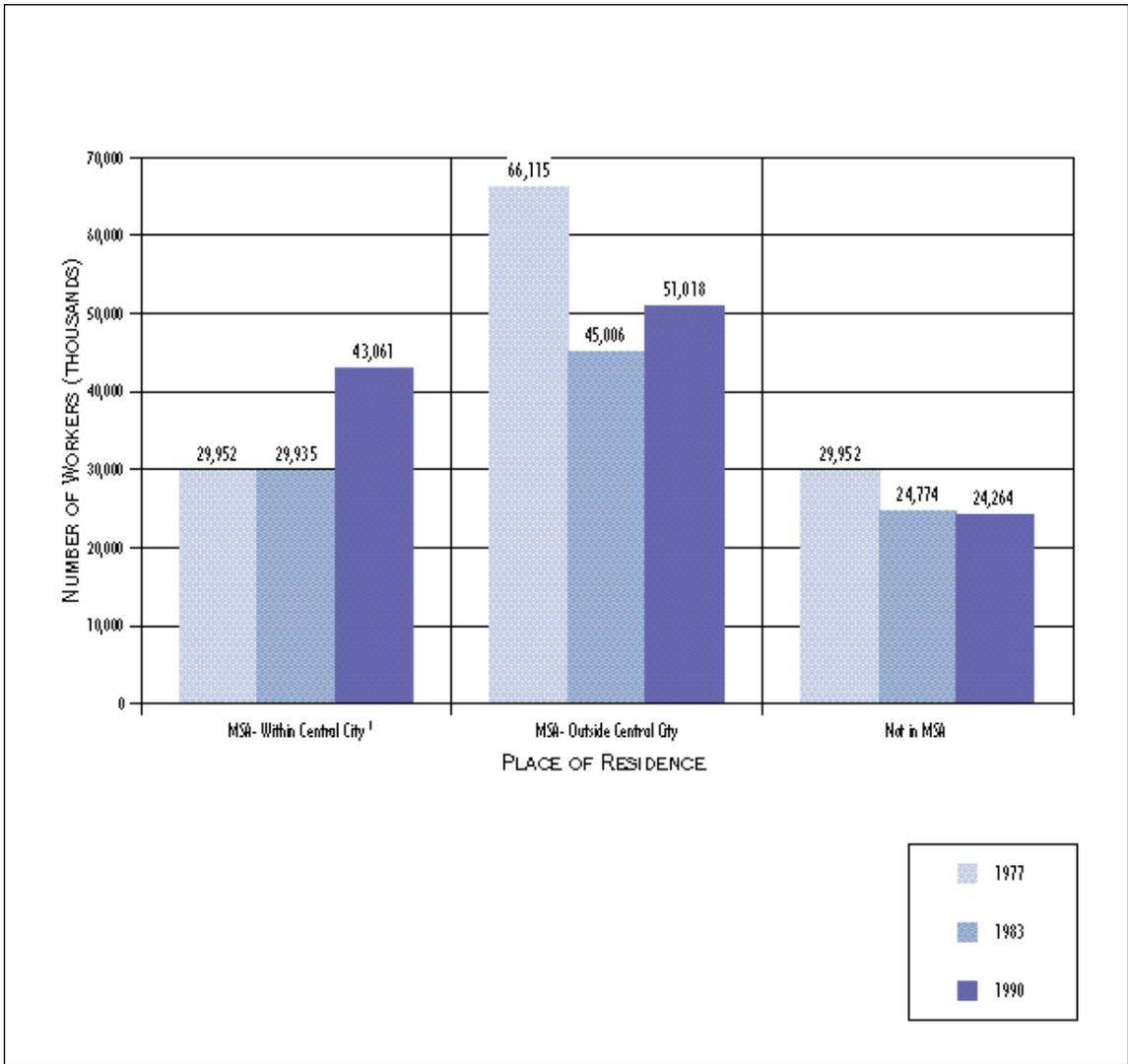
	In MSA		Not in MSA	TOTAL
	Within Central City	Outside Central City		
Number of Households				
1977	26,319 (34.9%)	24,433 (32.4%)	24,660 (32.7%)	75,412 (100.0%)
1983	27,438 (32.1%)	34,349 (40.2%)	20,590 (24.1%)	85,371 ² (100.0%)
1990	34,579 (37.0%)	37,353 (40.0%)	21,415 (22.9%)	93,347 (100.0%)
Number of Workers				
1977	29,952 (32.2%)	33,115 (35.6%)	29,952 (32.2%)	93,019 (100.0%)
1983	29,935 (29.0%)	45,006 (43.6%)	24,774 (24.0%)	103,224 ¹ (100.0%)
1990	43,061 (36.4%)	51,018 (41.1%)	24,264 (20.5%)	118,343 (100.0%)
Number of Workers per Household				
1977	1.14	1.36	1.21	1.23
1983	1.09	1.31	1.20	1.21
1990	1.25	1.37	1.13	1.27

¹ For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

² Includes 2,994,000 households and 3,509,000 workers where MSA status is unknown.

FIGURE 6.8

**NUMBER OF WORKERS BY PLACE OF RESIDENCE
1977, 1983 AND 1990 NPTS**



¹ See Appendix B for change in definition of central city.

The average length of a commute trip increased by 26% from 8.5 miles in 1983 to 10.7 miles in 1990 while the commute time increased by a substantially lower rate of 10% during the same period. The increase in commute distance may partially reflect the

continued development of suburban and exurban residential areas. The resulting commutes are longer but are travelled at faster speeds. In terms of the number of miles travelled per hour, commuting speeds for all areas improved between 1983 and 1990.

TABLE 6.11

COMMUTING PATTERNS OF JOURNEY TO WORK PERSON TRIPS
BY MODE OF TRANSPORTATION AND PLACE OF RESIDENCE
1983 AND 1990 NPTS¹

Note: See Limitations of Data on Transit² in Chapter 1, Section 5

Mode	In MSA, in Central City		In MSA, Not in Central City		Not In MSA		TOTAL	
	1983	1990	1983	1990	1983	1990	1983	1990
Average Commute Trip Distance (Miles)								
Auto	7.5	8.8	9.2	11.6	7.0	10.6	8.5	10.4
Truck	8.6	12.5	11.4	13.5	5.4	13.5	10.4	13.0
Bus	7.1	8.2	8.1	13.1	**	15.7	7.5	9.3
TOTAL³	7.5	9.0	9.4	11.9	6.4	11.0	8.5	10.7
Average Commute Travel Time⁴ (Minutes)								
Auto	16.8	17.2	18.4	20.3	14.3	16.3	17.2	18.4
Truck	18.1	20.0	20.8	23.3	13.0	20.0	19.1	21.4
Bus	34.3	44.0	32.7	52.7	**	58.3	33.7	46.6
TOTAL³	19.2	19.5	19.0	21.6	14.2	17.2	18.2	20.0
Average Commute Speed⁵ (Miles per Hour)								
TOTAL³	23.4	29.5	29.7	34.3	27.0	37.8	28.0	33.3

¹ For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

² Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

³ Includes all modes of transportation.

⁴ Includes both travel time and time spent waiting for transportation.

⁵ Average commute speed is calculated using nonsegmented trips only.

** Indicates no data available.

Commute distances increased as urbanized area size increased. Commute trips in non-urbanized areas were the longest in length and were travelled at higher average speeds, reflecting less congested and higher speed roads.

TABLE 6.12
AVERAGE TRAVEL TIME, TRIP LENGTH AND SPEED OF JOURNEY TO WORK PERSON TRIPS
BY URBANIZED AREA SIZE
1990 NPTS

Urbanized Area Size	Average Commute Trip Distance (miles)	Average Commute Travel Time ¹ (minutes)	Average Commute Speed ² (miles per hour)
50,000-199,999	7.3	14.5	31.0
200,000-499,999	8.6	16.1	32.3
500,000-999,999	9.2	18.6	30.4
1,000,000 or more without subway/rail	10.5	20.3	31.9
1,000,000 or more with subway/rail	11.1	25.1	29.5
Not in Urbanized Area	11.9	18.8	38.0
TOTAL	10.7	20.0	33.3
¹ Includes both travel time and time spent waiting for transportation.		² Average commuting speed is calculated using nonsegmented trips only.	

TABLE 6.13

**AVERAGE WAITING TIME FOR JOURNEY TO WORK PERSON TRIPS WHEN PUBLIC TRANSPORTATION IS USED
BY MODE OF TRANSPORTATION AND URBANIZED AREA SIZE
1990 NPTS
(MINUTES)**

Note: See Limitations of Data on Transit¹ in Chapter 1, Section 5

Urbanized Area Size	Bus, Streetcar or Trolley	Rail or Subway ²	TOTAL
50,000-199,999	8.57	**	8.57
200,000-499,999	6.93	**	6.93
500,000-999,999	12.21	**	12.21
1,000,000 or more without rail/subway	10.20	*	9.98
1,000,000 or more with rail/subway	11.03	8.43	9.54
Not in Urbanized Area	8.55	*	7.98
TOTAL	10.43	8.32	9.56

<p>¹ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.</p>	<p>² Rail/Subway includes trips by subway, elevated rail and commuter train.</p> <p>* Indicates insufficient data were reported.</p> <p>** Indicates no data reported.</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

On average, a household took more than 500 commute trips per year. The proportion of journey to work trips increased as household income increased. For households who provided income information, those with income less than \$10,000 in 1990 took almost 73% fewer journey to work trips than households

with incomes of more than \$40,000. The corresponding percentage in 1983 was 77%, suggesting that the gap in tripmaking for journey to work between the lowest and the highest income categories narrowed slightly.

TABLE 6.14
NUMBER OF HOUSEHOLDS AND JOURNEY TO WORK PERSON TRIPS BY HOUSEHOLD INCOME
(INCOME IN 1990 DOLLARS)
1983 AND 1990 NPTS¹

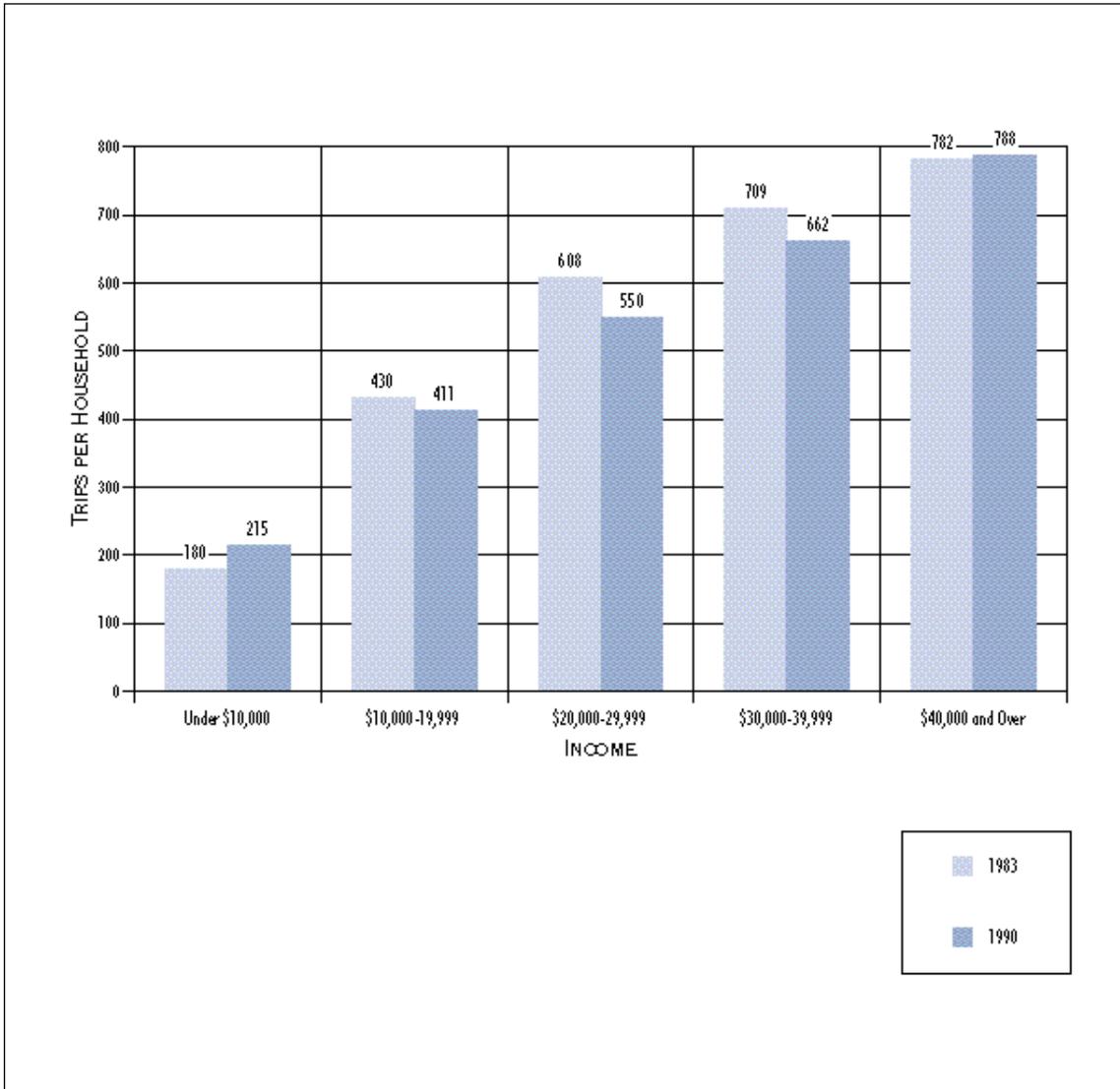
Income	1983			1990		
	Number of Households (000)	Number of Commute Person Trips (000)	Number of Commute Trips per Household	Number of Households (000)	Number of Commute Person Trips (000)	Number of Commute Trips per Household
Under \$10,000	18,016 (21.1%)	3,236,781 (7.1%)	180	9,252 (13.7%)	1,992,241 (4.0%)	215
\$10,000 - 19,999	18,437 (21.6%)	7,934,221 (17.3%)	430	13,011 (19.2%)	5,349,320 (10.6%)	411
\$20,000 - 29,999	15,694 (18.4%)	9,544,563 (20.8%)	608	12,294 (18.2%)	6,762,758 (13.4%)	550
\$30,000 - 39,999	12,065 (14.1%)	8,559,963 (18.7%)	709	11,323 (16.8%)	7,501,082 (14.9%)	662
\$40,000 or more	21,167 (24.8%)	16,557,472 (36.1%)	782	21,704 (32.1%)	17,106,573 (34.0%)	788
TOTAL²	85,371 (100.0%)	45,833,000 (100.0%)	537	93,347 (100.0%)	50,314,271 (100.0%)	539

¹ For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

² Includes trips where household income was unreported.

FIGURE 6.9

NUMBER OF JOURNEY TO WORK PERSON TRIPS PER HOUSEHOLD BY HOUSEHOLD INCOME
1983 AND 1990 NPTS



Privately owned vehicles continued to be, by far, the most common way of travelling to and from work. Journey to work trips by public transit were the longest, both in miles and in minutes, when compared to trips by

other modes of transportation. On average, commute speed improved from 1983 to 1990, with the improvement by privately owned vehicles being the most noticeable.

TABLE 6.15

**WORKERS AND THEIR HOME TO WORK PERSON TRAVEL BY MODE OF TRANSPORTATION¹
1983 AND 1990 NPTS²**

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

	Private	Public	Walk	Other	TOTAL
1983					
Percent of workers ⁴	86.1	5.1	4.1	4.8	100.0 ⁵
Average trip length (miles)	8.86	11.81	0.32	7.07	8.54
Average commute time (minutes)	17.62	39.77	8.58	21.55	18.20
Average travel speed (MPH)	30.17	17.82	2.24	19.68	28.15
1990					
Percent of workers ⁴	82.9	5.0	3.7	2.5	100.0 ⁵
Average trip length (miles)	11.02	13.27	0.83	5.88	10.65
Average commute time (minutes) ⁶	18.89	50.22	9.86	22.06	19.65
Average travel speed (MPH) ⁷	34.71	18.00	3.27	15.10	33.34

¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983 data.

² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

³ Estimates of "usual" transit use are based on 1321 workers who reported that their typical means to work was bus, subway, elevated rail or commuter train. Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

⁴ The percentage of workers travelling by different modes of transportation is based on the worker's usual mode of transportation. The rest of the statistics in this table are based on the actual mode of transportation as reported in the sampled day (travel day).

⁵ Includes 6% workers whose usual mode of transportation was unreported.

⁶ Includes both travel time and time waiting for transportation.

⁷ Average commute speed is calculated using non-segmented trips only.

TABLE 6.16

**STATISTICS ON JOURNEY TO WORK PERSON TRIPS¹ BY ACTUAL MODE OF TRANSPORTATION
1990 NPTS**

Note: See Limitations of Data on Transit² in Chapter 1, Section 5

	No. of Person Trips (000)	No. of Person Miles (000)	Average Trip Length ³ (miles)
Private Vehicles			
Auto, Van - Driver	33,963,202 (67.5%)	354,514,077 (67.4%)	10.6
Auto, Van - Passenger	3,558,012 (7.1%)	36,478,537 (6.9%)	10.6
Pickup	7,761,545 (15.4%)	96,445,643 (18.3%)	12.6
Other Private Vehicles	573,710 (1.1%)	11,354,666 (2.2%)	20.7
Subtotal	45,856,469 (91.1%)	498,792,923 (94.8%)	11.0
Public Transportation			
Bus, Streetcar	1,165,799 (2.3%)	10,377,333 (2.0%)	9.8
Rail/Subway ⁴	826,253 (1.6%)	11,715,329 (2.2%)	17.3
Subtotal	1,992,051 (4.0%)	22,092,661 (4.2%)	12.8
Other Means			
Amtrak	19,836 (0.0%)	1,165,687 (0.2%)	58.8
Taxi	93,182 (0.2%)	313,606 (0.1%)	3.5
Bike	169,380 (0.3%)	353,176 (0.1%)	2.1
Walk	1,999,298 (4.0%)	1,651,237 (0.3%)	0.8
School Bus	55,957 (0.1%)	453,668 (0.1%)	8.5
Other	89,149 (0.2%)	1,227,531 (0.2%)	13.8
Subtotal	2,426,802 (4.8%)	5,164,905 (1.0%)	2.2
TOTAL⁵	50,314,271 (100.0%)	526,155,669 (100.0%)	10.7

¹ Based on journey to work data collected on the sampled day (travel day).

² Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

³ Average trip length is calculated using only those records with trip mile information present.

⁴ Rail/Subway includes trips by subway, elevated rail and commuter train.

⁵ Includes trips where mode of transportation was unreported.

FIGURE 6.10

DISTRIBUTION OF JOURNEY TO WORK PERSON TRAVEL BY MODE OF TRANSPORTATION
1990 NPTS

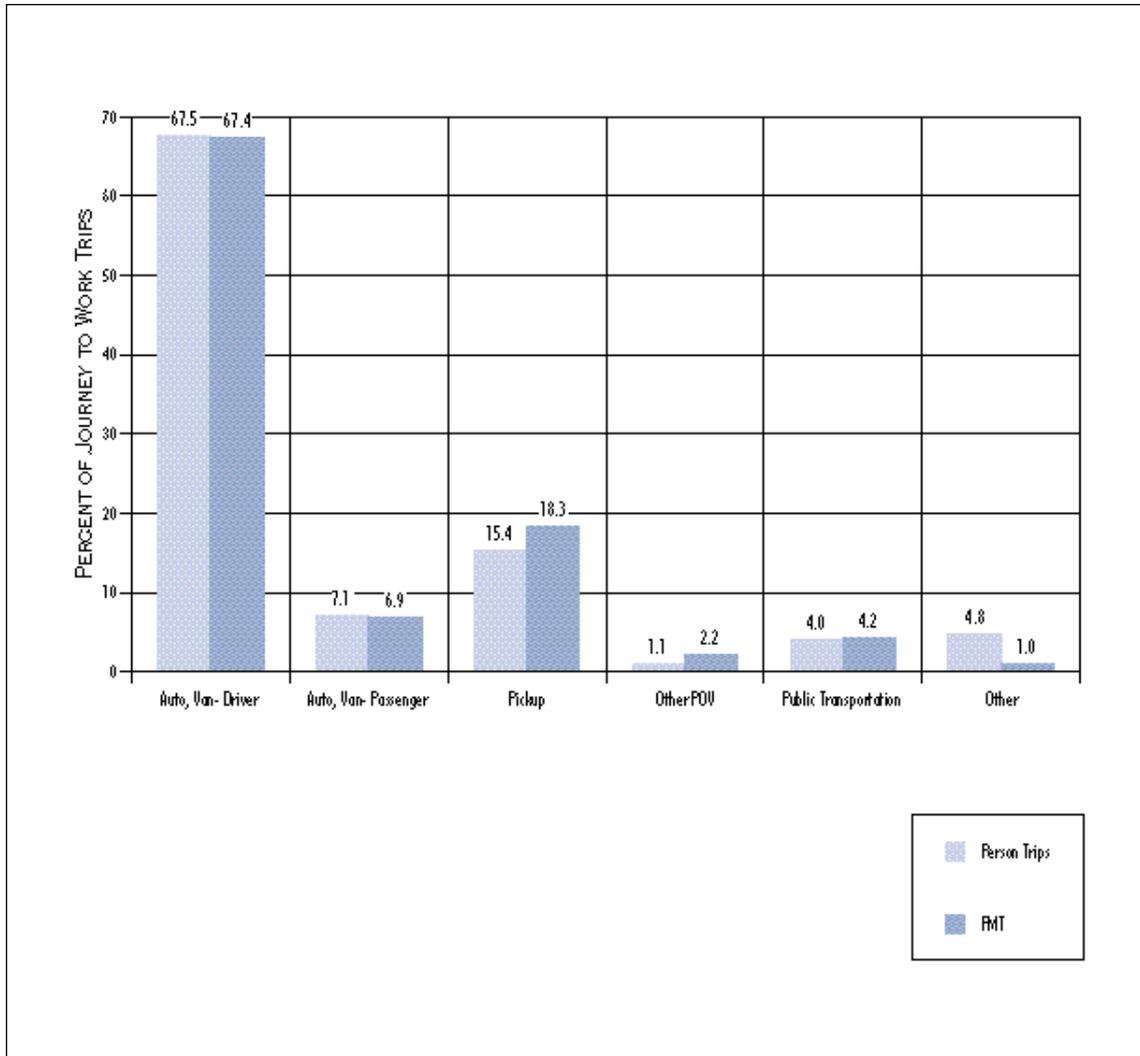


TABLE 6.17

**STATISTICS ON JOURNEY TO WORK VEHICLE TRIPS BY VEHICLE TYPE
1990 NPTS
(MILLIONS)**

Vehicle Type	Vehicle Trips	Vehicle Miles of Travel (VMT)
Auto	32,092 (76.8%)	332,960 (73.5%)
Passenger Van	1,579 (3.8%)	16,189 (3.6%)
Cargo Van	292 (0.7%)	5,364 (1.2%)
Pickup Truck	7,279 (17.4%)	88,063 (19.4%)
Other Truck	394 (0.9%)	9,450 (2.1%)
RV/Motor Home	9 (0.0%)	15 (0.0%)
Motorcycle	113 (0.3%)	708 (0.2%)
Moped	24 (0.1%)	208 (0.0%)
Other POV	0 (0.0%)	0 (0.0%)
TOTAL¹	41,792 (100.0%)	453,042 (100.0%)

¹ Includes trips and miles of travel where vehicle type was unreported.

In the 1990 NPTS, trips were defined as “segmented” if there is a change of vehicle (or mode) during the trip and if one of the modes involves public transportation (see Page 4-50 of Volume 1 for details). Segmented trips accounted for 2% of the journey to work trips

and 3% of the total commute travel. More than half of the segmented work-trips were taken by workers residing in the Northeast region. Land use patterns and well developed rapid transit systems contributed to the high percentage in that region.

TABLE 6.18

NUMBER OF JOURNEY TO WORK PERSON TRIPS BY SEGMENTED VS. NON-SEGMENTED TRIPS AND CENSUS REGION 1990 NPTS

Census Region	Segmented Commute Trips			Nonsegmented Commute Trips			TOTAL COMMUTE TRIPS		
	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)
Northeast	541,893 (52.4%)	9,743,185 (62.1%)	20.7	10,060,793 (20.4%)	103,659,445 (20.3%)	10.6	10,602,686 (21.1%)	113,402,631 (21.5%)	11.1
North Central	132,273 (12.8%)	1,315,667 (8.4%)	10.3	12,280,191 (24.9%)	121,976,313 (23.9%)	10.0	12,412,464 (24.7%)	123,291,980 (23.4%)	10.0
South	220,916 (21.4%)	3,134,990 (20.0%)	16.7	17,096,687 (34.7%)	181,857,246 (35.6%)	10.8	17,317,603 (34.4%)	184,992,236 (35.2%)	10.9
West	139,225 (13.5%)	1,483,687 (9.5%)	11.5	9,842,293 (20.0%)	102,985,135 (20.2%)	10.6	9,981,518 (19.8%)	104,468,822 (19.9%)	10.6
TOTAL	1,034,307 (100.0%)	15,677,529 (100.0%)	17.1	49,279,964 (100.0%)	510,478,140 (100.0%)	10.5	50,314,271 (100.0%)	526,155,669 (100.0%)	10.7

¹ Average trip length is calculated using only those records with trip mileage information present.

Workers living inside the central city of an MSA took a significantly greater percentage of segmented trips than workers living elsewhere. This observation reflected the fact that public transportation was more accessi-

ble for workers living inside the central city of an MSA. Their trip lengths were also significantly shorter than those of workers living elsewhere.

TABLE 6.19

NUMBER OF JOURNEY TO WORK PERSON TRIPS BY SEGMENTED VS. NON-SEGMENTED TRIPS AND PLACE OF RESIDENCE
1990 NPTS

	Segmented Commute Trips			Nonsegmented Commute Trips			TOTAL COMMUTE TRIPS		
	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)
MSA									
Central City	650,839 (3.6%)	7,738,799 (4.9%)	13.7	17,470,587 (96.4%)	150,901,722 (95.1%)	8.8	18,121,426 (100.0%)	158,640,521 (100.0%)	9.0
Not in Central City	358,014 (1.6%)	7,343,810 (2.9%)	22.6	21,397,884 (98.4%)	246,719,873 (97.1%)	11.7	21,755,898 (100.0%)	254,063,683 (100.0%)	11.9
Not In MSA									
	25,454 (0.2%)	594,920 (0.5%)	23.4	10,411,492 (99.8%)	112,856,545 (99.5%)	10.9	10,436,946 (100.0%)	113,451,465 (100.0%)	11.0
TOTAL	1,034,307 (2.1%)	15,677,529 (3.0%)	17.1	49,279,963 (97.9%)	510,478,140 (97.0%)	10.5	50,314,271 (100.0%)	526,155,669 (100.0%)	10.7

¹ Average trip length is calculated using only those records with trip mileage information present.

TABLE 6.20

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY TRIP SEGMENTED STATUS AND MSA SIZE
1990 NPTS**

MSA Size	Segmented Commute Trips			Nonsegmented Commute Trips			TOTAL COMMUTE TRIPS		
	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)	No. of Trips (000)	No. of Person Miles (000)	Avg. Trip Length ¹ (miles)
Less than 250,000	24,726 (2.4%)	287,592 (1.8%)	11.6	4,735,505 (9.6%)	40,539,585 (7.9%)	8.7	4,760,231 (9.5%)	40,827,177 (7.8%)	8.7
250,000-499,999	15,244 (1.5%)	70,177 (0.5%)	5.4	4,242,636 (8.6%)	40,484,650 (7.9%)	9.6	4,257,880 (8.5%)	40,554,827 (7.7%)	9.6
500,000-999,999	29,939 (2.9%)	346,080 (2.2%)	16.0	4,770,362 (9.7%)	49,197,457 (9.6%)	10.5	4,800,301 (9.5%)	49,543,537 (9.4%)	10.5
1,000,000-2,999,999	165,159 (16.0%)	1,741,957 (11.1%)	11.4	10,067,621 (20.4%)	102,275,487 (20.0%)	10.3	10,232,780 (20.3%)	104,017,444 (19.8%)	10.3
3,000,000 and Over	773,785 (74.8%)	12,636,803 (80.6%)	18.6	15,052,318 (30.5%)	165,124,416 (32.4%)	11.3	15,826,103 (31.5%)	177,761,219 (33.8%)	11.6
Not in MSA	25,454 (2.4%)	594,920 (3.8%)	23.4	10,411,521 (21.1%)	112,856,545 (22.1%)	10.9	10,436,975 (20.7%)	113,451,465 (21.5%)	11.0
TOTAL	1,034,307 (100.0%)	15,677,529 (100.0%)	17.1	49,279,963 (100.0%)	510,478,140 (100.0%)	10.5	50,314,271 (100.0%)	526,155,669 (100.0%)	10.7

¹ Average trip length is calculated using only those records with trip mileage information present.

TABLE 6.21

**DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY TRIP SEGMENTED STATUS
AND PRIMARY¹ MODE OF TRANSPORTATION
1990 NPTS
(THOUSANDS)**

Note: See Limitations of Data on Transit² in Chapter 1, Section 5

Primary Mode	Non-segmented Commute Trip	Segmented Commute Trip	TOTAL COMMUTE TRIPS
Private Vehicles			
Auto, Van - Driver	33,957,075 (68.9%)	6,127 (0.6%)	33,963,202 (67.5%)
Auto, Van - Passenger	3,518,652 (7.1%)	39,360 (3.8%)	3,558,012 (7.1%)
Pickup	7,754,245 (15.7%)	7,300 (0.7%)	7,761,545 (15.4%)
Other Private Vehicles	573,710 (1.1%)	0 (0.0%)	573,710 (1.1%)
Subtotal	45,803,682 (92.8%)	52,787 (5.1%)	45,856,469 (91.1%)
Public Transportation			
Bus, Streetcar	690,852 (1.4%)	474,900 (45.9%)	1,165,752 (2.3%)
Rail/Subway ³	393,466 (0.8%)	432,787 (41.8%)	826,253 (1.6%)
Subtotal	1,084,318 (2.2%)	907,687 (87.8%)	1,992,005 (4.0%)
Other Means			
Amtrak	7,928 (0.0%)	11,908 (1.2%)	19,836 (0.0%)
Taxi	93,182 (0.2%)	0 (0.0%)	93,182 (0.2%)
Bike	169,380 (0.3%)	0 (0.0%)	169,380 (0.3%)
Walk	1,948,688 (4.0%)	50,610 (4.9%)	1,999,298 (4.0%)
School Bus	55,957 (0.1%)	0 (0.0%)	55,957 (0.1%)
Other	77,869 (0.2%)	11,280 (1.1%)	89,149 (0.2%)
Subtotal	2,353,004 (4.8%)	73,798 (7.1%)	2,426,802 (4.8%)
TOTAL⁴	49,279,963 (100.0%)	1,034,307 (100.0%)	50,314,271 (100.0%)

¹ For segmented trips, primary mode refers to the mode used during the trip segment with the longest travel time in minutes.

² Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note

that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

³ Rail/Subway includes trips by subway, elevated rail and commuter train.

⁴ Includes trips where mode of transportation was unreported.

TABLE 6.22

**DISTRIBUTION OF JOURNEY TO WORK PERSON MILES OF TRAVEL
BY TRIP SEGMENTED STATUS AND PRIMARY¹ MODE OF TRANSPORTATION
1990 NPTS
(THOUSANDS)**

Note: See Limitations of Data on Transit² in Chapter 1, Section 5

Primary Mode	Non-segmented Commute Trip	Segmented Commute Trip	TOTAL COMMUTE TRIPS
Private Vehicles			
Auto, Van - Driver	354,413,801 (69.4%)	100,276 (0.6%)	354,514,077 (67.4%)
Auto, Van - Passenger	35,395,453 (6.9%)	1,083,084 (6.9%)	36,478,537 (6.9%)
Pickup	96,378,922 (18.9%)	66,721 (0.4%)	96,445,643 (18.3%)
Other Private Vehicles	11,354,666 (2.2%)	0 (0.0%)	11,354,666 (2.2%)
Subtotal	497,542,842 (97.4%)	1,250,081 (7.9%)	498,792,923 (94.8%)
Public Transportation			
Bus, Streetcar	5,059,594 (1.0%)	5,317,738 (33.9%)	10,377,332 (2.0%)
Rail/Subway ³	4,401,866 (0.9%)	7,313,463 (46.6%)	11,715,329 (2.2%)
Subtotal	9,461,460 (1.9%)	12,631,201 (80.6%)	22,092,661 (4.2%)
Other Means			
Amtrak	118,945 (0.0%)	1,046,742 (6.7%)	1,165,687 (0.2%)
Taxi	313,606 (0.1%)	0 (0.0%)	313,606 (0.1%)
Bike	353,176 (0.1%)	0 (0.0%)	353,176 (0.1%)
Walk	1,203,323 (0.2%)	447,914 (2.9%)	1,651,237 (0.3%)
School Bus	453,668 (0.1%)	0 (0.0%)	453,668 (0.1%)
Other	925,939 (0.2%)	301,592 (1.9%)	1,227,531 (0.2%)
Subtotal	3,368,657 (0.7%)	1,796,248 (11.5%)	5,164,904 (1.0%)
TOTAL⁴	510,478,140 (100.0%)	15,677,529 (100.0%)	526,155,669 (100.0%)

¹ For segmented trips, primary mode refers to the mode used during the trip segment with the longest travel time in minutes.

² Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note

that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

³ Rail/Subway includes trips by subway, elevated rail and commuter train.

⁴ Includes trips where mode of transportation was unreported.

TABLE 6.23

**AVERAGE TRIP LENGTH¹ OF JOURNEY TO WORK PERSON TRIPS
BY TRIP SEGMENTED STATUS AND PRIMARY² MODE OF TRANSPORTATION
1990 NPTS
(MILES)**

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

Primary Mode	Non-segmented Commute Trip	Segmented Commute Trip	TOTAL COMMUTE TRIPS
Private Vehicles			
Auto, Van - Driver	10.6	16.4	10.6
Auto, Van - Passenger	10.4	28.1	10.6
Pickup	12.6	9.1	12.6
Other Private Vehicle	20.7	0	20.7
Subtotal	11.0	24.1	11.0
Public Transportation			
Bus, Streetcar	8.0	12.5	9.8
Rail/Subway ⁴	14.2	19.9	17.3
Subtotal	10.0	16.0	12.8
Other Means			
Amtrak	15.0	87.9	58.8
Taxi	3.5	0	3.5
Bike	2.1	0	2.1
Walk	0.6	9.1	0.8
School Bus	8.5	0	8.5
Other	11.9	26.7	13.8
Subtotal	1.4	24.7	2.2
TOTAL⁵	10.5	17.1	10.7

¹ Average trip length is calculated using only those records with trip mile information present.

² For segmented trips, primary mode refers to the mode used during the trip segment with the longest travel time in minutes.

³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

⁴ Rail/Subway includes trips by subway, elevated rail and commuter train.

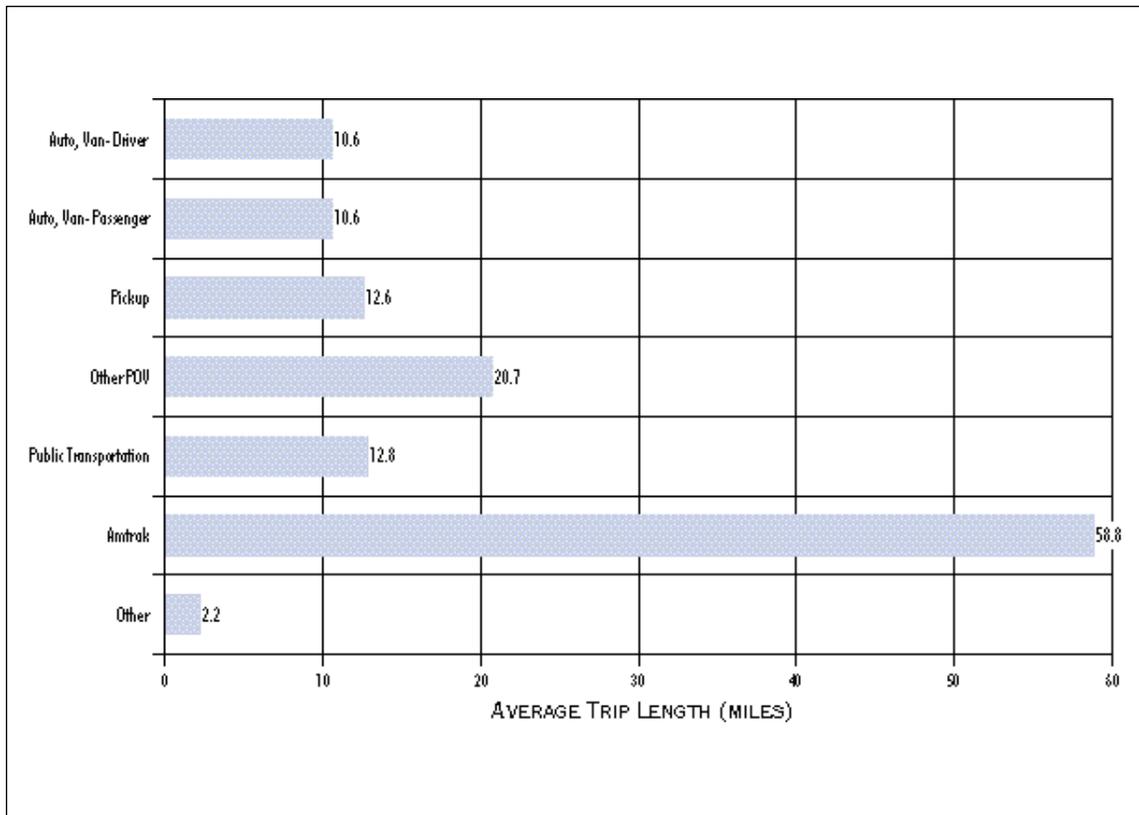
⁵ Includes trips where mode of transportation was unreported.

The 1990 NPTS estimated that there were 50 billion journey to work trips in 1990, which amounted to more than 526 billion person miles of travel (Table 6.16). Ninety-one percent of the trips used privately-owned vehicles (Table 6.21). Of all modes, trips by

Amtrak had the longest distance of all journey to work trips. The average length of segmented journey to work trips was one and a half times longer than non-segmented trips — 17.1 miles for a segmented trip and 10.5 miles for a non-segmented trip (Table 6.23).

FIGURE 6.11

AVERAGE TRIP LENGTH OF JOURNEY TO WORK PERSON TRIPS BY MODE OF TRANSPORTATION
1990 NPTS



In the 1990 NPTS, data were collected on a maximum of four trip segments. Segmented trips having more than four segments were assumed to be 4-segment trips. More than

80% of the segmented journey to work trips had no more than three segments; and 63% of the segmented journey to work trips included walking.

TABLE 6.24

NUMBER OF SEGMENTED JOURNEY TO WORK PERSON TRIPS BY NUMBER OF SEGMENTS TAKEN
1990 NPTS
(THOUSANDS)

No. of Segments	No. of Trips
Two	417,643 (40.4%)
Three	428,841 (41.5%)
Four +	187,823 (18.1%)
TOTAL	1,034,307 (100.0%)
At least one segment walked	654,372 (63.3%)

FIGURE 6.12

DISTRIBUTION OF SEGMENTED JOURNEY TO WORK PERSON TRIPS BY NUMBER OF SEGMENTS TAKEN
1990 NPTS

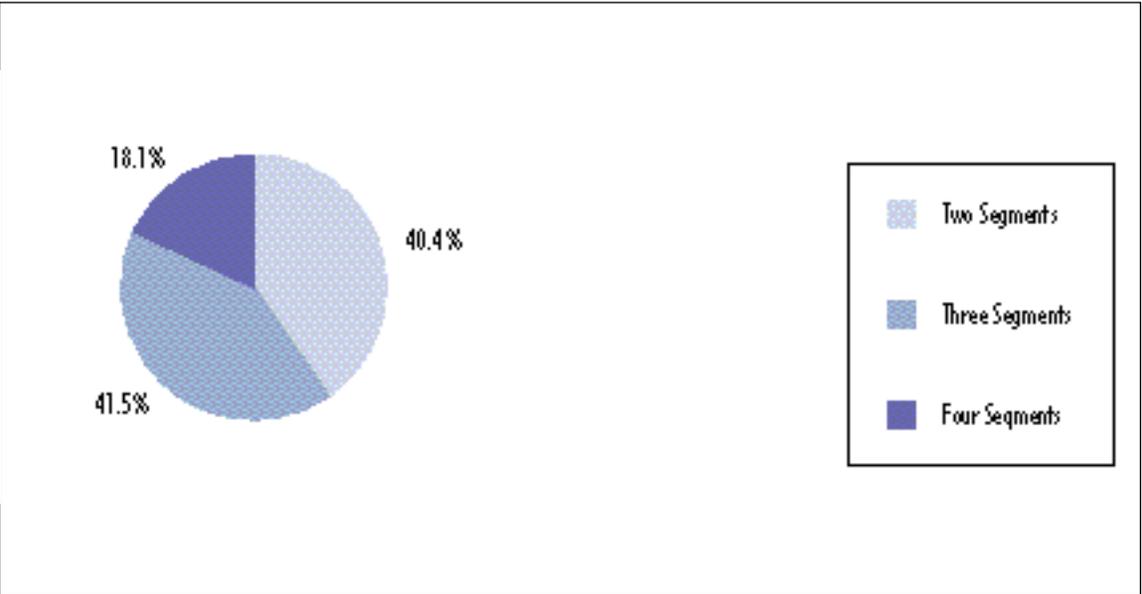


TABLE 6.25

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY TRAVEL TIME AND URBANIZED AREA SIZE
1990 NPTS
(MILLIONS)**

Urbanized Area Size	0-4 min.	5-9 min.	10-19 min.	20-29 min.	30-39 min.	40-49 min.	50+ min.	TOTAL ¹
50,000-199,999	422	917	1,674	676	237	89	84	4,145
	(10.2%)	(22.1%)	(40.4%)	(16.3%)	(5.7%)	(2.1%)	(2.0%)	(100.0%)
200,000-499,999	275	685	1,357	673	260	104	70	3,461
	(7.9%)	(19.8%)	(39.2%)	(19.4%)	(7.5%)	(3.0%)	(2.0%)	(100.0%)
500,000-999,999	220	477	1,191	758	403	168	83	3,329
	(6.6%)	(14.3%)	(35.8%)	(22.8%)	(12.1%)	(5.0%)	(2.5%)	(100.0%)
1,000,000 or more without rail/subway	658	1,464	3,470	2,055	1,435	622	448	10,292
	(6.4%)	(14.2%)	(33.7%)	(20.0%)	(13.9%)	(6.0%)	(4.4%)	(100.0%)
1,000,000 or more with rail/subway	664	1,622	3,185	1,965	1,418	968	1,158	11,206
	(5.9%)	(14.5%)	(28.4%)	(17.5%)	(12.7%)	(8.6%)	(10.3%)	(100.0%)
Not in Urbanized Area	1,916	3,467	5,585	2,869	1,691	1,009	1,080	17,881
	(10.7%)	(19.4%)	(31.2%)	(16.0%)	(9.5%)	(5.6%)	(6.0%)	(100.0%)
TOTAL	4,155	8,632	16,462	8,996	5,445	2,960	2,923	50,314
	(8.3%)	(17.2%)	(32.7%)	(17.9%)	(10.8%)	(5.9%)	(5.8%)	(100.0%)

¹ Includes trips where travel time was unreported.

On average, most journey to work trips were 10 to 19 minutes in duration. Travel times differed depending on the size of the urban area. For example, more than 70% of journey to work trips in small urban areas (with a population less than 200 thousand) were less than 20 minutes. However, less than half of

the journey to work trips in areas with a population more than 1 million, and with rail and subway available, were less than 20 minutes. The percentage of journey to work trips lasting more than 50 minutes in larger urban areas (10.3%) was almost twice of that of the national average (5.8%).

FIGURE 6.13

DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY TRAVEL TIME AND SELECTED URBANIZED AREA SIZE
1990 NPTS

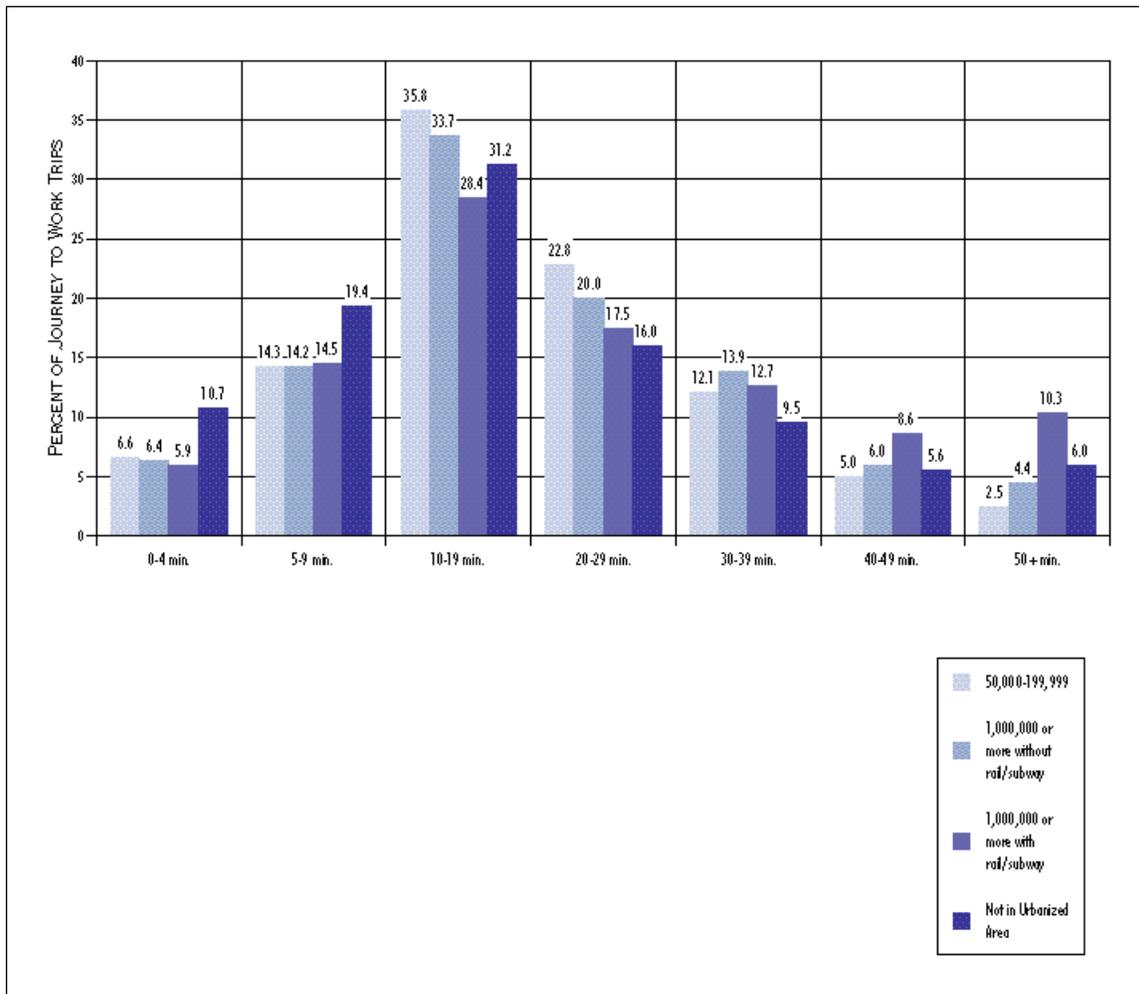


TABLE 6.26

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY TRIP LENGTH AND URBANIZED AREA SIZE
1990 NPTS
(MILLIONS)**

Urbanized Area Size	5 miles or less	6-10 miles	11-15 miles	16-20 miles	21-30 miles	30 miles or more	TOTAL ¹
50,000-199,999	2,468	937	349	118	114	117	4,145
	(59.5%)	(22.6%)	(8.4%)	(2.8%)	(2.8%)	(2.8%)	(100.0%)
200,000-499,999	1,730	921	388	142	129	106	3,461
	(50.0%)	(26.6%)	(11.2%)	(4.1%)	(3.7%)	(3.1%)	(100.0%)
500,000-999,999	1,474	873	490	201	117	108	3,329
	(44.3%)	(26.2%)	(14.7%)	(6.0%)	(3.5%)	(3.2%)	(100.0%)
1,000,000 or more without rail/subway	4,275	2,370	1,431	892	761	396	10,292
	(41.5%)	(23.0%)	(13.9%)	(8.7%)	(7.4%)	(3.8%)	(100.0%)
1,000,000 or more with rail/subway	5,007	2,179	1,281	765	805	745	11,206
	(44.7%)	(19.4%)	(11.4%)	(6.8%)	(7.2%)	(6.6%)	(100.0%)
Not in Urbanized Area	7,983	3,330	2,165	1,392	1,406	1,431	17,881
	(44.6%)	(18.6%)	(12.1%)	(7.8%)	(7.9%)	(8.0%)	(100.0%)
TOTAL	22,937	10,610	6,104	3,511	3,332	2,903	50,314
	(45.6%)	(21.1%)	(12.1%)	(7.0%)	(6.6%)	(5.8%)	(100.0%)

¹ Includes 1.8% of total trips where trip length was unreported.

Almost half of all journey to work trips, on average, were shorter than 5 miles. Journey to work trips in small urban areas (with a population size less than 200 thousand) were significantly shorter than those in other areas. On the other hand, trips to and from

work by those residing in non-urbanized areas were longer than trips by people living in other areas; and were relatively similar to trips by people in areas with more than 1 million in population and having rail and subway available.

FIGURE 6.14

DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY TRIP LENGTH AND SELECTED URBANIZED AREA SIZE 1990 NPTS

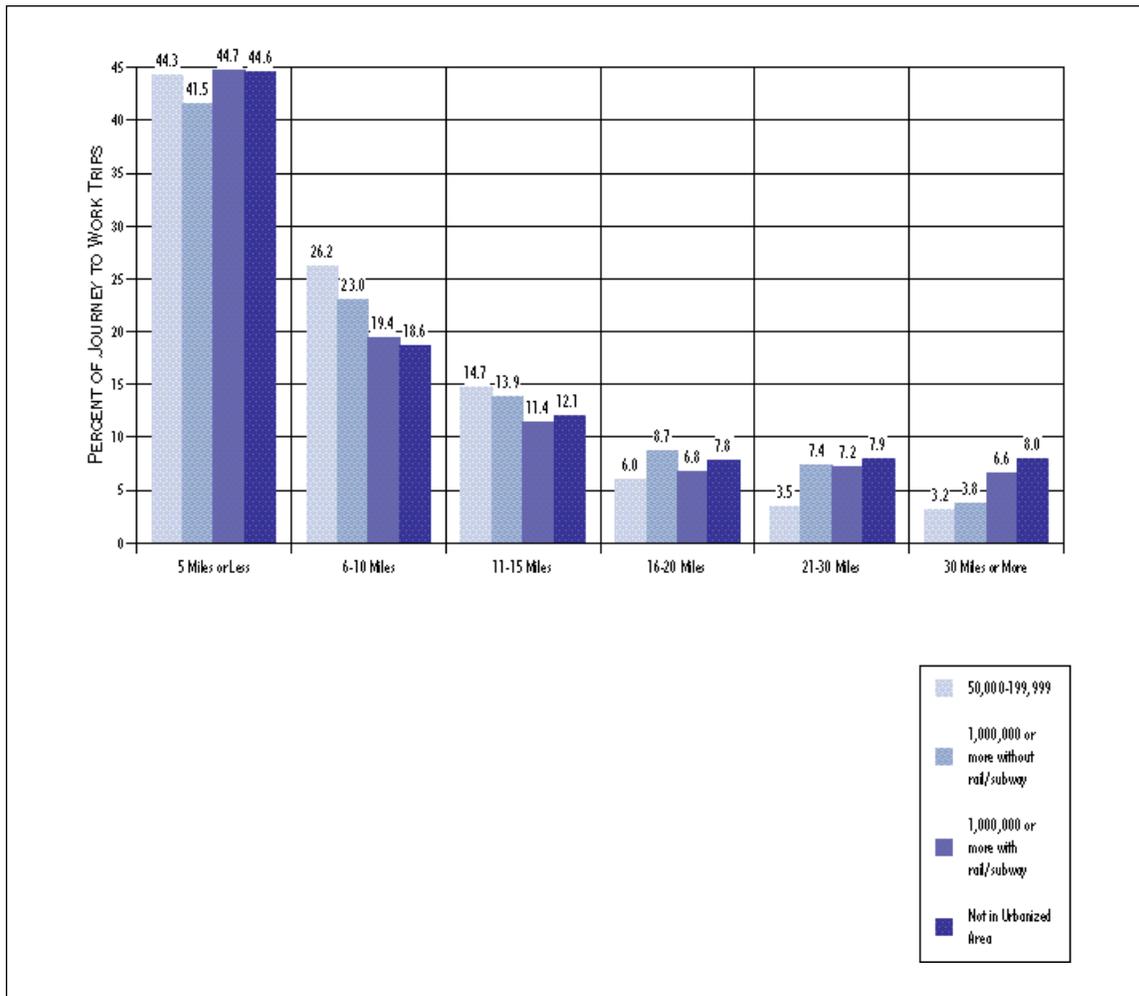


TABLE 6.27

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY MODE OF TRANSPORTATION AND TRAVEL TIME
1990 NPTS
(MILLIONS)**

Note: See Limitations of Data on Transit¹ in Chapter 1, Section 5

	0-4 min	5-9 min	10-19 min	20-29 min	30-39 min	40-49 min	50 + min	TOTAL ²
Private Vehicles								
Auto, Van-Driver	2,642 (63.6%)	5,957 (92.5%)	11,778 (94.2%)	6,183 (94.2%)	3,645 (90.4%)	1,938 (88.6%)	1,458 (76.4%)	33,963 (91.1%)
Auto, Van-Passenger	282 (6.8%)	653 (7.6%)	1,184 (7.2%)	578 (6.4%)	364 (6.7%)	182 (6.1%)	235 (8.0%)	3,558 (7.1%)
Pickup	592 (14.2%)	1,259 (14.6%)	2,364 (14.4%)	1,597 (17.8%)	890 (16.3%)	470 (15.9%)	490 (16.8%)	7,762 (15.4%)
Other Private Vehicles	47 (1.1%)	114 (1.3%)	177 (1.1%)	118 (1.3%)	22 (0.4%)	32 (1.1%)	49 (1.7%)	574 (1.1%)
Subtotal	3,563 (85.8%)	7,983 (92.5%)	15,503 (94.2%)	8,476 (94.2%)	4,921 (90.4%)	2,622 (88.6%)	2,232 (76.4%)	45,857 (91.1%)
Public Transportation								
Bus, Streetcar	3 (0.1%)	34 (0.4%)	214 (1.3%)	193 (2.1%)	256 (4.7%)	152 (5.1%)	285 (9.8%)	1,166 (2.3%)
Rail/Subway ³	6 (0.1%)	11 (0.1%)	65 (0.4%)	83 (0.9%)	144 (2.6%)	143 (4.8%)	343 (11.7%)	826 (1.6%)
Subtotal	9 (0.2%)	45 (0.5%)	280 (1.7%)	276 (3.1%)	400 (7.4%)	295 (10.0%)	628 (21.5%)	1,992 (4.0%)
Other Means								
Amtrak	** (0.0%)	** (0.0%)	4 (0.0%)	2 (0.0%)	2 (0.0%)	1 (0.0%)	10 (0.4%)	20 (0.0%)
Taxi	1 (0.0%)	23 (0.3%)	46 (0.3%)	14 (0.2%)	2 (0.0%)	** (0.0%)	** (0.0%)	93 (0.2%)
Bike	17 (0.4%)	26 (0.3%)	66 (0.4%)	33 (0.4%)	21 (0.4%)	7 (0.2%)	** (0.0%)	169 (0.3%)
Walk	562 (13.5%)	540 (6.3%)	526 (3.2%)	168 (1.9%)	70 (1.3%)	29 (1.0%)	18 (0.6%)	1,999 (4.0%)
School Bus	1 (0.0%)	4 (0.0%)	14 (0.1%)	8 (0.1%)	12 (0.2%)	** (0.0%)	15 (0.5%)	56 (0.1%)
Other	2 (0.0%)	10 (0.1%)	22 (0.1%)	18 (0.2%)	13 (0.2%)	7 (0.2%)	18 (0.6%)	89 (0.2%)
Subtotal	584 (14.0%)	602 (7.0%)	678 (4.1%)	243 (2.7%)	120 (2.2%)	44 (1.5%)	61 (2.1%)	2,426 (4.8%)
TOTAL²	4,155 (100.0%)	8,632 (100.0%)	16,462 (100.0%)	8,996 (100.0%)	5,445 (100.0%)	2,960 (100.0%)	2,923 (100.0%)	50,314 (100.0%)

¹ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

² Includes trips where mode of transportation, travel time or both were unreported.

³ Rail/Subway includes trips by subway, elevated rail and commuter train.

** Indicates no data reported.

TABLE 6.28

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY MODE OF TRANSPORTATION AND TRIP LENGTH
1990 NPTS
(MILLIONS)**

Note: See Limitations of Data on Transit¹ in Chapter 1, Section 5

	5 miles or less	6-10 miles	11-15 miles	16-20 miles	21-30 miles	30 miles or more	TOTAL ^{2,4}
Private Vehicles							
Auto, Van-Driver	14,852 (64.8%)	7,741 (73.0%)	4,404 (72.1%)	2,452 (69.8%)	2,310 (69.3%)	1,805 (62.2%)	33,963 (67.5%)
Auto, Van-Passenger	1,824 (8.0%)	615 (5.8%)	373 (6.1%)	194 (5.5%)	217 (6.5%)	230 (7.9%)	3,558 (7.1%)
Pickup	3,049 (13.3%)	1,671 (15.7%)	1,008 (16.5%)	684 (19.5%)	646 (19.4%)	621 (21.4%)	7,762 (15.4%)
Other Private Vehicles	236 (1.0%)	115 (1.1%)	98 (1.6%)	31 (0.9%)	15 (0.5%)	53 (1.8%)	574 (1.1%)
Subtotal	19,961 (87.0%)	10,142 (95.6%)	5,883 (96.4%)	3,361 (95.7%)	3,188 (95.7%)	2,709 (93.3%)	45,857 (91.1%)
Public Transportation							
Bus, Streetcar	492 (2.1%)	277 (2.6%)	124 (2.0%)	71 (2.0%)	48 (1.4%)	44 (1.5%)	1,166 (2.3%)
Rail/Subway ³	214 (0.9%)	130 (1.2%)	63 (1.0%)	65 (1.9%)	84 (2.5%)	123 (4.2%)	826 (1.6%)
Subtotal	706 (3.1%)	407 (3.8%)	187 (3.1%)	136 (3.9%)	132 (3.9%)	167 (5.7%)	1,992 (4.0%)
Other Means							
Amtrak	* (0.0%)	* (0.0%)	* (0.0%)	** (0.0%)	* (0.0%)	9 (0.3%)	20 (0.0%)
Taxi	81 (0.4%)	4 (0.0%)	* (0.0%)	* (0.0%)	** (0.0%)	* (0.0%)	93 (0.2%)
Bike	160 (0.7%)	7 (0.1%)	** (0.0%)	* (0.0%)	** (0.0%)	** (0.0%)	169 (0.3%)
Walk	1,945 (8.5%)	26 (0.2%)	* (0.0%)	12 (0.3%)	* (0.0%)	* (0.0%)	1,999 (4.0%)
School Bus	31 (0.1%)	4 (0.0%)	13 (0.2%)	** (0.0%)	* (0.0%)	* (0.0%)	56 (0.1%)
Other	44 (0.2%)	18 (0.2%)	9 (0.1%)	** (0.0%)	5 (0.2%)	13 (0.4%)	89 (0.2%)
Subtotal	2,264 (9.9%)	61 (0.6%)	30 (0.5%)	12 (0.3%)	12 (0.4%)	28 (1.0%)	2,426 (4.8%)
TOTAL^{2,4}	22,937 (100.0%)	10,610 (100.0%)	6,104 (100.0%)	3,511 (100.0%)	3,332 (100.0%)	2,903 (100.0%)	50,314 (100.0%)

¹ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

² Includes trips where mode of transportation, trip length or both were unreported.

³ Rail/Subway includes trips by subway, elevated rail and commuter train.

⁴ Includes records where insufficient data were reported in other cells.

* Indicates insufficient data reported.

** Indicates no data reported.

TABLE 6.29

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY DAY OF WEEK AND MODE OF TRANSPORTATION¹
1983 AND 1990 NPTS²
(THOUSANDS)**

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	TOTAL
1983								
Private Vehicle Driver	5,826,875 (74.6%)	6,301,661 (75.3%)	6,793,185 (76.1%)	6,916,485 (75.9%)	6,035,349 (78.2%)	2,155,416 (76.0%)	1,317,705 (76.6%)	35,346,676 (76.0%)
Private Vehicle Passenger	874,812 (11.2%)	1,062,830 (12.7%)	964,079 (10.8%)	1,038,840 (11.4%)	902,987 (11.7%)	422,575 (14.9%)	213,310 (12.4%)	5,479,433 (11.8%)
Public Transportation	484,271 (6.2%)	401,700 (4.8%)	392,773 (4.4%)	473,857 (5.2%)	262,406 (3.4%)	82,246 (2.9%)	53,327 (3.1%)	2,150,580 (4.6%)
Other	624,866 (8.0%)	602,549 (7.2%)	776,619 (8.7%)	683,447 (7.5%)	517,095 (6.7%)	175,837 (6.2%)	135,899 (7.9%)	3,516,312 (7.6%)
TOTAL	7,810,824 (100.0%)	8,368,740 (100.0%)	8,926,656 (100.0%)	9,112,628 (100.0%)	7,717,838 (100.0%)	2,836,073 (100.0%)	1,720,241 (100.0%)	46,493,000 (100.0%)
1990								
Private Vehicle Driver	7,642,872 (83.2%)	7,915,188 (82.2%)	7,708,270 (84.4%)	7,945,079 (83.1%)	6,332,546 (83.3%)	2,531,139 (82.5%)	1,707,889 (80.0%)	41,782,983 (83.0%)
Private Vehicle Passenger	768,333 (8.4%)	714,296 (7.4%)	670,646 (7.3%)	706,950 (7.4%)	646,068 (8.5%)	335,668 (10.9%)	231,516 (10.8%)	4,073,477 (8.1%)
Public Transportation	389,447 (4.2%)	414,537 (4.3%)	320,039 (3.5%)	456,161 (4.8%)	309,441 (4.1%)	65,219 (2.1%)	57,043 (2.7%)	2,011,887 (4.0%)
Other	373,651 (4.1%)	575,038 (6.0%)	427,686 (4.7%)	444,787 (4.6%)	313,788 (4.1%)	132,371 (4.3%)	139,637 (6.5%)	2,406,959 (4.8%)
TOTAL⁴	9,183,274 (100.0%)	9,624,933 (100.0%)	9,128,877 (100.0%)	9,565,503 (100.0%)	7,605,035 (100.0%)	3,069,020 (100.0%)	2,137,628 (100.0%)	50,314,271 (100.0%)

¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983.

² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

⁴ Includes trips where mode of transportation was unreported.

As expected, most journey to work trips occurred during the middle of the week and the fewest on the weekend. Approximately 10% of journey to work trips were on weekends.

TABLE 6.30

**DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY DAY OF WEEK AND MODE OF TRANSPORTATION¹
1983 AND 1990 NPTS²
(ACROSS DAY OF WEEK)**

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	TOTAL
1983								
Private Vehicle Driver	16.5	17.8	19.2	19.6	17.1	6.1	3.7	100.0
Private Vehicle Passenger	16.0	19.4	17.6	19.0	16.5	7.7	3.9	100.0
Public Transportation	22.5	18.7	18.3	22.0	12.2	3.8	2.5	100.0
Other	17.8	17.1	22.1	19.4	14.7	5.0	3.9	100.0
TOTAL	16.8	18.0	19.2	19.6	16.6	6.1	3.7	100.0
1990								
Private Vehicle Driver	18.3	18.9	18.4	19.0	15.2	6.1	4.1	100.0
Private Vehicle Passenger	18.9	17.5	16.5	17.4	15.9	8.2	5.7	100.0
Public Transportation	19.4	20.6	15.9	22.7	15.4	3.2	2.8	100.0
Other	15.5	23.9	17.8	18.5	13.0	5.5	5.8	100.0
TOTAL⁴	18.3	19.1	18.1	19.0	15.1	6.1	4.2	100.0

¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983.

² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.

³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

⁴ Includes trips where mode of transportation was unreported.

FIGURE 6.15

NUMBER OF JOURNEY TO WORK PERSON TRIPS BY DAY OF WEEK
1983 AND 1990 NPTS

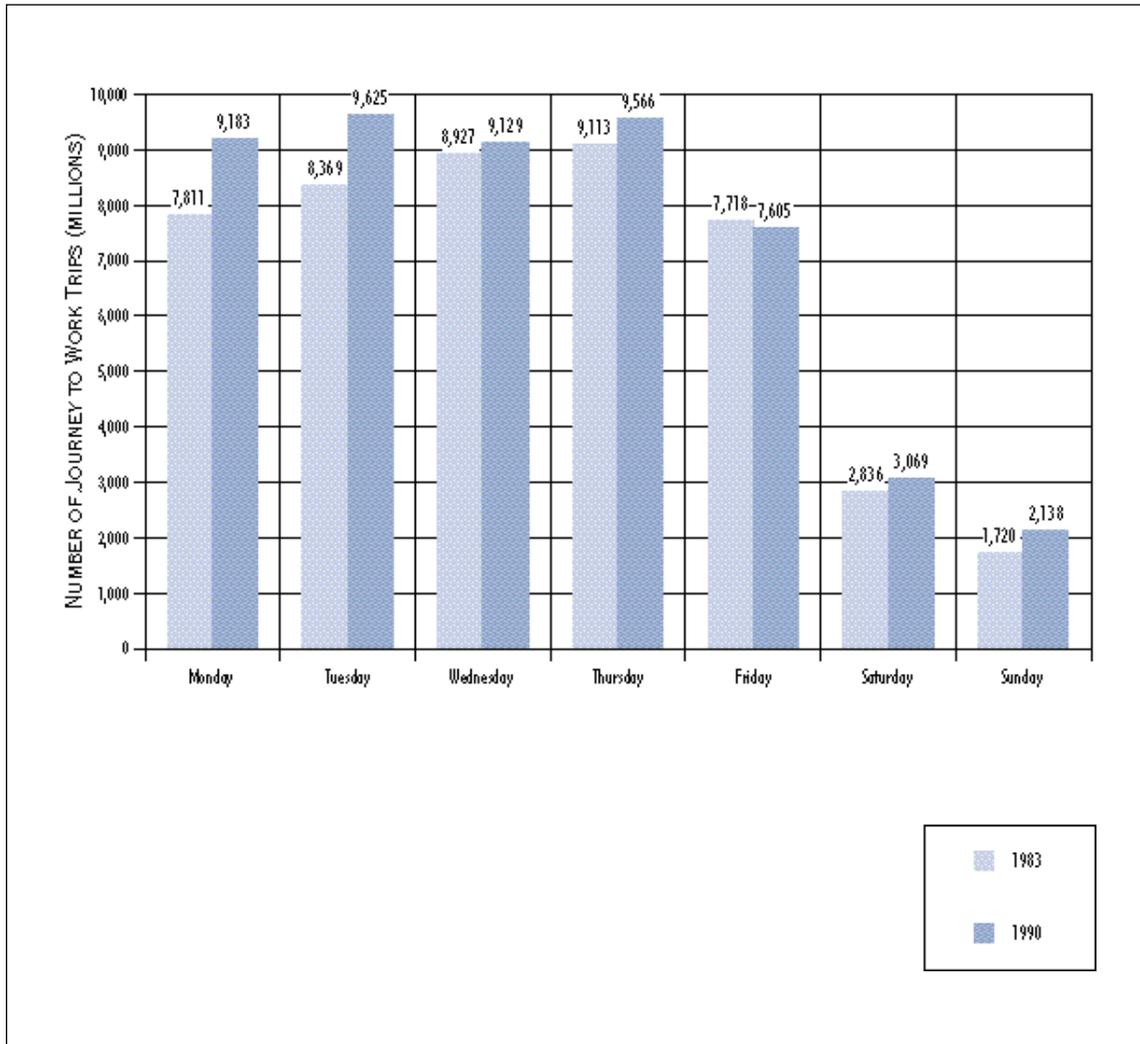


TABLE 6.31

**NUMBER OF PERSON TRIPS BY WEEKDAY¹ VS. WEEKEND,² TRIP PURPOSE, AND TIME OF DAY
1990 NPTS
(THOUSANDS)**

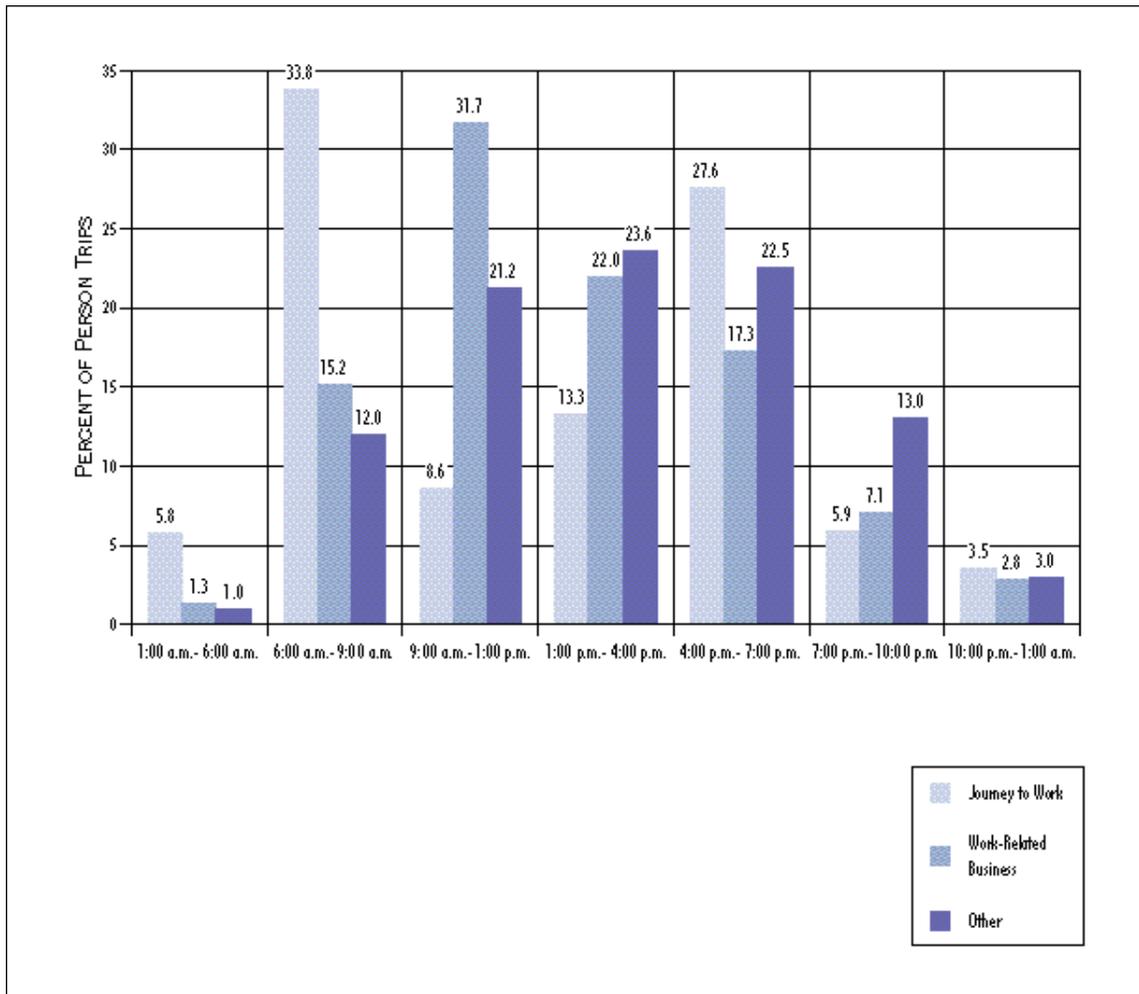
	1:00 a.m. to 6:00 a.m.	6:00 a.m. to 9:00 a.m.	9:00 a.m. to 1:00 p.m.	1:00 p.m. to 4:00 p.m.	4:00 p.m. to 7:00 p.m.	7:00 p.m. to 10:00 p.m.	10:00 p.m. to 1:00 a.m.	TOTAL ³
WEEKDAY								
Journey to Work	2,518,485 (5.8%)	14,763,593 (33.8%)	3,742,339 (8.6%)	5,818,407 (13.3%)	12,073,582 (27.6%)	2,568,277 (5.9%)	1,519,253 (3.5%)	43,726,712 (100.0%)
Work-Related Business	37,376 (1.3%)	448,023 (15.2%)	932,683 (31.7%)	648,132 (22.0%)	510,011 (17.3%)	208,235 (7.1%)	80,870 (2.8%)	2,940,327 (100.0%)
Other	1,232,723 (1.0%)	15,178,765 (12.0%)	26,784,387 (21.2%)	29,795,316 (23.6%)	28,340,647 (22.5%)	16,373,119 (13.0%)	3,750,796 (3.0%)	126,136,016 (100.0%)
Subtotal	3,788,584 (2.2%)	30,390,381 (17.6%)	31,459,409 (18.2%)	36,261,855 (21.0%)	40,924,240 (23.7%)	19,149,631 (11.1%)	5,350,919 (3.1%)	172,803,055 (100.0%)
WEEKEND								
Journey to Work	333,597 (5.2%)	1,127,697 (17.5%)	956,481 (14.9%)	863,335 (13.4%)	1,487,210 (23.1%)	971,596 (15.1%)	583,377 (9.1%)	6,439,359 (100.0%)
Work-Related Business	12,901 (2.3%)	71,141 (12.4%)	133,556 (23.3%)	107,119 (18.7%)	117,886 (20.6%)	74,795 (13.1%)	25,085 (4.4%)	572,557 (100.0%)
Other	702,036 (1.0%)	3,024,922 (4.4%)	17,514,628 (25.7%)	13,751,576 (20.2%)	14,426,868 (21.2%)	11,736,666 (17.2%)	3,967,808 (5.8%)	68,092,253 (100.0%)
Subtotal	1,048,534 (1.4%)	4,223,760 (5.6%)	18,604,665 (24.8%)	14,722,030 (19.6%)	16,031,964 (21.3%)	12,783,057 (17.0%)	4,576,270 (6.1%)	75,104,169 (100.0%)
TOTAL³	4,837,118 (1.9%)	34,614,141 (13.9%)	50,064,074 (20.1%)	50,983,885 (20.4%)	56,956,204 (22.8%)	31,932,688 (12.8%)	9,927,189 (4.0%)	249,562,297 (100.0%)
¹ Defined as the time between 12:01 a.m. Monday and 6:00 p.m. Friday.				³ Includes trips where time of day, weekday vs. weekend or both were unreported.				
² Defined as the time between 6:01 p.m. Friday and midnight Sunday.								

Table 6.31 illustrates how trips for different purposes occurred at different times of the day, and how this temporal distribution varied from weekdays to weekends. Weekday journey to work trips peaked between 6 and 9 a.m. and between 4 and 7 p.m. Trips for

work-related business tended to peak between 9 a.m. and 4 p.m.. For trips that were not related to work (such as errand running), more than two-thirds of them occurred between 9 a.m. and 7 p.m..

FIGURE 6.16

DISTRIBUTION OF WEEKDAY PERSON TRIPS BY TRIP PURPOSE, AND TIME OF DAY
1990 NPTS



This table presents the number of journey to work trips as a percentage of total person trips by time of day and by weekday versus weekend. More than two-thirds of weekday morning travel before 9 a.m. was for com-

muting to work. However, journey to work trips were, as expected, considerably less prevalent in morning traffic during weekends. Between 85% to 95% of weekend travel after 9 a.m. was for purposes other than work.

TABLE 6.32

DISTRIBUTION OF PERSON TRIPS BY WEEKDAY¹ VS. WEEKEND,² TRIP PURPOSE, AND TIME OF DAY
1990 NPTS
(WITHIN TIME OF DAY)

	1:00 a.m. to 6:00 a.m.	6:00 a.m. to 9:00 a.m.	9:00 a.m. to 1:00 p.m.	1:00 p.m. to 4:00 p.m.	4:00 p.m. to 7:00 p.m.	7:00 p.m. to 10:00 p.m.	10:00 p.m. to 1:00 a.m.	TOTAL
WEEKDAY								
Journey to Work	66.5	48.6	11.9	16.0	29.5	13.4	28.4	25.3
Work-Related Business	1.0	1.4	3.0	1.8	1.2	1.1	1.5	1.7
Other	32.5	50.0	85.1	82.2	69.3	85.5	70.1	73.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
WEEKEND								
Journey to Work	31.8	26.7	5.1	5.9	9.3	7.6	12.7	8.6
Work-Related Business	1.2	1.7	0.7	0.7	0.7	0.6	0.5	0.7
Other	67.0	71.6	94.1	93.4	90.0	91.8	86.7	90.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Defined as the time between 12:01 a.m. Monday and 6:00 p.m. Friday.

² Defined as the time between 6:01 p.m. Friday and midnight Sunday.

FIGURE 6.17

JOURNEY TO WORK PERSON TRIPS AS A PERCENTAGE OF TOTAL PERSON TRIPS
BY WEEKDAY VS. WEEKEND AND TIME OF DAY
1990 NPTS

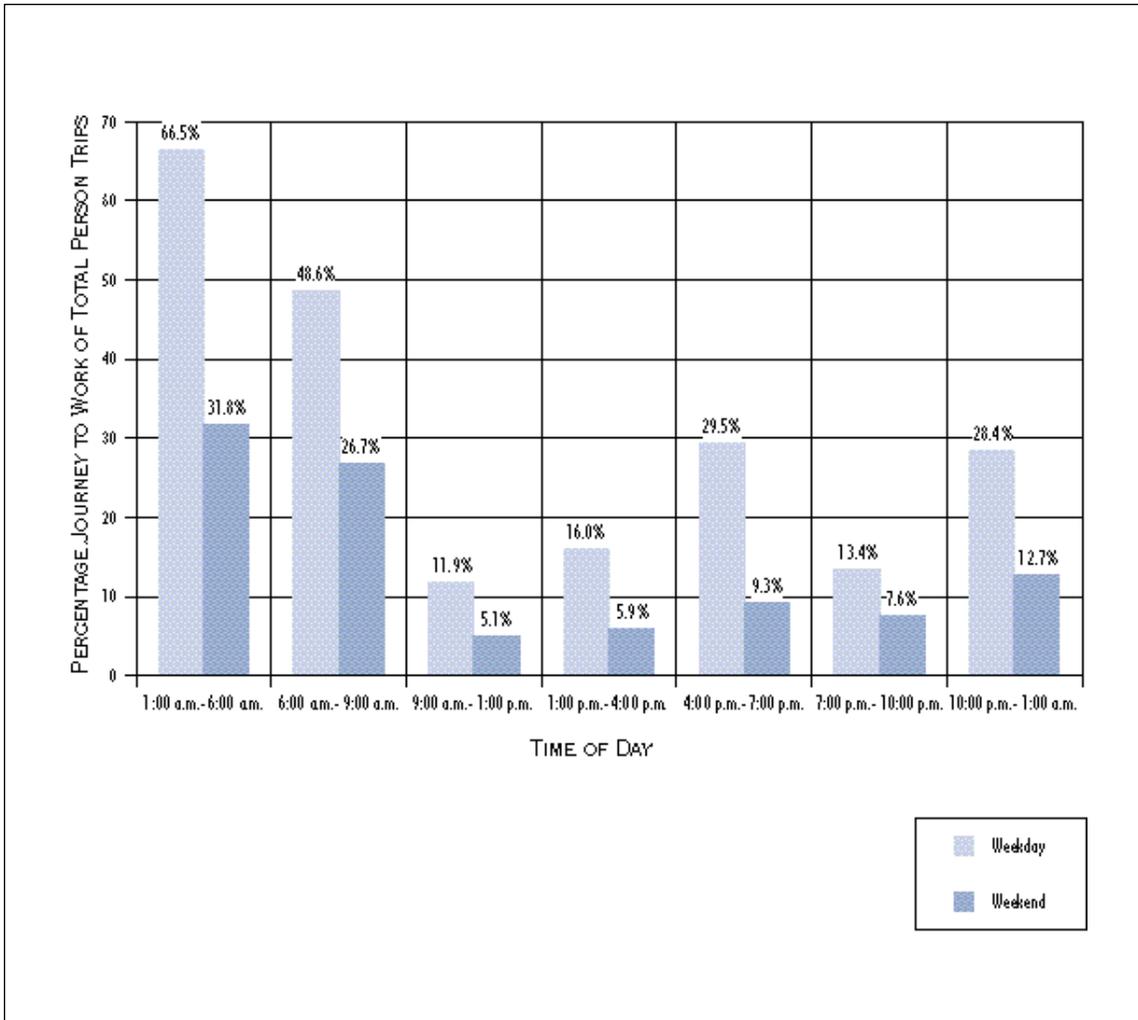


TABLE 6.33

**NUMBER OF JOURNEY TO WORK PERSON TRIPS BY TIME OF DAY AND MODE OF TRANSPORTATION¹
1983 AND 1990 NPTS²
(THOUSANDS)**

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

	1:00 a.m. to 6:00 a.m.	6:00 a.m. to 9:00 a.m.	9:00 a.m. to 1:00 p.m.	1:00 p.m. to 4:00 p.m.	4:00 p.m. to 7:00 p.m.	7:00 p.m. to 10:00 p.m.	10:00 p.m. to 1:00 a.m.	TOTAL ⁴
1983								
Private Vehicle Driver	1,874,319 (69.3%)	10,876,200 (72.7%)	3,965,817 (70.9%)	4,687,357 (69.3%)	8,086,155 (69.3%)	1,969,187 (73.7%)	1,396,627 (76.5%)	33,079,400 (71.1%)
Private Vehicle Passenger	498,846 (18.5%)	2,343,202 (15.7%)	837,638 (15.0%)	1,215,341 (18.0%)	1,964,136 (16.8%)	399,894 (15.0%)	239,305 (13.1%)	7,561,696 (16.3%)
Public Transportation	113,781 (4.2%)	839,836 (5.6%)	150,773 (2.7%)	219,817 (3.3%)	652,198 (5.6%)	79,585 (3.0%)	34,399 (1.9%)	2,097,609 (4.5%)
Other	128,904 (4.8%)	678,645 (4.5%)	542,313 (9.7%)	548,087 (8.1%)	617,184 (5.3%)	127,640 (4.8%)	96,820 (5.3%)	2,746,654 (5.9%)
TOTAL⁴	2,702,948 (100.0%)	14,962,800 (100.0%)	5,594,275 (100.0%)	6,760,033 (100.0%)	11,667,700 (100.0%)	2,673,124 (100.0%)	1,825,693 (100.0%)	46,493,000 (100.0%)
1990								
Private Vehicle Driver	2,391,287 (83.8%)	13,462,567 (84.7%)	3,771,894 (80.3%)	5,491,180 (82.2%)	11,315,524 (83.5%)	2,868,263 (81.0%)	1,719,226 (81.8%)	41,782,983 (83.0%)
Private Vehicle Passenger	243,814 (8.6%)	1,108,742 (7.0%)	411,197 (8.8%)	599,335 (9.0%)	1,053,922 (7.8%)	337,078 (9.5%)	211,328 (10.1%)	4,073,477 (8.1%)
Public Transportation	84,664 (3.0%)	736,865 (4.6%)	146,319 (3.1%)	213,314 (3.2%)	589,627 (4.3%)	125,510 (3.6%)	64,430 (3.0%)	2,011,887 (4.0%)
Other	132,317 (4.6%)	581,368 (3.7%)	368,859 (7.8%)	377,912 (5.6%)	597,531 (4.4%)	209,021 (5.9%)	107,645 (5.1%)	2,406,959 (4.8%)
TOTAL⁴	2,852,082 (100.0%)	15,891,290 (100.0%)	4,698,820 (100.0%)	6,681,741 (100.0%)	13,560,792 (100.0%)	3,539,873 (100.0%)	2,102,630 (100.0%)	50,314,271 (100.0%)
¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983.		³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.						
² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.		⁴ Includes trips where mode of transportation, trip start time or both were unreported.						

TABLE 6.34

NUMBER OF WEEKDAY JOURNEY TO WORK PERSON TRIPS BY TIME OF DAY
AND MODE OF TRANSPORTATION¹
1983 AND 1990 NPTS²
(THOUSANDS)

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

	1:00 a.m. to 6:00 a.m.	6:00 a.m. to 9:00 a.m.	9:00 a.m. to 1:00 p.m.	1:00 p.m. to 4:00 p.m.	4:00 p.m. to 7:00 p.m.	7:00 p.m. to 10:00 p.m.	10:00 p.m. to 1:00 a.m.	TOTAL ⁴
1983								
Private Vehicle-Driver	1,700,619 (69.9%)	10,076,200 (72.5%)	3,313,657 (70.2%)	4,101,577 (68.6%)	7,215,372 (69.2%)	1,459,433 (76.4%)	988,348 (75.4%)	29,024,140 (71.0%)
Private Vehicle-Passenger	463,797 (19.1%)	2,194,698 (15.8%)	690,547 (14.6%)	1,084,775 (18.1%)	1,775,461 (17.0%)	220,993 (11.6%)	173,145 (13.2%)	6,642,456 (16.2%)
Public Transportation	93,221 (3.8%)	804,682 (5.8%)	134,593 (2.9%)	181,778 (3.0%)	612,916 (5.9%)	68,754 (3.6%)	29,014 (2.2%)	1,932,179 (4.7%)
Other	107,808 (4.4%)	613,932 (4.4%)	499,727 (10.6%)	537,838 (9.0%)	539,411 (5.2%)	98,548 (5.2%)	76,400 (5.8%)	2,473,664 (6.0%)
TOTAL⁴	2,431,374 (100.0%)	13,904,992 (100.0%)	4,720,167 (100.0%)	5,979,400 (100.0%)	10,419,444 (100.0%)	1,909,912 (100.0%)	1,311,025 (100.0%)	40,891,511 (100.0%)
1990								
Private Vehicle-Driver	2,096,667 (83.3%)	12,531,839 (84.9%)	3,000,746 (80.2%)	4,774,805 (82.1%)	10,126,123 (83.9%)	2,095,238 (81.6%)	1,253,560 (82.5%)	36,435,186 (83.3%)
Private Vehicle-Passenger	222,705 (8.8%)	991,948 (6.7%)	299,415 (8.0%)	499,749 (8.6%)	902,508 (7.5%)	235,772 (9.2%)	133,838 (8.8%)	3,353,015 (7.7%)
Public Transportation	83,282 (3.3%)	707,158 (4.8%)	126,242 (3.4%)	193,841 (3.3%)	531,160 (4.4%)	90,730 (3.5%)	51,513 (3.4%)	1,829,743 (4.2%)
Other	115,831 (4.6%)	530,896 (3.6%)	315,386 (8.4%)	350,011 (6.0%)	511,389 (4.2%)	146,537 (5.7%)	80,342 (5.3%)	2,079,162 (4.8%)
TOTAL⁴	2,518,485 (100.0%)	14,763,593 (100.0%)	3,742,339 (100.0%)	5,818,407 (100.0%)	12,073,582 (100.0%)	2,568,277 (100.0%)	1,519,253 (100.0%)	43,726,712 (100.0%)
<p>¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983.</p> <p>² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.</p> <p>³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.</p> <p>⁴ Includes trips where mode of transportation, trip start time or both were unreported.</p>								

TABLE 6.35

**NUMBER OF WEEKEND JOURNEY TO WORK PERSON TRIPS BY TIME OF DAY AND MODE OF
TRANSPORTATION¹
1983 AND 1990 NPTS²
(THOUSANDS)**

Note: See Limitations of Data on Transit³ in Chapter 1, Section 5

	1:00 a.m. to 6:00 a.m.	6:00 a.m. to 9:00 a.m.	9:00 a.m. to 1:00 a.m.	1:00 p.m. to 4:00 p.m.	4:00 p.m. to 7:00 p.m.	7:00 p.m. to 10:00 p.m.	10:00 p.m. to 1:00 a.m.	TOTAL ⁴
1983								
Private Vehicle - Driver	173,700 (64.0%)	800,038 (75.6%)	652,160 (74.6%)	585,780 (75.0%)	870,784 (69.8%)	509,754 (66.8%)	408,279 (79.3%)	4,027,002 (72.6%)
Private Vehicle -Passenger	35,049 (12.9%)	148,504 (14.0%)	147,091 (16.8%)	130,566 (16.7%)	188,675 (15.1%)	178,902 (23.4%)	66,160 (12.9%)	903,355 (16.3%)
Public Transportation	20,560 (7.6%)	35,154 (3.3%)	16,180 (1.9%)	38,039 (4.9%)	39,281 (3.1%)	10,831 (1.4%)	5,385 (1.0%)	165,430 (3.0%)
Other	21,096 (7.8%)	64,713 (6.1%)	42,586 (4.9%)	10,249 (1.3%)	77,773 (6.2%)	29,093 (3.8%)	20,419 (4.0%)	268,788 (4.8%)
TOTAL⁴	271,574 (100.0%)	1,057,840 (100.0%)	874,108 (100.0%)	780,632 (100.0%)	1,248,269 (100.0%)	763,211 (100.0%)	514,668 (100.0%)	5,548,075 (100.0%)
1990								
Private Vehicle - Driver	294,620 (88.3%)	930,724 (82.5%)	771,148 (80.6%)	716,375 (83.0%)	1,189,404 (80.0%)	773,025 (79.6%)	465,666 (79.8%)	5,243,309 (81.4%)
Private Vehicle -Passenger	21,109 (6.3%)	116,794 (10.4%)	111,783 (11.7%)	99,586 (11.5%)	151,414 (10.2%)	101,306 (10.4%)	77,490 (13.3%)	688,727 (10.7%)
Public Transportation	1,382 (0.4%)	29,707 (2.6%)	20,077 (2.1%)	19,473 (2.3%)	58,468 (3.9%)	34,780 (3.6%)	12,917 (2.2%)	176,804 (2.7%)
Other	16,486 (4.9%)	50,472 (4.5%)	53,473 (5.6%)	27,901 (3.2%)	86,142 (5.8%)	62,485 (6.4%)	27,303 (4.7%)	324,353 (5.0%)
TOTAL⁴	333,597 (100.0%)	1,127,697 (100.0%)	956,481 (100.0%)	863,335 (100.0%)	1,487,210 (100.0%)	971,596 (100.0%)	583,377 (100.0%)	6,439,359 (100.0%)
<p>¹ In tables containing BOTH 1983 AND 1990 NPTS data, the category "train" (included in the public transportation category) includes both commuter rail and Amtrak. These were collected as one mode in the 1983 survey, and the 1990 data were tabulated to be comparable to the 1983.</p> <p>² For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.</p> <p>³ Estimates of "actual" transit use are based on 1240 person trips to work on travel day by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.</p> <p>⁴ Includes trips where mode of transportation, start time of trip or both were unreported.</p>								

From 1983 to 1990, about 87 to 88 percent of all journey to work trips occurred on weekdays. Weekday trips to work peaked from 6 a.m. to 9 a.m., and from 4 p.m. to 7 p.m.; and diminished considerably after 7 p.m.

Journey to work trips on weekends, on the other hand, peaked around 4 p.m. and remained fairly high until 1 a.m. These patterns were true in both 1983 and 1990.

TABLE 6.36

DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY WEEKDAY¹ VS. WEEKEND² AND TIME OF DAY
 1983 AND 1990 NPTS³
 (ACROSS TIME OF DAY)

	1:00 a.m. to 6:00 a.m.	6:00 a.m. to 9:00 a.m.	9:00 a.m. to 1:00 p.m.	1:00 p.m. to 4:00 p.m.	4:00 p.m. to 7:00 p.m.	7:00 p.m. to 10:00 p.m.	10:00 p.m. to 1:00 a.m.	TOTAL ⁴
1983								
Weekday (%)	5.9	34.0	11.5	14.6	25.5	4.7	3.2	100.0
Weekend (%)	4.9	19.1	15.8	14.1	22.5	13.8	9.3	100.0
ALL (000)	2,702,948	14,962,800	5,594,275	6,760,033	11,667,700	2,673,124	1,825,693	46,493,000
	(5.8%)	(32.2%)	(12.0%)	(14.5%)	(25.1%)	(5.7%)	(3.9%)	(100.0%)
1990								
Weekday (%)	5.8	33.8	8.6	13.3	27.6	5.9	3.5	100.0
Weekend (%)	5.2	17.5	14.9	13.4	23.1	15.1	9.1	100.0
ALL (000)	2,852,082	15,889,542	4,698,269	6,681,741	13,556,604	3,539,872	2,102,629	50,314,271
	(5.7%)	(31.6%)	(9.3%)	(13.3%)	(26.9%)	(7.0%)	(4.2%)	(100.0%)
¹ Defined as the time between 12:01 a.m. Monday and 6:00 p.m. Friday.				³ For information on comparing 1983 and 1990 NPTS survey data, see Section 4 of Chapter 1.				
² Defined as the time between 6:01 p.m. Friday and midnight Sunday.				⁴ Includes trips where time of day was unreported.				

FIGURE 6.18

DISTRIBUTION OF JOURNEY TO WORK PERSON TRIPS BY WEEKDAY VS. WEEKEND AND TIME OF DAY
1983 AND 1990 NPTS

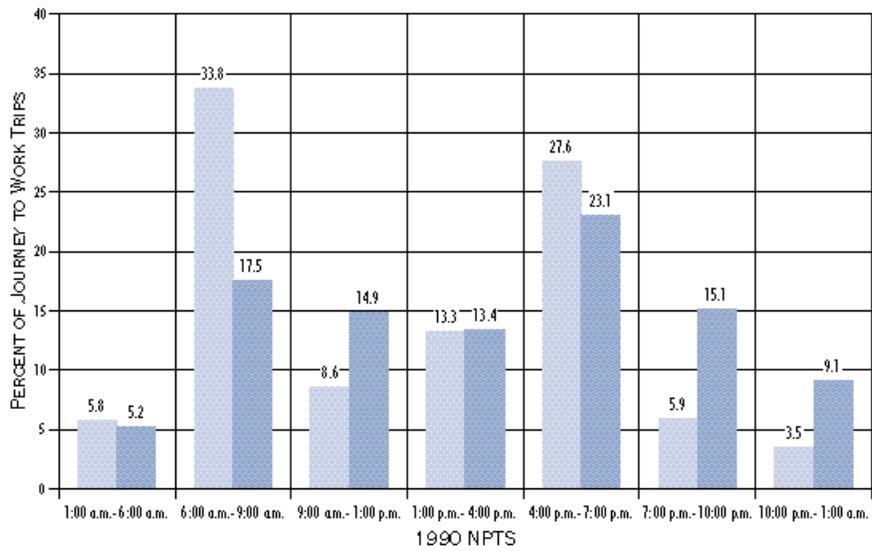
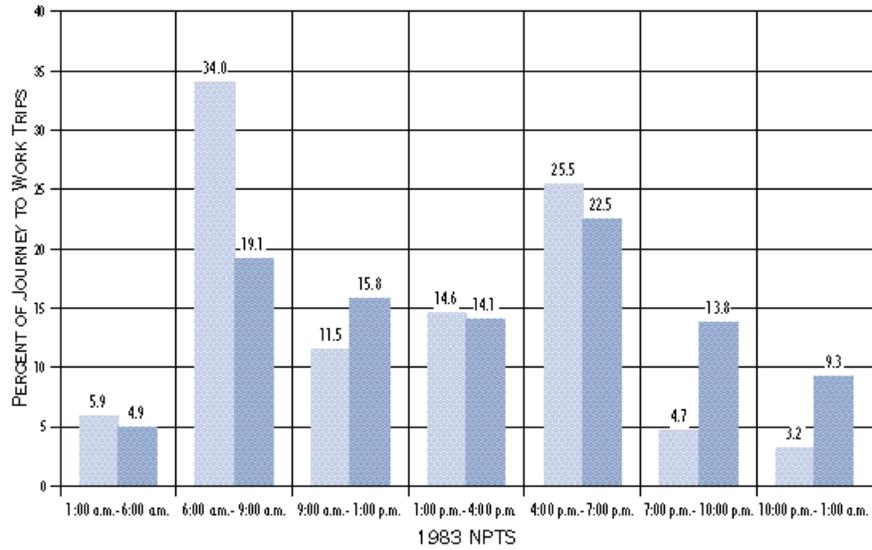


TABLE 6.37

**STATISTICS ON WORK-RELATED PERSON TRIPS BY MODE OF TRANSPORTATION
1990 NPTS**

Note: See Limitations of Data on Transit¹ in Chapter 1, Section 5

	No. of Person Trips (000)	No. of Person Miles (000)	Average Trip Length ² (miles)
Private Vehicles			
Auto, Van - Driver	2,325,639 (65.9%)	35,998,046 (37.0%)	15.8
Auto, Van - Passenger	306,574 (8.7%)	7,680,964 (7.9%)	25.6
Pickup	482,426 (13.7%)	6,122,242 (6.3%)	12.7
Other Private Vehicle	63,615 (1.8%)	1,383,741 (1.4%)	21.8
Subtotal	3,178,254 (90.1%)	51,184,993 (52.6%)	16.4
Public Transportation			
Bus, Streetcar	61,954 (1.8%)	343,578 (0.3%)	5.7
Rail/Subway ³	29,935 (0.8%)	456,514 (0.5%)	15.7
Subtotal	91,890 (2.6%)	800,092 (0.8%)	8.9
Other Means			
Amtrak	1,682 (0.0%)	672,965 (0.7%)	400.0
Airplane	52,163 (1.5%)	43,534,058 (44.7%)	1074.2
Taxi	13,508 (0.4%)	60,934 (0.1%)	4.5
Bike	4,920 (0.1%)	3,151 (0.0%)	0.6
Walk	154,031 (4.4%)	92,237 (0.1%)	0.6
Other	22,732 (0.6%)	771,239 (0.8%)	44.1
Subtotal	249,036 (7.1%)	45,134,584 (46.3%)	195.7
TOTAL⁴	3,528,663 (100.0%)	97,379,907 (100.0%)	28.2

¹ Estimates of "actual" transit use are based on 39 person trips for work-related travel by bus, subway, elevated rail or commuter train. Note that the NPTS estimate of transit trips for all purposes is 20% lower than the Federal Transit Administration's Section 15 reporting system.

² Average trip length is calculated using only those records with trip mile information present.

³ Rail/Subway includes trips by subway, elevated rail and commuter train.

⁴ Includes trips where mode of transportation was unreported.

TABLE 6.38

**STATISTICS ON WORK-RELATED VEHICLE TRIPS BY VEHICLE TYPE
1990 NPTS
(MILLIONS)**

Vehicle Type	Vehicle Trips	Vehicle Miles of Travel (VMT)
Auto	2,088	33,204
	(73.4%)	(78.4%)
Passenger Van	211	2,576
	(7.4%)	(6.1%)
Cargo Van	27	218
	(1.0%)	(0.5%)
Pickup Truck	454	4,951
	(15.9%)	(11.7%)
Other Truck	57	1,375
	(2.0%)	(3.3%)
Motorcycle	4	8
	(0.1%)	(0.0%)
TOTAL¹	2,845	42,336
	(100.0%)	(100.0%)

¹ Includes trips and miles of travel where vehicle type was unreported.

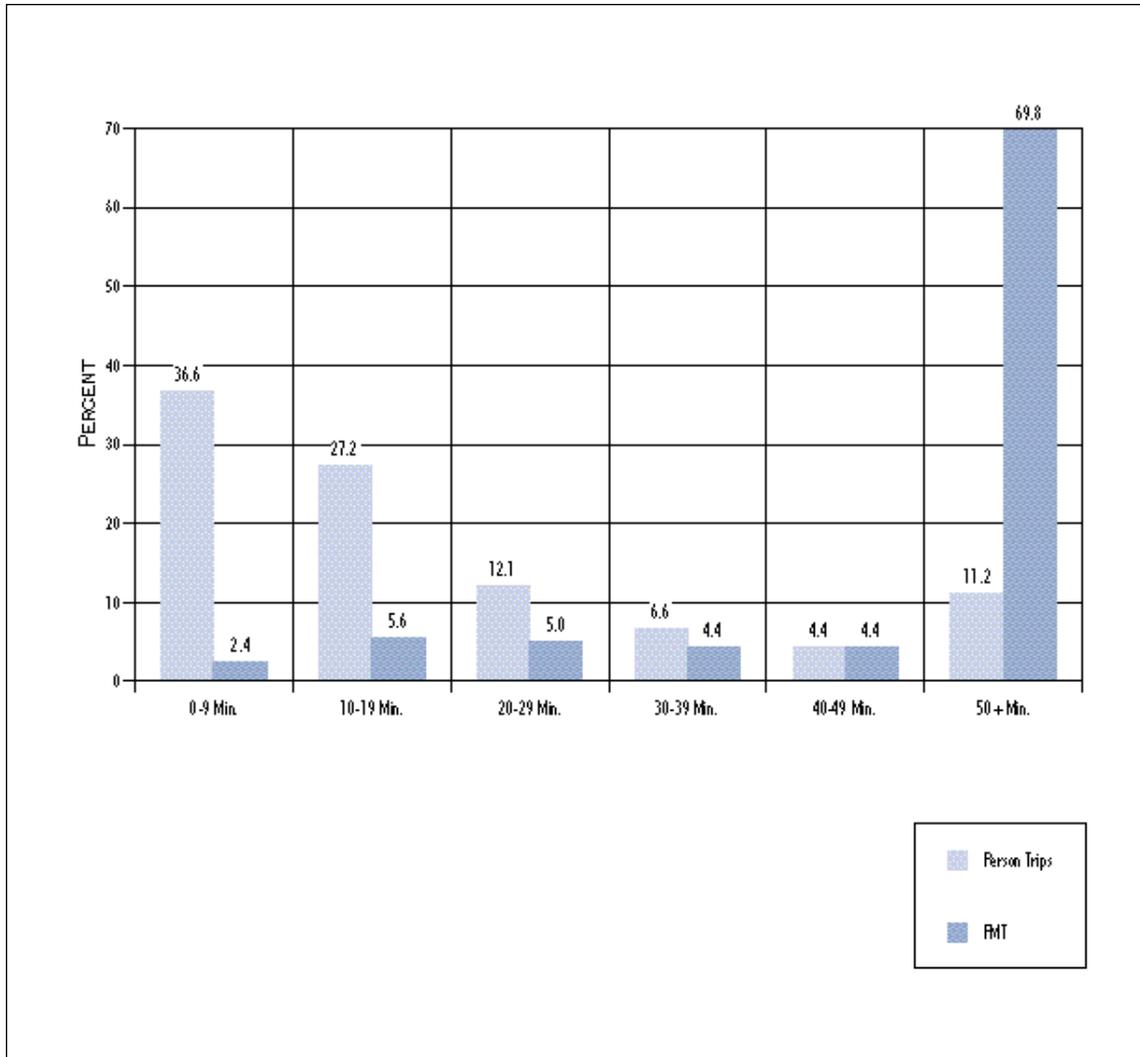
TABLE 6.39

**STATISTICS ON WORK-RELATED PERSON TRIPS BY TRAVEL TIME
1990 NPTS**

	No. of Person Trips (000)	No. of Person Miles (000)	Average Trip Length ¹ (miles)
0-9 min.	1,292,449 (36.6%)	2,323,477 (2.4%)	1.80
10-19 min.	959,586 (27.2%)	5,423,055 (5.6%)	5.70
20-29 min.	427,258 (12.1%)	4,909,415 (5.0%)	11.65
30-39 min.	232,330 (6.6%)	4,308,590 (4.4%)	19.21
40-49 min.	154,400 (4.4%)	4,302,402 (4.4%)	28.69
50+ min.	395,470 (11.2%)	68,017,296 (69.8%)	180.61
TOTAL²	3,528,663 (100.0%)	97,379,907 (100.0%)	28.20
¹ Average trip length is calculated using only those records with trip mile information present.		² Includes trips and miles of travel where travel time was unreported.	

FIGURE 6.19

DISTRIBUTION OF WORK-RELATED PERSON TRIPS AND MILES OF TRAVEL BY TRAVEL TIME
1990 NPTS



Compared with journey to work trips, work-related trips were more than twice as long — 28.2 miles vs. 10.7 miles. This difference is largely due to the greater percentage of work-related trips that were 30 miles or longer.

While 6% of journey to work trips were to places 30 miles or farther, the corresponding percentage was 12% for work-related trips. The average trip length for trips 30 miles or longer was 184 miles.

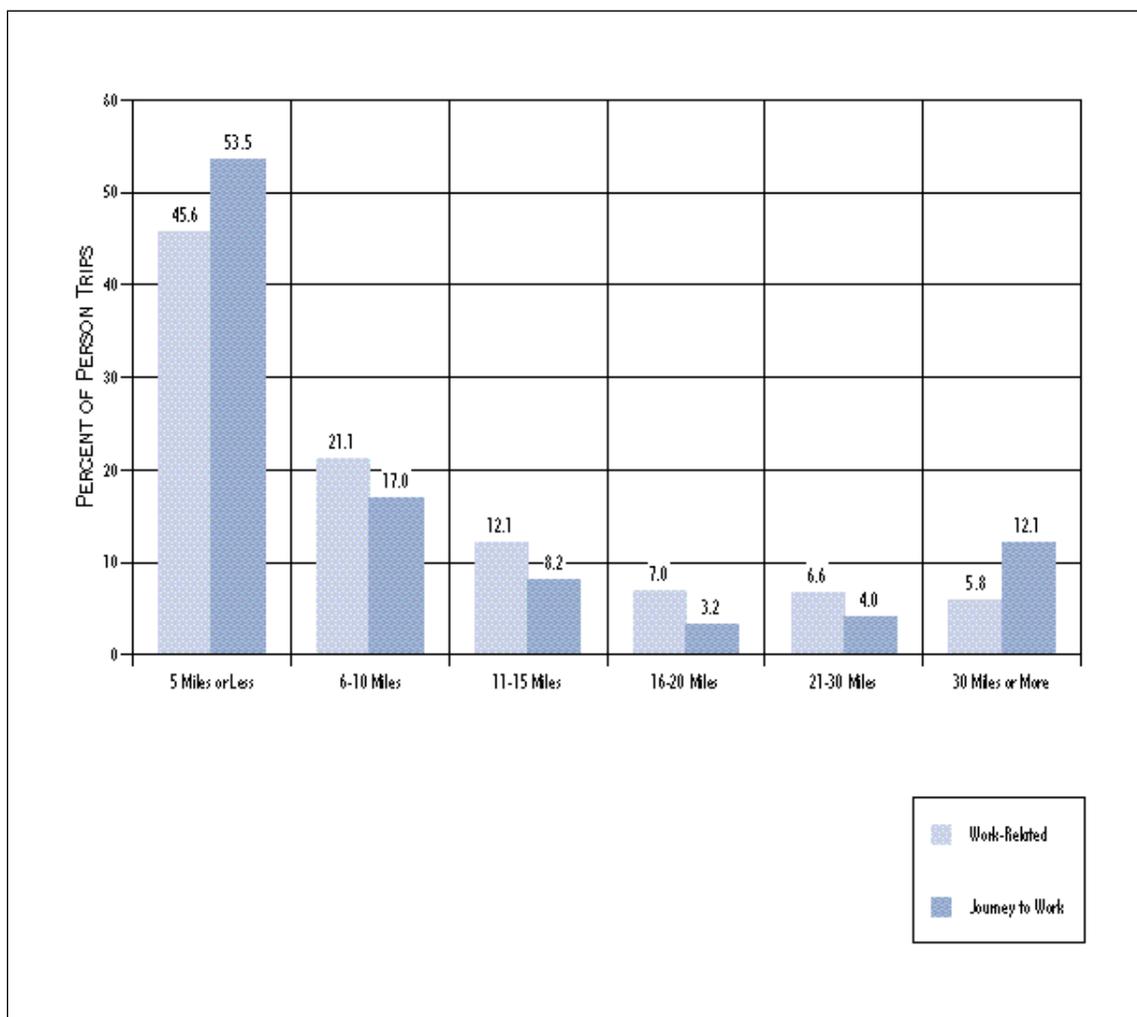
TABLE 6.40

**STATISTICS ON WORK-RELATED PERSON TRIPS BY TRIP LENGTH
1990 NPTS**

	No. of Person Trips (000)	No. of Person Miles (000)	Average Trip Length ¹ (miles)
5 miles or less	1,886,222 (53.5%)	4,179,532 (4.3%)	2.22
6-10 miles	598,381 (17.0%)	4,839,744 (5.0%)	8.09
11-15 miles	288,326 (8.2%)	3,959,401 (4.1%)	13.73
16-20 miles	112,697 (3.2%)	2,114,630 (2.2%)	18.76
21-30 miles	140,306 (4.0%)	3,702,803 (3.8%)	26.39
31 or more miles	427,473 (12.1%)	78,583,798 (80.7%)	183.83
TOTAL²	3,528,663 (100.0%)	97,379,907 (100.0%)	28.20
¹ Average trip length is calculated using only those records with trip mile information present.		² Includes trips and miles of travel where start time of the trip was unreported.	

FIGURE 6.20

COMPARISON OF JOURNEY TO WORK PERSON TRIPS AND WORK-RELATED PERSON TRIPS BY TRIP LENGTH
1990 NPTS



JOURNEY TO WORK AND WORK-RELATED TRIPS FROM ALLERLEI TRIPS

TABLE 6.41

**STATISTICS ON WORK-RELATED PERSON TRIPS BY TIME OF DAY
1990 NPTS**

	No. of Person Trips (000)	No. of Person Miles (000)
1:00 a.m. to 6:00 a.m.	50,277 (1.4%)	1,166,391 (1.2%)
6:00 a.m. to 9:00 a.m.	519,164 (14.7%)	26,293,657 (27.0%)
9:00 a.m. to 1:00 p.m.	1,066,239 (30.2%)	22,708,524 (23.3%)
1:00 p.m. to 4:00 p.m.	755,252 (21.4%)	17,257,601 (17.7%)
4:00 p.m. to 7:00 p.m.	627,897 (17.8%)	16,687,470 (17.1%)
7:00 p.m. to 10:00 p.m.	283,030 (8.0%)	8,222,581 (8.4%)
10:00 p.m. to 1:00 a.m.	105,955 (3.0%)	1,411,024 (1.4%)
TOTAL¹	3,528,663 (100.0%)	97,379,907 (100.0%)
¹ Includes trips and miles of travel where start time of trip was unreported.		

FIGURE 6.21
DISTRIBUTION OF NON-WORK-RELATED PERSON TRIPS AND
WORK-RELATED PERSON TRIPS BY TIME OF DAY
1990 NPTS

