

**NATIONWIDE
PERSONAL
TRANSPORTATION
STUDY**

Seasonal Variations of Automobile Trips and Travel

REPORT NO. **3**
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NATIONWIDE PERSONAL TRANSPORTATION SURVEY

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Trips and Travel

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INTRODUCTION

In the past, the studies of seasonal variations of vehicle trips and travel have been done largely on main rural roads. These studies have dealt generally with total vehicle-miles or total number of vehicles on a section of road. Little has been done to compare seasonal patterns of travel with other parameters such as length of trip, purpose of trip, etc.

The following report presents data relating seasonal patterns of automobile trips and travel with several selected factors. The degree of possible relationship among the factors is not evaluated. These data compiled from the Nationwide Personal Transportation Survey represent the most complete national overview of seasonal variations of vehicle trips and travel to date.

DESCRIPTION OF DATA

Seasonal patterns of automobile trips and vehicle-miles of travel were examined within four selected parameters. These parameters were: (1) place of residence by unincorporated areas and incorporated places; (2) purpose of the trip; (3) length of the trip; and (4) day of the week that the trip was started.

Four points concerning the data should be noted. First, except for the summer season, the data which represent a season of the year were collected during nine days of one month (hereafter referred to as one week) of that season. On the tables of the report the data months are shown in parentheses. Secondly, only the data for the summer season were collected during one week in July and one week in August, then factored and averaged for tabulation. Significantly, the data for these two summer weeks were quite consistent. Thirdly, as explained above, the data were collected from the same households for four of the five data months. Only the August data were collected from a separate, independent national sample of households. Finally, the tabulations actually present estimates of national values for the average day in each data week. Because the data weeks were distributed among the four seasons, the resulting distributions are considered to provide reliable indications of seasonal patterns and are so treated in this analysis.

HIGHLIGHTS

- . More automobile trips are taken in the spring than in any other season.
- . A greater percentage of vehicle-miles are driven during the summer than during any other season; the percentage of vehicle-miles traveled is lowest during the winter months.
- . The average automobile trip length is longer in summer than in other seasons.
- . Excluding educational, work, and religious trips, which account for a small percentage of total trips, the largest seasonal effect on vehicle trips is in the "social and recreational" trip purpose categories.
- . Trips for "earning a living" and "family business" show no significant seasonal variation in average trip length.
- . In each season, approximately 30 percent of trips taken are in the one- and two-mile classes.
- . The average automobile trip length is 8.9 miles per trip for all seasons combined, and ranges from a low of 8.3 miles a day in the winter months to a high of 10.1 miles a day in the summer months.

BACKGROUND AND PROCEDURES

Background

The Nationwide Personal Transportation Survey was designed to obtain up-to-date information on national patterns of travel. Earlier surveys, limited primarily to automobile and truck travel, were conducted in a number of States between 1930-1940 and more recently between 1951-1959. In April, 1961, a national survey was conducted to estimate characteristics of travel and ownership and use of automobiles. In this national survey, family income data were available which could be related to travel patterns.

Survey procedures

Data for the Nationwide Personal Transportation Survey were collected in 1969-1970 by the Bureau of the Census of the Department of Commerce for the Federal Highway Administration of the Department of Transportation.

The survey was based on a multi-stage probability sample of housing units located in 235 sample areas, comprising 485 counties and independent cities, representing every State and the District of Columbia. The 235 sample areas were selected by grouping all the Nation's counties and independent cities into about 1,900 primary sample units (PSU's) and further forming 235 strata containing one or more PSU's that are relatively homogeneous according to socio-economic characteristics. Within each of the strata, a single PSU was selected to represent the stratum. Within each PSU, a probability sample of housing units was selected to represent the civilian non-institutionalized population.

The households in the Nationwide Personal Transportation Survey comprised two outgoing panels in the Quarterly Housing Survey (QHS) conducted by the Bureau of the Census. One panel was interviewed in April, July, and October, 1969 and January, 1970; the second panel was interviewed only once in August, 1969.

Experienced field staff of the Bureau of the Census were assigned to the survey. Training consisted of a one-day session for field supervisors by Washington office personnel, and a one-day session of training of the interviewers by field supervisors. In addition, interviewers were assigned home-study exercises to be turned in before each interview period. The interviewers were also observed periodically by field office supervisory personnel.

The completed questionnaires were edited first in the Census regional field offices to clear up inconsistencies and omissions and later in the Washington office. The data were then coded, put on tapes and mechanically edited. An edited tape for each of the months of the

survey was furnished to the Federal Highway Administration for processing.

At the first visit to a selected household, in panel 1 during April, 1969, and in panel 2 during August, 1969, Sections I through VII of the household questionnaire was completed as well as a control card. On the control card were entered data on characteristics of the household such as income, automobile ownership, and age and sex of persons in the households. Only Section VI and VII of the questionnaire were completed at subsequent interviews at the households in panel 1.

Each of the tables in this report will indicate a reference source to a particular table from which the sample base can be determined. These sample bases are identified in Appendix A. A copy of the questionnaire is also found in the Appendix A.

Sampling variability

The Nationwide Personal Transportation Survey is based on a probability sample and the estimates are subject to sampling variability. The term "sampling variability" refers to the expected differences between the results of the survey and those that would have been obtained had a complete census been taken.

Some items such as person or household characteristics or number of vehicles were collected only during the first visit to a household in April or in August. Standard errors of estimates, measures of sampling variability, were calculated from data collected those two months. Estimates of the standard errors for characteristics of vehicle trips and vehicle-miles were determined from variance functions fitted to the data collected during the five months of interviewing.

Most of the data are presented as percentage distributions. The base value of each 100 percent figure is also indicated. Tables IV-2 and V-A.2 in Appendix B give the standard errors for specified percentages and base values. The appropriate standard error may be determined by interpolation. In general, the chances are about two out of three that the difference due to sampling variability between the estimated value and the figure that would have been obtained from a complete census does not exceed the standard error.

Other possible sources of error

In addition to variability arising from the use of samples and household responses, errors may have been made by interviewers or by other personnel involved in the collection and processing of data. Quality controls at all levels of data collection, coding, and editing were exercised by the Bureau of the Census.

SEASONAL TRIPS AND TRAVEL

Automobile trips and travel by season of the year

More automobile trips are taken in the spring than in any other season. Table 1 shows that 26.9 percent of all trips are taken in the spring, and only 23.3 percent of all trips are taken during the winter months. Summer and fall each account for approximately 25 percent of all trips taken in a year.

A greater percentage of vehicle-miles driven are during the summer (28.2 percent) than during any other season. The percentage of vehicle-miles traveled is lowest during the winter months (21.8), with spring and fall vehicle-miles about equally distributed, 25.6 and 24.4 percent of total, respectively. The greater percentage of vehicle-miles of travel during the summer is reflected in a longer average trip length. The average summer trip length is 10.1 miles compared to 8.5, 8.7, and 8.3 miles for the spring, fall and winter months, respectively.

Automobile trips and travel by place of residence of principal operator and season of the year

For residents of unincorporated areas, the seasonal average trip lengths are fairly constant, except for the summer peak; while the average trip length of residents of incorporated places fluctuates more by season (table 1 and figure 1). The average length for residents of unincorporated areas is 11.1 miles per trip in the summer, while during the other three seasons average trip lengths are approximately 9.5 miles per trip. Average miles per trip by residents of incorporated places vary from a high of 9.6 miles in the summer to a low of 7.6 miles in the winter with intermediate values in the spring and fall of 7.8 and 8.2 miles, respectively.

The seasonal distribution of vehicle trips and vehicle-miles of travel for residents of all unincorporated areas is the same as the distribution for all incorporated places. However, the distribution of vehicle-miles for incorporated place of residents is spread over a wider range than for the remaining population, with a high of 28.8 percent during the summer to a low of 21.3 percent during the winter. The seasonal distribution for unincorporated area residents ranges from 22.8 to 27.3 percent. It would appear, therefore, that season has less effect on travel for residents in unincorporated areas than for residents in incorporated places. However, it should be noted that some of this difference may be due to statistical variance.

Automobile trips and travel by purpose of the trip and season of the year

Excluding "educational, civic, and religious" trips which account for a small percentage of the total trips, the largest seasonal effect on vehicle trips appears to be in the "social and recreational" trip

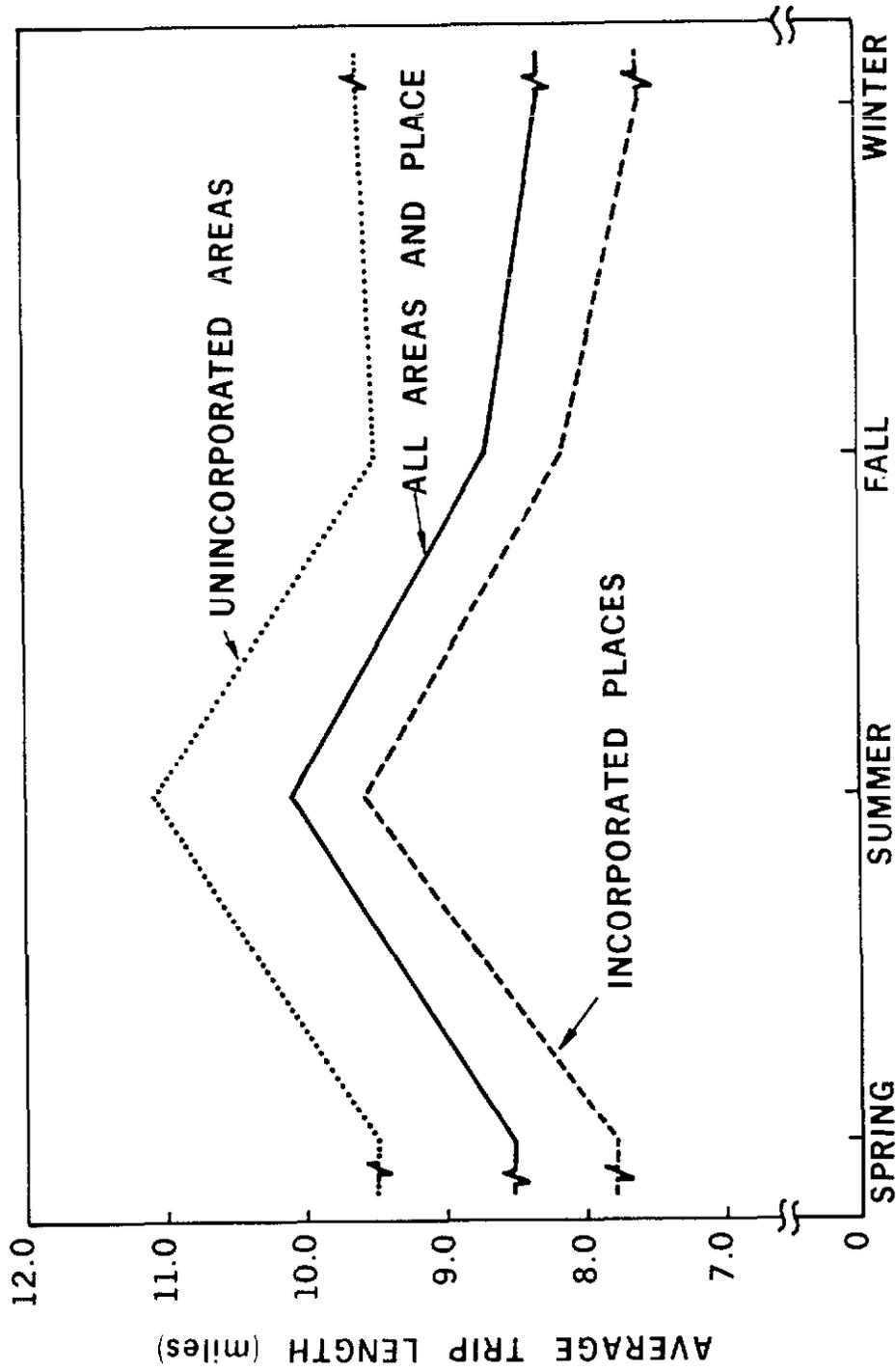
Table 1.--Average automobile trip length and percentage of automobile trips and vehicle-miles of travel by residence of principal operator and season of the year

Season of the year	Place of residence of principal operator								
	Unincorporated areas			Incorporated places			All areas and places		
	Vehicle trips	Vehicle miles of travel	Average trip length	Vehicle trips	Vehicle-miles of travel	Average trip length	Vehicle trips	Vehicle-miles of travel	Average trip length
	Percent	Percent	Miles	Percent	Percent	Miles	Percent	Percent	Miles
Spring (April)	28.3	26.9	9.5	26.2	24.7	7.8	26.9	25.6	8.5
Summer (July-August average)	24.4	27.3	11.1	25.0	28.8	9.6	24.8	28.2	10.1
Fall (October)	23.8	23.0	9.5	25.6	25.2	8.2	25.0	24.4	8.7
Winter (January)	23.5	22.6	9.6	23.2	21.3	7.6	23.3	21.8	8.3
All seasons	100.0	100.0	9.9	100.0	100.0	8.3	100.0	100.0	8.9
Percent of daily number of trips or vehicle-miles	33.8	37.9	-	66.2	62.1	-	100.0 ^{1/}	100.0 ^{1/}	-

^{1/} Based on 240,230,000 vehicle trips per day and 2,115,660,000 vehicle-miles per day.

SOURCE: Based upon unpublished table T-5 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

FIGURE 1. AVERAGE AUTOMOBILE TRIP LENGTH BY PLACE OF RESIDENCE OF THE PRINCIPAL OPERATOR AND SEASON



SEASON OF THE YEAR

purpose category. As can be seen from table 2, in the "earning a living" category, the proportion of trips for each of the seasons is approximately 25.0 percent. The "family business" category has a spread of 5.3 percentage points, from a high of 27.6 percent during the spring, to a low of 22.3 percent in the winter. Trips in the "social and recreational" category have a seasonal variation of 8.3 percentage points, 28.4 percent of the trips are taken during the summer months and 20.1 percent are taken during the winter months. The "educational, civic, and religious" trips show an opposite tendency, with 30.4 percent of the trips taken in the spring while only 13.3 percent are taken in the summer. This reverse tendency may be due to school closings or reduced attendance during the summer.

For all purposes combined, and for specific purpose trips including "to and from work," "shopping," and "visits to friends and relatives," the highest proportion of vehicle-miles are driven in the summer (table 3). Not surprisingly, 70 percent of the travel for "pleasure rides" is taken in the spring and summer, and only 8.3 percent is taken in the winter.

Trips for "earning a living" and "family business" show no significant seasonal variation in average trip length. It can be seen from table 4 and figure 2 that "earning a living" trips average approximately 10.2 miles for all seasons combined, ranging from 9.5 in the winter to 10.6 in the summer; "family business" trips average almost 5.6 miles in each season. On the other hand, "social and recreational" trips appear to fluctuate according to the season. Average trip lengths for these purposes are highest in the summer at 15.4 miles and lowest in the winter at 11.6 miles. Spring and fall months have intermediate values of 12.3 miles and 13.8 miles per trip, respectively. It is interesting that trip lengths for "visits to friends and relatives" are higher in the spring and fall than in the summer; in the summer, average mileage is 12.0 per trip, while in the spring and fall it is 12.6 and 13.9 miles per trip, respectively.

Automobile trips and travel by length of the trip and season of the year

As indicated previously, only "social and recreational" trips which comprise about one-fifth of all trips and one-third of all travel, are affected by seasonal variations. It is, therefore, not surprising that median trip length and the most likely (modal) trip length, do not appear to be affected by the season of the year (table 5). The median trip length occurs in the four-mile class regardless of season; and the most likely (modal) trip length is in the one-mile class in each season. In fact, in each season approximately 30 percent of the trips are taken in the one- and two-mile classes. The seasonal variations in average trip length shown for all purposes in table 4 probably occur because of the relatively larger percentage of trips in the higher mileage classes 31

Table 2.--Percentage of automobile trips by season for each purpose

Season of the year	Purpose of trip													All purposes
	Earning a living			Family business			Educational, civic and religious			Social and recreational				
	To and from work	Related business	Total	Medical and dental	Shopping	Other	Total	Educational, civic and religious	Vacation	Visits, friends, relatives	Pleasure rides	Other	Total	
Spring (April)	25.3	20.6	24.8	30.6	26.3	28.6	27.6	30.4	*	26.0	29.8	28.1	27.3	26.9
Summer (July-August average)	24.4	29.1	25.1	25.6	27.3	24.8	26.1	13.3	*	27.6	37.4	27.9	28.4	24.9
Fall (October)	25.0	25.8	25.0	19.9	24.4	24.3	24.0	29.7	*	23.6	20.9	25.0	24.2	25.0
Winter (January)	25.3	24.5	25.1	23.9	22.0	22.3	22.3	26.6	*	22.8	11.9	19.0	20.1	23.2
All seasons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent of daily number of total trips	31.6	4.8	36.4	1.8	15.3	14.0	31.1	9.4	0.1	8.9	1.3	11.9	22.2	100.0 ^{1/2/}

* Data insufficient for analysis. Data were judged to be insufficient when fewer than 50 trips were included in the sample in a particular cell.

^{1/} Not included in the table is 0.9 percent for "other or not available" trip purposes.

^{2/} Based on 232,986,997 trips per day.

SOURCE: Based upon unpublished table T-5 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Table 3.--Percentage of vehicle-miles of travel by automobile by season for each purpose

Season of the year	Purpose of trip											All purposes		
	Earning a living			Family business			Educational, civic and religious	Vacation	Social and recreational				Total	
	To and from work	Related to business	Total	Medical and dental	Shopping	Other			Total	Friends relatives	Pleasure rides			Other
Spring (April)	25.7	19.9	24.6	30.6	26.0	29.8	27.5	28.6	*	27.0	30.5	25.2	25.0	25.6
Summer (July-August average)	26.2	26.3	26.2	25.6	30.1	24.4	27.5	16.0	*	27.4	39.5	30.8	32.6	28.2
Fall (October)	24.1	29.2	25.1	19.9	23.2	22.4	22.3	26.7	*	27.2	21.7	24.4	24.9	24.4
Winter (January)	24.0	24.6	24.1	23.9	20.7	23.4	22.7	28.7	*	18.4	8.3	19.6	17.5	21.8
All seasons	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent of daily number of total vehicle-miles	32.9	7.7	40.6	1.8	7.6	10.6	29.0	4.9	3.3	12.0	3.1	14.9	33.3	100.0 ^{1/}

* Data insufficient for analysis. Data were judged to be insufficient when fewer than 50 trips were included in the sample in a particular cell.

^{1/} Not included in the table is 1.2 percent for "other or not available" trip purposes. Based on 2,124,598,550 vehicle-miles of travel per day.

SOURCE: Based upon unpublished table T-5 for the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Table 4.--Average automobile trip length by purpose of trip and season

Season of the year	Purpose of trip													All purposes Miles
	Earning a living			Family business			Educational, civic and religious Miles	Vacation Miles	Social and recreational			Total Miles		
	To and from work Miles	Related business Miles	Total Miles	Medical and dental Miles	Shopping Miles	Other Miles			Total Miles	Visits to friends and relatives Miles	Pleasure rides Miles		Other Miles	
Spring (April)	9.4	14.5	9.9	7.3	4.4	6.7	5.7	4.4	*	12.6	21.1	10.1	12.3	8.5
Summer (July-August average)	9.9	16.2	10.6	10.3	4.8	6.7	5.9	5.6	*	12.0	24.4	12.3	15.4	10.1
Fall (October)	9.0	16.5	10.0	6.4	4.2	6.2	5.3	4.2	*	13.9	22.1	11.0	13.8	8.7
Winter (January)	8.7	14.4	9.5	8.8	4.1	7.1	5.7	5.0	*	9.7	13.4	11.5	11.6	8.3
All seasons	9.4	16.0	10.2	8.3	4.4	6.6	5.6	4.7	165.1	12.0	19.6	11.4	13.1	8.9

* Data insufficient for analysis. Data were judged to be insufficient when fewer than 50 trips were included in the sample in a particular cell.

SOURCE: Based upon unpublished table T-5 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

FIGURE 2. AVERAGE AUTOMOBILE TRIP LENGTH BY PURPOSE OF TRIP AND SEASON

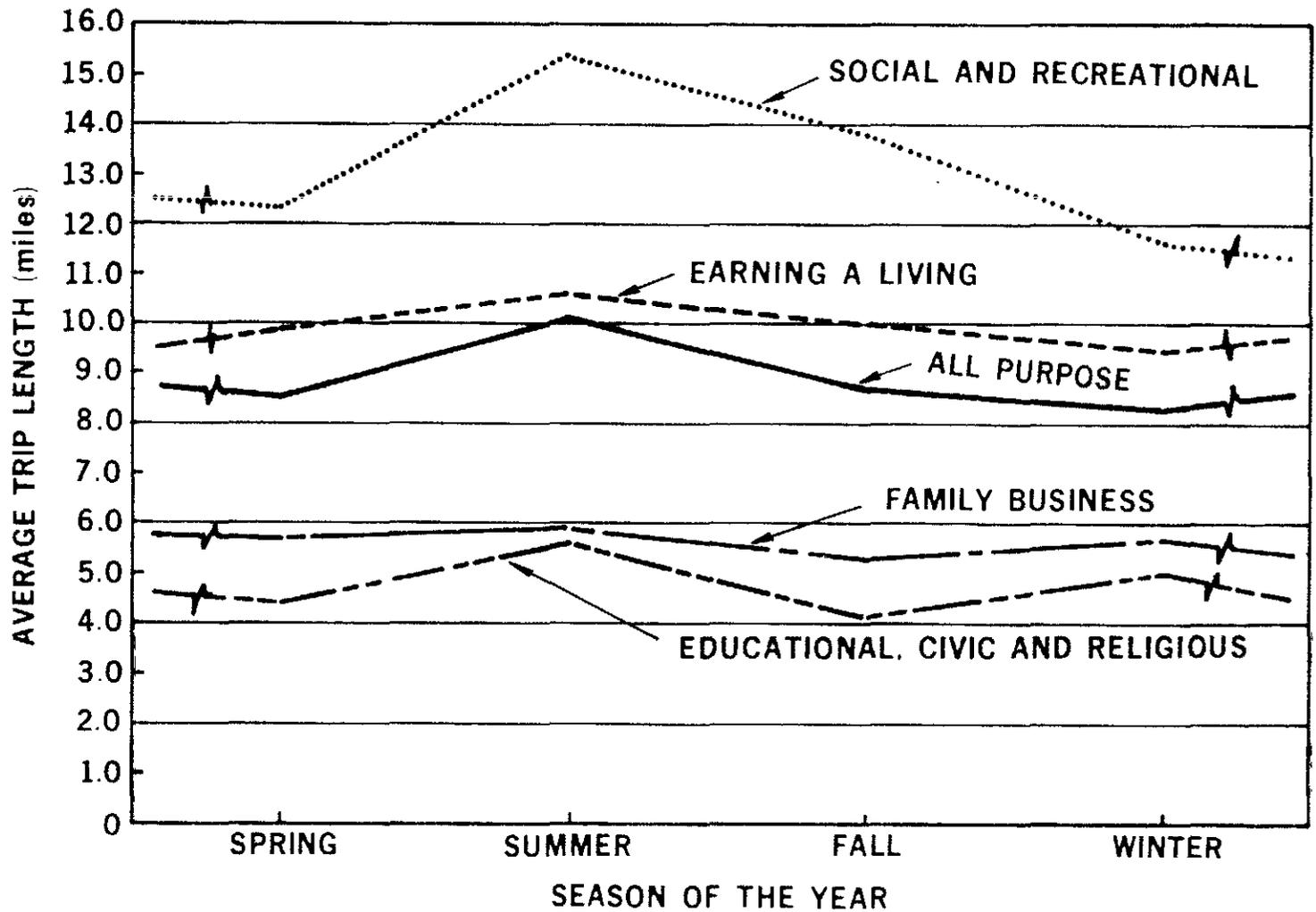


Table 5.--Percentage of automobile trips by season and trip length

Season of the year	Less than one-half mile	Length of trip (miles)													100 and over	Total	Daily number of trips (000)			
		1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-30				31-40	41-50	51-99
Spring (April)	8.2	16.4 ¹ / ₁	13.0	9.5	6.4 ² / ₂	8.8	3.6	2.4	3.5	1.3	5.3	8.8	4.6	4.1	1.7	0.8	0.9	0.7	100.0	254,445
Summer (July-August)	8.4	14.2 ¹ / ₁	13.1	9.7	6.3 ² / ₂	8.8	4.3	3.0	3.3	1.3	5.5	8.4	4.5	4.1	1.7	0.9	1.3	1.2	100.0	236,971
Fall (October)	8.7	15.2 ¹ / ₁	14.9	10.0	6.6 ² / ₂	7.8	3.7	3.8	3.5	1.0	5.9	7.4	3.7	3.6	1.5	0.9	1.1	0.7	100.0	237,936
Winter (January)	8.8	17.6 ¹ / ₁	13.0	10.6	6.3 ² / ₂	7.5	3.8	2.8	3.4	1.0	5.4	7.7	4.4	4.0	1.3	0.8	0.9	0.7	100.0	222,596

¹/ Indicates the statistical mode of trip lengths or the most likely length of trip taken.

²/ Indicates the median trip length or where 50 percent of the trips are longer and 50 percent are shorter.

SOURCE: Based upon unpublished table T-5 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

and over presented in table 5. For example, in the summer months 5.1 percent of the trips are longer than 30 miles, while 4.1 percent in the spring, 4.2 percent in the fall and 3.7 percent in the winter are longer than 30 miles.

Automobile trips and travel by day of the week and season of the year

Table 6 and figure 3 show a relationship between season of the year and days of the week on which longer trips are taken. During both winter and spring the average length of trips taken on any day from Monday through Saturday is approximately 8.0 miles; only Sunday deviates, it shows a trip length of 11.0 miles in these two seasons. In the fall, trips taken on any day from Monday through Friday average somewhat less than 8.0 miles per trip. However, unlike winter and spring, trips taken on Saturday during the fall months tend to be longer, averaging 12.0 miles; the Sunday fall average is the lowest of any season. Furthermore, trips taken during the summer range in trip length from a low of 8.7 miles on Tuesday to a high of 11.8 miles on Saturday. The average length then decreases to 11.3 miles on Sunday and to 10.5 miles on Monday.

The distribution of vehicle trips within a week does not appear to be affected by the season of the year. Although Sunday appears to have a consistently low percentage of the trips taken during the week, table 7 shows no predictable distribution of vehicle trips for days of the week. For example, during the fall, excluding Sunday, the lowest proportion (13.3 percent) of the trips is on Monday and Thursday, while the highest proportion of trips (17.1 percent) is on Tuesday. During the spring, the lowest proportion (12.3 percent) of the trips is on Tuesday, while the highest proportion (17.2 percent) of the trips is on Friday.

Table 6.--Average automobile trip length by day of the week and season

Season of the year	Day of the week							All days of the week
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
Spring (April)	8.1	8.3	8.6	8.2	7.5	8.3	11.0	8.5
Summer (July-August average)	10.5	8.7	9.0	9.8	10.4	11.8	11.3	10.1
Fall (October)	7.4	8.7	7.5	7.7	7.7	12.0	10.7	8.7
Winter (January)	8.6	6.5	7.3	8.8	8.5	8.5	11.0	8.3
All seasons	8.6	8.4	8.0	8.6	8.3	10.1	10.9	8.9

SOURCE: Based upon unpublished table T-7 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

FIGURE 3-AVERAGE AUTOMOBILE TRIP LENGTH BY SEASON AND DAY OF THE WEEK

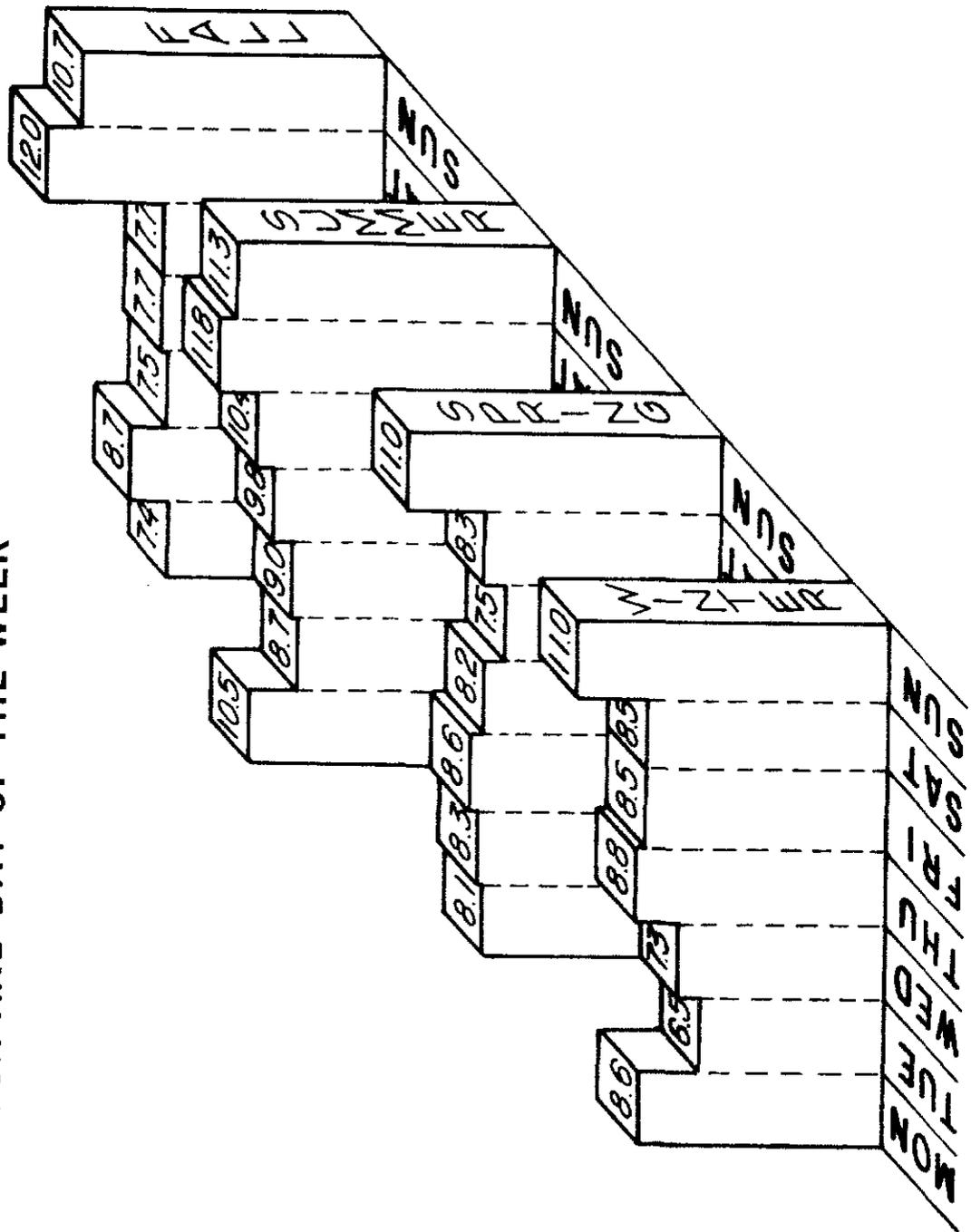


Table 7.--Percentage of automobile trips by season and day of the week

Season of the year	Day of the week								Weekly number of trips (000)
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	All days of the week	
Spring (April)	13.9	12.3	15.7	14.7	17.2	12.6	13.6	100.0	1,767,876
Summer (July-August average)	13.9	17.3	14.1	15.4	15.6	12.7	11.0	100.0	1,651,755
Fall (October)	13.3	17.1	15.4	13.3	15.0	14.2	11.7	100.0	1,658,000
Winter (January)	15.4	14.7	15.4	14.9	14.2	15.2	10.2	100.0	1,551,288
All seasons	13.9	14.9	15.0	15.0	15.9	13.4	11.9	100.0	1,657,230

SOURCE: Based upon unpublished table T-7 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

SUMMARY

1. The highest proportion of vehicle-miles of travel occurs during the summer. However, the largest portion of automobile trips is during the spring months. The average trip lengths show that the longest trips are taken during the summer.

2. Some types of trips are not affected by seasonal variation. Trips taken for the purposes of "earning a living" and "family business" are not affected by the season. "Social and recreational" trips, on the other hand, do vary according to the season.

3. From the relationships developed in this paper it can be seen that shorter trips (1- and 2-mile class) remain fairly constant regardless of the season. During the summer, longer trips are added rather than longer trips being substituted for shorter trips.

4. Data indicate that automobiles operated by residents of unincorporated areas average longer trips than automobiles in incorporated places. Furthermore, average trip lengths in unincorporated areas are more constant with the season. Except for the summer months, which have a high average trip length (11.1 miles), the other three seasons correspond to a constant trip length of around 9.5 miles.

5. The relationship of trip lengths by day of the week and season is an interesting one. During the fall, winter, and spring months, the average lengths of trips taken Monday through Friday hover around 8 miles. Only Saturday and Sunday show relatively higher average trip lengths. However, summer trips have average lengths which are lowest on Tuesday, and increase to a Saturday high of 11.8 miles, then again decrease.

APPENDIX A

Sample base for Nationwide Personal Transportation Survey

The following are the major series of tables and the sample base for tables developed from the survey. Each of the tables in any of these reports will indicate a reference source from which the sample base can be determined.

1. H-series, E-series, and T-9 through T-16

These tables relate to data collected in Sections I through V of the questionnaire. The tables are based upon a sample of approximately 6,000 households, approximately 3,000 from panel 1 interviewed in April 1969, and approximately 3,000 from panel 2 interviewed in August 1969. Each of these panels were expanded to national estimates. For purposes of all tables referred to in any of these reports, the expanded data from the two panels were averaged.

2. P-series and T-1 through T-8

These tables relate to data collected in Section VI. Data from four interviews at the identical households in panel 1 (approximately 3,000 households were interviewed in April, July, October 1969, and January 1970) were combined and expanded to represent annual estimates of trips and travel by automobile or other forms of public transportation.

APPENDIX A

Major sections of questionnaire

The following are the main sections of the questionnaire:

1. The data reported in items a through t above Section 1 of the questionnaire form were transcribed from the control card.
2. Section I - Automobile Record
3. Section II - Shopping and nearness to public transportation to main business district by residents of Standard Metropolitan Statistical Areas.
4. Section III - Travel to work for all employed persons 16 years or older.
5. Section IV - Driver information or estimated annual miles driven by licensed drivers.
6. Section V - Travel to school for persons between 5 and 18 years of age and attending school. For panel 2 of the households interviewed in August 1969, the interviewer asked for the travel to school information for the preceding May.
7. Section VI - Travel day report. All one-way trips by motor vehicle or some form of public transportation taken by persons 5 years of age or older were reported for a pre-assigned reference day. The reference days were all in a one-week period in each of the months of interviewing and all weekdays and weekends were represented. Generally, the interviewer visited all households the first weekday after the reference day in order to minimize memory errors.
8. Section VII - Overnight travel record of all trips lasting one or more nights during the 7 days ending the day before the preassigned travel day. Insufficient data were collected in this section to permit detailed analyses.

APPENDIX A

<p>NOTICE - All information which would permit identification of the individual will be held in strict confidence, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any purposes.</p> <p>FORM NPT-2 (7-10-69)</p> <p>U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS ACTING AS COLLECTING AGENT FOR THE U.S. DEPARTMENT OF TRANSPORTATION</p> <p>HOUSEHOLD QUESTIONNAIRE - AUGUST 1969</p> <p>NATIONWIDE PERSONAL TRANSPORTATION SURVEY</p>				<p>BUDGET BUREAU NO. 41-569011 APPROVAL EXPIRES DECEMBER 1970</p>									
				a. Ident. Code		b. Household No.		c. Control No.					
								PSU	Rot.	Segment	Serial	Str.	
				d. Type of structure			e. Race		f. SMSA		g. Place		h. State
i. Subsample		j. Designated travel day			k. No. of hhd. members (all ages)		l. Number of automobiles						
		Day of week			Mo./day								
m. Automobile				n. Principal user Line No.		o. (If no automobile)		p. Income		r. OFFICE USE			
Auto No.	Year	Make	Office use			1 <input type="checkbox"/> Auto available							
						2 <input type="checkbox"/> Not available		q. interviewer's code					
s. Date of interview		t. Noninterview reason		1 <input type="checkbox"/> NOH		3 <input type="checkbox"/> Ref.		5 <input type="checkbox"/> Other type - Specify <u>7</u>					
		2 <input type="checkbox"/> TA		4 <input type="checkbox"/> Other Type A				(Fill in: h, r, f, g, 4, 5, 6, 7)					
<p>Section I - AUTOMOBILE RECORD</p>													
Now I have some questions about your - - (first, second, etc., automobile)				Auto No.		Auto No. ②		Auto No.					
1. Is it owned by somebody living here?				1 <input type="checkbox"/> Yes		1 <input type="checkbox"/> Yes		1 <input type="checkbox"/> Yes					
				2 <input type="checkbox"/> No (Go to Q. 3)		2 <input type="checkbox"/> No (Go to Q. 3)		2 <input type="checkbox"/> No (Go to Q. 3)					
2a. Was it purchased new or used?				1 <input type="checkbox"/> New		1 <input type="checkbox"/> New		1 <input type="checkbox"/> New					
				2 <input type="checkbox"/> Used		2 <input type="checkbox"/> Used		2 <input type="checkbox"/> Used					
b. In what month and year was it bought? (Examples: 10/67, 04/68)				Month Year		Month Year		Month Year					
3. About how many thousand miles was it driven during the past 12 months?				Miles (Thousands)		Miles (Thousands)		Miles (Thousands)					
4. Is it used at least once a week in going from home to work?				1 <input type="checkbox"/> Yes - Entire trip		1 <input type="checkbox"/> Yes - Entire trip		1 <input type="checkbox"/> Yes - Entire trip					
				2 <input type="checkbox"/> Yes - Part-way		2 <input type="checkbox"/> Yes - Part-way		2 <input type="checkbox"/> Yes - Part-way					
				3 <input type="checkbox"/> No (Go to next auto or Sec. II)		3 <input type="checkbox"/> No (Go to next auto or Sec. II)		3 <input type="checkbox"/> No (Go to next auto or Sec. II)					
5. How many people are usually in the automobile going to work, including the driver?				Number		Number		Number					
6a. What type of parking facility is usually used for the trip to work - the employer's lot, a commercial lot, on the street, or what?				CODE KEY →		1 - Commercial parking garage or lot		5 - On the street					
						2 - Employer provided space		6 - No all day parking used					
						3 - Fringe parking		7 - Other					
						4 - Other lot or garage							
b. Is there a cost for parking?				1 <input type="checkbox"/> Yes		1 <input type="checkbox"/> Yes		1 <input type="checkbox"/> Yes					
				2 <input type="checkbox"/> No (Go to next auto or Sec. II)		2 <input type="checkbox"/> No (Go to next auto or Sec. II)		2 <input type="checkbox"/> No (Go to next auto or Sec. II)					
c. How much?				\$ 1 <input type="checkbox"/> Day		\$ 1 <input type="checkbox"/> Day		\$ 1 <input type="checkbox"/> Day					
				2 <input type="checkbox"/> Week		2 <input type="checkbox"/> Week		2 <input type="checkbox"/> Week					
				3 <input type="checkbox"/> Month		3 <input type="checkbox"/> Month		3 <input type="checkbox"/> Month					
d. Does . . . pay by putting coins into a meter?				1 <input type="checkbox"/> Yes		1 <input type="checkbox"/> Yes		1 <input type="checkbox"/> Yes					
				2 <input type="checkbox"/> No		2 <input type="checkbox"/> No		2 <input type="checkbox"/> No					
<p>Section II - SHOPPING</p> <p>ASK for SMSA residents only - 1 or 2 as second digit of identification code</p>													
Now we are interested in where people shop - (Mark all that apply)				1 <input type="checkbox"/> Yes → How many times? _____ (Go to Q. 3)									
1. During the past 3 months has . . . gone to the main business district of . . . principally to shop?				2 <input type="checkbox"/> No									
2. What were the reasons for not shopping there? (Mark all that apply)				1 <input type="checkbox"/> Goods available locally		4 <input type="checkbox"/> Difficulty of driving in congested area		5 <input type="checkbox"/> No automobile		6 <input type="checkbox"/> Other - Specify <u>7</u>			
				2 <input type="checkbox"/> Too far away									
				3 <input type="checkbox"/> Difficulty of parking									
3. How far is it from home to the nearest public transportation line to go to the main business district of . . . ?				1 <input type="checkbox"/> Less than one block		4 <input type="checkbox"/> Over 6 blocks (over 1/2 mile)		5 <input type="checkbox"/> No public transportation available		6 <input type="checkbox"/> Lives in main business district			
				2 <input type="checkbox"/> 1-2 blocks (less than 1/4 mile)									
				3 <input type="checkbox"/> 3-6 blocks (1/4 - 1/2 mile)									

Note - Fill remaining pages for household members 5 years old or over.

Section III - TRAVEL TO WORK

1. Line No. 2. CHECK ITEM
 This person is 16 years old or older and has an entry in Control Card question 16b. (Fill in Sec. III, IV, and V as applicable)
 All others (Fill in Sec. IV and V as applicable)

We are interested in where people work and how they get to work.
 3. Is the place where . . . works located in a city?
 1 Yes → What city? _____
 2 No
 3 Don't know State? _____

4. How far is it from home to the place where . . . works? (Actual travel distance)
 Miles
 1X No fixed place } (Go to Sec. IV)
 2X At home }
 3X Less than 1/2 mile (5 blocks)
 (Enter nearest full mile)

5. How much time is usually required for . . . to get to work from the time he leaves until he arrives at work?
 Minutes

6. How does . . . usually get to work?
 (Mark all appropriate boxes)
 1 Bus or street car 6 Motorcycle
 2 Commuter train, subway, elevated, etc. 7 Walk only (Go to Q. 10a)
 3 Automobile - with other persons 8 Other - including bicycle - Specify _____
 4 Automobile - alone
 5 Truck

7. How far is it from home to the nearest public transportation line that . . . uses (could use) to get to his place of work?
 1 Less than 1 block 4 Over 6 blocks (over 1/2 mile) } (Go to Q. 10a)
 2 1 to 2 blocks (less than 1/4 mile) 5 None available }
 3 3 to 6 blocks (1/4 to 1/2 mile)

8. What is the reason . . . does not use public transportation to go to work?
 Anything else?
 (Mark all boxes that apply)
 1 None available 6 Too crowded or uncomfortable
 2 Not convenient to get to 7 Takes too long
 3 Not convenient to place of work 8 Need auto for work
 4 Too many transfers 9 Other - Specify _____
 5 Too expensive (Go to Q. 10a)

9. What is the reason . . . uses public transportation to get to work?
 Anything else?
 (Mark all boxes that apply)
 1 No driver's license 7 No driving strain
 2 No car available 8 Faster
 3 No car pool available 9 Other - Specify _____
 4 Cheaper than auto
 5 Safer than auto
 6 No parking problems

10a. Does . . . work at same location as 5 years ago?
 b. Does . . . live at same location as 5 years ago?
 c. Compared with the time it took . . . to get to work 5 years ago, is the time to work:
 1 Yes 3 Not working 5 years ago (Go to Sec. IV)
 2 No
 1 Yes 2 No
 1 About the same as 5 years ago
 2 At least 10 minutes more
 3 At least 10 minutes less

Section IV - DRIVER INFORMATION

(Ask for licensed drivers only)
 1. About how many thousands of miles did . . . drive during the past 12 months, including driving as part of work?
 1 None 5 15,000 - 19,999
 2 Under 5,000 6 20,000 - 24,999
 3 5,000 - 9,999 7 25,000 - 29,999
 4 10,000 - 14,999 8 30,000 and over

Section V - TRAVEL TO SCHOOL

(Ask Sec. V for persons 5-18 years old)
 Now I would like to ask some questions about transportation to school.
 1. Last May was . . . attending or enrolled in school?
 1 Yes 2 No (Go to Sec. VII)
 2. Was it a public or private school?
 1 Public 2 Private
 3. What grade was . . . attending?
 Grade _____ (Enter "0" for kindergarten or "12" for 12th)
 4. About how many miles was it from home to . . . 's school?
 (If less than one mile enter "0")
 Miles
 5. About how long did it take . . . to get from home to school?
 Minutes
 6. How did . . . usually get to school?
 (Mark only one box)
 1 School bus - No charge } (Go to Sec. VII)
 2 Public transportation - No charge }
 3 School bus - Charge }
 4 Public transportation - Charge } (Go to Q. 7)
 5 Walk, bicycle
 6 Automobile - Driver
 7 Automobile - Passenger
 8 Motorcycle
 9 Other
 7. Was free school bus or free public transportation available?
 1 Yes 2 No

Section VI - TRAVEL DAY REPORT						
a. Line No.	b. Age	c. Sex 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female	d. Employment status (C.C. 16a) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	e. Occupation (C.C. 16b)	f. Retired Code (C.C. 17)	g. Licensed driver (C.C. 18) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
<p>Now I have some questions about the trips taken on _____. A trip is anytime you went from one place to another by motor vehicle or some form of public transportation. For example, going to work by automobile would be one trip, going to lunch by automobile would be a second trip, returning to work from lunch would be a third trip.</p> <p>Reference day is from 4:00 a.m. to 3:59 a.m. the following day</p>						
1. Did ... go any place at anytime on _____?	1 <input type="checkbox"/> Yes - One or more trips not previously reported (Fill columns) 2 <input type="checkbox"/> No - All previously reported 3 <input type="checkbox"/> No (Go to Q. 14a)					
2. At what time did ... start the (1st, next) trip he took on _____?	Trip 1 1 <input type="checkbox"/> a.m. 2 <input type="checkbox"/> p.m.	Trip 2 1 <input type="checkbox"/> a.m. 2 <input type="checkbox"/> p.m.	Trip 3 1 <input type="checkbox"/> a.m. 2 <input type="checkbox"/> p.m.	Trip 4 1 <input type="checkbox"/> a.m. 2 <input type="checkbox"/> p.m.		
3. How far is it from where ... started to where he went?	Miles 0 <input type="checkbox"/> Less than 1/2 mile (5 blocks)	Miles 0 <input type="checkbox"/> Less than 1/2 mile (5 blocks)	Miles 0 <input type="checkbox"/> Less than 1/2 mile (5 blocks)	Miles 0 <input type="checkbox"/> Less than 1/2 mile (5 blocks)		
4. How long did it take to get there?	1 <input type="checkbox"/> 15 min. or less 2 <input type="checkbox"/> 16-30 min. 3 <input type="checkbox"/> 31-45 min. 4 <input type="checkbox"/> 46 min.-1 hr. 5 <input type="checkbox"/> Bet. 1 and 2 hrs. 6 <input type="checkbox"/> 2 hrs. or more	1 <input type="checkbox"/> 15 min. or less 2 <input type="checkbox"/> 16-30 min. 3 <input type="checkbox"/> 31-45 min. 4 <input type="checkbox"/> 46 min.-1 hr. 5 <input type="checkbox"/> Bet. 1 and 2 hrs. 6 <input type="checkbox"/> 2 hrs. or more	1 <input type="checkbox"/> 15 min. or less 2 <input type="checkbox"/> 16-30 min. 3 <input type="checkbox"/> 31-45 min. 4 <input type="checkbox"/> 46 min.-1 hr. 5 <input type="checkbox"/> Bet. 1 and 2 hrs. 6 <input type="checkbox"/> 2 hrs. or more	1 <input type="checkbox"/> 15 min. or less 2 <input type="checkbox"/> 16-30 min. 3 <input type="checkbox"/> 31-45 min. 4 <input type="checkbox"/> 46 min.-1 hr. 5 <input type="checkbox"/> Bet. 1 and 2 hrs. 6 <input type="checkbox"/> 2 hrs. or more		
5. What was the main reason for this trip? <i>(If "Return home" enter the main purpose of the outgoing trip, plus "R.H.") (Enter one code)</i>	CODE KEY → 1. To work 2. Business, other than to work 3. Shopping 4. Other family or personal business 5. To school or church 6. To doctor or dentist 7. Vacation 8. Visit friends or relatives 9. Pleasure driving 10. Other social or recreational 11. Other Return home (reclassification required)					
	Code	Code	Code	Code		
6. In addition to ... did anyone else living here go on this trip? <i>(List line numbers of other household members 5 years old or older who went on this trip.)</i>	0 <input type="checkbox"/> No others Line numbers					
	Code	Code	Code	Code		
7. What means of transportation were used for this trip? <i>(If more than one, circle main mode.)</i>	CODE KEY → 1. School bus 2. Other bus and/or street car 3. Elevated or subway 4. Other train 5. Airplane 6. Taxi 7. Automobile - Driver 8. Automobile - Passenger 9. Motorcycle or motor bike 10. Truck (including pick-up) 11. Other					
	Code	Code	Code	Code		
8. Was public transportation for this trip available within 6 blocks (1/2 mile)?	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know		
9. What automobile was used? <i>(Transcribe automobile number from C.C.)</i>	Automobile No. _____ or 9 <input type="checkbox"/> Not an auto listed on the C.C.					
	Code	Code	Code	Code		
10. Who drove the automobile for this trip?	Line No. _____ 99 <input type="checkbox"/> Not a household member	Line No. _____ 99 <input type="checkbox"/> Not a household member	Line No. _____ 99 <input type="checkbox"/> Not a household member	Line No. _____ 99 <input type="checkbox"/> Not a household member		
11. Was parking free for this trip?	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Did not park 4 <input type="checkbox"/> Don't know	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Did not park 4 <input type="checkbox"/> Don't know	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Did not park 4 <input type="checkbox"/> Don't know	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Did not park 4 <input type="checkbox"/> Don't know		
12. How many people were in the automobile including the driver? <i>(Do not include children under 5 and non-household members.)</i>	Number _____ 0 <input type="checkbox"/> Don't know	Number _____ 0 <input type="checkbox"/> Don't know	Number _____ 0 <input type="checkbox"/> Don't know	Number _____ 0 <input type="checkbox"/> Don't know		
13. Did ... go anywhere else on _____?	1 <input type="checkbox"/> Yes - One or more trips not recorded (Go to next column) 2 <input type="checkbox"/> Yes - All trips recorded (Go to Q. 14a) 3 <input type="checkbox"/> No					
	Code	Code	Code	Code		
14a. During the 7 days ending (the day before travel day) ... did ... return home from a trip after being away from home one or more nights?	1 <input type="checkbox"/> Yes - One or more trips not previously reported (Go to 14b) 2 <input type="checkbox"/> Yes - All trips previously reported 3 <input type="checkbox"/> No					
	Number _____ (Go to Sec. VII)					
b. How many such trips ended during the 7 days?	Number _____ (Go to Sec. VII)					

Section VII - OVERNIGHT TRAVEL

OUTBOUND TRIP	Trip 1	Trip 2	Trip 3
	Line No. 9	Line No. 10	Line No. 11
1. How many miles is it from home to where . . . went? (To farthest point)	Miles	Miles	Miles
2. How much time did . . . spend getting there? (Total time from home to farthest point, not just travel time) (Enter nearest full hour or day)	1 [] Hours	1 [] Hours	1 [] Hours
	2 [] Days	2 [] Days	2 [] Days
3. What time of day did the trip start?	1 [] a.m.	1 [] a.m.	1 [] a.m.
	2 [] p.m.	2 [] p.m.	2 [] p.m.
4. On what day of the week did the trip start?	1 [] Sun. 5 [] Thurs.	1 [] Sun. 5 [] Thurs.	1 [] Sun. 5 [] Thurs.
	2 [] Mon. 6 [] Fri.	2 [] Mon. 6 [] Fri.	2 [] Mon. 6 [] Fri.
	3 [] Tues. 7 [] Sat.	3 [] Tues. 7 [] Sat.	3 [] Tues. 7 [] Sat.
	4 [] Wed.	4 [] Wed.	4 [] Wed.
5. What was the main reason for the trip? (Enter code)	Code Key → 1. To work 2. Business - Other than to work 3. Shopping 4. Other family or personal business 5. To school or church 6. To doctor or dentist 7. Vacation 8. Visit friends or relatives 9. Pleasure driving 10. Other social or recreational 11. Other		
	Trip 1	Trip 2	Trip 3
6. What means of transportation were used? (Enter codes) <i>(Include all means such as transportation to and from terminals as well as major means, circle major means.)</i>	Code Key → 1. School bus 2. Other bus and/or street car 3. Elevated or subway 4. Other train 5. Airplane 6. Taxi 7. Automobile - Driver 8. Automobile - Passenger 9. Motorcycle or motorbike 10. Truck (including pick-up) 11. Other		
	Trip 1	Trip 2	Trip 3
7. What automobile was used? <i>(If either code 7 or 8 has been entered in Q. 6 complete questions 7-9)</i> <i>(Transcribe automobile number from C.)</i>	Auto No.	Auto No.	Auto No.
	9 [] Not an auto listed on the C.C.	9 [] Not an auto listed on the C.C.	9 [] Not an auto listed on the C.C.
8. Who drove the automobile? <i>(If more than one driver, enter the line number of the person who drove the most miles.)</i>	Driver Line No.	Driver Line No.	Driver Line No.
	99 [] Not a household member	99 [] Not a household member	99 [] Not a household member
9. How many people were in the automobile, including the driver? <i>(Include children under 5 and non-household members)</i>	Number	Number	Number
RETURN TRIP	Trip 1	Trip 2	Trip 3
10. How many nights were you away from home?	Number	Number	Number
11. How much time did . . . spend on the return trip? (Enter nearest full hour or day)	1 [] Hours	1 [] Hours	1 [] Hours
	2 [] Days	2 [] Days	2 [] Days
12. What time of day did . . . start on the return trip?	1 [] a.m.	1 [] a.m.	1 [] a.m.
	2 [] p.m.	2 [] p.m.	2 [] p.m.
13. On what day of the week did . . . start on the return trip?	1 [] Sun. 5 [] Thurs.	1 [] Sun. 5 [] Thurs.	1 [] Sun. 5 [] Thurs.
	2 [] Mon. 6 [] Fri.	2 [] Mon. 6 [] Fri.	2 [] Mon. 6 [] Fri.
	3 [] Tues. 7 [] Sat.	3 [] Tues. 7 [] Sat.	3 [] Tues. 7 [] Sat.
	4 [] Wed.	4 [] Wed.	4 [] Wed.
14. What means of transportation were used? (Enter codes) <i>(Include all means such as transportation to and from terminals, as well as major means, circle major means.)</i>	Code Key → 1. School bus 2. Other bus and/or street car 3. Elevated or subway 4. Other train 5. Airplane 6. Taxi 7. Automobile - Driver 8. Automobile - Passenger 9. Motorcycle or motorbike 10. Truck (including pick-up) 11. Other		
	Trip 1	Trip 2	Trip 3
15. Who drove the automobile? <i>(If more than one driver, enter the Line No. of the person who drove the most miles)</i>	Driver Line No.	Driver Line No.	Driver Line No.
	9 [] Not a household member	9 [] Not a household member	9 [] Not a household member
16. How many people were in the automobile on the return trip, including the driver? <i>(Include children under 5 and nonhousehold members.)</i>	Number	Number	Number
	0 [] No others	0 [] No others	0 [] No others
17. In addition to . . . , did anyone else living here go on this trip both outbound and return? <i>(If outbound or return only, enter the trip as a separate number.)</i> <i>(List line numbers of other household members 5 years old or over who went on this round trip)</i>	Line Numbers	Line Numbers	Line Numbers

Appendix B

Table IV.-2.--Estimated standard errors for percentages of
vehicle trips for one day
when single auto is only means

Base of Percentage (000)	Estimated percentage					
	1 or 99%	5 or 95%	10 or 90%	20 or 80%	25 or 75%	50%
500	-	-	-	17.0	18.4	21.2
750	-	-	10.4	13.9	15.0	17.3
1,000	-	-	9.0	12.0	13.0	15.0
2,500	-	4.1	5.7	7.6	8.2	9.5
5,000	1.3	2.9	4.0	5.4	5.8	6.7
10,000	.9	2.1	2.9	3.8	4.1	4.8
15,000	.8	1.7	2.3	3.1	3.4	3.9
25,000	.6	1.3	1.8	2.4	2.6	3.0
50,000	.4	.9	1.3	1.7	1.8	2.1
75,000	.3	.8	1.0	1.4	1.5	1.7
100,000	.3	.7	.9	1.2	1.3	1.5
125,000	.3	.6	.8	1.1	1.2	1.3
150,000	.2	.5	.7	1.0	1.1	1.2
175,000	.2	.5	.7	.9	1.0	1.1
200,000	.2	.4	.6	.8	.9	1.1
225,000	.2	.4	.6	.8	.9	1.0
235,000	.2	.4	.6	.8	.8	1.0
255,000	.2	.4	.6	.8	.8	.9

These standard errors may be used to evaluate the percentages for vehicle trips shown in tables 1, 2, 5, and 7.

Appendix B

Table V.-A.2.--Estimated standard errors for percentages of vehicle-miles for one day when single auto is only means

Base of Percentage (000)	Estimated percentage					
	1 or 99%	5 or 95%	10 or 90%	20 or 80%	25 or 75%	50%
20,000	-	-	-	16.9	18.3	21.1
25,000	-	-	11.3	15.1	16.3	18.9
50,000	-	5.8	8.0	10.7	11.6	13.3
75,000	2.2	4.7	6.5	8.7	9.4	10.9
100,000	1.9	4.1	5.7	7.5	8.2	9.4
150,000	1.5	3.4	4.6	6.2	6.7	7.7
250,000	1.2	2.6	3.6	4.8	5.2	6.0
500,000	.8	1.8	2.5	3.4	3.6	4.2
750,000	.7	1.5	2.1	2.8	3.0	3.4
1,000,000	.6	1.3	1.8	2.4	2.6	3.0
1,250,000	.5	1.2	1.6	2.1	2.3	2.7
1,500,000	.5	1.1	1.5	1.9	2.1	2.4
1,750,000	.4	1.0	1.4	1.8	2.0	2.2
2,000,000	.4	.9	1.3	1.7	1.8	2.1
2,100,000	.4	.9	1.2	1.6	1.8	2.0
2,380,000	.4	.9	1.2	1.6	1.7	1.9

These standard errors may be used to evaluate the percentages for vehicle miles shown in tables 1 and 3.