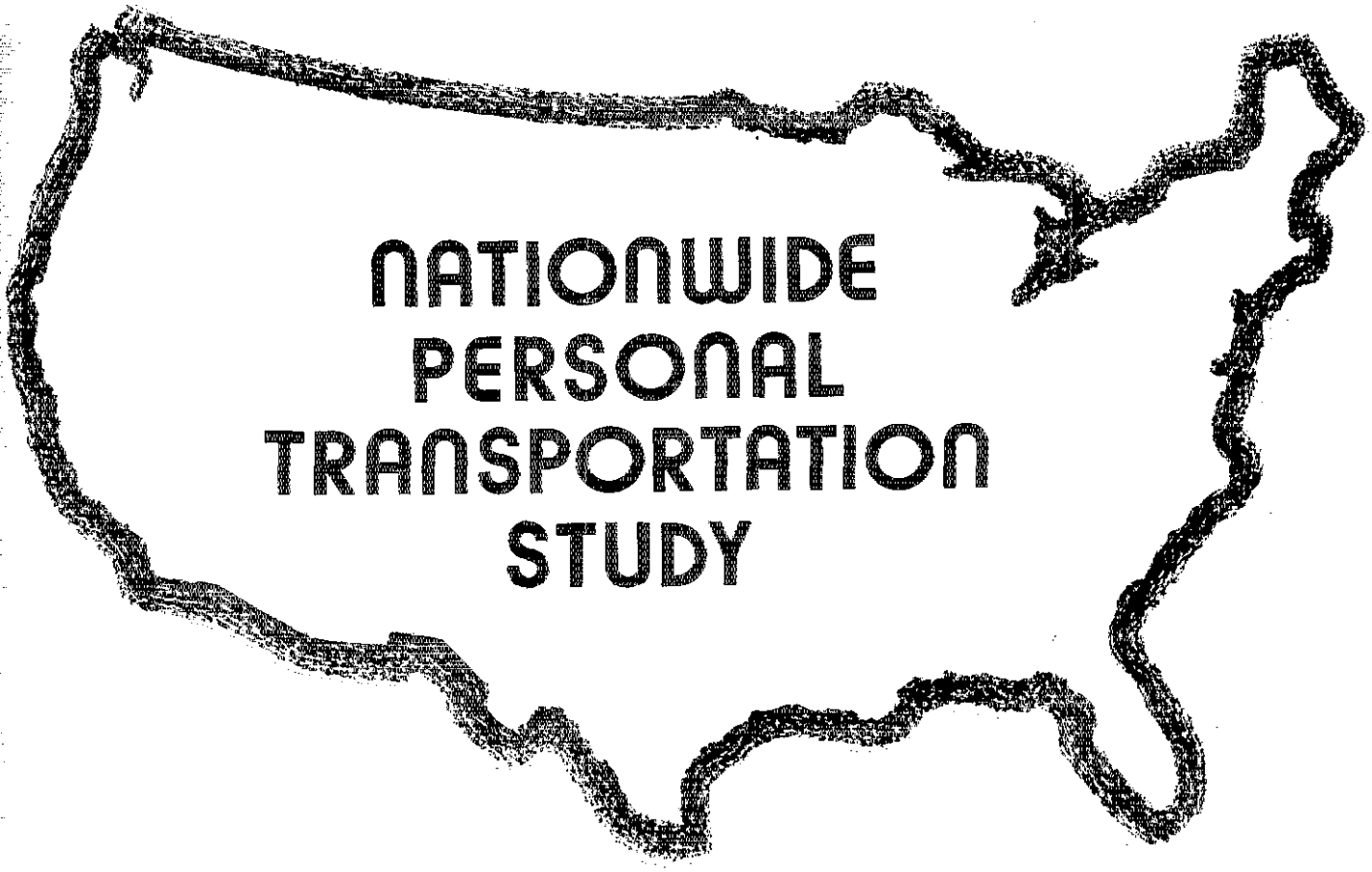

NATIONWIDE PERSONAL TRANSPORTATION STUDY

Annual Miles of Automobile Travel

REPORT NO. 2
April 1972

U.S. Department of Transportation • Federal Highway Administration

NATIONWIDE PERSONAL TRANSPORTATION SURVEY

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Report No. 2

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INTRODUCTION

Realistic prediction of the future levels of automobile use is important to plan to meet the future demands put on our Nation's streets and highways. Before realistic predictions can be made, the current characteristics and factors affecting use of the automobile must be understood.

The following report presents data compiled from the Nationwide Personal Transportation Survey concerning the use of automobiles by households. These data were used to estimate the average annual mileage per automobile and to relate automobile use to seven selected variables.

DESCRIPTION OF DATA

Data collected in this survey were used to study the effect of seven selected variables on automobile use expressed in average annual miles per vehicle 1/. These seven variables were: number of cars in the household 2/, age of the automobile by year model, cars purchased new or used, annual income of the household, occupation of the principal operator of the automobile, place of residence of principal operator by incorporated places and unincorporated areas, and size of the Standard Metropolitan Statistical Area.

1/ In this survey, people were asked to estimate annual miles for each vehicle in their households. Therefore, data presented represent estimated average annual miles per vehicle.

2/ For this survey, households were selected to represent the civilian, non-institutionalized population. Therefore, the total number of automobiles will be less than the universe of registered vehicles.

HIGHLIGHTS

- Automobiles in two- and three-or-more car households average more miles per vehicle annually than automobiles operated from one-car households.

- As the average age of the automobile increases, the average annual miles per automobile decreases.

- The average age for all cars, whether located in a one-, two-, or three-or-more car household, remains relatively constant.

- Considering all year-models, automobiles purchased as new appear to have higher average annual miles per vehicle than automobiles purchased as used. However, for any particular year-model, cars purchased new have lesser annual mileage per vehicle than cars purchased used.

- Approximately 50 percent of cars are purchased new and approximately 50 percent are purchased used.

- As the annual income of the household increases so does the average annual miles per vehicle.

- Vehicles operated by residents of incorporated places account for nearly two-thirds of all vehicle miles of travel.

- Passenger automobiles averaged 11,600 miles annually.

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 were 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.

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 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 III.-A.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.

AUTOMOBILE TRAVEL

Vehicle-miles and number of automobiles in the household

Table 1 shows that automobiles in two- and three-or-more car households average more miles annually than automobiles operated in one-car households. While the overall average for annual mileage is 11,600 miles per vehicle, the annual mileage by household increases from 10,800 miles per vehicle for one-car households to 12,000 miles per vehicle for all cars in a two-car household, to a high of 12,800 for all cars in a three-or-more car household.

One-car households drive 39.7 percent of the vehicle-miles and account for 61.0 percent of the car-owning households. Two-car households make up 33.2 percent of all car-owning households. They own about the same percent of vehicles as one-car households (45.4 percent to 42.5 percent, respectively), and account for 47.0 percent of the annual vehicle-miles. Three-or-more car households drive 13.3 percent of the vehicle-miles, while owning 12.1 percent of the vehicles and accounting for 5.8 percent of the car-owning households.

Vehicle-miles and the age of automobile (year-model)

Generally, as the average age increases, the average annual miles per automobile decreases. Table 1 and figure 1 show that average annual mileage per vehicle ranges from 6,500 miles for year-models of 1959 or older to 17,500 miles for 1969 model cars. It can be seen that this tendency is evident in automobiles whether they are operated by one-, two-, or three-or-more car households. For example, in two-car households, the automobile mileage ranges from 6,800 miles for cars of models 1959 or older to 17,700 miles for 1969 model cars.

Table 2 shows that as mileage decreases, the average age of the vehicles increases. The average age increases from 3.2 years for automobiles driven more than 28,000 miles a year to 7.8 years for automobiles driven less than 500 miles a year. The average age for all mileage classes is 5.1 years.

As the average age of vehicles increases, there is a corresponding change in the median year-model in each mileage class (table 2 and figure 2). The median year-model ranges from 1961 models for automobiles driven less than 500 miles annually to 1967 models for automobiles driven over 28,000 miles. The median year-model for all mileage classes at the time of the survey was 1965.

An interesting relationship can be seen from table 3, average age by mileage class and number of cars in the household. The average age for all cars is 5.1 years whether in a one-, two-, or three-or-more car household . Furthermore, it appears that the average age in each

Table 1.--Estimated average annual miles per automobile (thousands) by year-model and number of cars in the household

Year-model of newest car	Year of vehicle life	One-car households	Two-car households	Three- or more car households	All households
1969	1st	17.5	17.7	17.1	17.5
1968	2nd	14.6	17.4	16.7	16.1
1967	3rd	12.6	13.5	13.7	13.2
1966	4th	11.1	11.5	12.9	11.4
1965	5th	9.6	12.7	16.9	11.7
1964	6th	9.2	10.1	12.1	10.0
1963	7th	10.5	9.7	12.2	10.3
1962	8th	8.5	8.9	8.1	8.6
1961	9th	9.4	12.8	7.0	10.9
1960	10th	7.7	7.2	12.4	8.0
1959 and earlier	11th and older	6.4	6.8	6.3	6.5
All models	All years	10.8	12.0	12.8	11.6
Percent of car-owning households	--	61.0	33.2	5.8	100.0
Percent of vehicles	1/	42.5	45.4	12.1	100.0
Percent of vehicle-miles	1/	39.7	47.0	13.3	100.0

1/ Percentages based on a total number of 66,405,001 vehicles and 2,120,323,000 daily vehicle-miles.

Source: Based upon unpublished tables T-11, T-14 and H-18 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Figure 1 - AVERAGE ANNUAL MILES PER VEHICLE BY YEAR-MODEL OF AUTOMOBILE

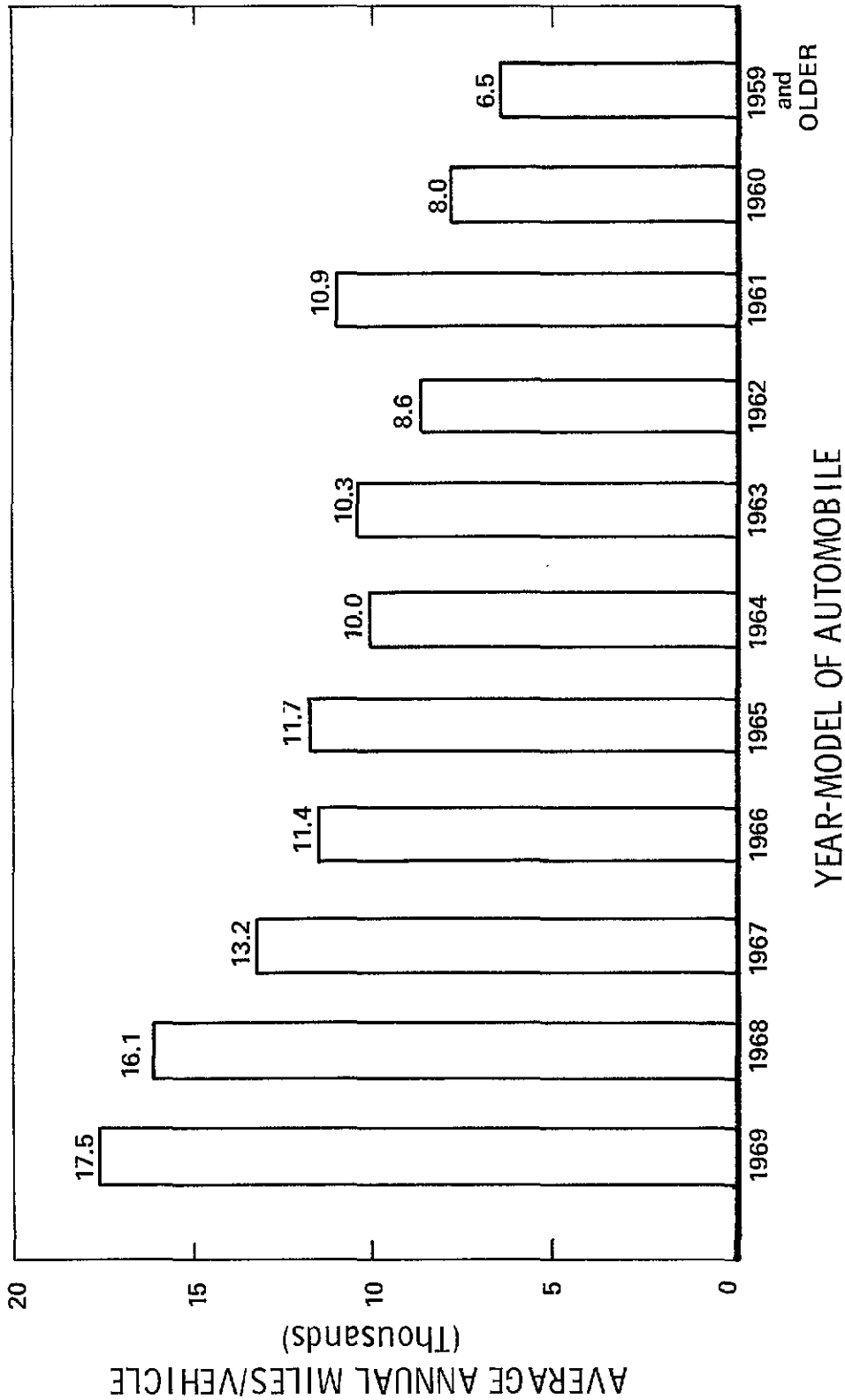

Table 2.--Percentage of automobiles by year-model and mileage class for all car-owning households

Year model	Age 1/	Average annual miles (thousands)								
		Less than 500 miles	1-2	3-7	8-12	13-17	18-22	23-27	28 and over	Total
		Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1969	½	7.8	2.5	5.2	7.5	9.1	11.7	25.6	20.0	8.3
1968	1½	4.6	4.2	7.8	10.4	18.7	21.2	22.0	27.9	12.2
1967	2½	3.2	5.3	8.4	12.2	15.0	14.2	12.4*	13.9*	10.9
1966	3½	4.6	5.8	9.5	14.5	14.7*	13.6*	10.7	5.6	11.5
1965	4½	7.6	9.8	11.4	14.6*	11.0	13.6	8.7	9.5	12.1*
1964	5½	4.4	8.4	11.8*	10.5	9.0	6.2	5.6	6.4	9.6
1963	6½	6.4	10.5	9.9	8.8	8.7	6.1	4.6	6.9	8.7
1962	7½	6.6	11.1*	9.6	7.3	4.5	4.1	3.1	3.2	7.3
1961	8½	6.9*	6.5	6.7	3.8	2.9	2.0	2.1	1.4	4.5
1960	9½	8.8	9.0	5.1	3.5	1.3	2.1	2.1	2.2	4.1
1959 & earlier	12	39.1	26.9	14.6	6.9	5.1	5.2	3.1	3.0	10.8
All years		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average age		7.8	7.3	5.9	3.8	4.1	3.8	3.1	3.2	5.1
Total number of vehicles		1,716,623	5,592,379	17,976,302	22,679,764	7,291,626	5,038,421	2,528,521	3,581,320	66,405,001

1/ Because the survey was conducted in April and August of 1969, no 1970 models were included. Also, for this reason, average ages of automobiles for the purpose of ownership were assumed to have one-half year values. Year-models of 1959 and over were assumed to have an average age of 12 years.

* Indicates median year model for each mileage class.

Source: Based upon unpublished table T-11 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Figure 2 - MEDIAN YEAR-MODEL OF AUTOMOBILE BY MILE CLASS

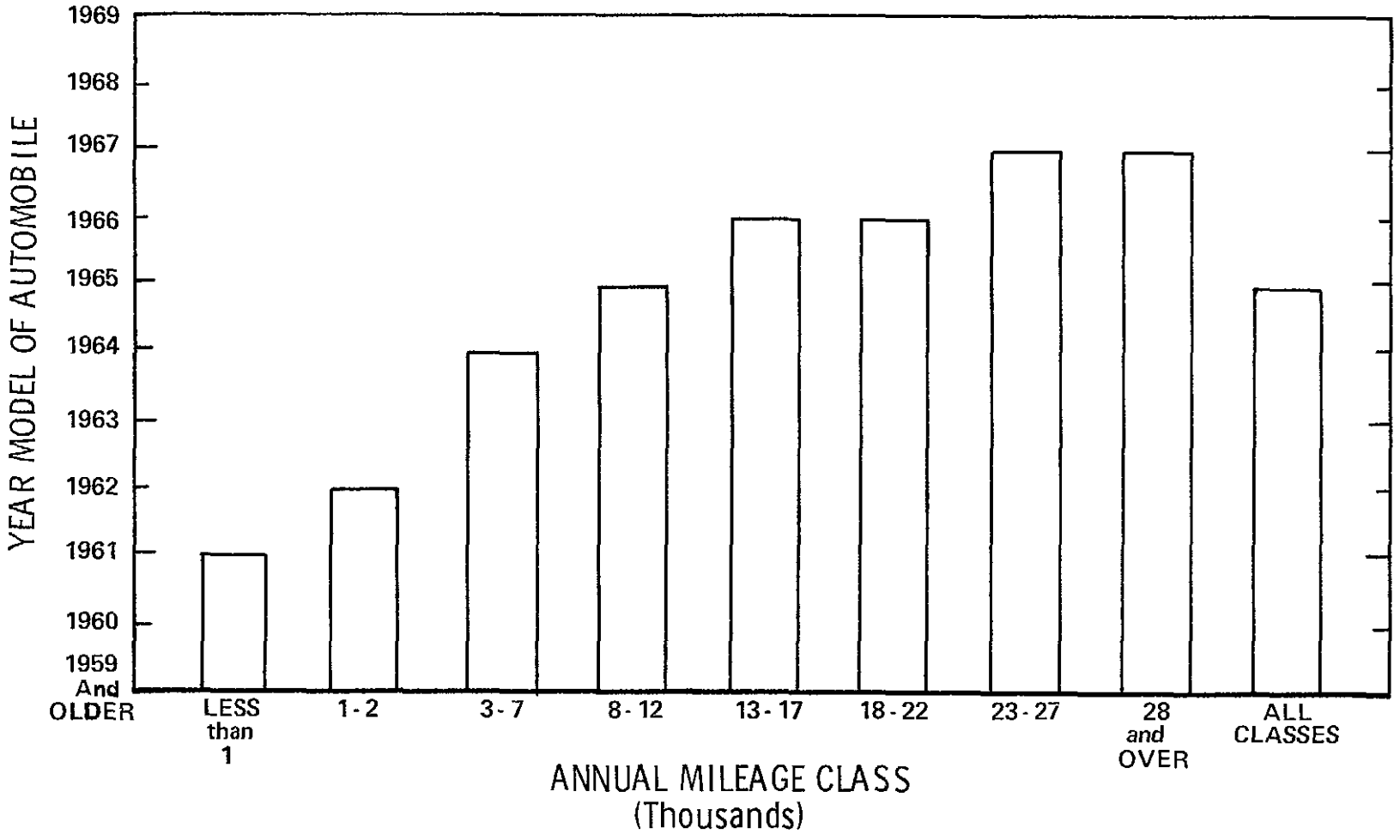

Table 3.--Average age[1]/ of automobiles by number of cars in the household and mileage class

Mileage class (thousands)	One-car households	Two-car households	Three-car households	All-car households
Less than 500 miles	7.6	7.6	*	7.8
1 - 2	7.4	7.2	*	7.3
3 - 7	5.7	6.2	5.9	5.9
8 - 12	4.9	4.7	4.8	4.8
13 - 17	4.2	4.0	3.6	4.1
18 - 22	3.6	4.1	3.4	3.8
23 - 27	3.3	2.9	*	3.1
28 and over	3.3	3.0	3.4	3.2
All classes	5.1	5.1	5.1	5.1

1/ See footnote 1, table 2.

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

Source: Based upon unpublished table T-11 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

mileage class does not vary with the number of cars in the household. For instance, in the 8-12 thousand annual mileage class, the average age is fairly constant varying only from 4.7 to 4.9 years with an average of 4.8 years.

Vehicle-miles and automobiles purchased as new or used

Considering all year-models, automobiles purchased as new appear to have higher average annual miles per vehicle than automobiles purchased as used. From table 4 it can be seen that average annual miles for cars purchased as new is 12,500 miles per vehicle and that average annual miles for cars purchased as used is 10,700 miles.

For each particular year-model comparison in table 4, cars purchased new have lesser annual mileage per vehicle than cars purchased used. For instance, of the 1965 model automobiles, cars purchased new averaged only 10,100 miles a year while cars purchased used averaged 12,900 miles a year.

This finding is in agreement with data presented by Bostick and Greenhalgh 1/. When cars were compared for a particular year-model, average odometer readings, taken from the Montana motor-vehicle-use study, 1963-1964, were consistently higher for passenger cars purchased used than for cars purchased new.

The apparent discrepancy with the overall average miles can be explained by the fact that the greater number of cars purchased new were in the newer model years-higher mileage classes, and that the greater number of cars purchased used were in the older-lower mileage classes. This can be seen by the average ages which show that cars purchased as new have an average age of 3.5 years while cars purchased as used have an average age of 6.8 years.

Two other points from table 4 are worthy of note. First, approximately 50 percent of the automobiles, reported in the Nationwide Personal Transportation Survey, were cars purchased new and approximately 50 percent were cars purchased used. Secondly, although annual mileage of cars purchased used generally decreases with age, the pattern fluctuates more than it does for cars purchased new. Annual mileage for cars purchased new, decreases rather uniformly from 18,000 miles per vehicle for 1969 models to 5,000 miles per vehicle for 1959 and older models. For used cars, year-models, 1965, 1964, 1963, and 1962, the average annual miles were 12,900 miles, 10,500 miles, 11,200 miles, and 9,100 miles, respectively.

1/ Thurley A. Bostick and Helen V. Greenhalgh, "Relationship of Passenger-Car Age and Other Factors to Miles Driven," Highway Research Record 197.

Table 4.--Average annual miles per automobile by year-model and whether purchased new or used

Year model	Average annual miles - thousands		
	Automobiles purchased new	Automobiles purchased used	All automobiles (miles in thousands)
1969	18.0	*	17.6
1968	15.8	18.3	16.2
1967	12.6	14.5	13.2
1966	11.2	11.9	11.5
1965	10.1	12.9	11.7
1964	9.2	10.5	10.0
1963	8.7	11.2	10.4
1962	7.2	9.1	8.7
1961	6.5	12.5	10.9
1960	*	7.9	8.0
1959 and earlier	5.0	6.9	6.6
All models	12.5	10.7	11.6
Average age (years) 1/	3.5	6.8	5.1
Percent vehicles	50.6	49.4	100.1
Total number vehicles (000)			66,350

1/ See footnote 1, table 2.

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

Source: Based upon unpublished table T-13 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Vehicle-miles and annual income of the household

As the annual income of the household increases so does the average annual miles per vehicle. From table 5 and figure 3, it can be seen that mileage values range from a low of 6,600 miles per vehicle for incomes of less than $3,000 to a high value of 15,000 miles per vehicle for incomes greater than $15,000. It is interesting that the average annual miles hold constant at 12,200 miles per vehicle for household incomes between $7,500 and $15,000.

In accordance with the general relationship discussed previously, average age of automobiles increases while the mileage per vehicle decreases. Table 5 shows that average age increases from 4.0 to 7.0 years as annual miles per vehicle is decreasing from 15,000 to 6,600 miles and as household incomes decrease from over $15,000 to under $3,000 annually.

Vehicle-miles and occupation of principal operator

Table 6 shows average annual miles per vehicle by occupation of the principal operator. For principal operators with an occupation, the annual mileage varies from a high of 14,600 miles per vehicle for professional and semi-professional workers to a low of 8,600 miles per vehicle for farmers and farm managers. Vehicles operated by retired household heads, 50 years or older, have an average annual miles per automobile of 6,600 miles.

When the occupations are ranked according to average income, the annual miles per vehicle seems to increase as the average income increases. According to "Population Characteristics," published by the Department of Commerce, Bureau of the Census, July 13, 1970, the rank from highest to lowest average income in 1969 was as follows: (1) Professional and semi-professional workers; (2) managers, officials, and proprietors except farm; (3) sales workers; (4) craftsmen, foremen, and kindred workers; (5) clerical and kindred workers; (6) operatives and kindred workers; (7) service workers except private household; and (8) unskilled and semiskilled laborers, except farm. In the Nationwide Personal Transportation Survey clerks and salesmen were grouped together, as were operatives and laborers. The Census ranking by income is directly related to a decrease from 14,600 miles per vehicle for professional and semiprofessional workers to 10,300 miles per vehicle for service workers.

Use of the newer(est) car by multi-car households

Table 7 shows that both high annual mileage cars and newer(est) cars in multi-car households are used for work trips. Of the automobiles in the 28,000 and over mileage class, 90.1 percent are used for trips to work, while only 51.9 percent in the 1 or 2 thousand mileage class are used for trips to work. For all the newer(est) automobiles

Table 5.--Average annual miles, average automobile age, percent of automobiles, and percent vehicle-miles by annual income of the household

Automobile characteristics	Annual income of the household									
	Under $3,000	$3,000 thru $3,999	$4,000 thru $4,999	$5,000 thru $5,999	$6,000 thru $7,499	$7,500 thru $9,999	$10,000 thru $14,999	$15,000 and over	Income not reported	All incomes
Average annual miles per vehicle (thousands)	6.6	7.7	9.2	11.2	11.3	12.2	12.2	15.0	11.4	11.6
Average age[1/]	7.0	6.1	6.2	6.0	5.6	4.8	4.6	4.0	4.2	5.1
Percent of vehicle-miles	3.5	3.3	3.8	7.4	11.6	18.7	26.4	16.3	9.0	100.0[2/]
Percent of vehicles	6.0	4.9	4.8	7.6	11.9	17.8	25.1	12.7	9.2	100.0[2/]

1/ See footnote 1, table number 2.
2/ Percentages based on a total number of 66,843,567 vehicles and 2,129,860,000 daily vehicle-miles.

Source: Based upon unpublished tables T-9 and T-16 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Figure 3 - AVERAGE ANNUAL MILES PER AUTOMOBILE BY ANNUAL HOUSEHOLD INCOME

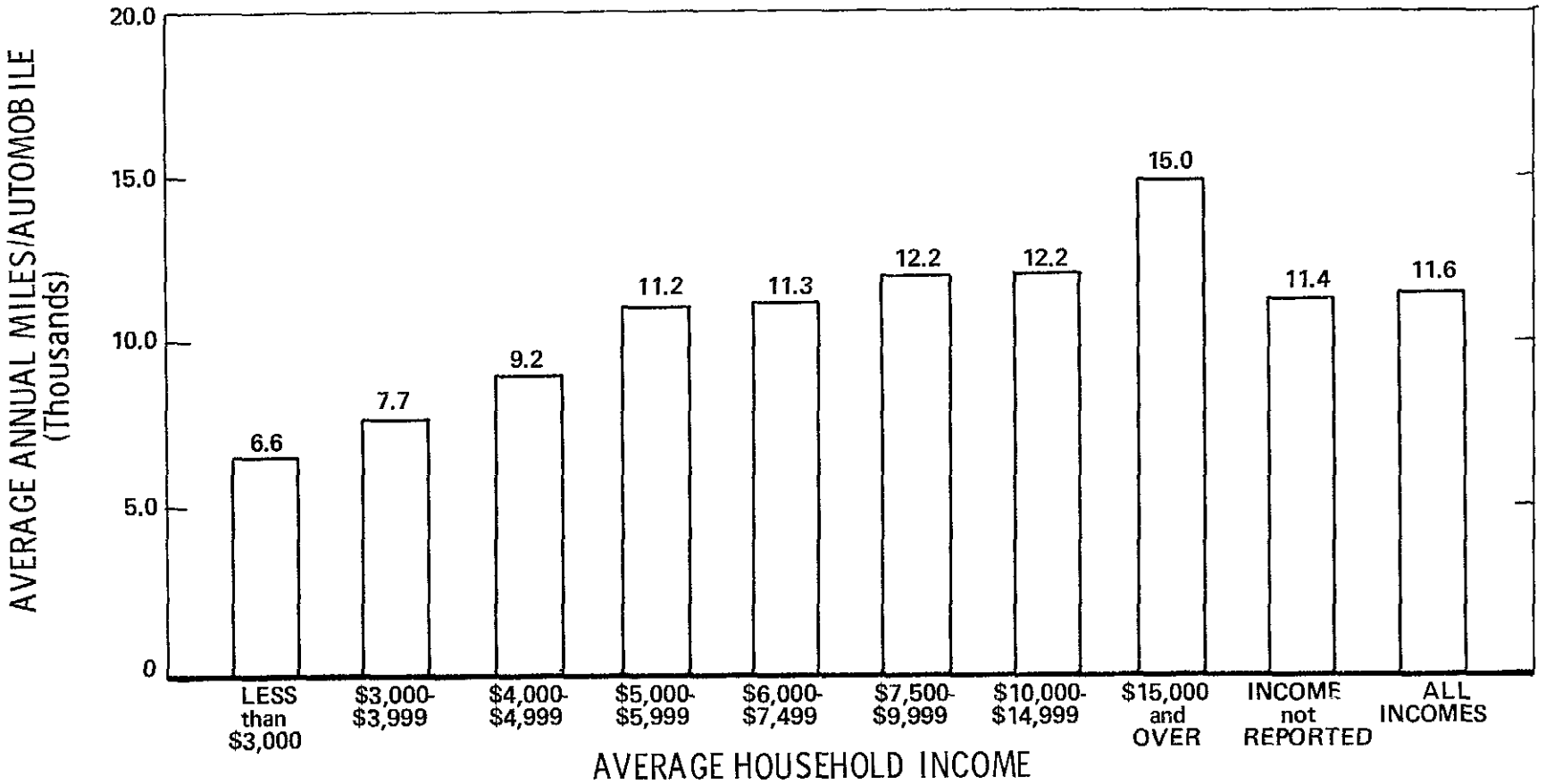

Table 6.--Average annual miles, average automobile age, and percent of automobiles by occupation of principal operator

Automobile characteristics	Occupation of principal operator									
	Professionals and semi-professionals	Farmers and farm managers	Proprietors, managers, and officials (except farmers and farm managers)	Store and office clerks and salesmen	Craftsmen, foremen, skilled laborers, etc.	Operatives, semi-skilled and unskilled laborers	Service workers	Retired household heads, 50 years or older	Not employed,[1] not a retired household head	All groups
Average annual miles per vehicle (thousands)	14.6	8.6	14.1	13.3	12.0	10.9	10.3	6.6	10.0	11.6
Average age (years)[3]	4.6	6.4	4.5	5.0	6.1	6.3	6.1	6.8	5.7	5.1
Percent of automobiles	14.1	1.7	7.4	15.9	11.2	15.2	6.3	8.8	19.4	100.0[2]

1/ Includes all principal operators who are not employed and not a retired household head. In other words, it would include unemployed wife, school age children, etc., that are principal operators of a car.

2/ Percentages based on a total of 66,460,979 vehicles. Also includes 2.0 percent "other" or "N/A" occupation.

3/ See footnote 1, table number 2.

Source: Based upon unpublished table T-15 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Table 7.--Percentage of the newer(est) cars in each annual mileage and year model class that are driven to work by members of multi-car households

Year model	Year of vehicle life	Average annual miles (thousands)								All classes
		0	1-2	3-7	8-12	13-17	18-22	23-27	28 and over	
			Percent	Percent	Percent		Percent		Percent	Percent
1969	1st	*	70.6	79.4	74.1	*	82.2	*	90.8	80.7
1968	2nd	*	58.3	54.2	74.1	*	76.6	*	88.6	74.7
1967	3rd	*	65.9	71.9	69.7	*	81.1	*	84.2	74.6
1966	4th	*	52.1	61.6	67.8	*	82.8	*	91.7	70.9
1965	5th	*	0.0	63.1	60.7	*	75.6	*	84.5	66.7
1964	6th	*	61.3	53.6	60.4	*	84.9	*	*	67.6
1963	7th	*	22.9	39.6	72.6	*	91.3	*	*	61.9
1962	8th	*	41.6	42.1	82.0	*	41.6	*	*	55.4
1961 and earlier	9th and older	*	*	*	*	*	*	*	*	67.0
All Models		*	51.9	61.8	69.6	*	79.0	*	90.1	72.2

* Data not sufficient for analysis. Data were judged to be insufficient when fewer than 50 automobiles were sampled in a particular cell.

Source: Based upon unpublished table T-12 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

in multi-car households it can be seen that 72.2 percent are used for trips to work. For cars of the 1969 year-model, 80.7 percent are used for work trips and only 61.9 percent of the 1963 model cars are used for trips to work where those models are the newer(est) car in a multi-car household.

Vehicle-miles and unincorporated areas and incorporated places

Generally, automobiles in unincorporated areas have higher average annual miles per vehicle than automobiles in incorporated places. Table 8 shows that average annual miles of vehicles operated by households in incorporated places is 11,200 miles per vehicle. Automobiles of households in unincorporated areas have an annual mileage of 12,600 miles.

While automobiles in unincorporated areas travel more miles a year, they have a higher average age. Automobiles in unincorporated areas have an average age of 5.3 years and cars in incorporated places have an average age of 5.0 years. This is an exception to the general relationship found in a previous section that increasing age corresponds to decreasing average annual miles per vehicle.

Vehicle-miles and size of the Standard Metropolitan Statistical Area (SMSA)

Table 9 shows no clear relationship between size of the SMSA and average annual miles per vehicle. Although SMSA's with 2 to 3 million people have a high of 14,000 miles per vehicle, the other large SMSA size groups, 1 to 2 million and 3 million and over, do not show a high mileage figure, but rather hover closely to the average for all SMSA's of 11,500 miles a year per vehicle.

Table 8.--Average annual miles, average age, percent vehicles and percent vehicle-miles by place of residence of the principal operator

Automobile characteristics	Place of residence											
	Households in incorporated places				Households in unincorporated areas				Households in all places and areas			
	1-car	2 cars	3 or more cars	All	1-car	2 cars	3 or more cars	All	1 car	2 cars	3 or more cars	All
Average annual miles per vehicle (thousands)	10.4	11.6	12.6	11.2	11.8	13.0	13.2	12.6	10.9	12.0	12.8	11.6
Average age (years)[1/]	5.0	5.0	4.9	5.0	5.2	5.3	5.3	5.3	5.1	5.1	5.1	5.1
Percent of vehicle-miles	-	-	-	63.9	-	-	-	36.1	-	-	-	100.0[2/]
Percent of vehicles	-	-	-	66.6	-	-	-	33.4	-	-	-	100.0[2/]

1/ See footnote 1, table number 2.
2/ Percentages based on a total number of 66,348,808 vehicles and 2,118,394,000 daily vehicle-miles.

Source: Based upon unpublished table T-13 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

Table 9.--Average annual miles, average automobile age, percent of automobiles and percent of vehicle-miles by size of the SMSA

Automobile characteristics	Size of standard metropolitan statistical area						
	Less than 250,000	250,000-499,999	500,000-999,999	1,000,000-1,999,999	2,000,000-2,999,999	3,000,000 and over	All SMSA's
Average annual miles per vehicle	11.0	10.3	11.3	11.3	14.0	11.5	11.5
Average age[1/] (year)	5.1	5.2	5.2	4.6	4.7	4.7	4.9
Percent of vehicle-miles	15.9	13.1	15.3	19.0	13.7	23.0	100.0[2/]
Percent of automobiles	16.1	14.6	15.5	19.7	11.2	22.9	100.0[2/]

1/ See footnote 1, table 2.
2/ Percentages based on a total number of 44,473,680 vehicles and 1,398,103,000 daily vehicle-miles.

Source: Based upon unpublished table T-13 from the Nationwide Personal Transportation Survey conducted by the Bureau of the Census for the Federal Highway Administration, 1969-1970.

SUMMARY

1. Average annual mileage is directly related to the number of cars in the household and the annual income of the household and is inversely related to the age of the car. Furthermore, these three factors show an interrelationship. For example, not only does increasing age of automobile correspond to decreasing annual mileage but also to decreasing number of cars in the household and to decreasing household income.

2. Cars operated from single-car households have lower average annual miles than cars operated from multi-car households. For example, the average annual miles per vehicle for one-car households was 10,800 as compared to an average of 12,000 miles per vehicle for cars in two-car households.

3. Automobiles operated principally by professional and semi-professional workers have the greatest average annual mileage. Data further indicate that average annual mileage varies directly with the average income of the occupational group.

4. The relationship between annual mileage and automobiles purchased new or used is an interesting one. Cars purchased new tend to have higher average annual mileage than cars purchased used when all year-models are considered. However, for each particular year-model, cars purchased new had lower annual mileage than cars purchased used.

5. It was found that over 70 percent of the newer(est) cars in multi-car households were used for trips "to and from work."

6. Automobiles operated by households in unincorporated areas had higher average annual mileage than automobiles in incorporated places. However, these automobiles were on the average older than automobiles operated by households in incorporated places.

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 1 - 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.

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.

FORM **NPT-2**
(7-10-69)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR THE
U.S. DEPARTMENT OF TRANSPORTATION

HOUSEHOLD QUESTIONNAIRE – AUGUST 1969

NATIONWIDE PERSONAL TRANSPORTATION SURVEY

BUDGET BUREAU NO. 41-S69011
APPROVAL EXPIRES DECEMBER 1970

(1)

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: Day of week	Mo./day	k. No. of hhld. members (all ages)	l. Number of automobiles

m. Automobile

Auto No.	Year	Make	Office use

n. Principal user Line No.

o. *(If no automobile)*
1 ☐ Auto available
2 ☐ Not available

p. Income

q. Interviewer's code

r. OFFICE USE

s. Date of interview

t. Noninterview reason: 1 ☐ NOH; 2 ☐ TA; 3 ☐ Ref.; 4 ☐ Other Type A; 5 ☐ Other type – *Specify* _____
(Fill a, b, c, f, g, h, i, j, q.)

Section 1 – AUTOMOBILE RECORD

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 ☐ Yes 2 ☐ No *(Go to Q. 3)*	1 ☐ Yes 2 ☐ No *(Go to Q. 3)*	1 ☐ Yes 2 ☐ No *(Go to Q. 3)*
2a. Was it purchased new or used?	1 ☐ New 2 ☐ Used	1 ☐ New 2 ☐ Used	1 ☐ New 2 ☐ 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 ☐ Yes – Entire trip 2 ☐ Yes – Part-way 3 ☐ No *(Go to next auto or Sec. II)*	1 ☐ Yes – Entire trip 2 ☐ Yes – Part-way 3 ☐ No *(Go to next auto or Sec. II)*	1 ☐ Yes – Entire trip 2 ☐ Yes – Part-way 3 ☐ 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
CODE KEY →	1 – Commercial parking garage or lot; 2 – Employer provided space; 3 – Fringe parking; 4 – Other lot or garage; 5 – On the street; 6 – No all day parking used; 7 – Other		
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?			
	If code 6 go to next auto or Sec. II		
b. Is there a cost for parking?	1 ☐ Yes 2 ☐ No *(Go to next auto or Sec. II)*	1 ☐ Yes 2 ☐ No *(Go to next auto or Sec. II)*	1 ☐ Yes 2 ☐ No *(Go to next auto or Sec. II)*
c. How much?	$ ____ . ____ 1 ☐ Day 2 ☐ Week 3 ☐ Month	$ ____ . ____ 1 ☐ Day 2 ☐ Week 3 ☐ Month	$ ____ . ____ 1 ☐ Day 2 ☐ Week 3 ☐ Month
d. Does . . . pay by putting coins into a meter?	1 ☐ Yes 2 ☐ No	1 ☐ Yes 2 ☐ No	1 ☐ Yes 2 ☐ No

Section II – SHOPPING

ASK for SMSA residents only – 1 or 2 as second digit of identification code

Now we are interested in where people shop – *(Ask 1 and 2 for (1) wife or (2) female head or (3) male head)*	
1. During the past 3 months has . . . gone to the main business district of _____ principally to shop?	1 ☐ Yes → How many times? _____ *(Go to Q. 3)* 2 ☐ No
2. What were the reasons for not shopping there? *(Mark all boxes that apply)*	1 ☐ Goods available locally 2 ☐ Too far away 3 ☐ Difficulty of parking 4 ☐ Difficulty of driving in congested area 5 ☐ No automobile 6 ☐ Other – *Specify* _____
3. How far is it from home to the nearest public transportation line to go to the main business district of _____?	1 ☐ Less than one block 2 ☐ 1–2 blocks (less than ¼ mile) 3 ☐ 3–6 blocks (¼ – ½ mile) 4 ☐ Over 6 blocks (over ½ mile) 5 ☐ No public transportation available 6 ☐ Lives in main business district

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

Section III – TRAVEL TO WORK

(3)

1. Line No.

2. CHECK ITEM

1 ☐ 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)*

X ☐ 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? _____ State? _____

2 ☐ No

3 ☐ Don't know

4. How far is it from home to the place where . . . works? (Actual travel distance)

Miles _____ *(Enter nearest full mile)*

1X ☐ No fixed place
2X ☐ At home
3X ☐ Less than ½ mile (5 blocks)
(Go to Sec. IV)

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
2 ☐ Commuter train, subway, elevated, etc.
3 ☐ Automobile – with other persons
4 ☐ Automobile – alone
5 ☐ Truck
6 ☐ Motorcycle
7 ☐ Walk only *(Go to Q. 10a)*
8 ☐ Other – including bicycle – specify _____

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
2 ☐ 1 to 2 blocks (less than ¼ mile)
3 ☐ 3 to 6 blocks (¼ to ½ mile)
4 ☐ Over 6 blocks (over ½ mile)
5 ☐ None available
(Go to Q. 10a)

(Ask if boxes 1 and/or 2 – is not marked in Q. 6)

8. What is the reason . . . does not use public transportation to go to work?
Anything else?
(Mark all boxes that apply)

1 ☐ None available
2 ☐ Not convenient to get to
3 ☐ Not convenient to place of work
4 ☐ Too many transfers
5 ☐ Too expensive
6 ☐ Too crowded or uncomfortable
7 ☐ Takes too long
8 ☐ Need auto for work
9 ☐ Other – Specify _____
(Go to Q. 10a)

(Ask if either box 1 or 2 – is marked in Q. 6)

9. What is the reason . . . uses public transportation to get to work?
Anything else?
(Mark all boxes that apply)

1 ☐ No driver's license
2 ☐ No car available
3 ☐ No car pool available
4 ☐ Cheaper than auto
5 ☐ Safer than auto
6 ☐ No parking problems
7 ☐ No driving strain
8 ☐ Faster
9 ☐ Other – Specify _____

(Ask for persons 21 years old or older)

10a. Does . . . work at same location as 5 years ago?

1 ☐ Yes
2 ☐ No
3 ☐ Not working 5 years ago *(Go to Sec. IV)*

b. Does . . . live at same location as 5 years ago?

1 ☐ Yes
2 ☐ No

c. Compared with the time it took . . . to get to work 5 years ago, is the time to work:

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
2 ☐ Under 5,000
3 ☐ 5,000 – 9,999
4 ☐ 10,000 – 14,999
5 ☐ 15,000 – 19,999
6 ☐ 20,000 – 24,999
7 ☐ 25,000 – 29,999
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. VI)*

2. Was it a public or private school?

1 ☐ Public
2 ☐ Private

3. What grade was . . . attending?

Grade _____ *Enter "0" for kindergarten or 1–12, 13+*

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
2 ☐ Public transportation – No charge
(Go to Sec. VI)

3 ☐ School bus – Charge
4 ☐ Public transportation – Charge
5 ☐ Walk, bicycle
6 ☐ Automobile – Driver
7 ☐ Automobile – Passenger
8 ☐ Motorcycle
9 ☐ Other
(Go to Q. 7)

7. Was free school bus or free public transportation available?

1 ☐ Yes
2 ☐ No

④

Section VI – TRAVEL DAY REPORT

a. Line No.	b. Age	c. Sex	d. Employment status (C.C. 16a)	e. Occupation (C.C. 16b)	f. Retired Code (C.C. 17)	g. Licensed driver (C.C. 18)
		1 [ ] Male 2 [ ] Female	1 [ ] Yes 2 [ ] No			1 [ ] Yes 2 [ ] No

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.

Reference day is from 4:00 a.m. to 3:59 a.m. the following day

1. Did . . . go any place at anytime on ________?

1 [ ] Yes – One or more trips not previously reported *(Fill columns)*
2 [ ] Yes – All previously reported } *(Go to Q. 14a)*
3 [ ] No }

	Trip 1 ⑤	Trip 2 ⑥	Trip 3 ⑦	Trip 4 ⑧
2. At what time did . . . start the (1st, next) trip he took on ________?	___:___ 1 [ ] a.m. 2 [ ] p.m.	___:___ 1 [ ] a.m. 2 [ ] p.m.	___:___ 1 [ ] a.m. 2 [ ] p.m.	___:___ 1 [ ] a.m. 2 [ ] p.m.
3. How far is it from where . . . started to where he went?	______ Miles 0 [ ] Less than ½ mile (5 blocks)	______ Miles 0 [ ] Less than ½ mile (5 blocks)	______ Miles 0 [ ] Less than ½ mile (5 blocks)	______ Miles 0 [ ] Less than ½ mile (5 blocks)
4. How long did it take to get there?	1 [ ] 15 min. or less 2 [ ] 16–30 min. 3 [ ] 31–45 min. 4 [ ] 46 min.–1 hr. 5 [ ] Bet. 1 and 2 hrs. 6 [ ] 2 hrs. or more	1 [ ] 15 min. or less 2 [ ] 16–30 min. 3 [ ] 31–45 min. 4 [ ] 46 min.–1 hr. 5 [ ] Bet. 1 and 2 hrs. 6 [ ] 2 hrs. or more	1 [ ] 15 min. or less 2 [ ] 16–30 min. 3 [ ] 31–45 min. 4 [ ] 46 min.–1 hr. 5 [ ] Bet. 1 and 2 hrs. 6 [ ] 2 hrs. or more	1 [ ] 15 min. or less 2 [ ] 16–30 min. 3 [ ] 31–45 min. 4 [ ] 46 min.–1 hr. 5 [ ] Bet. 1 and 2 hrs. 6 [ ] 2 hrs. or more

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)

	Trip 1	Trip 2	Trip 3	Trip 4
5. What was the main reason for this trip? *(If "return home" enter the main purpose of the outgoing trip(s), plus "R.H.") (Enter one code.)*	Code	Code	Code	Code
6. In addition to . . . did anyone else living here go on this trip? *(List line numbers of other household members* ***5 years old or older*** *who went on this trip.)*	0 [ ] No others Line numbers	0 [ ] No others Line numbers	0 [ ] No others Line numbers	0 [ ] No others Line numbers

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

	Trip 1	Trip 2	Trip 3	Trip 4
7. What means of transportation were used for this trip? *(If more than one, circle major means.)*	Code *(If code 1–5 only go to Q. 13)*	Code *(If code 1–5 only go to Q. 13)*	Code *(If code 1–5 only go to Q. 13)*	Code *(If code 1–5 only go to Q. 13)*
8. Was public transportation for this trip available within 6 blocks (½ mile)?	1 [ ] Yes 2 [ ] No 3 [ ] Don't know	1 [ ] Yes 2 [ ] No 3 [ ] Don't know	1 [ ] Yes 2 [ ] No 3 [ ] Don't know	1 [ ] Yes 2 [ ] No 3 [ ] Don't know
(Complete questions 9–12 if code 7 or 8 was entered in Q. 7) **9. What automobile was used?** *(Transcribe automobile number from C.C.)*	Automobile No. or 9 [ ] Not an auto listed on the C.C.	Automobile No. or 9 [ ] Not an auto listed on the C.C.	Automobile No. or 9 [ ] Not an auto listed on the C.C.	Automobile No. or 9 [ ] Not an auto listed on the C.C.
10. Who drove the automobile for this trip?	Line No. ______ 99 [ ] Not a household member	Line No. ______ 99 [ ] Not a household member	Line No. ______ 99 [ ] Not a household member	Line No. ______ 99 [ ] Not a household member
11. Was parking free for this trip?	1 [ ] Yes 2 [ ] No 3 [ ] Did not park 4 [ ] Don't know	1 [ ] Yes 2 [ ] No 3 [ ] Did not park 4 [ ] Don't know	1 [ ] Yes 2 [ ] No 3 [ ] Did not park 4 [ ] Don't know	1 [ ] Yes 2 [ ] No 3 [ ] Did not park 4 [ ] Don't know
12. How many people were in the automobile including the driver? *(Include children under 5 and non-household members.)*	______ Number 0 [ ] Don't know	______ Number 0 [ ] Don't know	______ Number 0 [ ] Don't know	______ Number 0 [ ] Don't know
13. Did . . . go anywhere else on ________?	1 [ ] Yes – One or more trips not recorded *(Go to next column)* 2 [ ] Yes – All trips recorded } *Go to Q. 14a* 3 [ ] No }	1 [ ] Yes – One or more trips not recorded *(Go to next column)* 2 [ ] Yes – All trips recorded } *Go to Q. 14a* 3 [ ] No }	1 [ ] Yes – One or more trips not recorded *(Go to next column)* 2 [ ] Yes – All trips recorded } *Go to Q. 14a* 3 [ ] No }	1 [ ] Yes – One or more trips not recorded *(Go to next column)* 2 [ ] Yes – All trips recorded } *Go to Q. 14a* 3 [ ] No }

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 [ ] Yes – One or more trips not previously reported *(Go to 14b)*
2 [ ] Yes – All trips previously reported } *Fill Sections III–VI for next person 5 years old or older*
3 [ ] No }

b. How many such trips ended during the 7 days?

Number ______ *(Go to Sec. VII)*

(4)

Section VI – TRAVEL DAY REPORT

a. Line No.	b. Age	c. Sex	d. Employment status (C.C. 16a)	e. Occupation (C.C. 16b)	f. Retired Code (C.C. 17)	g. Licensed driver (C.C. 18)
		1 ☐ Male 2 ☐ Female	1 ☐ Yes 2 ☐ No			1 ☐ Yes 2 ☐ No

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.

Reference day is from 4:00 a.m. to 3:59 a.m. the following day

1. Did . . . go any place at anytime on __________?

1 ☐ Yes – One or more trips not previously reported *(Fill columns)*
2 ☐ Yes – All previously reported } *(Go to Q. 14a)*
3 ☐ No } *(Go to Q. 14a)*

Question	Trip 1 (5)	Trip 2 (6)	Trip 3 (7)	Trip 4 (8)
2. At what time did . . . start the (1st, next) trip he took on __________?	___:___ 1 ☐ a.m. 2 ☐ p.m.	___:___ 1 ☐ a.m. 2 ☐ p.m.	___:___ 1 ☐ a.m. 2 ☐ p.m.	___:___ 1 ☐ a.m. 2 ☐ p.m.
3. How far is it from where . . . started to where he went?	______ Miles 0 ☐ Less than ½ mile (5 blocks)	______ Miles 0 ☐ Less than ½ mile (5 blocks)	______ Miles 0 ☐ Less than ½ mile (5 blocks)	______ Miles 0 ☐ Less than ½ mile (5 blocks)
4. How long did it take to get there?	1 ☐ 15 min. or less 2 ☐ 16–30 min. 3 ☐ 31–45 min. 4 ☐ 46 min.–1 hr. 5 ☐ Bet. 1 and 2 hrs. 6 ☐ 2 hrs. or more	1 ☐ 15 min. or less 2 ☐ 16–30 min. 3 ☐ 31–45 min. 4 ☐ 46 min.–1 hr. 5 ☐ Bet. 1 and 2 hrs. 6 ☐ 2 hrs. or more	1 ☐ 15 min. or less 2 ☐ 16–30 min. 3 ☐ 31–45 min. 4 ☐ 46 min.–1 hr. 5 ☐ Bet. 1 and 2 hrs. 6 ☐ 2 hrs. or more	1 ☐ 15 min. or less 2 ☐ 16–30 min. 3 ☐ 31–45 min. 4 ☐ 46 min.–1 hr. 5 ☐ Bet. 1 and 2 hrs. 6 ☐ 2 hrs. or more

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)

Question	Trip 1	Trip 2	Trip 3	Trip 4
5. What was the main reason for this trip? *(If "return home" enter the main purpose of the outgoing trip(s), plus "R.H.") (Enter one code.)*	Code	Code	Code	Code
6. In addition to . . . did anyone else living here go on this trip? *(List line numbers of other household members 5 years old or older who went on this trip.)*	0 ☐ No others Line numbers	0 ☐ No others Line numbers	0 ☐ No others Line numbers	0 ☐ No others Line numbers

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

Question	Trip 1	Trip 2	Trip 3	Trip 4
7. What means of transportation were used for this trip? *(If more than one, circle major means.)*	Code *(If code 1–5 only go to Q. 13)*	Code *(If code 1–5 only go to Q. 13)*	Code *(If code 1–5 only go to Q. 13)*	Code *(If code 1–5 only go to Q. 13)*
8. Was public transportation for this trip available within 6 blocks (½ mile)?	1 ☐ Yes 2 ☐ No 3 ☐ Don't know	1 ☐ Yes 2 ☐ No 3 ☐ Don't know	1 ☐ Yes 2 ☐ No 3 ☐ Don't know	1 ☐ Yes 2 ☐ No 3 ☐ Don't know
(Complete questions 9–12 if code 7 or 8 was entered in Q. 7) **9. What automobile was used?** *(Transcribe automobile number from C.C.)*	Automobile No. or 9 ☐ Not an auto listed on the C.C.	Automobile No. or 9 ☐ Not an auto listed on the C.C.	Automobile No. or 9 ☐ Not an auto listed on the C.C.	Automobile No. or 9 ☐ Not an auto listed on the C.C.
10. Who drove the automobile for this trip?	Line No. ______ 99 ☐ Not a household member	Line No. ______ 99 ☐ Not a household member	Line No. ______ 99 ☐ Not a household member	Line No. ______ 99 ☐ Not a household member
11. Was parking free for this trip?	1 ☐ Yes 2 ☐ No 3 ☐ Did not park 4 ☐ Don't know	1 ☐ Yes 2 ☐ No 3 ☐ Did not park 4 ☐ Don't know	1 ☐ Yes 2 ☐ No 3 ☐ Did not park 4 ☐ Don't know	1 ☐ Yes 2 ☐ No 3 ☐ Did not park 4 ☐ Don't know
12. How many people were in the automobile including the driver? *(Include children under 5 and non-household members.)*	______ Number 0 ☐ Don't know	______ Number 0 ☐ Don't know	______ Number 0 ☐ Don't know	______ Number 0 ☐ Don't know
13. Did . . . go anywhere else on __________?	1 ☐ Yes – One or more trips not recorded *(Go to next column)* 2 ☐ Yes – All trips recorded } Go to Q. 14a 3 ☐ No } Go to Q. 14a	1 ☐ Yes – One or more trips not recorded *(Go to next column)* 2 ☐ Yes – All trips recorded } Go to Q. 14a 3 ☐ No } Go to Q. 14a	1 ☐ Yes – One or more trips not recorded *(Go to next column)* 2 ☐ Yes – All trips recorded } Go to Q. 14a 3 ☐ No } Go to Q. 14a	1 ☐ Yes – One or more trips not recorded *(Go to next column)* 2 ☐ Yes – All trips recorded } Go to Q. 14a 3 ☐ No } Go to Q. 14a

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 ☐ Yes – One or more trips not previously reported *(Go to 14b)*
2 ☐ Yes – All trips previously reported } *Fill Sections III–VI for next person 5 years old or older*
3 ☐ No } *Fill Sections III–VI for next person 5 years old or older*

b. How many such trips ended during the 7 days?

Number ______ *(Go to Sec. VII)*

Appendix B

Estimated standard errors for percentage
Table III.A.-2-..for all vehicles and vehicles owned by all persons

Base of percentage (000)	Estimated percentage					
	1 or 99%	5 or 95%	10 or 90%	20 or 80%	25 or 75%	50%
100	-	-	11.2	15.0	16.2	18.7
150	-	-	9.2	12.2	13.2	15.3
200	-	5.8	7.9	10.6	11.1	13.2
250	-	5.1	7.1	9.4	10.2	11.8
300	-	4.7	6.5	8.6	9.3	10.8
500	1.7	3.6	5.0	6.7	7.2	8.4
750	1.4	3.0	4.1	5.5	5.9	6.8
1,000	1.2	2.6	3.5	4.7	5.1	5.9
1,500	1.0	2.1	2.9	3.9	4.2	4.8
2,000	.8	1.8	2.5	3.3	3.6	4.2
3,000	.7	1.5	2.0	2.7	3.0	3.4
5,000	.5	1.2	1.6	2.1	2.3	2.6
7,500	.4	.9	1.3	1.7	1.9	2.2
10,000	.4	.8	1.1	1.5	1.6	1.9
15,000	.3	.7	.9	1.2	1.3	1.5
20,000	.3	.6	.8	1.1	1.2	1.3
25,000	.2	.5	.7	.9	1.0	1.2
30,000	.2	.5	.6	.9	.9	1.1
35,000	.2	.4	.6	.8	.9	1.0
50,000	.2	.4	.5	..7	.7	.8
73,000	.1	.3	.4	.6	.6	.7

These standard errors may be used to evaluate the percentages for vehicles shown in tables 1, 2, 5, 6, 8, and 9.

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, 5, 6, 8, and 9.