

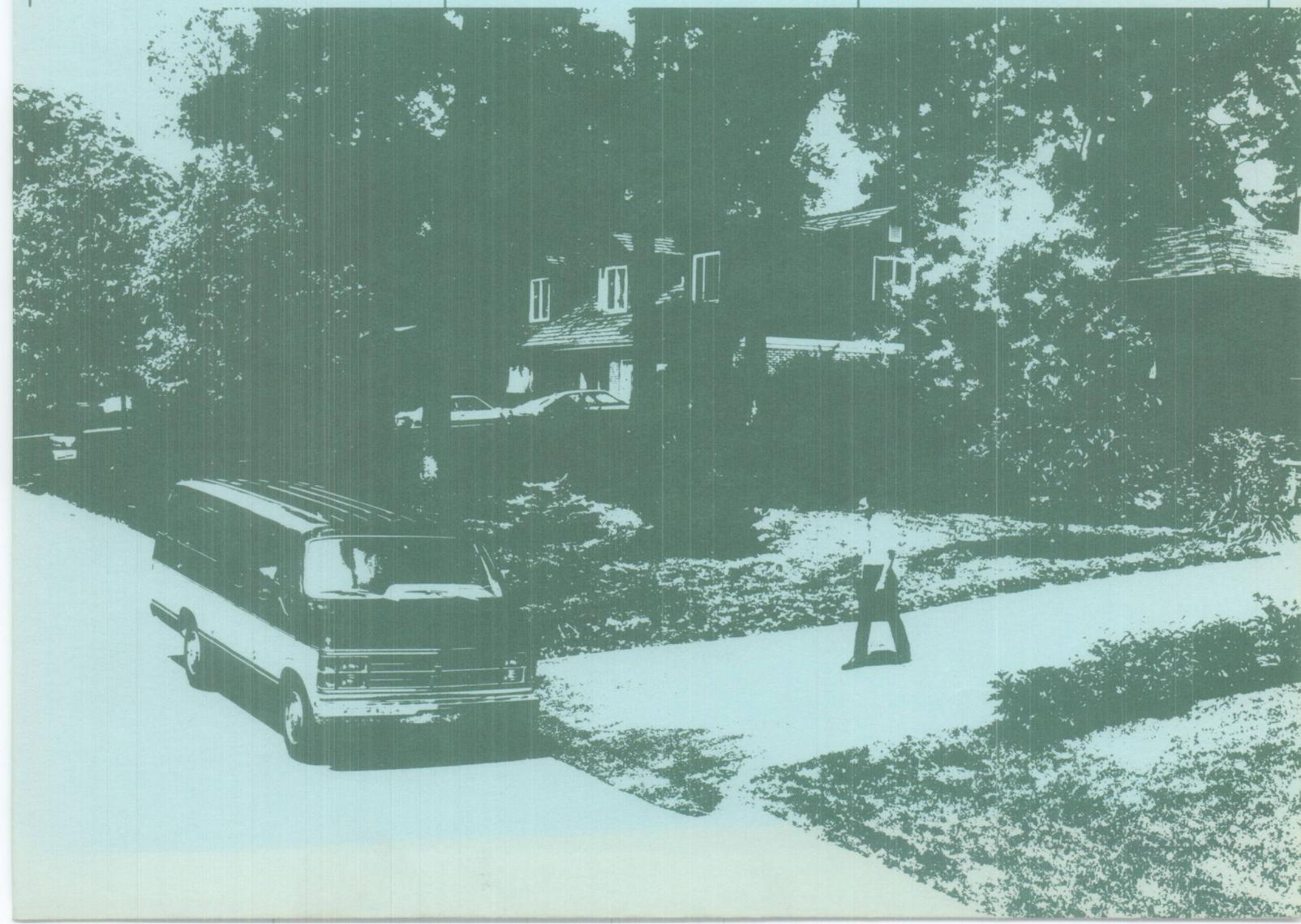
Residential Energy
Consumption Survey:

Consumption Patterns of Household Vehicles, June 1979 to December 1980

Energy Information Administration
Office of Energy Markets and End Use
U.S. Department of Energy



April 1982



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PREFACE

This is the second in a series of reports presenting data from the Household Transportation Panel, and the first to present 19-months of data. The first report, (DOE/EIA-0207/4), contained data for June, July, and August 1979. The next planned report, the last in the series, will contain additional data for January 1981 through September 1981. Concurrently, this office is examining the issues concerning the collection and interpretation of this type of data.

This report contains data for June 1979 through December 1980 on the use of household vehicles. (The household characteristics in this report reflect the structure of the household at the time of the original household surveys, and are not updated on a monthly basis.) The tables include both average and aggregate transportation statistics cross-classified by vehicle characteristics (size and age) and household characteristics (urban/rural, income, race, owner/renter, one-versus multi-vehicle, number of drivers, household size); and matching relative standard error tables. Also included are: a summary of findings; a description of how the survey was conducted; a copy of the fuel purchase log, and the background questionnaire; an explanation of the relative standard errors for total sample estimates; and a glossary.

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1. CONSUMPTION PATTERNS OF HOUSEHOLD VEHICLES

This is the second report in a statistical series that will provide monthly data on residential transportation characteristics and consumption patterns. Included are data on fuel consumption, expenditures, miles per gallon, and miles driven; all of which are cross-classified by household and vehicle characteristics. This report provides survey data for the June 1979 - December 1980 Household Transportation Panels (see "How the Survey was Conducted") which cover the 48 contiguous States and the District of Columbia.

Tables 1 through 4 summarize the total and average consumption data on a monthly basis for the United States as a whole. Tables 5 through 24 show yearly totals and average consumption data for the United States cross-classified by vehicle and household characteristics. In all of the above tables, total expenditures, total gallons purchased, and average price per gallon are broken down into leaded and unleaded categories of gasoline. Tables 26 through 30 show monthly frequency counts (of vehicles) classified by miles driven, gallons of fuel purchased, and dollar expenditures. Frequency counts are not shown on a yearly basis since individual vehicles are not kept in the survey for a full 12 months. (Again, see "How the Survey was Conducted" for a more complete explanation). Tables 31 through 60 show the relative standard errors for the data shown in Tables 1 through 30.

The consumption data presented throughout this report provides an insight into household-vehicle use patterns within the United States. Following the data tables are a description of how the survey was conducted, a copy of the fuel purchase log used each month, a copy of the background questionnaire filled out by participating households, an explanation and analysis of the relative standard errors determined for the total and average sample estimates, and a glossary; all of which should provide the reader with enough information to make effective use of the data presented in this report. The following text will concentrate on the 1980 data since it represents a full year. Comparisons with the 1979 data will be made to point out any significant changes between the two time periods.

The reader should note that because of the survey design used, roughly one-half of the households remain the same during consecutive months, once the household rotation is in operation. Hence, there is a high degree of correlation between consecutive months, and comparisons of individual months may be statistically significant more often than implied by the relative standard errors shown in this report. Also, the Bureau of the Census has made revisions to the definition of SMSA's and non-SMSA's and to the estimate of the population in the United States. Both of these changes affect the data in this report. The reader should refer to the Limitations of the Data section for a discussion of this problem.

Fuel Consumption

From January 1980 to December 1980, there were 74.9 billion gallons (+ 1.8)¹ of gasoline and diesel fuel purchased by households within the United States.

This amount included 34.2 billion gallons (+1.9) of leaded fuels, 35.7 billion gallons (+1.8) of unleaded fuels, and 5.0 billion gallons (+0.6) of diesel fuels and fuels of unknown type. For the typical vehicle, 49.1 gallons (+1.2) were purchased during an average month in 1980.

To obtain an appropriate perspective on the 74.9 billion gallons of petroleum purchased as a fuel for residential transportation, it is useful to look at the following figures compiled from statistics presented in the November 1981 issue of Monthly Energy Review (MER), published by the U.S. Department of Energy (DOE):

Petroleum Consumption - 1980

Residential/Commercial Sector....	30.6 billion gallons ²
Industrial Sector.....	68.2 billion gallons
Transportation Sector.....	142.9 billion gallons
Electric Utilities Sector.....	19.9 billion gallons
U.S. Total	261.6 billion gallons

Motor Gasoline (Product Supplied)

1980.....101.1 billion gallons

Total United States Consumption of all Energy

1980.....76.2 quadrillion (10¹⁵) Btu

A comparison with the MER data indicates that more petroleum was purchased for use as fuel for household vehicles in the United States than was consumed in either the Residential/Commercial, Industrial, or Electric Utilities sectors.³ Figure 1 on page 3 shows that the 74.9 billion gallons purchased for household transportation represents 52.4 percent of all petroleum consumption in the transportation sector, and 28.6 percent of all petroleum consumed in the United States. In addition, of the 74.9 billion gallons of fuel purchased by households, at least 69.9 billion gallons⁴ were motor gasoline. This is 69.1 percent of the total amount of motor gasoline 'product supplied' in the United States.

¹The + values given in parentheses after a statistic quoted in the text represent two standard errors of the statistic. Adding and subtracting the value in parentheses from the statistic will produce an approximate 95 percent confidence interval.

²Excludes Residential/Commercial Transportation which is included in the Transportation Sector.

³The reader should note that the 74.9 billion gallons of fuel purchased by residential vehicles is not exactly comparable with the MER petroleum consumption statistics since the latter include petroleum used for lubrication and other nonfuel purposes while the 74.9 billion gallons is strictly petroleum used as a fuel.

⁴Includes 34.2 billion gallons of leaded gasoline and 35.7 billion gallons of unleaded gasoline as shown in Table 2.

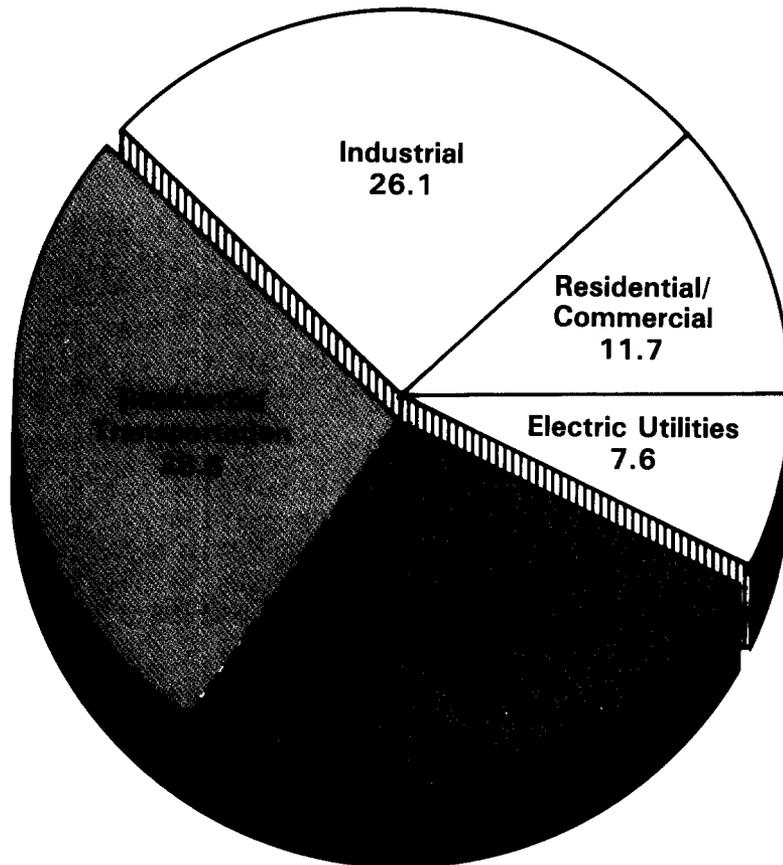


Figure 1. 1980 Petroleum Consumption in the United States (Percent)

Finally, converting the 74.9 billion gallons of fuel purchased into Btu:

$$\frac{(74.9 \times 10^9 \text{ gallons})}{(42 \text{ gallons per barrel})} \times 5,409,000 \text{ Btu per barrel}^1$$

results in 9.6 quadrillion Btu. This is 12.6 percent of the total amount of energy, 76.2 quadrillion Btu, consumed by all sectors of the U.S. economy.

Miles Driven

In 1980, residential vehicles were driven a total of 1,094.2 billion miles (+ 30.6), or an average of 8,614.8 miles (+ 241.2) per vehicle per year. (When average miles traveled per vehicle is calculated, those vehicles which are not used each month are included in the computations. Excluding vehicles not used results in a higher value for the annual miles traveled, 9,195.6 miles, per vehicle for the "fleet in use" in 1980 as opposed to the entire residential fleet.)²

In Table 10, the difference in total miles traveled varies by vehicle model year. These variations are statistically significant. Vehicles built between 1975 and 1980 were driven a total of 705.2 billion miles (+ 36.7). This is more than double the 299.7 billion miles (+ 19.8) traveled in 1970 to 1974 vehicles, and almost eight times the 88.3 billion miles (+ 11.3) traveled in 1969 or earlier vehicles.

The total miles traveled by vehicle class is, in part, dependent on the number of vehicles in each class. However, average miles traveled per vehicle for a typical month also show statistically significant differences (Table 12). Newer vehicles, 1975 to 1980, recorded the highest average miles traveled per vehicle, 904.4 (+ 27.1) for an average month. Those vehicles built from 1970 to 1974 had an average of 593.7 miles per vehicle (+ 28.5), and the older vehicles, 1969 and earlier, were driven an average of 371.4 miles (+ 26.7) during an average month. Overall, the average miles traveled per vehicle in an average month during 1980 was 717.9 (+ 20.1).

The following figures show the comparison between the Department of Transportation, (DOT), counts for total miles traveled by all vehicles in the United States, and the total miles traveled by household vehicles as reported by DOE in Tables 1 and 2 of this report:

¹Average number of Btu for petroleum consumed in the transportation sector as reported in the November 1981 issue of Monthly Energy Review.

²All averages per vehicle shown throughout this report include vehicles which were not driven and/or for which no fuel purchases were made, but were in working condition and available to be used. The 'non-use' of a vehicle is considered to be as valid an indicator of household behavior as the use of a vehicle, and, as such, should be included in averages which are intended to represent the consumption patterns of the residential transportation fleet as a whole.

Table A. Total Vehicle Miles, Household Vehicle Miles, and Household Miles as a Percentage of Vehicle Miles by Year and Month

<u>Year/Month</u>	<u>All Vehicle Miles¹ (Billions)</u>	<u>Household Vehicle Miles² (Billions)</u>	<u>Household Miles as a Percentage of Vehicle Miles</u>
1979			
June.....	131.2	93.2	71.0
July.....	134.9	98.4	72.9
August.....	139.9	93.9	67.1
September.....	127.6	89.4	70.1
October.....	131.6	94.4	71.7
November.....	123.4	89.6	72.6
December.....	123.2	87.4	70.9
Total.....	911.8	646.5 ³	70.9
1980			
January.....	115.3	83.5	72.4
February.....	106.2	81.0	76.3
March.....	124.2	89.2	71.8
April.....	125.4	86.3	68.8
May.....	131.2	89.8	68.4
June.....	132.4	93.1	70.3
July.....	138.4	101.0	73.0
August.....	140.6	98.6	70.1
September.....	127.5	90.0	70.6
October.....	132.2	95.3	72.1
November.....	123.3	93.9	76.2
December.....	124.1	92.3	74.4
Total.....	1,520.8	1,094.2 ³	71.9

¹Federal Highway Administration, U.S. Department of Transportation. Includes all miles traveled on roads and streets in the United States.

²Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, Department of Energy.

³May not sum due to rounding.

Household vehicles account for 71.9 percent of the miles traveled in the United States in 1980. As expected, seasonal variations are apparent when looking at miles driven on a monthly basis. For both the DOT and DOE data, generally higher monthly totals were recorded in the summer months than in the winter months.

Price

As can be seen in Figure 2 on page 7, the price of motor gasoline has changed dramatically since the survey was initiated in June 1979. The average price for all fuels has risen from 87.5 cents per gallon (+ 0.9) in June 1979 to a high of 122.4 cents per gallon (+ 1.2) in June 1980, an increase of 40 percent. Leaded fuels have increased in price from 85.2 cents per gallon (+ 0.9) to 120.2 cents (+ 2.4) during the same time period, and unleaded fuels have shown a comparable increase from 89.7 cents (+ 0.9) to 125.0 cents per gallon (+ 0.8) in July 1980.

Overall, the average price for fuel during the last six months of 1979 was 96.8 cents per gallon (+ 0.6). The average price for 1980 was 119.7 (+ 0.5). Regular leaded fuel had the lowest average price per gallon¹; 93.9 (+ 0.6) in the last half of 1979, and 116.2 (+ 0.7) in 1980.

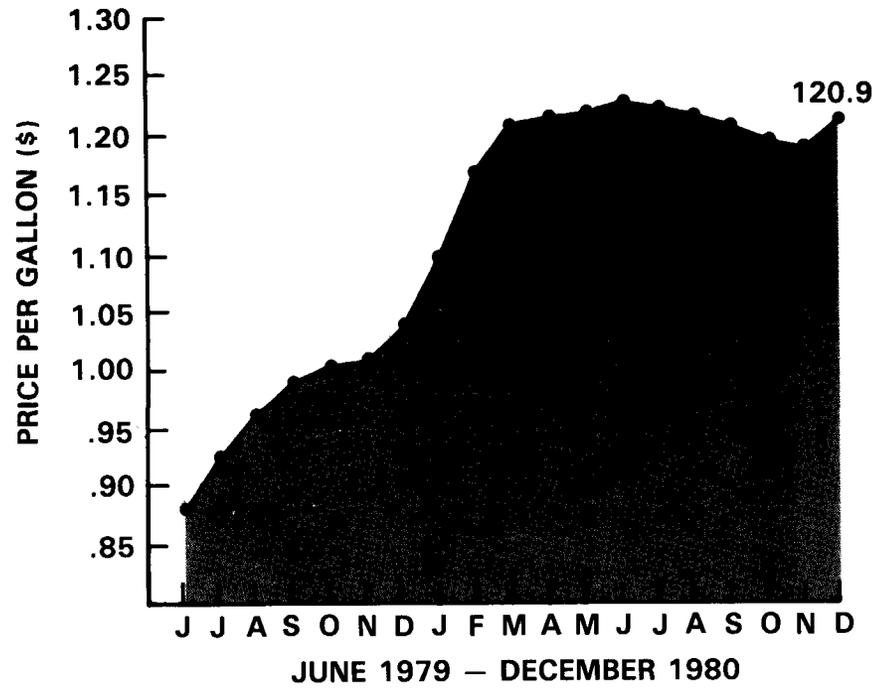
Table B. Comparisons of Price Series Data for Motor Gasoline

<u>Year/Month</u>	DOE/HTP ² (prices paid by <u>all households</u>)	DOE/HTP ² (prices paid by <u>urban households</u>)	BLS/CPI ³ (urban service <u>station prices</u>)
1979			
June.....	87.5	88.3	88.0
July.....	92.4	93.0	93.0
August.....	96.0	96.3	96.7
September.....	98.9	99.5	99.8
October.....	100.0	100.5	100.6
November.....	100.0	100.4	101.9
December.....	103.3	104.1	104.2
1980			
January.....	109.7	110.7	111.0
February.....	116.9	117.6	118.6
March.....	120.8	121.6	123.0
April.....	121.4	122.3	124.2
May.....	121.6	121.7	124.4
June.....	122.4	122.8	124.6
July.....	122.2	122.8	124.7
August.....	121.6	122.0	124.3
September.....	120.4	120.8	123.1
October.....	119.5	119.6	122.3
November.....	118.9	119.4	122.2
December.....	120.9	121.4	123.1

¹Excluding unknown and diesel fuels.

²Household Transportation Panel, Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration, Department of Energy. Coverage - 48 contiguous States and the District of Columbia.

³"U.S. City Average Retail Prices for Motor Gasoline", Consumer Price Index, Bureau of Labor Statistics, U.S. Department of Energy, March 1981 Monthly Energy Review, coverage represents 85 urban areas selected to represent all urban consumers which, in turn, represent 80 percent of the total U.S. population.



AVERAGE PRICE OF GASOLINE FOR RESIDENTIAL VEHICLES

Figure 2.

Both data series show a comparable rise in fuel prices from June 1979 to December 1980. The differences between the data series may not be statistically significant,¹ but it should be noted that the surveys do vary in the type of data collected. The DOE/HTP survey consists of data collected from a sample of U.S. motorists while the BLS survey is based on a sample of urban service stations throughout the United States.

Expenditures

Total expenditures for fuel for residential vehicles in 1980 were \$89.7 billion (+ 2.2). By fuel type, this amount included \$40.0 billion (+ 2.2) for leaded fuels, \$43.8 billion (+ 2.3) for unleaded fuels, and \$5.9 billion (+0.7) for diesel and unknown fuels.

The total expenditures for fuel for residential vehicles represents 5.4 percent of the total personal consumption expenditures, \$1,672.8 billion², in the United States in 1980. In addition, it is 36.9 percent of the \$243.0 billion³ spent on transportation and transportation products by consumers during 1980.

For the average month in 1980, \$58.80 (+ 1.4) was spent per vehicle for fuel. Annually, this is approximately \$1,270 per year (\$58.80 per vehicle per month x 1.8 vehicles per household x 12 months) for the average household which has one or more residential vehicles.

Total and average expenditures dramatically reflect the rising price of motor fuel during the survey months. In June 1979, the purchase of 6.5 billion gallons (+0.4) of fuel resulted in total expenditures of 5.7 billion dollars (+0.4), (average price of 87.5 cents per gallon (+0.9)). However, by June 1980, with an average price having increased to 122.4 cents per gallon (+ 1.2), a total of 6.1 billion gallons (+0.4) were purchased at a cost of 7.4 billion dollars (+0.5). Thus, while there is no statistically significant change in the total gallonage purchased in June 1979 as compared to June 1980, there was a statistically significant increase in the total cost of the fuel purchased.

¹For determining statistical significance, the relative standard error for the BLS/CPI price data would have to be known.

²Survey of Current Business, January 1982, Tables 2.2-2.3, p.12.

³Ibid, Table 2.2-2.3, p.12.

Miles Per Gallon

For 1980, residential vehicles in the United States averaged 14.7 miles per gallon (+0.3). The efficiency of the residential vehicles in the survey was affected by, among other factors, the size of the vehicle. Full-size vehicles averaged 12.5 miles per gallon (+0.2) during an average month in 1980. Intermediates traveled 13.6 miles per gallon (+0.2). Compacts averaged 15.7 miles per gallon (+0.3), and subcompacts were the most fuel-efficient with an average of 22.7 miles per gallon (+0.5).

In addition, newer vehicles were more fuel-efficient than older vehicles. Those vehicles built from 1975 through 1980 had a combined average miles per gallon of 15.7 (+0.3) while 1970 to 1974 vehicles, and 1969 and older vehicles, posted average miles per gallon of 13.2 (+0.2) and 12.9 (+0.4), respectively.

As data for future months are processed and made available, the effects on vehicle performance of various factors including seasonality can be determined.

Primary Vehicles

Of particular interest is the classification of residential vehicles into 'primary' and 'secondary' categories in order to determine specific usage patterns within individual households, or the population as a whole. Alternative vehicle usage within a household is a real option for those households which have more than one vehicle. The use of large inefficient vehicles may be quite different than the use of small efficient vehicles. Tables 5 through 8 have been prepared to give some insight into these differences.

Tables 5 and 6 show average statistics classified by vehicles which have been ranked by miles per gallon (mpg), with vehicle No. 1 having the highest mpg. In Tables 7 and 8, the vehicles are ranked by mileage, with vehicle No. 1 having the highest mileage.

In both sets of tables, the data show similar trends. When ranked by mpg, the No. 1 vehicle had the highest average miles traveled than other vehicles in 1979 and 1980. When the vehicles are ranked by miles traveled, the No. 1 vehicles had the highest mpg in 1979 and 1980. Both of these statements indicate that the driving burden is not equally shared by vehicles in multi-vehicle households.

Additional ranking priorities, such as ranking by vehicle age, fuel expenditures, and type of fuel consumed, would assist in interpreting the relationship between vehicles in multi-vehicle households. Future reports will examine more closely the characteristics of No. 1 vehicles as compared to other vehicles as well as to the socioeconomic characteristics of the households in the survey.

TABLE 1. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY TOTALS FOR JUNE 1979 TO DECEMBER 1979

	MONTH							TOTAL
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79	
U.S. TOTALS								
MILES DRIVEN (BILLIONS).....	93.2	98.4	93.9	89.4	94.4	89.6	87.4	646.5
EXPENDITURES (BILLIONS OF DOLLARS)								
ALL FUELS.....	5.7	6.0	6.2	5.8	6.4	6.4	6.6	43.1
LEADED FUELS.....	2.7	2.8	2.9	2.7	2.7	3.0	3.2	20.0
UNLEADED FUELS.....	2.7	2.9	2.7	2.5	3.2	3.1	3.1	20.3
UNKNOWN, OTHER, & DIESEL FUELS..	.3	.3	.6	.6	.5	.3	.2	2.8
GALLONS PURCHASED (BILLIONS)								
ALL FUELS.....	6.5	6.5	6.5	5.9	6.4	6.4	6.3	44.5
LEADED FUELS.....	3.2	3.1	3.1	2.8	2.7	3.0	3.1	21.1
UNLEADED FUELS.....	3.0	3.0	2.8	2.5	3.2	3.1	2.9	20.5
UNKNOWN, OTHER, & DIESEL FUELS..	.3	.3	.6	.6	.5	.3	.2	2.9
NUMBER OF HOUSEHOLDS (MILLIONS)								
WITH VEHICLES.....	69.0	69.2	69.3	69.4	69.6	69.7	69.8	
NUMBER OF VEHICLES (MILLIONS).....								
DRIVEN 100 MILES OR LESS.....	122.9	123.2	123.5	123.9	124.2	124.5	124.8	
DRIVEN MORE THAN 100 MILES.....	13.7	13.2	10.3	10.3	10.3	13.1	18.5	
	109.2	110.0	113.2	113.6	113.9	111.5	106.2	

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 2. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY TOTALS FOR 1980

	MONTH												TOTAL
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80	
U.S. TOTALS													
MILES DRIVEN (BILLIONS).....	83.5	81.0	89.2	86.3	89.8	93.1	101.0	98.6	90.0	95.3	93.9	92.3	1094.2
EXPENDITURES (BILLIONS OF DOLLARS)													
ALL FUELS.....	6.6	7.0	7.5	7.1	7.3	7.4	7.9	8.0	7.2	7.8	7.9	8.0	89.7
LEADED FUELS.....	3.2	3.3	3.5	3.3	3.4	3.4	3.3	3.5	2.9	3.4	3.5	3.3	40.0
UNLEADED FUELS.....	3.0	3.3	3.5	3.2	3.4	3.5	4.1	4.0	3.8	4.0	3.9	4.1	43.8
UNKNOWN, OTHER, & DIESEL FUELS..	.3	.4	.6	.6	.5	.5	.5	.5	.5	.4	.5	.6	5.9
GALLONS PURCHASED (BILLIONS)													
ALL FUELS.....	6.0	6.0	6.2	5.9	6.0	6.1	6.5	6.6	6.0	6.5	6.6	6.6	74.9
LEADED FUELS.....	2.9	2.9	3.0	2.7	2.9	2.8	2.8	3.0	2.5	2.9	3.0	2.8	34.2
UNLEADED FUELS.....	2.7	2.7	2.8	2.6	2.7	2.8	3.3	3.2	3.1	3.3	3.2	3.3	35.7
UNKNOWN, OTHER, & DIESEL FUELS..	.3	.4	.5	.5	.4	.4	.5	.4	.4	.4	.4	.5	5.0
NUMBER OF HOUSEHOLDS (MILLIONS)													
WITH VEHICLES.....	70.0	70.1	70.2	70.3	70.4	70.6	70.7	70.8	70.9	71.0	71.2	71.3	
NUMBER OF VEHICLES (MILLIONS).....	125.2	125.5	125.7	126.2	126.7	126.9	127.2	127.6	128.0	128.0	128.4	128.8	
DRIVEN 100 MILES OR LESS.....	16.8	14.8	10.8	13.8	12.0	13.2	12.2	12.8	11.8	12.6	11.8	13.1	
DRIVEN MORE THAN 100 MILES.....	108.4	110.7	114.9	112.4	114.7	113.7	115.1	114.8	116.2	115.4	116.6	115.7	

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 3. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY AVERAGES FOR JUNE 1979 TO DECEMBER 1979

	MONTH							AVERAGE MONTH
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79	
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	52.9	52.5	52.3	47.4	51.9	51.5	50.9	51.3
GALLONS CONSUMED.....	51.1	53.2	51.9	47.8	51.8	51.3	50.2	51.0
MILES DRIVEN.....	758.8	798.9	760.6	721.6	760.3	719.4	700.8	745.6
EXPENDITURES (DOLLARS).....	46.3	48.5	50.2	46.9	51.9	51.5	52.5	49.7
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	61.9	61.9	60.4	60.0	59.5	58.0	58.6	60.0
FUEL TANK CAPACITY (GALLONS).....	19.4	19.5	19.9	19.6	19.6	19.5	19.8	19.6
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON)								
ALL FUELS.....	87.5	92.4	96.0	98.9	100.0	100.0	103.3	96.8
LEADED FUELS.....	85.2	90.3	94.0	96.7	97.5	98.7	101.9	94.8
REGULAR.....	84.5	89.7	93.1	95.9	96.3	97.5	101.2	93.9
PREMIUM.....	90.9	96.1	101.1	101.9	105.0	104.5	107.9	101.2
UNKNOWN.....	82.3	NA	107.0	99.0	99.0	109.1	101.0	104.4
UNLEADED FUELS.....	89.7	94.7	98.4	101.3	102.1	101.7	105.8	99.0
REGULAR.....	89.6	94.7	97.9	100.8	101.5	101.6	105.9	99.0
PREMIUM.....	91.6	97.7	101.4	105.1	104.6	106.7	110.1	102.6
UNKNOWN.....	89.3	93.9	98.5	101.9	103.1	97.9	103.0	97.6
UNKNOWN, OTHER, & DIESEL FUELS..	89.1	90.5	95.9	98.6	99.6	96.8	93.6	95.7
MILES PER GALLON.....	14.9	15.0	14.7	15.1	14.7	14.0	14.0	14.6

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 4. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY AVERAGES FOR 1980

	MONTH												AVERAGE MONTH
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80	
AVERAGES PER VEHICLE													
GALLONS PURCHASED.....	47.8	48.0	49.5	46.6	47.1	47.8	51.1	51.5	46.7	50.7	51.7	51.2	49.1
GALLONS CONSUMED.....	48.2	47.2	49.5	46.5	46.6	47.9	51.4	51.2	46.3	50.5	51.6	50.9	49.0
MILES DRIVEN.....	667.4	645.6	709.7	683.9	708.7	733.8	794.1	773.0	703.3	744.7	731.4	716.6	717.9
EXPENDITURES (DOLLARS).....	52.4	56.1	59.9	56.5	57.3	58.5	62.4	62.6	56.2	60.6	61.4	62.0	58.8
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	56.3	56.6	57.1	56.8	57.2	56.6	56.6	56.4	55.7	56.6	56.3	55.2	56.5
FUEL TANK CAPACITY (GALLONS).....	19.9	19.8	19.7	19.8	19.7	19.7	19.8	20.0	19.8	20.0	20.2	19.9	19.8
AVERAGES PER GALLON													
PRICE (CENTS PER GALLON)													
ALL FUELS.....	109.7	116.9	120.8	121.4	121.6	122.4	122.2	121.6	120.4	119.5	118.9	120.9	119.7
LEADED FUELS.....	107.8	114.8	118.6	119.8	119.5	120.2	119.4	118.5	117.6	116.5	115.2	117.2	117.0
REGULAR.....	106.8	114.0	117.9	119.0	118.8	119.7	118.1	117.7	116.5	115.4	114.5	116.6	116.2
PREMIUM.....	114.6	121.8	124.8	128.2	127.3	128.3	128.9	128.2	129.7	131.5	128.2	127.4	125.8
UNKNOWN.....	108.1	120.9	125.9	124.2	129.4	125.4	120.9	121.6	117.2	120.9	115.8	120.3	120.2
UNLEADED FUELS.....	112.3	119.4	123.5	124.4	124.3	124.9	125.0	124.7	123.0	122.4	122.3	124.2	122.6
REGULAR.....	111.8	118.5	122.8	123.8	124.3	124.6	124.4	123.7	122.3	122.0	121.6	123.3	122.0
PREMIUM.....	119.1	125.0	129.8	129.9	130.5	130.5	131.1	132.3	130.8	128.5	128.4	130.3	128.8
UNKNOWN.....	111.5	119.8	124.3	125.5	122.2	124.4	124.9	126.1	122.6	121.5	121.9	124.2	122.4
UNKNOWN, OTHER, & DIESEL FUELS..	105.6	114.1	118.1	114.6	118.5	120.3	119.4	120.0	116.8	116.9	118.9	119.8	117.1
MILES PER GALLON.....	13.8	13.7	14.4	14.7	15.2	15.3	15.5	15.1	15.2	14.8	14.2	14.1	14.7

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 5. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLES RANKED BY MPG

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	51.3	51.5	55.4	47.2	53.6	59.8	40.5	30.1
GALLONS CONSUMED.....	51.0	50.9	55.0	47.1	52.7	60.3	40.6	30.5
MILES DRIVEN.....	745.6	748.1	883.6	592.2	928.7	823.4	464.2	339.2
EXPENDITURES (DOLLARS).....	49.7	50.3	53.6	45.6	51.6	57.7	38.6	28.7
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	60.0	63.7	60.0	58.8	56.9	58.2	58.5	58.0
FUEL TANK CAPACITY (GALLONS).....	19.6	19.8	18.6	20.7	17.7	20.2	21.1	20.4
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	96.8	97.7	96.8	96.7	96.5	96.4	95.3	95.4
MILES PER GALLON.....	14.6	14.7	16.1	12.6	17.6	13.7	11.4	11.1

THE #1 VEHICLE HAS THE HIGHEST MPG, THE #2 VEHICLE THE NEXT HIGHEST MPG, ETC.
 SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
 RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
 OFFICE OF ENERGY MARKETS AND END USE,
 ENERGY INFORMATION ADMINISTRATION.

TABLE 6. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY VEHICLES RANKED BY MPG

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	49.1	50.3	55.0	43.2	51.6	53.1	41.1	32.0
GALLONS CONSUMED.....	49.0	50.0	54.7	43.3	51.3	53.0	41.4	32.0
MILES DRIVEN.....	717.9	720.7	895.6	538.2	940.4	727.7	478.6	329.8
EXPENDITURES (DOLLARS).....	58.8	60.9	66.1	51.5	61.5	63.2	48.5	37.4
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	56.5	59.8	56.3	55.2	56.4	55.5	54.1	51.6
FUEL TANK CAPACITY (GALLONS).....	19.8	19.8	18.7	21.0	17.4	20.1	22.4	21.5
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	119.7	121.0	120.1	119.2	119.2	119.1	118.1	116.9
MILES PER GALLON.....	14.7	14.4	16.4	12.4	18.3	13.7	11.6	10.3

THE #1 VEHICLE HAS THE HIGHEST MPG, THE #2 VEHICLE THE NEXT HIGHEST MPG, ETC.
 SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
 RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
 OFFICE OF ENERGY MARKETS AND END USE,
 ENERGY INFORMATION ADMINISTRATION.

TABLE 7. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLES RANKED BY MILES TRAVELED

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
			AVERAGES PER VEHICLE					
GALLONS PURCHASED.....	51.3	51.5	67.6	31.8	83.3	46.1	23.2	16.3
GALLONS CONSUMED.....	51.0	50.9	67.4	31.5	83.5	45.8	23.1	15.9
MILES DRIVEN.....	745.6	748.1	1010.7	432.2	1239.6	662.2	305.1	195.8
EXPENDITURES (DOLLARS).....	49.7	50.3	65.6	30.7	80.3	44.1	22.4	15.6
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	60.0	63.7	60.3	58.4	60.0	56.9	57.2	53.8
FUEL TANK CAPACITY (GALLONS).....	19.6	19.8	19.8	19.2	20.1	19.2	19.9	18.3
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	96.8	97.7	96.9	96.4	96.3	95.8	96.3	95.7
MILES PER GALLON.....	14.6	14.7	15.0	13.7	14.9	14.4	13.2	12.3

THE #1 VEHICLE HAS THE HIGHEST MILES TRAVELED, THE #2 VEHICLE THE NEXT HIGHEST MILES TRAVELED, ETC.

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 8. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY VEHICLES RANKED BY MILES TRAVELED

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	49.1	50.3	66.1	30.1	77.7	45.5	24.0	12.2
GALLONS CONSUMED.....	49.0	50.0	66.2	29.8	77.8	45.4	23.7	12.3
MILES DRIVEN.....	717.9	720.7	1012.5	398.6	1212.3	630.2	307.8	155.8
EXPENDITURES (DOLLARS).....	58.8	60.9	79.3	35.9	92.2	54.2	28.4	14.3
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	56.5	59.8	56.9	54.4	57.7	54.7	53.5	49.6
FUEL TANK CAPACITY (GALLONS).....	19.8	19.8	19.8	19.8	19.5	20.1	20.4	19.8
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	119.7	121.0	120.0	119.1	118.7	119.0	118.5	117.8
MILES PER GALLON.....	14.7	14.4	15.3	13.4	15.6	13.9	13.0	12.7

THE #1 VEHICLE HAS THE HIGHEST MILES TRAVELED, THE #2 VEHICLE THE NEXT HIGHEST MILES TRAVELED, ETC.
 SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
 RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
 OFFICE OF ENERGY MARKETS AND END USE,
 ENERGY INFORMATION ADMINISTRATION.

TABLE 9. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLE CHARACTERISTICS

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTERMEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1980	1970 TO 1974	1960 AND EARLIER	UNKNOWN
U.S. TOTALS											
MILES DRIVEN (BILLIONS).....	646.5	162.4	111.3	109.8	122.5	59.5	81.0	387.5	198.2	60.5	0.3
EXPENDITURES (BILLIONS OF DOLLARS)											
ALL FUELS.....	43.1	12.5	8.0	6.9	5.3	4.5	5.9	24.5	14.1	4.4	.0
LEADED FUELS.....	20.0	5.5	2.9	2.5	2.6	3.0	3.6	4.9	11.5	3.6	.0
UNLEADED FUELS.....	20.3	6.1	4.8	4.0	2.5	1.2	1.6	18.5	1.4	.3	.0
UNKNOWN, OTHER, & DIESEL FUELS.....	2.8	.9	.4	.3	.2	.3	.6	1.1	1.2	.5	NA
GALLONS PURCHASED (BILLIONS)											
ALL FUELS.....	44.5	12.9	8.3	7.0	5.4	4.7	6.1	25.0	14.9	4.6	.0
LEADED FUELS.....	21.1	5.7	3.0	2.7	2.7	3.1	3.8	5.2	12.2	3.7	.0
UNLEADED FUELS.....	20.5	6.2	4.8	4.1	2.5	1.2	1.6	18.7	1.4	.4	.0
UNKNOWN, OTHER, & DIESEL FUELS.....	2.9	1.0	.4	.3	.2	.3	.6	1.1	1.2	.5	NA
NUMBER OF VEHICLES (MILLIONS).....	123.9	31.2	21.8	22.2	20.0	11.5	17.1	58.2	43.6	21.9	.2

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 10. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY VEHICLE CHARACTERISTICS

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTERMEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1981	1970 TO 1974	1960 AND EARLIER	UNKNOWN
U.S. TOTALS											
MILES DRIVEN (BILLIONS).....	1094.2	240.0	203.9	199.9	215.8	133.5	101.2	705.2	299.7	88.3	0.9
EXPENDITURES (BILLIONS OF DOLLARS)											
ALL FUELS.....	89.7	23.1	18.2	15.4	11.4	12.9	8.7	54.6	26.9	8.1	.1
LEADED FUELS.....	40.0	9.8	6.2	5.1	4.7	8.9	5.2	11.6	21.7	6.6	.0
UNLEADED FUELS.....	43.8	11.7	10.9	9.4	6.1	3.2	2.5	40.7	2.5	.6	.0
UNKNOWN, OTHER, & DIESEL FUELS.....	5.9	1.6	1.0	.9	.7	.6	1.0	2.3	2.6	.9	.0
GALLONS PURCHASED (BILLIONS)											
ALL FUELS.....	74.9	19.3	15.0	12.8	9.5	10.9	7.4	45.1	22.8	6.9	.1
LEADED FUELS.....	34.2	8.4	5.3	4.4	4.0	7.7	4.5	10.0	18.5	5.6	.0
UNLEADED FUELS.....	35.7	9.5	8.9	7.7	4.9	2.6	2.1	33.1	2.1	.5	.0
UNKNOWN, OTHER, & DIESEL FUELS.....	5.0	1.4	.9	.8	.5	.5	.9	2.0	2.2	.8	.0
NUMBER OF VEHICLES (MILLIONS).....	127.0	30.2	23.4	23.2	21.2	16.1	12.8	65.0	42.1	19.8	.1

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 11. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLE CHARACTERISTICS

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTERMEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1980	1970 TO 1974	1960 AND EARLIER	UNKNOWN
AVERAGES PER VEHICLE											
GALLONS PURCHASED.....	51.3	59.2	54.1	45.3	38.7	58.8	51.1	61.3	48.7	30.2	18.2
GALLONS CONSUMED.....	51.0	58.5	53.5	45.0	38.5	59.2	51.4	61.0	48.5	29.8	20.1
MILES DRIVEN.....	745.6	743.2	729.1	706.1	874.4	739.7	676.0	950.5	650.1	394.4	280.3
EXPENDITURES (DOLLARS).....	49.7	57.4	52.6	44.2	37.7	56.0	48.8	60.2	46.2	28.9	18.5
FUEL INVENTORY AS A PERCENT											
OF TANK CAPACITY.....	60.0	60.6	60.0	60.3	59.8	59.1	59.2	62.0	58.2	57.7	53.8
FUEL TANK CAPACITY (GALLONS).....	19.6	23.2	21.0	17.5	12.9	22.1	20.3	19.6	19.8	19.5	17.0
AVERAGES PER GALLON											
PRICE (CENTS PER GALLON)											
ALL FUELS.....	96.8	97.0	97.3	97.5	97.4	95.2	95.5	98.1	94.9	95.7	101.7
MILES PER GALLON.....	14.6	12.7	13.6	15.7	22.7	12.5	13.1	15.6	13.4	13.2	13.9

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 12. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY VEHICLE CHARACTERISTICS

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTERMEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1981	1970 TO 1974	1960 AND EARLIER	UNKNOWN
AVERAGES PER VEHICLE											
GALLONS PURCHASED.....	49.1	53.1	53.5	45.9	37.3	56.7	47.8	57.9	45.2	28.9	33.3
GALLONS CONSUMED.....	49.0	52.8	53.2	45.7	37.3	56.4	48.1	57.8	44.9	28.9	33.8
MILES DRIVEN.....	717.9	662.2	725.4	717.2	847.4	691.0	656.1	904.4	593.7	371.4	525.2
EXPENDITURES (DOLLARS).....	58.8	63.8	64.7	55.3	44.9	66.6	56.4	70.1	53.2	34.1	39.5
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	56.5	56.5	57.3	57.3	57.3	54.8	54.5	58.5	54.4	53.6	58.7
FUEL TANK CAPACITY (GALLONS).....	19.8	23.6	21.0	18.0	13.1	22.4	20.1	19.8	20.0	19.8	18.3
AVERAGES PER GALLON											
PRICE (CENTS PER GALLON) ALL FUELS.....	119.7	120.0	120.9	120.4	120.3	117.4	118.1	121.0	117.7	118.0	118.7
MILES PER GALLON.....	14.7	12.5	13.6	15.7	22.7	12.3	13.6	15.7	13.2	12.9	15.5

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 15. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY GEOGRAPHIC LOCATION

	UNITED STATES			CENSUS REGIONS											
	T O T A L	U R B A N	R U R A L	NORTHEAST			NORTH CENTRAL			SOUTH			WEST		
				T O T A L	U R B A N	R U R A L									
AVERAGES PER VEHICLE															
GALLONS PURCHASED.....	51.3	50.1	54.2	50.0	48.8	53.8	52.4	52.1	53.0	53.2	52.4	54.6	47.9	45.6	55.2
GALLONS CONSUMED.....	51.0	49.8	54.0	49.6	48.4	53.8	51.9	51.5	52.9	53.0	52.0	54.5	47.8	45.6	55.0
MILES DRIVEN.....	745.6	719.2	808.0	718.3	680.1	846.0	744.9	739.4	758.3	774.0	751.6	810.6	724.0	685.4	851.6
EXPENDITURES (DOLLARS).....	49.7	48.8	51.7	49.6	48.5	53.3	50.7	51.0	50.1	49.8	49.0	51.2	48.1	46.1	54.5
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	60.0	60.3	59.4	61.5	61.5	61.4	60.1	60.6	59.0	57.9	58.1	57.6	61.8	61.5	62.5
FUEL TANK CAPACITY (GALLONS).....	19.6	19.5	20.0	19.3	19.2	19.3	20.3	20.1	20.7	19.8	19.8	19.8	18.8	18.5	20.1
AVERAGES PER GALLON															
PRICE (CENTS PER GALLON)															
ALL FUELS.....	96.8	97.4	95.5	99.2	99.3	99.0	96.9	97.8	94.5	93.6	93.5	93.7	100.5	101.1	98.7
LEADED FUELS.....	94.8	95.4	93.7	96.8	97.1	95.6	94.3	95.0	92.7	91.8	91.5	92.2	99.4	100.3	97.5
REGULAR.....	93.9	94.4	92.9	96.1	96.2	95.5	94.2	94.8	92.5	91.1	90.8	91.5	97.4	98.2	95.8
PREMIUM.....	101.2	101.4	100.6	102.2	102.3	99.1	98.8	100.0	97.1	96.7	95.6	98.5	105.5	105.8	104.6
UNKNOWN.....	104.4	110.7	91.1	97.0	98.9	95.7	106.4	113.0	93.2	91.8	97.0	89.2	114.0	114.0	NA
UNLEADED FUELS.....	99.0	99.4	98.2	101.1	101.2	100.8	99.9	100.5	98.1	95.8	95.6	96.1	101.8	102.0	100.7
REGULAR.....	99.0	99.3	98.2	100.8	100.9	100.6	99.9	100.5	98.1	95.4	95.2	95.7	102.5	102.9	101.3
PREMIUM.....	102.6	103.0	100.6	106.8	107.3	102.5	104.4	104.3	104.6	100.1	100.5	99.1	103.0	103.0	NA
UNKNOWN.....	97.6	97.7	97.5	99.9	99.3	101.8	98.0	98.4	97.0	94.3	93.6	95.7	100.2	100.4	99.0
UNKNOWN, OTHER, & DIESEL FUELS	95.7	97.0	93.8	97.6	97.6	97.9	93.3	96.8	88.3	93.1	92.7	93.5	100.9	100.8	101.1
MILES PER GALLON.....	14.6	14.5	15.0	14.5	14.1	15.7	14.4	14.4	14.3	14.6	14.4	14.9	15.1	15.0	15.5

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 16. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY GEOGRAPHIC LOCATION

	UNITED STATES			CENSUS REGIONS											
	T O T A L	U R B A N	R U R A L	NORTHEAST			NORTH CENTRAL			SOUTH			WEST		
				T O T A L	U R B A N	R U R A L									
AVERAGES PER VEHICLE															
GALLONS PURCHASED.....	49.1	47.9	51.7	49.4	48.3	53.3	50.9	49.3	54.1	49.9	48.8	51.3	45.4	45.1	46.7
GALLONS CONSUMED.....	49.0	47.7	51.6	49.2	48.0	53.3	50.8	49.1	54.2	49.6	48.5	51.0	45.4	45.0	46.8
MILES DRIVEN.....	717.9	697.0	761.9	730.4	698.9	835.5	717.7	696.5	760.4	734.0	704.5	772.9	681.9	687.1	663.5
EXPENDITURES (DOLLARS).....	58.8	57.7	61.3	60.6	59.3	64.9	60.3	58.9	63.3	58.8	57.4	60.6	55.4	55.1	56.3
FUEL INVENTORY AS A PERCENT															
OF TANK CAPACITY.....	56.5	56.5	56.4	57.4	57.6	56.7	56.9	56.2	58.3	53.9	54.1	53.7	58.9	58.6	59.9
FUEL TANK CAPACITY (GALLONS).....	19.8	19.6	20.3	19.4	19.5	19.1	20.4	20.1	21.0	19.8	19.9	19.7	19.6	18.9	21.9
AVERAGES PER GALLON															
PRICE (CENTS PER GALLON)															
ALL FUELS.....	119.7	120.3	118.6	122.5	122.8	121.6	118.5	119.4	117.1	117.9	117.7	118.2	121.9	122.3	120.6
LEADED FUELS.....	117.0	117.4	116.4	119.4	119.8	118.1	115.5	116.0	114.8	115.1	114.5	115.8	120.1	120.5	119.2
REGULAR.....	116.2	116.4	116.0	118.8	119.2	117.9	115.2	115.6	114.7	114.7	114.1	115.4	118.3	118.3	118.3
PREMIUM.....	125.8	126.5	123.7	125.4	125.6	122.7	126.9	126.8	127.8	121.9	121.1	122.7	127.5	128.2	124.6
UNKNOWN.....	120.2	120.9	117.8	123.0	124.1	120.9	117.7	120.1	109.8	117.3	118.2	116.1	121.3	121.1	122.7
UNLEADED FUELS.....	122.6	123.1	121.6	125.0	125.0	124.8	121.7	122.3	120.4	120.9	121.0	120.9	124.8	125.0	124.3
REGULAR.....	122.0	122.5	121.1	124.2	124.2	124.4	121.0	121.6	119.8	120.3	120.3	120.4	124.8	125.1	123.6
PREMIUM.....	128.8	129.4	127.5	130.7	131.2	128.9	129.8	130.4	127.9	127.0	127.2	126.8	128.0	127.9	129.0
UNKNOWN.....	122.4	122.9	121.3	124.7	124.9	123.7	121.8	122.0	121.3	120.1	120.7	119.2	124.5	124.3	125.1
UNKNOWN, OTHER, & DIESEL FUELS..	117.1	117.7	116.0	121.3	120.9	122.0	114.3	117.2	108.6	116.1	114.5	117.7	118.7	119.1	116.7
MILES PER GALLON.....	14.7	14.6	14.8	14.8	14.6	15.7	14.1	14.2	14.0	14.8	14.5	15.2	15.0	15.3	14.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 17. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY FAMILY INCOME

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
U.S. TOTALS							
MILES DRIVEN (BILLIONS).....	646.5	27.4	62.8	114.2	115.7	114.4	212.0
EXPENDITURES (BILLIONS OF DOLLARS)							
ALL FUELS.....	43.1	1.9	4.2	7.5	7.9	7.7	13.8
LEADED FUELS.....	20.0	1.0	2.2	3.6	4.0	3.3	5.7
UNLEADED FUELS.....	20.3	.6	1.7	3.3	3.5	4.0	7.2
UNKNOWN, OTHER, & DIESEL FUELS..	2.8	.3	.3	.7	.4	.4	.8
GALLONS PURCHASED (BILLIONS)							
ALL FUELS.....	44.5	2.0	4.5	7.8	8.2	7.9	14.1
LEADED FUELS.....	21.1	1.1	2.4	3.8	4.3	3.5	6.0
UNLEADED FUELS.....	20.5	.6	1.8	3.3	3.6	4.0	7.2
UNKNOWN, OTHER, & DIESEL FUELS..	2.9	.3	.3	.7	.4	.4	.8
NUMBER OF HOUSEHOLDS (MILLIONS)							
WITH VEHICLES.....	69.4	6.0	9.7	14.4	11.9	10.8	16.5
NUMBER OF VEHICLES (MILLIONS).....	123.9	7.7	14.5	23.3	21.4	20.8	36.1

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 18. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY FAMILY INCOME

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
		U.S. TOTALS					
MILES DRIVEN (BILLIONS).....	1094.2	49.6	116.9	188.7	172.2	190.5	376.2
EXPENDITURES (BILLIONS OF DOLLARS)							
ALL FUELS.....	89.7	4.3	9.9	15.6	14.3	15.7	29.9
LEADED FUELS.....	40.0	1.7	4.8	7.9	6.9	7.4	11.4
UNLEADED FUELS.....	43.8	1.8	4.1	6.9	6.7	7.3	17.1
UNKNOWN, OTHER, & DIESEL FUELS..	5.9	.8	1.0	.8	.8	1.0	1.4
GALLONS PURCHASED (BILLIONS)							
ALL FUELS.....	74.9	3.6	8.2	13.1	12.1	13.1	24.8
LEADED FUELS.....	34.2	1.5	4.0	6.7	5.9	6.3	9.7
UNLEADED FUELS.....	35.7	1.4	3.3	5.6	5.5	6.0	13.9
UNKNOWN, OTHER, & DIESEL FUELS..	5.0	.7	.9	.7	.7	.8	1.2
NUMBER OF HOUSEHOLDS (MILLIONS)							
WITH VEHICLES.....	70.6	5.7	11.4	13.8	10.4	10.7	18.5
NUMBER OF VEHICLES (MILLIONS).....	127.0	7.7	16.8	22.3	19.0	21.4	39.8

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 19. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY FAMILY INCOME

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
AVERAGES PER VEHICLE							
GALLONS PURCHASED.....	51.3	37.0	43.7	47.8	54.9	54.3	55.9
GALLONS CONSUMED.....	51.0	36.7	43.0	47.7	54.7	53.8	55.8
MILES DRIVEN.....	745.6	508.4	617.2	698.9	773.5	785.1	839.0
EXPENDITURES (DOLLARS).....	49.7	35.8	41.6	46.2	52.7	52.8	54.6
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	60.0	60.4	59.1	61.6	58.9	59.0	60.5
FUEL TANK CAPACITY (GALLONS).....	19.6	19.8	20.1	19.4	19.9	19.4	19.5
AVERAGES PER GALLON							
PRICE (CENTS PER GALLON)							
ALL FUELS.....	96.8	96.9	95.2	96.6	95.9	97.2	97.6
LEADED FUELS.....	94.8	95.4	94.0	94.4	94.7	94.7	95.3
REGULAR.....	93.9	94.4	93.6	93.5	94.0	94.0	94.0
PREMIUM.....	101.2	105.9	98.9	100.5	99.6	100.9	102.5
UNKNOWN.....	104.4	NA	92.6	98.0	99.8	83.2	112.1
UNLEADED FUELS.....	99.0	99.5	97.2	99.4	97.4	99.6	99.8
REGULAR.....	99.0	100.9	97.9	99.4	97.2	100.0	99.3
PREMIUM.....	102.6	97.5	102.6	104.4	98.6	103.0	103.2
UNKNOWN.....	97.6	96.7	92.0	97.1	97.7	96.3	100.3
UNKNOWN, OTHER, & DIESEL FUELS....	95.7	96.4	94.1	95.5	96.8	94.8	96.0
MILES PER GALLON.....	14.6	13.9	14.4	14.7	14.1	14.6	15.0

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 20. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY FAMILY INCOME

	TOTAL	FAMILY INCOME					
		\$0	\$5,000	\$10,000	\$15,000	\$20,000	\$25,000
		TO \$4,999	TO \$9,999	TO \$14,999	TO \$19,999	TO \$24,999	OR MORE
AVERAGES PER VEHICLE							
GALLONS PURCHASED.....	49.1	39.0	41.0	48.9	52.8	51.1	51.9
GALLONS CONSUMED.....	49.0	38.7	40.5	48.7	52.8	50.8	51.9
MILES DRIVEN.....	717.9	539.7	580.9	705.5	754.7	740.9	786.8
EXPENDITURES (DOLLARS).....	58.8	47.1	49.0	58.3	62.8	60.9	62.5
FUEL INVENTORY AS A PERCENT							
OF TANK CAPACITY.....	56.5	57.0	56.8	55.8	55.2	54.9	57.9
FUEL TANK CAPACITY (GALLONS).....	19.8	19.6	20.0	20.0	19.9	19.8	19.8
AVERAGES PER GALLON							
PRICE (CENTS PER GALLON)							
ALL FUELS.....	119.7	120.6	119.7	119.3	119.0	119.2	120.4
LEADED FUELS.....	117.0	118.1	118.0	116.7	116.5	116.8	117.2
REGULAR.....	116.2	116.7	117.0	116.3	115.8	115.9	116.3
PREMIUM.....	125.8	126.1	125.5	122.3	125.3	127.9	127.3
UNKNOWN.....	120.2	120.5	122.9	118.5	120.0	114.9	122.1
UNLEADED FUELS.....	122.6	123.5	122.3	122.5	122.0	122.1	123.2
REGULAR.....	122.0	123.5	121.4	122.1	121.1	121.7	122.5
PREMIUM.....	128.8	128.3	129.6	126.7	128.2	127.7	130.1
UNKNOWN.....	122.4	121.9	121.1	122.6	122.1	122.1	123.0
UNKNOWN, OTHER, & DIESEL FUELS..	117.1	119.9	117.7	118.2	116.2	117.0	115.2
MILES PER GALLON.....	14.7	13.9	14.3	14.5	14.3	14.6	15.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 21. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY HOUSEHOLD CHARACTERISTICS

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2 VEHICLES	1 DRIVER	2 DRIVERS	3 OR MORE DRIVERS
U.S. TOTALS								
MILES DRIVEN (BILLIONS).....	646.5	524.9	121.6	148.6	497.9	480.8	165.3	0.5
EXPENDITURES (BILLIONS OF DOLLARS)								
ALL FUELS.....	43.1	35.1	8.0	10.0	33.1	32.1	10.9	.0
LEADED FUELS.....	20.0	16.5	3.5	3.9	16.1	14.8	5.1	.0
UNLEADED FUELS.....	20.3	16.4	3.8	5.4	14.9	15.0	5.2	.0
UNKNOWN, OTHER, & DIESEL FUELS.....	2.8	2.1	.7	.7	2.1	2.2	.6	.0
GALLONS PURCHASED (BILLIONS)								
ALL FUELS.....	44.5	36.3	8.2	10.2	34.3	33.2	11.3	.0
LEADED FUELS.....	21.1	17.5	3.6	4.1	17.0	15.6	5.4	.0
UNLEADED FUELS.....	20.5	16.6	3.9	5.4	15.0	15.2	5.2	.0
UNKNOWN, OTHER, & DIESEL FUELS.....	2.9	2.2	.7	.7	2.2	2.3	.6	.0
NUMBER OF HOUSEHOLDS (MILLIONS)								
WITH VEHICLES.....	69.4	54.5	14.9	28.6	40.8	58.1	11.2	.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 22. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY HOUSEHOLD CHARACTERISTICS

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2+ VEHICLES	1 DRIVER	2 DRIVERS	3+ DRIVERS
U.S. TOTALS								
MILES DRIVEN (BILLIONS).....	1094.2	856.4	237.8	239.7	854.5	796.8	294.9	2.5
EXPENDITURES (BILLIONS OF DOLLARS)								
ALL FUELS.....	89.7	70.4	19.3	20.2	69.4	65.0	24.4	.2
LEADED FUELS.....	40.0	31.3	8.7	7.5	32.5	28.1	11.8	.1
UNLEADED FUELS.....	43.8	34.8	9.0	11.1	32.6	32.2	11.5	.1
UNKNOWN, OTHER, & DIESEL FUELS....	5.9	4.2	1.6	1.6	4.2	4.7	1.2	.0
GALLONS PURCHASED (BILLIONS)								
ALL FUELS.....	74.9	58.8	16.1	16.7	58.2	54.2	20.5	.2
LEADED FUELS.....	34.2	26.7	7.4	6.3	27.8	23.9	10.1	.1
UNLEADED FUELS.....	35.7	28.4	7.3	9.1	26.6	26.2	9.4	.1
UNKNOWN, OTHER, & DIESEL FUELS....	5.0	3.6	1.4	1.4	3.6	4.0	1.0	.0
NUMBER OF HOUSEHOLDS (MILLIONS)								
WITH VEHICLES.....	70.6	53.0	17.6	28.3	42.3	58.0	12.2	.4

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 23. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY HOUSEHOLD CHARACTERISTICS

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2 VEHICLES	1 DRIVER	2 DRIVERS	3 OR MORE DRIVERS
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	51.3	50.7	54.2	51.5	51.3	49.6	57.5	21.5
GALLONS CONSUMED.....	51.0	50.4	53.8	50.9	51.1	49.3	57.4	21.3
MILES DRIVEN.....	745.6	734.1	800.0	748.1	744.9	718.6	842.2	269.5
EXPENDITURES (DOLLARS).....	49.7	49.1	52.5	50.3	49.5	48.0	55.7	21.1
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	60.0	60.4	57.7	63.7	58.9	60.5	58.2	67.3
FUEL TANK CAPACITY (GALLONS).....	19.6	19.9	18.6	19.8	19.6	19.6	19.6	22.3
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON)								
ALL FUELS.....	96.8	96.8	96.8	97.7	96.5	96.8	96.8	98.2
MILES PER GALLON.....	14.6	14.6	14.9	14.7	14.6	14.6	14.7	12.7

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 24. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY HOUSEHOLD CHARACTERISTICS

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2 VEHICLES	1 DRIVER	2 DRIVERS	3 OR MORE DRIVERS
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	49.1	48.6	51.4	50.3	48.8	47.3	55.0	38.3
GALLONS CONSUMED.....	49.0	48.5	51.1	50.0	48.7	47.1	55.0	38.3
MILES DRIVEN.....	717.9	707.3	758.9	720.7	717.1	695.1	790.6	518.2
EXPENDITURES (DOLLARS).....	58.8	58.1	61.5	60.9	58.3	56.7	65.5	47.9
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	56.5	57.1	53.9	59.8	55.5	56.9	55.0	61.1
FUEL TANK CAPACITY (GALLONS).....	19.8	20.0	19.1	19.8	19.9	19.8	20.0	20.5
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON)								
ALL FUELS.....	119.7	119.7	119.6	121.0	119.4	120.0	119.0	125.2
MILES PER GALLON.....	14.7	14.6	14.9	14.4	14.7	14.8	14.4	13.5

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 25. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY MILES DRIVEN FOR JUNE 1979 TO DECEMBER 1979

	MILLIONS OF VEHICLES BY MONTH						
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79
MILES DRIVEN							
TOTAL	122.9	123.2	123.5	123.9	124.2	124.5	124.8
0	10.0	10.2	8.4	6.2	6.9	9.0	11.9
1 TO 100	3.7	3.0	1.9	4.1	3.4	4.0	6.6
101 TO 200	7.7	6.9	6.8	8.0	6.9	8.2	7.6
201 TO 300	6.2	8.7	10.2	9.2	8.5	8.4	8.9
301 TO 400	10.5	8.4	10.4	10.7	9.4	10.2	8.7
401 TO 500	9.2	9.1	11.3	11.8	11.0	8.0	9.4
501 TO 600	11.0	9.1	9.6	11.6	10.1	13.7	9.6
601 TO 700	9.0	9.1	8.8	10.3	9.3	8.2	7.5
701 TO 800	6.4	8.1	10.5	9.2	11.1	9.7	10.4
801 TO 1,000	16.6	14.3	14.4	14.7	13.4	13.6	14.2
1,001 TO 2,000	27.3	28.3	26.3	24.3	30.0	27.6	25.7
2,001 OR MORE	5.4	7.9	4.8	3.8	4.1	3.9	4.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 26. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY MILES DRIVEN FOR 1980

	MILLIONS OF VEHICLES BY MONTH											
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80
MILES DRIVEN												
TOTAL.....	125.2	125.5	125.7	126.2	126.7	126.9	127.2	127.6	128.0	128.0	128.4	128.8
0.....	11.9	9.7	7.5	9.2	7.9	7.7	6.9	7.8	6.7	6.6	6.7	7.7
1 TO 100.....	4.9	5.2	3.3	4.6	4.0	5.5	5.2	5.0	5.1	6.1	5.2	5.4
101 TO 200.....	10.1	11.2	9.8	6.9	7.8	11.7	10.7	7.1	10.3	7.9	9.3	9.2
201 TO 300.....	8.7	10.3	10.3	11.4	10.3	9.9	8.8	11.5	10.6	11.1	8.4	12.3
301 TO 400.....	11.3	11.8	11.1	10.3	11.3	8.4	9.3	11.5	12.0	9.0	11.6	9.8
401 TO 500.....	8.7	11.7	13.1	11.7	8.6	11.0	9.1	8.6	10.4	9.8	9.9	12.6
501 TO 600.....	11.5	11.5	9.1	10.6	13.0	8.5	8.4	9.5	11.7	10.3	11.7	10.5
601 TO 700.....	10.6	9.2	9.5	8.6	9.1	8.7	9.4	10.8	8.8	11.6	9.4	8.3
701 TO 800.....	7.2	8.6	9.0	10.1	10.2	8.7	7.9	6.8	8.2	9.1	9.6	7.7
801 TO 1,000.....	13.8	13.2	13.6	14.8	14.8	15.1	14.3	13.7	14.8	11.9	14.4	14.5
1,001 TO 2,000.....	23.0	19.5	24.7	24.8	25.9	25.9	29.1	28.6	25.3	30.0	28.0	26.0
2,001 OR MORE.....	3.4	3.7	4.7	3.3	3.7	5.7	8.1	6.6	4.1	4.7	4.2	4.8

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 27. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY GALLONS OF FUEL PURCHASED FOR JUNE 1979 TO DECEMBER 1979

	MILLIONS OF VEHICLES BY MONTH						
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79
GALLONS PURCHASED							
TOTAL.....	122.9	123.2	123.5	123.9	124.2	124.5	124.8
0.....	10.5	11.2	9.2	6.7	8.4	10.2	13.9
1 TO 10.....	4.4	3.9	2.0	4.0	4.6	3.8	6.8
11 TO 20.....	9.7	12.0	14.2	15.5	10.9	11.1	9.0
21 TO 30.....	14.7	14.6	16.9	16.5	12.7	14.7	12.3
31 TO 40.....	14.1	15.7	14.6	18.9	14.0	17.1	15.3
41 TO 50.....	17.1	13.1	13.7	16.2	18.0	14.5	14.0
51 TO 60.....	13.0	12.8	10.9	15.8	15.1	12.0	10.8
61 TO 70.....	9.6	8.3	9.2	6.8	12.4	8.7	9.1
71 TO 80.....	5.7	7.7	10.7	8.2	8.6	9.0	8.2
81 TO 90.....	5.3	6.9	6.2	4.7	6.0	5.9	7.3
91 TO 100.....	6.5	3.8	3.2	2.4	2.6	6.3	4.0
101 OR MORE.....	12.3	13.1	12.8	8.2	10.9	11.2	14.0

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 28. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY GALLONS OF FUEL PURCHASED FOR 1980

	MILLIONS OF VEHICLES BY MONTH											
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80
GALLONS PURCHASED												
TOTAL.....	125.2	125.5	125.7	126.2	126.7	126.9	127.2	127.6	128.0	128.0	128.4	128.8
0.....	13.1	10.4	8.4	9.5	9.7	10.3	9.0	9.2	8.3	9.0	8.7	9.8
1 TO 10.....	5.8	4.8	5.0	5.0	4.0	5.8	5.1	5.5	7.2	6.2	4.8	5.4
11 TO 20.....	11.8	13.0	12.4	13.0	14.7	16.1	15.8	14.2	15.0	11.6	14.1	14.4
21 TO 30.....	16.4	17.1	12.8	17.0	17.1	18.9	15.2	14.5	17.0	16.0	13.0	15.6
31 TO 40.....	15.2	15.7	18.0	17.0	16.7	14.8	15.4	16.6	18.6	18.0	19.8	14.4
41 TO 50.....	13.6	16.6	18.3	15.9	15.8	13.1	15.9	16.4	14.6	16.6	14.6	14.8
51 TO 60.....	12.7	13.1	13.4	12.8	12.5	12.8	11.5	12.1	11.5	12.3	13.0	12.4
61 TO 70.....	9.6	9.6	9.5	11.8	10.2	7.9	8.8	9.8	10.0	9.6	9.7	7.7
71 TO 80.....	7.6	6.6	8.0	8.7	7.4	6.3	5.4	6.1	7.6	5.9	8.1	9.7
81 TO 90.....	4.6	4.6	5.4	3.7	4.5	5.0	7.0	6.0	5.6	6.6	5.6	5.9
91 TO 100.....	4.2	3.2	4.2	2.4	4.0	3.6	3.3	4.0	2.9	3.6	4.9	5.7
101 OR MORE.....	10.7	10.9	10.3	9.4	10.0	12.2	14.9	13.1	9.8	12.6	12.2	13.1

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 29. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES
BY DOLLAR EXPENDITURES FOR JUNE 1979 TO DECEMBER 1979**

	MILLIONS OF VEHICLES BY MONTH						
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79
EXPENDITURES							
TOTAL.....	122.9	123.2	123.5	123.9	124.2	124.5	124.8
\$0.....	10.5	11.2	9.2	6.7	8.4	10.3	13.9
\$10.00 OR LESS.....	5.5	4.4	1.8	4.6	4.8	4.6	6.1
\$10.01 TO \$20.00.....	12.1	14.0	16.5	15.3	10.6	11.2	9.2
\$20.01 TO \$30.00.....	15.7	15.4	15.9	17.7	13.6	12.9	10.5
\$30.01 TO \$40.00.....	20.8	16.6	15.1	16.7	14.4	17.2	15.9
\$40.01 TO \$50.00.....	15.3	15.2	14.9	18.2	16.9	15.0	13.5
\$50.01 TO \$60.00.....	10.5	10.7	11.5	13.5	14.8	12.7	9.5
\$60.01 TO \$70.00.....	8.3	7.8	10.4	8.9	12.2	8.3	10.8
\$70.01 TO \$80.00.....	6.8	8.2	7.8	6.6	9.8	8.6	8.8
\$80.01 TO \$90.00.....	6.0	4.3	5.2	5.1	4.6	6.9	6.3
\$90.01 TO \$100.00.....	2.4	5.0	3.4	1.9	3.0	5.2	4.1
\$100.01 OR MORE.....	8.9	10.3	11.8	8.8	11.3	11.6	16.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 30. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY DOLLAR EXPENDITURES FOR 1980

	MILLIONS OF VEHICLES BY MONTH											
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80
EXPENDITURES												
TOTAL.....	125.2	125.5	125.7	126.2	126.7	126.9	127.2	127.6	128.0	128.0	128.4	128.8
\$0.....	13.1	10.4	8.4	9.5	9.7	10.3	9.0	9.2	8.3	9.0	8.7	9.8
\$10.00 OR LESS.....	4.6	3.7	3.6	3.3	2.6	4.1	3.2	3.1	4.6	3.0	2.9	3.6
\$10.01 TO \$20.00.....	10.5	9.4	9.9	10.6	10.6	11.2	10.5	11.8	12.8	11.2	11.3	10.1
\$20.01 TO \$30.00.....	13.9	12.5	10.1	10.9	12.1	15.8	14.9	11.8	12.2	11.1	11.9	13.5
\$30.01 TO \$40.00.....	14.0	15.1	12.1	16.5	15.1	13.9	10.7	12.5	17.3	16.4	12.8	12.0
\$40.01 TO \$50.00.....	12.3	15.0	14.4	12.4	13.6	11.7	12.2	13.5	12.4	14.2	15.7	12.8
\$50.01 TO \$60.00.....	13.9	13.8	13.4	12.7	12.2	11.0	14.4	14.1	12.3	12.5	13.3	11.0
\$60.01 TO \$70.00.....	10.8	10.1	13.3	11.2	11.3	10.4	10.4	11.0	10.1	10.3	10.1	11.6
\$70.01 TO \$80.00.....	7.0	8.6	8.3	9.4	10.1	6.8	7.5	7.2	8.4	8.9	9.3	9.0
\$80.01 TO \$90.00.....	6.4	6.2	7.7	8.8	6.7	7.0	5.8	6.5	8.6	7.2	6.4	6.2
\$90.01 TO \$100.00.....	3.8	4.2	6.0	5.4	5.6	5.3	5.4	4.7	4.3	4.5	5.5	6.0
\$100.01 OR MORE.....	14.8	16.6	18.4	15.6	17.1	19.3	23.2	22.1	16.6	19.6	20.7	23.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

The Following Tables Present Data
on the Relative Standard Errors

**TABLE 31. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY TOTALS FOR JUNE 1979 TO DECEMBER 1979:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MONTH							TOTAL
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79	
U.S. TOTALS								
MILES DRIVEN (BILLIONS).....	3.6	2.8	3.4	3.7	3.7	2.8	3.5	1.8
EXPENDITURES (BILLIONS OF DOLLARS)								
ALL FUELS.....	3.2	2.8	2.9	3.6	3.4	2.8	3.3	1.7
LEADED FUELS.....	5.5	5.2	7.6	7.3	6.1	6.9	5.8	3.6
UNLEADED FUELS.....	6.7	6.1	8.2	7.4	5.7	6.4	6.2	4.2
UNKNOWN, OTHER, & DIESEL FUELS..	28.7	14.3	27.7	22.2	22.6	20.4	19.4	12.0
GALLONS PURCHASED (BILLIONS)								
ALL FUELS.....	3.1	2.7	2.9	3.4	3.3	2.6	3.3	1.6
LEADED FUELS.....	5.4	5.2	7.6	7.2	6.1	6.8	5.7	3.6
UNLEADED FUELS.....	6.8	6.1	8.1	7.3	5.7	6.6	6.2	4.1
UNKNOWN, OTHER, & DIESEL FUELS..	27.6	14.3	27.0	21.4	22.5	20.5	19.6	11.6
NUMBER OF HOUSEHOLDS (MILLIONS)								
WITH VEHICLES.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NUMBER OF VEHICLES (MILLIONS).....								
DRIVEN 100 MILES OR LESS.....	12.3	10.7	14.9	15.2	14.1	11.9	9.8	
DRIVEN MORE THAN 100 MILES.....	1.5	1.3	1.4	1.4	1.3	1.4	1.5	

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 32. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY TOTALS FOR 1980:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MONTH												TOTAL
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80	
U.S. TOTALS													
MILES DRIVEN (BILLIONS).....	3.5	3.5	3.0	2.5	2.6	3.1	2.5	2.6	2.8	3.0	3.4	3.1	1.4
EXPENDITURES (BILLIONS OF DOLLARS)													
ALL FUELS.....	2.8	3.1	2.5	2.1	2.5	3.6	2.2	2.5	2.9	3.2	3.7	3.0	1.2
LEADED FUELS.....	4.6	5.2	5.4	5.9	6.3	6.5	4.7	5.5	6.1	6.1	7.8	5.7	2.8
UNLEADED FUELS.....	6.1	5.6	4.8	5.4	6.0	5.6	5.0	4.7	5.4	6.3	6.0	6.5	2.6
UNKNOWN, OTHER, & DIESEL FUELS..	19.6	16.8	16.0	18.3	14.4	17.0	13.3	16.7	19.2	17.5	15.7	18.4	5.8
GALLONS PURCHASED (BILLIONS)													
ALL FUELS.....	2.8	3.1	2.6	2.0	2.5	3.4	2.1	2.5	2.9	3.2	3.9	3.1	1.2
LEADED FUELS.....	4.7	5.3	5.5	6.0	6.4	6.0	4.7	5.5	5.9	6.0	8.0	5.8	2.8
UNLEADED FUELS.....	6.2	5.5	4.7	5.3	6.0	5.6	5.0	4.7	5.4	6.2	6.0	6.5	2.5
UNKNOWN, OTHER, & DIESEL FUELS..	19.5	16.9	16.1	18.3	14.3	17.6	13.3	16.5	19.2	17.6	15.8	18.0	5.8
NUMBER OF HOUSEHOLDS (MILLIONS)													
WITH VEHICLES.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NUMBER OF VEHICLES (MILLIONS).....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DRIVEN 100 MILES OR LESS.....	8.3	9.4	9.6	9.9	12.4	10.1	10.2	10.6	13.1	12.0	10.7	10.6	
DRIVEN MORE THAN 100 MILES.....	1.3	1.3	0.9	1.2	1.3	1.2	1.1	1.2	1.3	1.3	1.1	1.2	

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 33. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY AVERAGES FOR JUNE 1979 TO DECEMBER 1979:
RELATIVE STANDARD ERRORS (PERCENTS)

	MONTH							AVERAGE MONTH
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79	
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	3.1	2.7	2.9	3.4	3.3	2.6	3.3	1.6
GALLONS CONSUMED.....	3.2	2.7	3.0	3.5	3.2	2.6	3.2	1.7
MILES DRIVEN.....	3.6	2.8	3.4	3.7	3.7	2.8	3.5	1.8
EXPENDITURES (DOLLARS).....	3.2	2.8	2.9	3.6	3.4	2.8	3.3	1.7
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	2.2	1.1	1.1	1.6	1.2	1.1	1.9	0.8
FUEL TANK CAPACITY (GALLONS).....	1.4	1.2	1.7	1.8	1.2	1.1	1.7	0.9
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON)								
ALL FUELS.....	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.3
LEADED FUELS.....	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.3
REGULAR.....	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.3
PREMIUM.....	1.3	0.6	0.9	2.2	1.2	1.1	0.8	0.7
UNKNOWN.....	NA	NA	NA	NA	NA	5.1	NA	5.5
UNLEADED FUELS.....	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4
REGULAR.....	0.5	0.5	0.6	0.5	0.4	0.7	0.4	0.3
PREMIUM.....	1.1	1.4	1.5	1.1	1.0	1.1	0.9	0.7
UNKNOWN.....	1.4	0.6	1.0	1.0	0.6	0.8	2.1	0.8
UNKNOWN, OTHER, & DIESEL FUELS..	2.4	0.8	1.4	1.7	0.7	1.9	7.6	0.9
MILES PER GALLON.....	2.0	1.4	2.6	2.2	1.8	1.5	1.6	1.1

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 34. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY AVERAGES FOR 1980:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MONTH												AVERAGE MONTH
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80	
AVERAGES PER VEHICLE													
GALLONS PURCHASED.....	2.8	3.1	2.6	2.0	2.5	3.4	2.1	2.5	2.9	3.2	3.9	3.1	1.2
GALLONS CONSUMED.....	2.7	3.2	2.5	2.2	2.5	3.3	2.1	2.5	2.8	3.2	3.8	3.1	1.2
MILES DRIVEN.....	3.5	3.5	3.0	2.5	2.6	3.1	2.5	2.6	2.8	3.0	3.4	3.1	1.4
EXPENDITURES (DOLLARS).....	2.8	3.1	2.5	2.1	2.5	3.6	2.2	2.5	2.9	3.2	3.7	3.0	1.2
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	1.4	1.3	1.4	1.1	1.3	1.1	1.4	1.7	1.7	1.4	1.0	1.2	0.7
FUEL TANK CAPACITY (GALLONS).....	1.3	1.2	1.2	1.1	1.1	1.2	0.9	1.0	1.1	1.2	1.2	1.3	0.6
AVERAGES PER GALLON													
PRICE (CENTS PER GALLON)													
ALL FUELS.....	0.4	0.4	0.4	0.4	0.3	0.5	0.3	0.3	0.4	0.4	0.4	0.4	0.2
LEADED FUELS.....	0.4	0.5	0.4	0.4	0.4	1.0	0.4	0.5	0.6	0.4	0.5	0.4	0.3
REGULAR.....	0.4	0.4	0.5	0.4	0.4	1.0	0.4	0.4	0.4	0.4	0.5	0.4	0.3
PREMIUM.....	0.8	1.0	1.0	0.6	0.8	1.0	1.0	1.0	1.1	1.6	1.6	1.2	0.4
UNKNOWN.....	NA	3.4	NA	11.9	NA	NA	11.9	12.1	3.0	3.5	12.4	2.2	1.5
UNLEADED FUELS.....	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.2
REGULAR.....	0.5	0.4	0.5	0.4	0.4	0.3	0.4	0.3	0.4	0.5	0.5	0.5	0.2
PREMIUM.....	1.1	1.3	0.7	1.1	0.9	1.3	0.8	0.6	0.9	0.9	1.2	0.7	0.4
UNKNOWN.....	0.8	0.6	0.8	0.5	0.7	0.6	0.6	0.8	0.5	0.6	0.5	0.7	0.3
UNKNOWN, OTHER, & DIESEL FUELS..	4.4	0.9	0.9	3.7	1.2	1.4	1.0	1.1	1.3	1.6	0.9	1.0	0.5
MILES PER GALLON.....	1.7	1.8	1.8	1.7	1.4	1.6	1.5	1.3	1.3	1.7	1.4	1.5	0.9

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 35. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLES RANKED BY MPG:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	1.6	3.3	2.6	3.1	3.3	3.5	9.0	18.0
GALLONS CONSUMED.....	1.7	3.3	2.6	3.2	3.4	3.6	8.8	18.4
MILES DRIVEN.....	1.8	3.4	2.9	3.2	3.1	3.8	7.1	19.7
EXPENDITURES (DOLLARS).....	1.7	3.5	2.6	3.2	3.6	3.6	8.6	18.3
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.8	1.2	1.0	1.1	2.8	1.3	1.9	5.6
FUEL TANK CAPACITY (GALLONS).....	0.9	1.3	1.3	1.4	2.1	1.9	2.1	4.5
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	0.3	0.5	0.4	0.4	0.6	0.7	0.9	2.0
MILES PER GALLON.....	1.1	1.9	1.6	1.7	2.6	2.6	4.0	4.2

THE #1 VEHICLE HAS THE HIGHEST MPG, THE #2 VEHICLE THE NEXT HIGHEST MPG, ETC.
SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 36. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY VEHICLES RANKED BY MPG:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	1.2	2.4	2.0	2.2	2.9	3.2	5.3	12.8
GALLONS CONSUMED.....	1.2	2.4	2.0	2.2	2.9	3.2	5.3	12.7
MILES DRIVEN.....	1.4	2.8	1.9	2.4	2.8	3.2	5.9	12.1
EXPENDITURES (DOLLARS).....	1.2	2.4	2.0	2.2	2.8	3.1	5.2	12.6
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.7	1.1	0.9	1.0	1.0	1.4	1.6	4.2
FUEL TANK CAPACITY (GALLONS).....	0.6	1.0	1.2	0.9	1.5	1.4	2.0	2.9
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.8
MILES PER GALLON.....	0.9	1.3	1.3	1.2	1.8	1.9	1.7	2.3

THE #1 VEHICLE HAS THE HIGHEST MPG, THE #2 VEHICLE THE NEXT HIGHEST MPG, ETC.
SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 37. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLES RANKED BY MILES TRAVELED: RELATIVE STANDARD ERRORS (PERCENTS)

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	1.6	3.3	2.8	2.5	3.6	3.5	6.8	16.2
GALLONS CONSUMED.....	1.7	3.3	2.7	2.6	3.5	3.5	6.4	16.7
MILES DRIVEN.....	1.8	3.4	2.9	2.8	2.8	4.2	6.7	16.7
EXPENDITURES (DOLLARS).....	1.7	3.5	2.8	2.5	3.5	3.6	7.1	17.1
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.8	1.2	0.9	1.3	1.3	1.8	3.6	7.2
FUEL TANK CAPACITY (GALLONS).....	0.9	1.3	1.3	1.4	2.4	1.6	2.0	4.2
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	0.3	0.5	0.3	0.4	0.6	0.6	0.8	1.7
MILES PER GALLON.....	1.1	1.9	1.5	1.8	2.4	2.3	2.4	4.4

THE #1 VEHICLE HAS THE HIGHEST MILES TRAVELED, THE #2 VEHICLE THE NEXT HIGHEST MILES TRAVELED, ETC.
 SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
 RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
 OFFICE OF ENERGY MARKETS AND END USE,
 ENERGY INFORMATION ADMINISTRATION.

**TABLE 38. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY VEHICLES RANKED BY MILES TRAVELED:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	ONE VEHICLE HOUSEHOLDS	TWO VEHICLE HOUSEHOLDS		THREE OR MORE VEHICLE HOUSEHOLDS			
			#1 VEHICLE	#2 VEHICLE	#1 VEHICLE	#2 VEHICLE	#3 VEHICLE	OTHER VEHICLES
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	1.2	2.4	1.7	2.3	2.9	2.6	4.5	13.0
GALLONS CONSUMED.....	1.2	2.4	1.7	2.2	3.0	2.6	4.5	14.4
MILES DRIVEN.....	1.4	2.8	1.6	2.4	2.5	3.0	5.0	13.0
EXPENDITURES (DOLLARS).....	1.2	2.4	1.7	2.3	2.8	2.6	4.4	13.2
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.7	1.1	0.8	1.1	0.9	1.5	1.7	4.3
FUEL TANK CAPACITY (GALLONS).....	0.6	1.0	1.1	1.0	1.8	1.2	1.7	2.7
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6
MILES PER GALLON.....	0.9	1.3	1.2	1.4	2.1	1.4	2.0	3.3

THE #1 VEHICLE HAS THE HIGHEST MILES TRAVELED, THE #2 VEHICLE THE NEXT HIGHEST MILES TRAVELED, ETC.
SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 39. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLE CHARACTERISTICS:
RELATIVE STANDARD ERRORS (PERCENTS)

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTERMEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1980	1970 TO 1974	1960 AND EARLIER	UNKNOWN
U.S. TOTALS											
MILES DRIVEN (BILLIONS).....	1.8	5.5	5.5	5.5	6.5	6.4	8.0	3.1	3.5	6.8	62.7
EXPENDITURES (BILLIONS OF DOLLARS)											
ALL FUELS.....	1.7	5.2	5.2	5.2	6.6	7.3	8.5	2.9	4.0	7.3	58.8
LEADED FUELS.....	3.6	7.1	7.7	8.7	6.2	11.9	9.1	7.4	4.7	7.3	64.1
UNLEADED FUELS.....	4.2	7.6	7.7	7.0	10.1	20.0	14.4	4.4	10.8	19.0	75.2
UNKNOWN, OTHER, & DIESEL FUELS.....	12.0	16.0	16.7	22.7	24.5	26.8	33.9	17.0	12.9	21.7	NA
GALLONS PURCHASED (BILLIONS)											
ALL FUELS.....	1.6	5.1	5.2	5.2	6.4	7.7	8.3	2.9	3.9	7.2	58.1
LEADED FUELS.....	3.6	7.0	7.9	8.7	6.1	12.1	9.1	7.6	4.7	7.3	63.0
UNLEADED FUELS.....	4.1	7.6	7.6	6.9	9.9	20.6	14.1	4.3	11.0	18.9	75.0
UNKNOWN, OTHER, & DIESEL FUELS.....	11.6	16.0	16.1	22.9	23.6	27.0	32.2	16.2	12.7	21.7	NA
NUMBER OF VEHICLES (MILLIONS).....	0.0	4.5	4.7	4.8	5.3	4.8	6.4	2.5	2.7	5.5	46.3

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 40. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY VEHICLE CHARACTERISTICS:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTER MEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1981	1970 TO 1974	1960 AND EARLIER	UNKNOWN
U.S. TOTALS											
MILES DRIVEN (BILLIONS).....	1.4	3.9	4.4	4.3	5.7	5.1	5.4	2.6	3.3	6.4	30.5
EXPENDITURES (BILLIONS OF DOLLARS)											
ALL FUELS.....	1.2	3.8	4.4	4.0	5.7	5.3	5.6	2.4	3.2	6.6	28.5
LEADED FUELS.....	2.8	5.6	6.6	6.4	5.6	6.3	6.6	5.7	3.6	6.9	60.0
UNLEADED FUELS.....	2.6	5.6	5.4	5.3	7.2	8.9	9.6	2.7	9.9	15.2	27.6
UNKNOWN, OTHER, & DIESEL FUELS.....	5.8	8.9	14.5	12.4	15.2	15.9	14.4	11.0	7.8	16.5	53.2
GALLONS PURCHASED (BILLIONS)											
ALL FUELS.....	1.2	3.7	4.4	3.9	5.5	5.4	5.6	2.4	3.2	6.5	28.3
LEADED FUELS.....	2.8	5.6	6.4	6.4	5.5	6.3	6.6	5.8	3.6	6.8	58.9
UNLEADED FUELS.....	2.5	5.5	5.4	5.3	7.1	8.9	9.6	2.7	9.8	15.2	27.5
UNKNOWN, OTHER, & DIESEL FUELS.....	5.8	8.9	14.4	12.3	14.7	15.9	14.4	10.7	7.8	16.7	53.2
NUMBER OF VEHICLES (MILLIONS).....	0.0	3.2	3.2	3.5	5.0	3.9	4.6	2.4	2.2	5.3	29.4

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 41. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY VEHICLE CHARACTERISTICS: RELATIVE STANDARD ERRORS (PERCENTS)

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTERMEDIATE	COMPACT	SUBCOMPACT	OTHER	UNKNOWN	1975 TO 1981	1970 TO 1974	1960 AND EARLIER	UNKNOWN
AVERAGES PER VEHICLE											
GALLONS PURCHASED.....	1.6	3.1	2.6	3.3	2.8	6.1	5.3	2.0	2.9	4.5	40.0
GALLONS CONSUMED.....	1.7	3.2	2.6	3.2	2.7	6.0	5.3	2.1	2.9	4.4	37.3
MILES DRIVEN.....	1.8	3.7	2.9	3.3	3.1	5.2	4.9	1.9	2.6	3.9	45.8
EXPENDITURES (DOLLARS).....	1.7	3.2	2.8	3.4	3.0	5.7	5.7	2.1	3.0	4.7	40.5
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.8	0.9	1.6	1.2	1.1	2.0	1.9	0.7	1.1	2.5	35.5
FUEL TANK CAPACITY (GALLONS).....	0.9	0.5	0.8	0.8	1.0	3.5	2.1	1.2	1.2	1.7	33.0
AVERAGES PER GALLON											
PRICE (CENTS PER GALLON) ALL FUELS.....	0.3	0.5	0.5	0.4	0.5	0.9	0.6	0.4	0.4	0.6	NA
MILES PER GALLON.....	1.1	1.2	1.1	1.5	1.8	3.4	2.2	1.4	1.3	2.8	26.6

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 42. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY VEHICLE CHARACTERISTICS:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	VEHICLE SIZE						MODEL YEAR			
		FULL SIZE	INTER MEDIATE	COMPACT	SUB COMPACT	OTHER	UNKNOWN	1975 TO 1981	1970 TO 1974	1960 AND EARLIER	UNKNOWN
AVERAGES PER VEHICLE											
GALLONS PURCHASED.....	1.2	1.8	2.5	1.8	2.2	3.4	4.4	1.5	2.1	3.6	23.3
GALLONS CONSUMED.....	1.2	1.8	2.6	1.8	2.1	3.3	4.4	1.5	2.1	3.7	23.3
MILES DRIVEN.....	1.4	2.2	2.8	2.2	2.2	3.1	4.3	1.5	2.4	3.6	24.3
EXPENDITURES (DOLLARS).....	1.2	1.9	2.6	1.7	2.4	3.3	4.5	1.5	2.1	3.7	23.1
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.7	1.2	1.0	0.8	0.8	1.4	1.6	0.6	0.9	1.8	5.4
FUEL TANK CAPACITY (GALLONS).....	0.6	0.3	0.4	0.6	0.8	1.6	1.5	0.9	0.9	0.8	7.7
AVERAGES PER GALLON											
PRICE (CENTS PER GALLON) ALL FUELS.....	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.2	0.3	0.4	1.3
MILES PER GALLON.....	0.9	0.9	0.9	1.1	1.0	1.4	2.1	1.0	0.9	1.5	6.5

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 43. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY GEOGRAPHIC LOCATION: RELATIVE STANDARD ERRORS (PERCENTS)

	UNITED STATES			CENSUS REGIONS												
	T O T A L	U R B A N	R U R A L	NORTHEAST			NORTH CENTRAL			SOUTH			WEST			
				T O T A L	U R B A N	R U R A L										
U.S. TOTALS																
MILES DRIVEN (BILLIONS).....	1.8	5.4	11.6	8.5	11.5	30.4	6.6	9.5	20.9	7.7	9.7	18.3	13.1	17.5	49.7	
EXPENDITURES (BILLIONS OF DOLLARS)																
ALL FUELS.....	1.7	5.2	11.5	9.1	10.6	32.5	6.8	10.6	21.1	7.1	8.7	17.5	12.9	17.3	48.3	
LEADED FUELS.....	3.6	5.6	14.4	10.9	10.9	38.6	9.2	12.3	32.1	8.4	9.1	21.4	15.4	14.2	44.5	
UNLEADED FUELS.....	4.2	6.5	10.4	10.8	12.2	31.3	7.2	10.1	15.1	9.9	12.6	17.0	19.1	25.2	42.4	
UNKNOWN, OTHER, & DIESEL FUELS..	12.0	15.5	26.8	15.8	20.6	54.3	17.9	28.1	23.1	14.6	19.0	19.4	40.5	42.2	94.3	
GALLONS PURCHASED (BILLIONS)																
ALL FUELS.....	1.6	5.2	11.5	9.1	10.6	32.6	6.9	10.6	21.9	7.0	8.8	17.6	13.0	17.0	48.8	
LEADED FUELS.....	3.6	5.7	14.4	11.0	10.9	38.6	9.5	12.4	32.8	8.3	9.1	21.4	15.7	14.2	44.5	
UNLEADED FUELS.....	4.1	6.5	10.3	10.7	12.1	31.5	6.9	10.0	15.7	9.9	12.7	17.0	18.8	24.9	43.8	
UNKNOWN, OTHER, & DIESEL FUELS..	11.6	15.2	25.6	16.2	20.7	53.5	17.5	28.1	23.0	14.5	18.4	20.0	40.5	42.4	94.2	
NUMBER OF HOUSEHOLDS (MILLIONS)																
WITH VEHICLES.....	1.3	4.3	10.7	7.7	9.9	26.7	7.4	8.7	23.8	5.7	7.5	14.9	10.3	13.3	46.4	
NUMBER OF VEHICLES (MILLIONS).....	0.0	4.7	11.1	8.7	10.3	27.5	7.4	9.5	26.1	5.7	8.0	16.2	10.3	14.4	45.9	

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 44. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY GEOGRAPHIC LOCATION:
RELATIVE STANDARD ERRORS (PERCENTS)**

	UNITED STATES			CENSUS REGIONS													
	T O T A L	U R B A N	R U R A L	NORTHEAST			NORTH CENTRAL			SOUTH			WEST				
				T O T A L	U R B A N	R U R A L											
U.S. TOTALS																	
MILES DRIVEN (BILLIONS).....	1.4	4.9	10.1	9.0	11.9	30.4	5.8	8.5	20.5	6.5	8.1	17.3	8.0	12.7	33.3		
EXPENDITURES (BILLIONS OF DOLLARS)																	
ALL FUELS.....	1.2	4.5	10.0	7.7	10.1	29.4	5.6	7.8	20.7	5.1	6.5	16.9	8.6	17.5	34.9		
LEADED FUELS.....	2.8	5.1	11.4	9.6	12.0	31.9	9.3	9.1	25.2	5.4	7.6	16.9	9.8	12.5	38.5		
UNLEADED FUELS.....	2.6	5.1	9.8	8.6	10.8	27.4	5.3	8.5	19.0	6.6	7.8	17.8	15.8	27.0	29.7		
UNKNOWN, OTHER, & DIESEL FUELS..	5.8	8.3	17.0	21.2	18.2	53.9	11.0	17.6	23.6	11.4	14.5	28.4	9.3	8.3	39.7		
GALLONS PURCHASED (BILLIONS)																	
ALL FUELS.....	1.2	4.5	10.0	7.8	10.3	29.2	5.9	7.8	21.2	5.1	6.5	16.9	8.4	16.5	34.8		
LEADED FUELS.....	2.8	5.1	11.4	9.7	12.2	31.8	9.6	9.0	25.8	5.4	7.5	17.1	10.0	11.7	38.6		
UNLEADED FUELS.....	2.5	5.1	9.9	8.6	10.9	27.0	5.4	8.6	19.3	6.6	7.7	17.9	15.4	26.1	29.5		
UNKNOWN, OTHER, & DIESEL FUELS..	5.8	8.4	16.7	20.8	18.4	53.5	10.9	17.6	24.0	11.5	14.8	28.4	8.6	7.9	37.0		
NUMBER OF HOUSEHOLDS (MILLIONS)																	
WITH VEHICLES.....	1.3	4.4	8.9	7.7	9.8	26.1	5.2	8.0	20.1	5.2	7.5	13.8	7.0	10.4	35.2		
NUMBER OF VEHICLES (MILLIONS).....	0.0	4.5	9.4	8.0	10.6	25.4	5.7	7.9	22.9	5.3	7.5	14.3	7.1	11.0	34.6		

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 45. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY GEOGRAPHIC LOCATION:
RELATIVE STANDARD ERRORS (PERCENTS)**

	UNITED STATES			CENSUS REGIONS											
	T O T A L	U R B A N	R U R A L	NORTHEAST			NORTH CENTRAL			SOUTH			WES		
				T O T A L	U R B A N	R U R A L									
AVERAGES PER VEHICLE															
GALLONS PURCHASED.....	1.6	1.7	2.9	4.1	4.3	10.0	3.7	3.4	7.8	2.6	3.2	3.9	3.5	4.0	6.3
GALLONS CONSUMED.....	1.7	1.7	2.9	4.2	4.1	10.9	3.7	3.5	7.9	2.6	3.2	3.8	3.4	3.8	5.7
MILES DRIVEN.....	1.8	2.0	3.3	3.5	4.8	7.3	3.1	2.5	9.3	3.3	4.2	4.2	4.7	5.3	7.1
EXPENDITURES (DOLLARS).....	1.7	1.8	3.3	4.2	4.4	10.0	3.9	3.3	9.1	2.7	3.3	4.2	3.3	4.1	6.1
FUEL INVENTORY AS A PERCENT															
OF TANK CAPACITY.....	0.8	0.9	1.4	1.2	1.3	2.8	1.2	1.1	2.7	1.8	2.8	2.0	1.2	1.4	1.5
FUEL TANK CAPACITY (GALLONS).....	0.9	1.2	1.0	2.1	1.9	3.5	1.3	1.8	1.7	0.9	1.4	1.8	3.6	4.2	1.2
AVERAGES PER GALLON															
PRICE (CENTS PER GALLON)															
ALL FUELS.....	0.3	0.3	0.7	0.5	0.6	0.8	0.8	0.6	2.0	0.4	0.5	0.8	0.6	0.5	1.2
LEADED FUELS.....	0.3	0.4	0.8	0.5	0.7	1.0	0.7	0.7	1.7	0.4	0.4	0.9	0.8	0.8	1.6
REGULAR.....	0.3	0.3	0.6	0.5	0.7	1.0	0.7	0.7	1.7	0.4	0.4	0.8	0.9	1.0	1.6
PREMIUM.....	0.7	0.9	1.5	1.0	1.1	5.0	2.0	1.8	4.6	1.0	1.4	0.9	0.9	0.8	NA
UNKNOWN.....	5.5	5.2	5.3	1.8	NA	2.5	NA	NA	NA	13.2	NA	21.9	NA	NA	NA
UNLEADED FUELS.....	0.4	0.4	0.7	0.5	0.7	0.6	0.8	0.6	2.3	0.6	0.7	0.8	0.5	0.5	2.3
REGULAR.....	0.3	0.4	0.6	0.5	0.7	0.7	0.6	0.5	1.4	0.5	0.6	1.1	0.5	0.6	1.9
PREMIUM.....	0.7	0.7	2.3	1.4	1.4	NA	1.2	1.3	1.5	1.6	1.7	3.2	1.1	1.1	NA
UNKNOWN.....	0.8	0.9	1.8	0.8	1.2	0.7	2.0	1.9	5.9	1.1	1.6	0.9	1.0	0.9	3.6
UNKNOWN, OTHER, & DIESEL FUELS..	0.9	0.6	2.5	1.0	1.1	23.8	1.9	1.1	4.0	0.8	1.4	1.4	0.5	0.6	6.3
MILES PER GALLON.....	1.1	1.3	1.9	3.1	3.0	6.9	1.1	1.9	2.1	1.6	1.8	3.0	4.2	4.5	5.6

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 46. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY GEOGRAPHIC LOCATION:
RELATIVE STANDARD ERRORS (PERCENTS)**

	UNITED STATES			CENSUS REGIONS											
	T O T A L	U R B A N	R U R A L	NORTHEAST			NORTH CENTRAL			SOUTH			WES		
				T O T A L	U R B A N	R U R A L									
AVERAGES PER VEHICLE															
GALLONS PURCHASED.....	1.2	1.4	2.6	2.9	2.4	8.6	2.0	2.3	4.5	2.2	2.1	4.8	3.2	3.9	4.3
GALLONS CONSUMED.....	1.2	1.4	2.6	2.8	2.3	8.6	2.0	2.3	4.5	2.1	2.1	4.7	3.3	4.1	4.4
MILES DRIVEN.....	1.4	1.5	3.0	3.0	3.3	9.5	2.4	2.6	5.6	2.6	2.5	4.6	3.1	3.8	4.7
EXPENDITURES (DOLLARS).....	1.2	1.4	2.7	3.0	2.5	9.1	1.9	2.3	4.7	2.3	2.3	4.9	3.2	4.0	5.0
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.7	0.8	1.2	1.1	0.9	3.6	0.9	1.0	1.6	1.8	2.5	1.8	0.7	0.9	1.4
FUEL TANK CAPACITY (GALLONS).....	0.6	0.8	1.1	2.1	2.0	3.6	0.9	1.0	1.6	0.8	1.0	1.4	1.8	2.0	1.6
AVERAGES PER GALLON															
PRICE (CENTS PER GALLON)															
ALL FUELS.....	0.2	0.2	0.5	0.3	0.3	0.7	0.5	0.4	1.2	0.4	0.4	0.7	0.4	0.5	0.9
LEADED FUELS.....	0.3	0.3	0.6	0.4	0.5	0.9	0.6	0.5	1.2	0.5	0.6	0.9	0.4	0.5	1.1
REGULAR.....	0.3	0.3	0.6	0.4	0.5	0.9	0.6	0.5	1.2	0.6	0.7	0.9	0.4	0.5	0.9
PREMIUM.....	0.4	0.5	1.2	1.1	1.2	4.3	2.4	2.7	12.7	0.8	1.2	1.0	0.6	0.4	2.5
UNKNOWN.....	1.5	1.9	1.3	2.0	2.6	3.5	2.4	2.0	NA	1.1	1.7	12.0	3.0	3.2	NA
UNLEADED FUELS.....	0.2	0.2	0.5	0.3	0.3	0.9	0.5	0.3	1.1	0.4	0.4	0.7	0.2	0.3	0.4
REGULAR.....	0.2	0.2	0.5	0.4	0.4	0.9	0.5	0.3	1.0	0.4	0.4	0.8	0.4	0.5	0.5
PREMIUM.....	0.4	0.5	0.7	0.7	0.9	0.9	0.9	0.9	2.3	0.7	0.9	1.0	1.1	1.2	23.9
UNKNOWN.....	0.3	0.3	0.6	0.5	0.5	1.6	0.5	0.4	1.2	0.6	0.8	0.9	0.2	0.3	0.3
UNKNOWN, OTHER, & DIESEL FUELS..	0.5	0.5	1.0	0.9	1.1	1.2	0.9	0.8	2.1	1.0	0.9	1.1	0.7	0.6	4.1
MILES PER GALLON.....	0.9	1.1	1.5	2.7	3.0	4.0	1.4	1.5	2.6	1.0	1.1	1.9	2.6	2.9	2.3

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 47. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY FAMILY INCOME:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
U.S. TOTALS							
MILES DRIVEN (BILLIONS).....	1.8	17.5	8.6	7.3	6.5	6.0	6.7
EXPENDITURES (BILLIONS OF DOLLARS)							
ALL FUELS.....	1.7	17.4	9.2	7.4	7.0	6.3	6.4
LEADED FUELS.....	3.6	18.3	13.9	8.7	9.4	9.3	7.3
UNLEADED FUELS.....	4.2	23.4	10.3	11.0	9.3	9.0	9.2
UNKNOWN, OTHER, & DIESEL FUELS..	12.0	33.6	24.8	16.5	17.9	23.1	34.1
GALLONS PURCHASED (BILLIONS)							
ALL FUELS.....	1.6	17.5	9.5	7.3	6.9	6.2	6.5
LEADED FUELS.....	3.6	18.3	14.1	8.8	9.4	9.3	7.4
UNLEADED FUELS.....	4.1	23.8	10.5	11.0	9.2	8.7	9.1
UNKNOWN, OTHER, & DIESEL FUELS..	11.6	33.2	25.0	16.4	17.7	22.5	33.1
NUMBER OF HOUSEHOLDS (MILLIONS)							
WITH VEHICLES.....	1.3	13.7	8.0	5.8	5.8	5.5	6.1
NUMBER OF VEHICLES (MILLIONS).....	0.0	14.6	8.1	6.5	6.4	5.8	5.7

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 48. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY FAMILY INCOME:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
U.S. TOTALS							
MILES DRIVEN (BILLIONS).....	1.4	10.1	7.3	5.3	6.4	5.9	5.2
EXPENDITURES (BILLIONS OF DOLLARS)							
ALL FUELS.....	1.2	10.2	7.1	5.2	6.8	5.9	5.0
LEADED FUELS.....	2.8	13.9	8.8	6.7	7.8	7.6	6.6
UNLEADED FUELS.....	2.6	12.5	9.4	7.3	8.3	7.0	5.7
UNKNOWN, OTHER, & DIESEL FUELS..	5.8	24.1	13.9	15.5	16.4	17.7	14.8
GALLONS PURCHASED (BILLIONS)							
ALL FUELS.....	1.2	10.2	7.1	5.2	6.9	6.0	5.0
LEADED FUELS.....	2.8	13.7	8.7	6.7	8.0	7.6	6.6
UNLEADED FUELS.....	2.5	12.4	9.4	7.3	8.3	7.1	5.7
UNKNOWN, OTHER, & DIESEL FUELS..	5.8	24.5	13.8	15.2	17.1	18.0	14.6
NUMBER OF HOUSEHOLDS (MILLIONS)							
WITH VEHICLES.....	1.3	8.2	5.5	4.8	5.3	5.2	5.1
NUMBER OF VEHICLES (MILLIONS).....	0.0	8.6	6.3	4.9	6.0	5.0	5.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 49. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY FAMILY INCOME:
RELATIVE STANDARD ERRORS (PERCENTS)

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
AVERAGES PER VEHICLE							
GALLONS PURCHASED.....	1.6	7.6	4.3	4.4	3.6	3.1	2.7
GALLONS CONSUMED.....	1.7	7.5	4.2	4.3	3.6	3.2	2.8
MILES DRIVEN.....	1.8	8.7	4.0	4.2	3.5	3.2	2.5
EXPENDITURES (DOLLARS).....	1.7	7.8	4.0	4.6	3.6	3.3	2.6
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.8	2.4	2.9	1.8	1.4	1.5	1.1
FUEL TANK CAPACITY (GALLONS).....	0.9	1.8	1.5	1.6	1.4	1.4	1.8
AVERAGES PER GALLON							
PRICE (CENTS PER GALLON)							
ALL FUELS.....	0.3	0.9	0.7	0.5	0.5	0.5	0.6
LEADED FUELS.....	0.3	1.1	0.8	0.6	0.6	0.7	0.7
REGULAR.....	0.3	0.8	0.8	0.6	0.5	0.6	0.7
PREMIUM.....	0.7	3.5	1.6	1.2	2.1	1.9	1.0
UNKNOWN.....	5.5	NA	NA	NA	NA	NA	12.8
UNLEADED FUELS.....	0.4	1.8	0.9	0.7	0.5	0.6	0.5
REGULAR.....	0.3	2.1	1.0	0.6	0.5	0.6	0.6
PREMIUM.....	0.7	17.5	2.4	1.8	2.3	1.8	1.1
UNKNOWN.....	0.8	2.8	1.2	1.6	1.3	1.6	1.0
UNKNOWN, OTHER, & DIESEL FUELS..	0.9	1.8	1.1	1.4	1.3	1.8	3.0
MILES PER GALLON.....	1.1	4.2	2.4	2.2	1.5	1.9	2.3

NA = NOT AVAILABLE

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 50. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY FAMILY INCOME:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	FAMILY INCOME					
		\$0 TO \$4,999	\$5,000 TO \$9,999	\$10,000 TO \$14,999	\$15,000 TO \$19,999	\$20,000 TO \$24,999	\$25,000 OR MORE
AVERAGES PER VEHICLE							
GALLONS PURCHASED.....	1.2	4.9	3.0	2.4	3.7	2.9	1.8
GALLONS CONSUMED.....	1.2	4.9	3.0	2.4	3.7	2.9	1.8
MILES DRIVEN.....	1.4	5.5	3.4	2.8	3.4	2.7	1.8
EXPENDITURES (DOLLARS).....	1.2	5.0	3.0	2.4	3.6	2.8	1.8
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.7	2.2	1.7	1.3	1.3	1.2	0.7
FUEL TANK CAPACITY (GALLONS).....	0.6	1.2	1.2	1.1	1.1	1.3	1.3
AVERAGES PER GALLON							
PRICE (CENTS PER GALLON)							
ALL FUELS.....	0.2	0.6	0.4	0.4	0.4	0.4	0.3
LEADED FUELS.....	0.3	0.9	0.8	0.4	0.4	0.5	0.4
REGULAR.....	0.3	0.8	0.9	0.4	0.4	0.5	0.4
PREMIUM.....	0.5	1.2	1.0	1.2	1.2	1.2	0.9
UNKNOWN.....	1.5	20.7	2.7	2.7	1.7	2.5	2.2
UNLEADED FUELS.....	0.2	0.6	0.5	0.4	0.4	0.4	0.3
REGULAR.....	0.2	0.9	0.5	0.4	0.4	0.5	0.3
PREMIUM.....	0.4	0.9	1.0	1.1	0.9	0.8	0.5
UNKNOWN.....	0.3	1.2	0.6	0.8	0.7	0.6	0.5
UNKNOWN, OTHER, & DIESEL FUELS..	0.5	1.5	0.6	1.1	1.3	1.1	1.2
MILES PER GALLON.....	0.9	2.4	1.6	1.6	1.7	1.9	1.3

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

TABLE 51. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR JUNE 1979 TO DECEMBER 1979 BY HOUSEHOLD CHARACTERISTICS: RELATIVE STANDARD ERRORS (PERCENTS)

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2 OR MORE VEHICLES	1 DRIVER	2 OR MORE DRIVERS	UNKNOWNTAKEN DOWN
U.S. TOTALS								
MILES DRIVEN (BILLIONS).....	1.8	2.4	9.6	5.6	2.6	3.0	7.3	71.4
EXPENDITURES (BILLIONS OF DOLLARS)								
ALL FUELS.....	1.7	2.5	10.1	5.3	2.4	3.1	7.0	72.9
LEADED FUELS.....	3.6	4.4	9.4	6.8	4.7	4.5	9.8	70.6
UNLEADED FUELS.....	4.2	4.5	14.5	7.6	5.2	4.8	10.0	79.8
UNKNOWN, OTHER, & DIESEL FUELS....	12.0	14.1	22.5	17.9	13.2	14.9	20.7	100.9
GALLONS PURCHASED (BILLIONS)								
ALL FUELS.....	1.6	2.5	10.0	5.3	2.4	3.0	7.1	73.2
LEADED FUELS.....	3.6	4.4	9.4	6.7	4.7	4.5	10.0	70.7
UNLEADED FUELS.....	4.1	4.3	14.6	7.8	5.1	4.7	9.7	80.5
UNKNOWN, OTHER, & DIESEL FUELS....	11.6	13.5	22.3	17.8	12.7	14.3	20.7	100.9
NUMBER OF HOUSEHOLDS (MILLIONS)								
WITH VEHICLES.....	1.3	2.3	9.1	4.7	1.6	2.2	6.6	54.1
NUMBER OF VEHICLES (MILLIONS).....	0.0	1.9	9.4	4.7	1.4	1.8	6.2	52.5

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 52. U.S. HOUSEHOLD TRANSPORTATION DATA - TOTALS FOR 1980 BY HOUSEHOLD CHARACTERISTICS:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2+ VEHICLES	1 DRIVER	2 DRIVERS	3+ DRIVERS
U.S. TOTALS								
MILES DRIVEN (BILLIONS).....	1.4	2.5	7.8	5.2	1.7	2.1	4.6	38.1
EXPENDITURES (BILLIONS OF DOLLARS)								
ALL FUELS.....	1.2	2.4	7.3	5.0	1.7	2.1	4.6	34.0
LEADED FUELS.....	2.8	3.6	8.9	6.2	3.2	3.6	6.7	38.3
UNLEADED FUELS.....	2.6	3.5	9.4	6.4	2.9	3.1	5.4	59.7
UNKNOWN, OTHER, & DIESEL FUELS....	5.8	6.8	13.7	9.6	8.0	7.4	14.7	54.9
GALLONS PURCHASED (BILLIONS)								
ALL FUELS.....	1.2	2.4	7.3	4.9	1.7	2.2	4.7	33.7
LEADED FUELS.....	2.8	3.6	9.0	6.1	3.3	3.7	6.8	38.4
UNLEADED FUELS.....	2.5	3.4	9.4	6.4	2.8	3.1	5.4	59.8
UNKNOWN, OTHER, & DIESEL FUELS....	5.8	6.7	13.8	9.3	7.8	7.4	15.1	54.5
NUMBER OF HOUSEHOLDS (MILLIONS)								
WITH VEHICLES.....	1.3	2.2	6.7	4.3	1.0	1.9	3.5	27.2
NUMBER OF VEHICLES (MILLIONS).....	0.0	1.7	7.1	4.3	1.2	1.4	4.3	26.8

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 53. U.S. TRANSPORTATION DATA - AVERAGE MONTH FOR JUNE 1979 TO DECEMBER 1979 BY HOUSEHOLD CHARACTERISTICS: RELATIVE STANDARD ERRORS (PERCENTS)

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	1 VEHICLE	2 VEHICLES	1 DRIVER	2 DRIVERS	3 OR MORE DRIVERS
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	1.6	1.7	3.1	3.3	1.8	2.1	3.0	67.1
GALLONS CONSUMED.....	1.7	1.8	3.1	3.3	1.9	2.1	3.0	65.2
MILES DRIVEN.....	1.8	1.9	3.6	3.4	1.9	2.1	3.5	63.9
EXPENDITURES (DOLLARS).....	1.7	1.8	3.1	3.5	1.8	2.2	2.9	66.6
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.8	0.7	2.2	1.2	0.8	0.9	1.3	50.0
FUEL TANK CAPACITY (GALLONS).....	0.9	0.8	2.1	1.3	1.0	0.9	1.6	24.4
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	0.3	0.4	0.8	0.5	0.4	0.3	0.6	NA
MILES PER GALLON.....	1.1	1.2	2.2	1.9	1.3	1.1	2.4	33.5

NA = NOT AVAILABLE
 SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 54. U.S. HOUSEHOLD TRANSPORTATION DATA - AVERAGE MONTH FOR 1980 BY HOUSEHOLD CHARACTERISTICS:
RELATIVE STANDARD ERRORS (PERCENTS)**

	TOTAL	HOUSING STATUS		NUMBER OF VEHICLES USED BY HOUSEHOLD		NUMBER OF DRIVERS IN HOUSEHOLD		
		OWNERS	RENTERS	VEHICLES	2 VEHICLES	1 DRIVER	2 DRIVERS	3 OR MORE DRIVERS
AVERAGES PER VEHICLE								
GALLONS PURCHASED.....	1.2	1.4	2.5	2.4	1.4	1.3	2.8	15.4
GALLONS CONSUMED.....	1.2	1.4	2.5	2.4	1.4	1.3	2.8	15.5
MILES DRIVEN.....	1.4	1.6	2.4	2.8	1.5	1.5	2.6	21.1
EXPENDITURES (DOLLARS).....	1.2	1.4	2.5	2.4	1.3	1.3	2.8	15.9
FUEL INVENTORY AS A PERCENT OF TANK CAPACITY.....	0.7	0.7	1.4	1.1	0.7	0.8	1.0	8.2
FUEL TANK CAPACITY (GALLONS).....	0.6	0.6	1.6	1.0	0.7	0.8	1.0	2.1
AVERAGES PER GALLON								
PRICE (CENTS PER GALLON) ALL FUELS.....	0.2	0.3	0.4	0.3	0.3	0.2	0.4	1.6
MILES PER GALLON.....	0.9	0.8	2.1	1.3	1.0	1.0	1.2	8.8

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 55. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES
BY MILES DRIVEN - JUNE 1979 TO DECEMBER 1979:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MILLIONS OF VEHICLES BY MONTH						
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79
MILES DRIVEN							
TOTAL.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.....	14.7	11.7	15.5	19.3	19.3	14.1	11.5
1 TO 100.....	22.1	18.8	23.5	26.4	21.6	19.3	14.7
101 TO 200.....	24.4	15.9	19.3	18.0	19.9	12.3	14.7
201 TO 300.....	18.0	8.7	13.0	16.1	20.9	13.3	14.4
301 TO 400.....	13.7	9.0	13.6	12.7	17.6	12.2	14.9
401 TO 500.....	14.2	10.5	14.1	11.4	14.3	15.2	9.8
501 TO 600.....	13.7	11.6	15.7	16.7	17.1	13.0	12.9
601 TO 700.....	16.4	11.0	17.6	13.0	17.3	12.5	13.5
701 TO 800.....	15.4	14.0	13.3	13.0	17.1	13.5	11.6
801 TO 1,000.....	10.5	9.8	11.2	11.0	14.3	10.0	11.5
1,001 TO 2,000.....	7.8	5.8	7.6	9.0	6.6	7.2	5.9
2,001 OR MORE.....	20.7	12.7	26.1	26.3	23.8	23.8	25.4

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 56. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY MILES DRIVEN - 1980:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MILLIONS OF VEHICLES BY MONTH											
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80
MILES DRIVEN												
TOTAL.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.....	10.5	11.9	12.7	13.3	16.2	15.9	16.6	14.5	14.1	14.7	13.8	13.8
1 TO 100.....	14.8	15.3	17.1	20.3	15.5	15.9	13.6	15.6	20.5	15.4	17.3	15.4
101 TO 200.....	10.6	13.8	9.3	16.2	10.6	12.2	11.1	13.7	10.0	13.4	12.9	10.4
201 TO 300.....	9.3	9.5	12.2	9.5	11.8	10.7	11.7	9.4	11.2	11.2	14.4	9.9
301 TO 400.....	9.2	8.7	12.7	10.3	10.8	12.1	11.0	8.4	11.3	12.4	12.1	12.5
401 TO 500.....	11.3	10.2	10.3	12.4	14.0	11.7	11.6	9.5	10.8	13.4	11.2	9.2
501 TO 600.....	12.1	8.9	13.7	11.4	11.4	10.4	10.3	10.7	10.3	10.9	12.0	11.8
601 TO 700.....	9.7	10.0	12.3	11.7	11.1	12.4	12.2	10.8	10.0	12.4	12.6	10.0
701 TO 800.....	10.8	9.9	11.5	12.2	12.5	13.0	11.3	12.9	11.3	11.7	13.1	12.0
801 TO 1,000.....	9.3	8.2	10.4	8.4	9.3	9.3	7.8	9.0	9.2	10.6	11.1	10.4
1,001 TO 2,000.....	7.8	7.6	7.4	5.7	6.7	6.5	6.3	6.1	7.4	7.3	6.7	6.7
2,001 OR MORE.....	21.3	20.6	18.5	22.7	14.7	15.8	11.4	13.4	15.9	15.9	17.7	16.2

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

TABLE 57. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY GALLONS OF FUEL PURCHASED - JUNE 1979 TO DECEMBER 1979: RELATIVE STANDARD ERRORS (PERCENTS)

	MILLIONS OF VEHICLES BY MONTH						
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79
GALLONS PURCHASED							
TOTAL.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.....	14.5	12.1	15.1	18.1	17.5	12.9	10.4
1 TO 10.....	22.4	14.0	35.7	26.5	28.1	21.8	15.4
11 TO 20.....	15.0	8.9	11.6	13.9	12.2	10.3	13.6
21 TO 30.....	11.7	8.2	11.4	11.5	17.8	12.0	9.5
31 TO 40.....	14.1	8.0	11.1	9.5	11.4	10.7	9.3
41 TO 50.....	13.6	8.1	13.0	9.1	10.2	12.3	9.8
51 TO 60.....	11.6	8.8	13.4	12.0	13.8	11.5	10.1
61 TO 70.....	13.3	12.2	14.2	16.7	14.0	11.6	12.6
71 TO 80.....	23.0	14.1	16.4	17.9	18.9	12.7	13.7
81 TO 90.....	24.3	12.8	17.4	23.2	18.2	17.3	15.1
91 TO 100.....	17.9	17.6	21.2	22.5	28.3	16.8	18.4
101 OR MORE.....	10.4	9.8	12.0	16.0	12.7	11.9	13.3

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 58. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY GALLONS OF FUEL PURCHASED - 1980:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MILLIONS OF VEHICLES BY MONTH											
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80
GALLONS PURCHASED												
TOTAL.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.....	10.2	11.7	11.4	13.1	13.4	13.2	13.0	11.5	13.5	14.4	11.4	12.2
1 TO 10.....	14.2	15.6	16.7	17.2	19.3	19.5	15.4	15.4	13.6	15.2	15.4	13.8
11 TO 20.....	10.5	9.1	11.2	9.3	8.4	8.4	7.9	8.9	9.7	10.6	10.6	10.8
21 TO 30.....	9.7	8.5	11.5	9.4	8.1	8.2	9.1	10.1	8.6	10.0	10.3	9.6
31 TO 40.....	8.8	7.8	8.9	7.4	7.8	8.8	9.4	7.6	7.7	9.1	7.8	7.9
41 TO 50.....	8.1	7.4	8.5	8.6	9.7	10.6	8.0	8.1	9.8	8.5	9.6	8.7
51 TO 60.....	8.2	7.8	9.7	7.7	10.2	9.0	10.0	8.6	9.9	11.2	10.0	10.4
61 TO 70.....	12.8	10.3	12.7	13.4	11.5	14.2	11.4	10.1	12.3	10.6	11.7	13.7
71 TO 80.....	12.0	13.6	12.1	12.4	12.9	14.4	15.9	13.3	14.1	17.0	12.4	11.3
81 TO 90.....	15.4	15.5	15.8	19.1	17.3	14.9	10.6	16.3	14.5	15.9	20.7	13.7
91 TO 100.....	16.9	20.4	19.5	22.7	17.0	19.6	16.6	16.6	18.8	18.7	20.3	12.5
101 OR MORE.....	11.0	11.0	11.8	11.4	12.4	11.4	7.6	8.9	15.8	12.5	12.4	10.7

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY,
RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION,
OFFICE OF ENERGY MARKETS AND END USE,
ENERGY INFORMATION ADMINISTRATION.

**TABLE 59. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES
BY DOLLAR EXPENDITURES - JUNE 1979 TO DECEMBER 1979:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MILLIONS OF VEHICLES BY MONTH						
	JUN '79	JUL '79	AUG '79	SEP '79	OCT '79	NOV '79	DEC '79
EXPENDITURES							
TOTAL.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0
\$0.....	14.5	12.1	15.1	18.1	17.5	12.8	10.4
\$10.00 OR LESS.....	16.3	14.3	37.5	21.4	31.2	20.3	16.7
\$10.01 TO \$20.00.....	11.4	8.6	8.4	14.2	11.3	10.6	13.0
\$20.01 TO \$30.00.....	10.2	7.2	10.8	9.4	17.3	11.6	10.9
\$30.01 TO \$40.00.....	10.8	7.0	11.4	8.5	12.4	11.1	9.5
\$40.01 TO \$50.00.....	11.3	8.7	11.4	8.8	10.2	12.1	9.8
\$50.01 TO \$60.00.....	11.0	11.0	16.0	14.5	14.4	11.8	10.8
\$60.01 TO \$70.00.....	18.3	13.1	15.3	14.8	13.6	12.0	11.7
\$70.01 TO \$80.00.....	19.3	11.8	17.1	18.1	16.7	11.5	13.4
\$80.01 TO \$90.00.....	17.4	15.6	19.6	25.0	20.6	16.0	15.8
\$90.01 TO \$100.00.....	27.7	15.6	22.2	37.8	22.2	18.4	19.7
\$100.01 OR MORE.....	12.6	11.4	12.5	15.2	12.3	11.3	11.1

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

**TABLE 60. U.S. HOUSEHOLD TRANSPORTATION DATA - MONTHLY COUNTS OF VEHICLES BY DOLLAR EXPENDITURES - 1980:
RELATIVE STANDARD ERRORS (PERCENTS)**

	MILLIONS OF VEHICLES BY MONTH											
	JAN '80	FEB '80	MAR '80	APR '80	MAY '80	JUN '80	JUL '80	AUG '80	SEP '80	OCT '80	NOV '80	DEC '80
EXPENDITURES												
TOTAL.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
\$0.....	10.2	11.7	11.4	13.1	13.4	13.2	13.0	11.5	13.5	14.4	11.4	12.2
\$10.00 OR LESS.....	17.2	18.6	18.8	20.6	25.3	21.8	18.8	21.1	18.7	20.7	19.9	18.8
\$10.01 TO \$20.00.....	11.7	10.6	13.9	10.8	11.5	11.1	10.6	9.3	10.2	10.3	12.3	12.1
\$20.01 TO \$30.00.....	11.7	9.6	10.6	10.1	13.1	9.0	8.1	11.1	11.0	12.6	10.0	10.8
\$30.01 TO \$40.00.....	8.0	7.3	10.8	7.5	9.0	10.6	9.3	10.6	8.6	9.6	11.6	10.8
\$40.01 TO \$50.00.....	8.9	8.0	10.1	10.4	7.5	9.7	11.0	8.6	8.1	8.7	10.1	9.4
\$50.01 TO \$60.00.....	8.8	9.5	10.7	10.1	11.1	11.4	8.3	7.9	10.5	8.9	9.6	9.7
\$60.01 TO \$70.00.....	11.8	10.5	9.9	8.3	11.1	9.0	9.8	10.6	10.1	13.9	12.2	10.0
\$70.01 TO \$80.00.....	13.7	10.1	12.0	14.5	11.6	13.7	10.7	11.6	15.5	10.7	12.2	11.5
\$80.01 TO \$90.00.....	13.4	13.7	12.2	14.0	14.6	13.6	14.7	14.7	13.5	17.7	14.0	13.0
\$90.01 TO \$100.00.....	17.9	16.5	14.1	15.5	15.8	14.7	12.0	16.5	17.2	19.2	18.1	16.0
\$100.01 OR MORE.....	9.1	10.0	7.4	7.9	7.8	8.4	6.5	7.1	11.3	9.7	10.8	8.3

SOURCE: HOUSEHOLD TRANSPORTATION PANEL, RESIDENTIAL ENERGY CONSUMPTION SURVEY, RESIDENTIAL AND COMMERCIAL BRANCH, ENERGY END USE DIVISION, OFFICE OF ENERGY MARKETS AND END USE, ENERGY INFORMATION ADMINISTRATION.

2. LIMITATIONS OF THE DATA

Overview

Data from the Household Transportation Panel are subject to many sources of sampling error, nonsampling error, and bias. Sampling error is a measure of the variability in the data caused by a subset of households being surveyed rather than the entire population. Because the survey used probability sampling techniques, it is possible to estimate sampling errors of the survey estimates and use these sampling errors as a guide in making inferences from the sample estimates to the total population. Nonsampling error and bias are measures of variability in survey data due to the conduct of the survey and therefore are not reflected in the estimate of the relative standard error. They can include respondent bias and response variance, interviewer error, coding and/or punching error, and nonresponse bias. Estimates of variance and bias due to these sources of error are not available for this survey. The wording and format of the survey questionnaires, the procedures used to select and train interviewers, and the quality control built into the data collection, data receipt, and data processing operations were all designed to minimize these sources of error.

Computation of Estimates

The estimates for the data totals were obtained by using the formula

$$X' = \sum W_i X_i$$

where W_i is the household or vehicle weight and X_i is the variable of interest. The estimates for the data averages were obtained using the formula

$$A' = \sum W_i X_i / \sum W_i Y_i$$

where W_i and X_i are as before and Y_i is the variable over which we are averaging. The estimates for different table cells are obtained independently. No attempt was made to use the household rotation (2-4-2) pattern¹ to improve the estimation procedure. If the variable, "month", was not one of the factors used to determine a particular cell, then the results for one household for different months were treated the same as data from different households in the estimation procedure. No information from previous transportation surveys was used to adjust the estimates except to insure that the weighted sum of households with vehicles was controlled to equal projections based on the Bureau of the Census' 'Current Population Series.'

¹With a 2-4-2 design, a household is in the survey for two months, then out for four months, then in for another two months. In any given month, approximately one fourth of the households in the panel are in for the first time, one fourth were in the previous month only, one fourth were in the fifth and sixth previous months and one fourth were in the previous month, sixth previous month and seventh previous month. As a result, the estimates for monthly statistics are highly correlated. In testing for trends over months, the power of comparison can be greatly increased by using the 2-4-2 design pattern in the estimation procedure and variance calculation.

Computation of Sampling Errors

The complex multi-stage, multi-frame design of the survey makes it virtually impossible to construct an exact algebraic variance estimator. The method used to produce variances for this survey is a balanced half-sample replication procedure (See References 1 and 2). In order to apply the half-sample technique to this survey, the 103 sample primary sampling units (PSU's) were grouped into 71 strata. Thirty-nine of the strata were self-representing; that is, they consisted of large metropolitan areas that came into the sample with certainty. In these strata, sample segments were divided into two replication groups. Each of the remaining 32 strata consisted of two matched nonself-representing PSU's belonging to the same Census region. Nonself-representing PSU's which were used for the pretest were matched among themselves and those not used for the pretest were matched among themselves. In addition, the nonself-representing PSU's were matched according to rural/urban status and SMSA size whenever possible. The two replication groups in the nonself-representing strata consisted of one PSU each.

Variance estimates for selected survey statistics were created by computing 72 half-sample estimates for each statistic. Each half-sample estimate was formed by selecting one of the two replication groups from each stratum using an orthogonal matrix technique adapted from an article by Plackett and Burman (See Reference 3). The household weights and vehicle weights in each half-sample were ratio-adjusted upward so that the total number of households with vehicles and total number of vehicles per month corresponded to the full sample weighted totals. These control totals are as follows:

Table C. Total and Estimated Numbers of Sample Households with Vehicles by Year and Month

Year/Month	Control Number of Households with Vehicles (thousands)	Estimated Number of Vehicles (thousands)
1979		
June.....	69,050	122,900
July.....	69,180	123,200
August.....	69,310	123,500
September.....	69,450	123,900
October.....	69,580	124,200
November.....	69,710	124,500
December.....	69,830	124,800
1980		
January.....	69,950	125,200
February.....	70,070	125,500
March.....	70,200	125,700
April.....	70,320	126,200
May.....	70,440	126,700
June.....	70,560	126,900
July.....	70,680	127,200
August.....	70,800	127,600

Table C. Total and Estimated Number of Sample Households with Vehicles by Year and Month (Continued)

Year/Month	Control Number of Households with Vehicles (thousands)	Estimated Number of Vehicles (thousands)
September.....	70,920	128,000
October.....	71,040	128,000
November.....	71,160	128,400
December.....	71,290	128,800

The variance estimate for the survey estimate X' of characteristic X is given by:

$$S_{X'}^2 = \frac{1}{72} \sum_{i=1}^{72} (X_i' - X')^2$$

where X_i' is the i^{th} half-sample estimate of X . The error tables in this report display relative standard errors (RSE's), which are defined as

$$RSE(X') = \sqrt{\frac{S_{X'}^2}{(X')^2}}$$

The ratio adjustment of the totals for vehicles and households with vehicles insures that the relative error for these totals is zero. Any errors in these numbers can be considered to be design biases. In particular, they are affected by any undercount or overcount in the census data. In addition, the total number of vehicles may be biased by the estimate of the number of vehicles per household and the final weighting scheme.

Using Error Estimates to Form Confidence Intervals

Estimates of the RSE's can be used to construct confidence intervals for individual estimates. For example, Table 1 includes the estimate that during June 1979, the total miles driven were 93.2 billion. From Table 31, the relative standard error for this estimate is 3.6 percent. From this data, an approximate 95 percent confidence interval can be constructed by using ± 2 standard errors of the estimate, where the standard error of an estimate \bar{X} is given by $S_{\bar{X}} = [RSE(\bar{X})] \times [\bar{X}]$. Thus, a 95 percent confidence interval can be constructed for the previous example as follows: during June 1979, the total miles driven was 93.2 billion (± 7.2 percent of 93.2), or 93.2 billion miles (± 6.7 billion miles).

Using Error Estimates to Test Statistical Hypotheses

The analytical statements in the text of this report can be divided into three types. The first type is the expository statement, which presents a statistic for its own sake, without reference to any other statistic. An example of such a statement is found in the first sentence of the third paragraph under "Expenditures". "For the average month in 1980, \$58.80 (+1.4) was spent per vehicle for fuel." No statistical tests of hypothesis are needed or were performed for such statements; twice the standard error is given in parentheses after the estimate. This value serves as a measure of the level of variability in the statistic, and enables the reader to compute an approximate 95 percent confidence interval for the estimate by adding and subtracting the value in parentheses.

The second type of statement is the descriptive statement, which is intended to be a summary statement of a data relationship or relationships that exist in a table. An example of this type of statement is found in the first sentence under "Price": "... the price of motor gasoline has changed dramatically since the survey was initiated in June 1979." Such statements are meant to give general impressions and are not subject to statistical justification.

The third type of statement is the stated or implied comparison of two or more statistics. Such comparisons are meant to point out specific similarities and differences between population subgroups, sometimes in support of the summary statements discussed above. Since these statements imply specific relationships among population subgroups based on sample data, they are inferential, and subject to statistical testing. Examples of such comparisons are:

Example (1) The third sentence in the second paragraph under "Price": "Regular leaded fuel had the lowest average price per gallon; ... 116.2 (+ 0.7) in 1980."

Example (2) The second sentence in the second paragraph under "miles per gallon: Those vehicles built from 1975 through 1980 had a combined average miles per gallon of 15.7 (+ 0.3) while 1970 to 1974 vehicles, and 1969 and older vehicles, posted average miles per gallon of 13.2 (+ 0.2) and 12.9 (+ 0.4), respectively."

Example 1 implies that the average price of regular leaded fuel was significantly less than the average for other gasoline grades. Example 2 states that the average miles per gallon for cars built after 1974 was higher than the value for each of the other two age groups.

The test used to check this kind of statement is the standard normal deviate test. In order to test the significance of the difference between estimates X' and Y' , X' and Y' are assumed to be normally distributed by appeal to the Central Limit Theorem.

Then the test statistic

$$Z_{X', Y'} = \frac{X' - Y'}{\sqrt{S_X^2 + S_Y^2}}$$

is computed, with Z having approximately a standard normal distribution. The null hypothesis, that there is no difference between X' and Y', is rejected if $Z_{X', Y'}$ is greater than some critical value G. In this report, G is set so that the level of significance, (the probability of detecting a difference when no difference exists,) is .05. Ordinarily, this level of significance corresponds to a critical value of 1.96, and when a comparison is the only possible one of its type, 1.96 is the correct value. However, most of the statements in this report involve comparisons that were selected from a larger set of C possible comparisons, each of which had an opportunity to be tested and falsely yield a significant difference. In order to attain a true level of significance no greater than .05 for a particular test from such a set, the critical value G was adjusted so that the probability of falsely detecting any significant difference was .05/C. The rationale for this adjustment is based on the Bonferroni inequality, and is discussed elsewhere (see References 4 and 5).

The normal test of a hypothesis with adjusted critical value can be applied to the examples as follows:

- (1) The test data for Example 1 came from Table 4 and Error Table 34, and are summarized in the table below:

Table D. Test Data for Example 1

Fuel Grade	1980	
	Average Price per Gallon	Standard Error ¹
Leaded Regular.....	116.2	0.35
Leaded Premium	125.8	0.50
Unleaded Regular.....	122.0	0.24
Unleaded Premium.....	128.8	0.52

¹The standard error is derived by multiplying the average price per gallon in Table 4, by the relative standard error in Table 34.

The number of possible comparisons among the 4 fuel grades is the combination ${}^4C_2 = 6$ so the critical value for all tests is the normal two-tailed $.05/6 = .0083$ critical value which, from the standard normal tables, is 2.64.

The test statistics for the fuel grade comparison are:

$$Z_{LP,LR} = \frac{125.8 - 116.2}{\sqrt{(0.50)^2 + (0.35)^2}} = \frac{9.6}{0.61} = 15.7$$

$$Z_{UR,LR} = \frac{122.0 - 116.2}{\sqrt{(0.24)^2 + (0.35)^2}} = \frac{5.8}{0.42} = 13.8$$

$$Z_{UP,LR} = \frac{128.8 - 116.2}{\sqrt{(0.52)^2 + (0.35)^2}} = \frac{12.6}{0.63} = 20.0$$

All differences exceed the critical value of 2.64; therefore, the statement is justified.

- (2) All data needed to test the statement in Example 2 are found in the statement. Note that two standard errors are shown in the text, so the error values in the denominators of the test statistics are half of the text values. The test statistics are:

$$Z_1 = \frac{15.7 - 13.2}{\sqrt{(0.15)^2 + (0.10)^2}} = \frac{2.5}{0.18} = 13.9$$

$$Z_2 = \frac{15.7 - 12.9}{\sqrt{(0.15)^2 + (0.20)^2}} = \frac{2.8}{0.25} = 11.2$$

Since there are 3 subgroups, the number of possible comparisons is ${}^3C_2 = 3$ and the resulting critical value is 2.39. Both test statistics exceed the critical value, and so the statement is justified.

References

1. National Center for Health Statistics: "Replication: An Approach to the Analysis of Data From Complex Surveys." Vital and Health Statistics. Public Health Service Publication No. 1000 - Series 2 - No. 14., Washington: U.S. Government Printing Office, April 1966.
2. National Center for Health Statistics: "Pseudoreplication: Further Evaluation and Application of the Balanced Half-Sample Technique," Vital and Health Statistics. Public Health Service Publication No. 1000 - Series 2 - No. 31. Washington: U.S. Government Printing Office, January 1969.
3. Plackett, R.L., and Burman, J.P.: "The Design of Optimum Multifactorial Experiments." Biometrika 33: pp. 305-325, 1946.
4. Miller, R. G.: Simultaneous Statistical Inference. New York: McGraw-Hill Book Co., 1966.
5. National Center for Health Statistics: Manual on Standards and Procedures for Reviewing Statistical Reports. 1974. (Internal Document.)

3. HOW THE SURVEY WAS CONDUCTED

Introduction

The Household Transportation Panel (EIA-141)¹ was designed by the Energy Information Administration (EIA) to provide data on energy consumption for motor vehicle transportation within the residential sector. This survey is one of several studies that, together, will provide data on energy consumption in the residential, commercial, industrial, and transportation sectors.

The purpose of the Household Transportation Panel is to provide monthly and annual estimates of fuel consumed and miles driven by household-used vehicles. Data are recorded in fuel purchase logs by monthly panels of respondents. ("Household vehicles" includes all motor vehicles used by the household except motorcycles, mopeds, large trucks, and large buses.) The panels of households are generally asked to report for two months initially, and then to report for another two months after a four-month interval of nonparticipation. Each month's panel is a representative national sample selected from the 48 contiguous States and the District of Columbia.

Sample Selection

The Household Transportation Panel is comprised of households that are subsampled from two national surveys. The first survey used for subsampling is the set of 3,842 respondents to the National Interim Energy Consumption Survey (NIECS). Response Analysis Corporation (RAC) of Princeton, New Jersey, contacted 4,507 households for the NIECS in November and December 1978. They inquired about fuels used by the households, appliances used, conservation activities, and characteristics of the households' vehicles. These households had been selected according to a complex, multi-stage sample design; probability techniques were used throughout all stages.² (only households which own at least one vehicle are selected.) Respondents in 69 of the 103 Primary Sampling Units (PSU)³ who had at least one vehicle were randomly assigned to 6 groups.

¹Office of Management and Budget (OMB) Clearance No. 38-R0392.

²For more information on how the NIECS survey was conducted, see Appendix B, Residential Energy Consumption Survey: Consumption and Expenditures, April 1978 through March 1979, July 1980, DOE/EIA 0207/5, GPO Stock No. 061-003-00131-9.

³Respondents in the other 34 PSU's from the NIECS were used in pretests to select an optimum design for the Transportation Panel.

Starting in June 1979, one group was brought into the sample each month for a two-month reporting period. (There was some experimentation in July 1979 with one- and three-month reporting periods.) Starting in December 1979, these groups were returned to the sample, one each month, for another two-month reporting period.

The second survey was necessary to screen households for participation in the Household Transportation Panel beyond November 1979. This national "Screener Sample" was selected from the same block listings of housing units in 103 PSU's that had been used for the NIECS, but excluding the households that had been selected for the NIECS. Households in the Screener Sample were interviewed in November and December 1979 and resulted in 3,806 personal contacts at the 4,453 eligible households. Households that used vehicles for personal transportation were divided into 12 groups of 250 vehicles each, and, starting in December 1979, are being brought into the sample in the same 2-4-2 pattern as described for the NIECS households. Since January 1980, this general 2-4-2 reporting pattern has yielded a combined design sample size of about 1,000 households for each month's panel from the NIECS and the Screener Sample.¹

Survey Operations

The basic instrument used for data collection for the Household Transportation Panel is the Vehicle Fuel Purchase Log (See Appendix A). Sample households are requested to complete monthly logs for each of their vehicles. The information requested on the log for each purchase is the:

- odometer reading
- fuel gauge reading after purchase
- number of gallons purchased
- total cost of the purchase
- price per gallon
- type of fuel purchased

In addition, odometer and fuel gauge readings are requested for the first and last days of each month.

Selected households are first contacted by a letter briefly describing the task of completing the purchase log and conveying a gift of \$5 per vehicle.² A follow-up telephone call is made to administer a background questionnaire and to verify information pertinent to the Transportation Panel, such as address, household size, and vehicle inventory. The interview obtains the name of the main driver for each household vehicle so that the

¹For a more detailed discussion of the Screener Sample, see Appendix A, Residential Energy Consumption Survey: 1979-1980 Consumption and Expenditures, Part 1: National Data (Including Conservation), DOE/EIA-0262/1, April 1981.

²Field experiments were carried out from February through June 1980 to determine the effectiveness of other dollar amounts, the appropriate timing for conveying the incentive, and one- versus two-month reporting periods.

fuel purchase log can be mailed to that person. In addition, RAC secures the name and address of a neighbor who would know the forwarding address should a move occur between panel rotations.

Shortly before the first day of the reporting month, a fuel purchase log and instructions are sent to each household. A telephone call is made several days later to check on the arrival of these materials and to answer any questions the respondent may have. Panelists are requested to use the logs from the first day of the month until the last day.

A mid-month telephone call is made to answer any new questions and to encourage the respondent to continue with the panel. Finally, within four or five days after the end of the month, a telephone call is made to collect the data recorded on the fuel purchase log. The respondent who reads the log data to the interviewer also answers a short list of topical questions. For instance, during the first several months of the panel, respondents were asked about waiting in lines at gas stations.

Data Processing

Data from the final telephone interviews are coded and then keypunched from hard copy to magnetic tape. The keypunching is 100 percent key-verified. A series of computer edits is made using the interrelationships among the data elements to check for reasonable values.

Estimation

A series of weights are applied to the reported data in order to expand them to population levels. These weights account for sampling and non-response, and incorporate ratio estimation techniques. Missing fuel purchases are detected and estimated from those reported. If a household completed purchase logs for some but not all of its vehicles, the completed logs are weighted up to represent the missing logs in that household. Sampled households that provided no complete purchase logs were accounted for by weighting up reported data at various subnational levels.

Initially, the household weight applied to the data is the product of the following weights:

- The household weight from the NIECS or the Screener Sample.
- The inverse of the chance of selecting the household to be in a particular month's panel.

Ratio estimation by the type of community within four Census regions and by selected household characteristics was used as an intermediate adjustment to the weights.

Initially, the total number of weighted vehicles in any month was the result of an estimate based on the average number of vehicles per household determined on a straight line basis from November 1978 to November 1979, and from November 1979 to November 1980 (the NIECS and Screener Survey).

The initial value for the total number of vehicles per month was the product of this estimate and the number of households in the population taken from the Current Population Survey (CPS) estimates as reported by the Bureau of the Census.

Subsequent events resulted in the necessity of further adjustments to the household and vehicle weights. There were different adjustments to the weights for households living in metropolitan areas and those living in nonmetropolitan areas. The adjustment also changed according to the month. These additional adjustments arise from two factors.

- Overall 1980 census totals are higher than CPS estimates for the same period.
- Weighting procedures used for CPS estimates in 1977 and 1978 resulted in inconsistencies in the series of CPS data reported for metropolitan and nonmetropolitan areas; this factor caused a distortion in the relationship between data for metropolitan areas and nonmetropolitan areas both in the CPS and in the transportation panel data.

The final weighted control totals for the number of households and number of vehicles by month are listed on page 72.

Response Rate

Table D. Percentage of Vehicles for Which Purchase Logs Were Completed

<u>Year/Month</u>	<u>Number of Eligible Vehicles¹</u>	<u>Vehicles with Completed Logs²</u>	<u>Percentage of Completed Logs</u>
1979			
June.....	1,051	682	65
July.....	2,124	1,221	57
August.....	1,320	691	52
September.....	1,326	658	50
October.....	1,316	715	54
November.....	1,541	761	49
December	1,870	954	51
1980			
January.....	2,220	1,228	55
February.....	2,181	1,252	57
March.....	1,893	1,166	62
April.....	1,832	1,121	61
May.....	2,022	1,180	58
June.....	2,040	1,217	60
July.....	2,146	1,354	63
August.....	2,055	1,315	64
September.....	1,848	1,249	68
October.....	1,757	1,162	66
November.....	1,784	1,152	65
December.....	1,756	1,193	68

¹Number of eligible vehicles in the Household Transportation Panel data base.

²All completed vehicles that are used (weighted) to produce the Household Transportation Panel estimates.

To be eligible, the vehicle must meet the qualifications described in the glossary and be available for the household to use. It need not have been driven.

APPENDIXES

A. FUEL PURCHASE SURVEY LOG

Information on fuel purchases is confidential and will be used only in statistical summaries. This survey is being done under the Federal Energy Administration Act of 1974. Your participation is voluntary.



U.S. DEPARTMENT OF ENERGY

National Survey of Fuel Purchases for Vehicles

MAY 1980

Conducted by
Response Analysis Corporation
P.O. Box 158
Princeton, New Jersey

File No. _____

VEHICLE FUEL PURCHASE LOG

PLEASE KEEP THIS LOG IN YOUR VEHICLE AND WRITE DOWN EVERY GASOLINE OR DIESEL FUEL PURCHASE BETWEEN MAY 1, 1980, AND MAY 31, 1980.

MAKE THESE ENTRIES BEFORE FIRST USE OF VEHICLE ON MAY 1, 1980

Total Vehicle Mileage	Complete the line showing how full the tank is before first use on May 1, 1980
	

Vehicle Make: _____

Vehicle Year: _____

Vehicle Model: _____

About how many gallons does the tank of this vehicle hold? _____ GALLONS

DON'T KNOW

FUEL PURCHASES										
Purchase Number..	Fuel Purchase Date	Total Vehicle Mileage	Complete the line showing how full the tank is after fuel purchase	Number of Gallons Purchased	Total Cost of Fuel	Price per Gallon	Was the tank filled?	Type of Fuel Purchased		Please note any problem related to this purchase
1							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL	
2							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL	
3							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL	
4							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL	

PLEASE CONTINUE RECORDING PURCHASES UNTIL MAY 31, 1980 ON SECOND PAGE OF THIS LOG.

MAKE THESE ENTRIES AFTER LAST USE OF VEHICLE ON MAY 31, 1980

Total Vehicle Mileage	Complete the line showing how full the tank is after last use on May 31, 1980
	

After the last use on May 31, 1980, please keep this log near your telephone. We will be calling to obtain the information. Or, if you will be difficult to reach by telephone, call collect to Pat Gambino at (609) 921-3333.

THANK YOU VERY MUCH FOR YOUR HELP!

Purchase Number..	Fuel Purchase Date	Total Vehicle Mileage	Complete the line showing how full the tank is after fuel purchase	Number of Gallons Purchased	Total Cost of Fuel	Price per Gallon	Was the tank filled?	Type of Fuel Purchased	Please note any problem related to this purchase
5							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
6							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
7							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
8							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
9							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
10							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
11							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
12							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
13							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
14							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL

AFTER THE LAST USE OF THIS VEHICLE ON MAY 31, 1980, PLEASE COMPLETE ENTRIES AT THE BOTTOM OF THE FIRST PAGE OF THIS LOG.

Purchase Number..	Fuel Purchase Date	Total Vehicle Mileage	Complete the line showing how full the tank is <u>after</u> fuel purchase	Number of Gallons Purchased	Total Cost of Fuel	Price per Gallon	Was the tank filled?	Type of Fuel Purchased	Please note any problem related to this purchase
15							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
16							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
17							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
18							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
19							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
20							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
21							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
22							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
23							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL
24							<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> LEADED <input type="checkbox"/> UNLEADED	<input type="checkbox"/> REGULAR <input type="checkbox"/> PREMIUM <input type="checkbox"/> DIESEL

AFTER THE LAST USE OF THIS VEHICLE ON MAY 31, 1980, PLEASE
COMPLETE ENTRIES AT THE BOTTOM OF THE FIRST PAGE OF THIS LOG.

B. FUEL PURCHASE SURVEY INSTRUCTIONS

Ta

May

Please keep the Fuel Purchase Log in your vehicle.

Fill in now:

The vehicle make, model year, and model name.

If you know the (approximate) number of gallons that the fuel tank of the vehicle holds, please fill in that number.

On Thursday, May 1, or the first time you use the vehicle after that date:

Put the number of miles shown on the total mileage meter (odometer) of the vehicle.

After you start the engine for the first time, complete the line showing (approximately) the level of fuel in the tank of the vehicle.

Starting on May 1 and continuing until May 31:

Use your vehicle and purchase fuel as you normally would during this period.

Fill in entries for each purchase of fuel (see reverse side of these instructions).

On Saturday, May 31:

After your last use of the vehicle on May 31, complete the entries showing the number of miles on the total mileage meter (odometer), and the approximate level of fuel in the tank of the vehicle.

After your last use of the vehicle on May 31, please keep the Log near your telephone. We will be calling you within a few days after May 31 to obtain the information on fuel purchases from you.

We will be sending you an additional Log for your fuel purchases during the month of June.

If you have a question about your Fuel Purchase Log, please call collect to (609) 921-3333 any weekday between 9 a.m. and 4 p.m., eastern time. Ask to speak to Patricia Gambino.

Turn page for additional instructions

Please make the following entries for each fuel purchase for your vehicle:

- Fuel purchase date Show the month and day each time gasoline or diesel fuel is added to the vehicle.
- Total vehicle mileage This is the number of miles shown on the total mileage meter (odometer) of the vehicle at the time you stop for fuel.
- Line showing how full tank is after fuel purchase Most vehicles have a meter showing the (approximate) level of fuel in the fuel tank. After fuel has been added to the tank, and you have started your engine again, draw in the line showing the approximate level of fuel.
- Number of gallons purchased Make this entry to the nearest tenth of a gallon (for example: 3.4 or 11.8).
- Total cost of fuel Show total cost of the gasoline or diesel fuel. Do not include cost of oil or other items, if any, purchased at the same time.
- Price per gallon This is the price per gallon for the type of gasoline or diesel fuel you purchase, to the nearest tenth of a cent.
- Was the tank filled? Generally, this answer should be marked "YES" if you had asked to have the tank filled (and the amount of the purchase was not limited by the service station). The answer would usually be "NO" if you have asked for a certain number of gallons or for a dollar amount, or the amount of the purchase was limited by the service station.
- Type of fuel purchased Mark an answer in each column that applies.
- Any problem related to purchase? Note any problems or difficulties in obtaining fuel when you wanted it, or in the amount or type of fuel that you wanted.

IMPORTANT: Please keep the purchase log in your vehicle. The entries should be made for each purchase of fuel, even when someone other than the main driver of the vehicle makes the purchase.

C. BACKGROUND QUESTIONNAIRE
U.S. DEPARTMENT OF ENERGY

**National Survey of
 Fuel Purchases for Vehicles**

BACKGROUND QUESTIONNAIRE

1. At the time of our interview in _____, the members of your household included
 (READ LIST BELOW). (MONTH/YEAR)

HOUSEHOLD MEMBER #	RELATIONSHIP	SEX		AGE
		FEMALE	MALE	
1	RESPONDENT	1[]	2[]	
2		1[]	2[]	
3		1[]	2[]	
4		1[]	2[]	
5		1[]	2[]	
6		1[]	2[]	
7		1[]	2[]	
8		1[]	2[]	
9		1[]	2[]	
10		1[]	2[]	
11		1[]	2[]	
12		1[]	2[]	

2. Is there anyone living in your household now who was not a member of your household in (MONTH/YEAR)?
 1[] YES -- Who is that? (ADD TO LIST) 089
 0[] NO

3. Was there anyone living in your household in (MONTH/YEAR) who is not a member of your household now?
 1[] YES -- Who is that?

HOUSEHOLD MEMBER #(S) FROM TABLE ABOVE
 0[] NO

4. At the time we spoke with your household in (MONTH/YEAR) you had a (READ LIST BELOW).

VEHICLE #						c02-c09
VEHICLE TYPE						14-16
MAKE						17-19
MODEL YEAR						20-22
MODEL NAME						23-25

5. Do you still have (VEHICLE LISTED ABOVE)?	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO					
IF YES: 6. What is the name of the main driver?						
7. FILL IN HOUSEHOLD MEMBER # FROM Q. 1						55-56

IF HOUSEHOLD STILL HAS ONE OR MORE VEHICLES LISTED IN Qs. 4/5, ASK:

8. Do you or other members of your household own or have the regular use of any cars, trucks, vans, or similar vehicles, <u>in addition to</u> (MAKE AND MODEL YEAR FROM Q. 4)?	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO -- SKIP TO Q. 19
9. How many additional vehicles do you have?	1 <input type="checkbox"/> ONE 2 <input type="checkbox"/> TWO 3 <input type="checkbox"/> THREE 4 <input type="checkbox"/> FOUR OR MORE } SKIP TO Q. 12

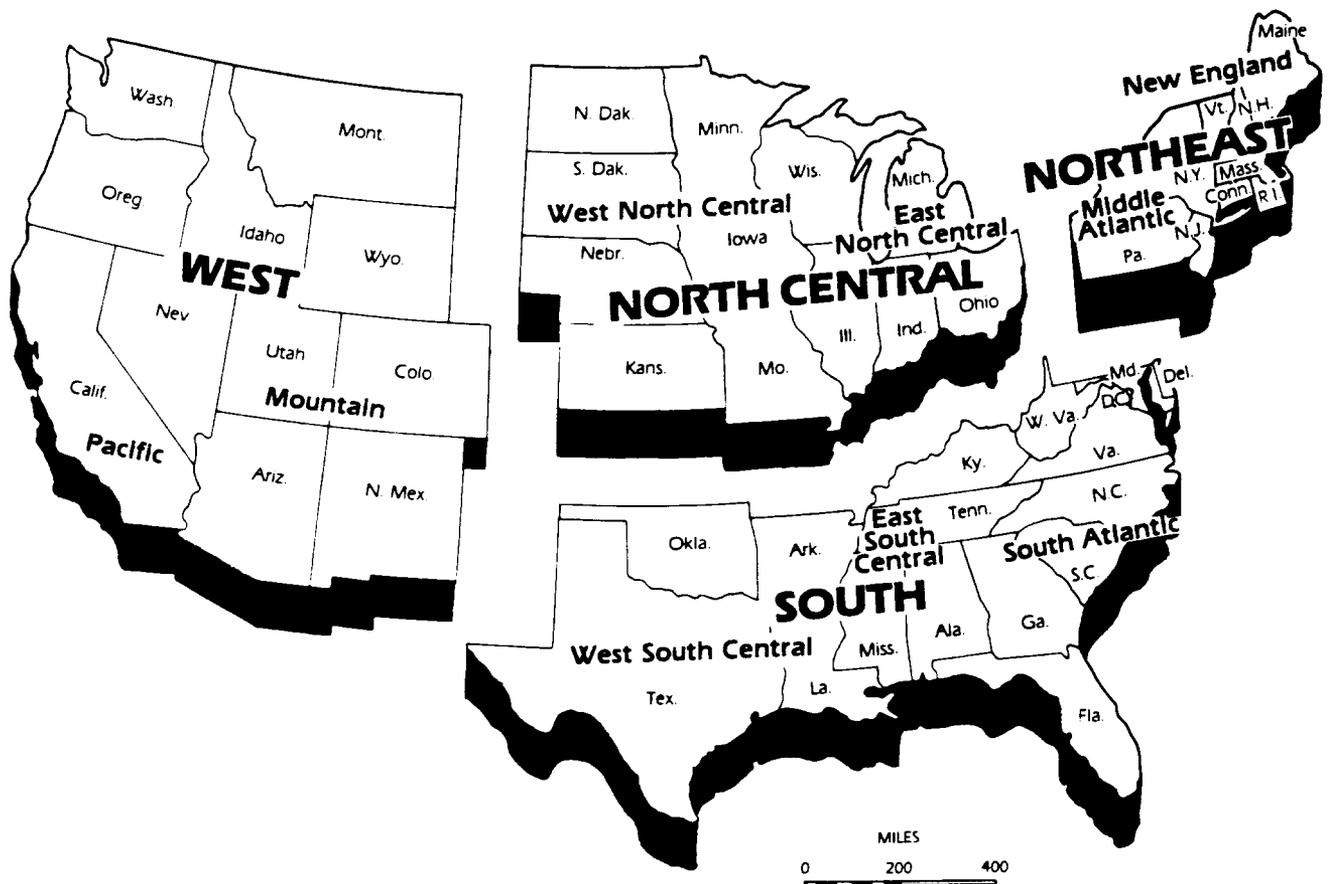
IF HOUSEHOLD NO LONGER HAS ANY OF THE VEHICLES LISTED IN Qs. 4/5, ASK:

10. Do you or other members of your household now own, or have the regular use of any cars, trucks, vans, or similar vehicles?	1 <input type="checkbox"/> YES 0 <input type="checkbox"/> NO -- SKIP TO Q. 19
11. How many vehicles do you have?	1 <input type="checkbox"/> ONE 2 <input type="checkbox"/> TWO 3 <input type="checkbox"/> THREE 4 <input type="checkbox"/> FOUR OR MORE } ASK Q. 12

ASK QUESTIONS 12 - 18 ABOUT EACH VEHICLE NOT LISTED IN Q. 4

		c85	c86	c87	c88	
		5	6	7	8	
12. Which type(s) is it (are they)?	STATION WAGON	01[]	01[]	01[]	01[]	
	AUTOMOBILE	02[]	02[]	02[]	02[]	
	JEEP OR SIMILAR VEHICLE	03[]	03[]	03[]	03[]	
	PASSENGER VAN OR MINIBUS	04[]	04[]	04[]	04[]	
	CARGO VAN	05[]	05[]	05[]	05[]	14-
	PICKUP TRUCK	06[]	06[]	06[]	06[]	15
	OTHER TRUCK	07[]	07[]	07[]	07[]	
	MOTOR HOME	08[]	08[]	08[]	08[]	
	OTHER (SPECIFY):	21[]	21[]	21[]	21[]	
	MAKE					16-17
13. Please tell me the make and model year (of each one). (ENTER LAST TWO DIGITS OF MODEL YEAR.)	MODEL YEAR	19 ____	19 ____	19 ____	19 ____	18-19
14. What is the model name (of each one)?	MODEL NAME					20-21
15. In what month and year did you get it?	MONTH					23-24
	YEAR	19 ____	19 ____	19 ____	19 ____	25
16. How many miles has it been driven since you have had it?	MILES					26-30
	DON'T KNOW	[]	[]	[]	[]	
17. What is the name of the main driver?	NAME					
18. FILL IN HOUSEHOLD MEMBER # FROM Q. 1.	HOUSEHOLD MEMBER #					

D. U.S. Census Regions



GLOSSARY

Census Region. Refers to a grouping of States and the District of Columbia into a region depending on their population and geographic location. In this survey, the States and the District of Columbia were grouped into four regions:

Northeast

Maine	Rhode Island
Vermont	New York
New Hampshire	Pennsylvania
Massachusetts	New Jersey
Connecticut	

North Central

Ohio	Iowa
Michigan	Missouri
Indiana	Kansas
Illinois	Nebraska
Wisconsin	South Dakota
Minnesota	North Dakota

South

Maryland	Kentucky
Delaware	Tennessee
District of Columbia	Alabama
West Virginia	Mississippi
Virginia	Louisiana
North Carolina	Arkansas
South Carolina	Oklahoma
Georgia	Texas
Florida	

West

Montana	Idaho
Wyoming	Washington
Colorado	Oregon
New Mexico	Nevada
Arizona	California
Utah	

Note: Alaska and Hawaii are normally considered parts of the western region, but were not included in the sample for this survey. A map of the Census regions is provided in Appendix D.

Drivers refers to household members who can drive a car, truck, or motorcycle. Persons who can drive but do not ordinarily do so are also included.

Expenditures refers to the total cost of the gasoline or diesel fuel added to the vehicle's tank including taxes. Expenditures do not include the cost of oil or other items that may have been purchased at the same time as the fuel.

Family Income is the total combined income in 1977 for the NIECS households (1978 for Screener households) from all sources before taxes and deductions. It includes wages, salaries, tips, commissions, and income from social security, pensions, interest, dividends, rent, public assistance, and unemployment insurance. Family income includes the total income for all family members who lived in the household, regardless of whether they were living there at the time of the interview. Income of nonfamily members of the household is not included. Family includes the following types of relationships: mother, father, sister, brother, son, daughter, father-in-law, uncle, aunt, niece, grandchild, and similar relationships.

Fill-up. A fuel purchase was recorded as a fill-up when the attendant was asked to fill the tank. (When the attendant was asked for a certain number of gallons or for a dollar amount of fuel, the instructions to the respondent called for usually not recording this as a fill-up.)

Fuel Inventory as a Percent of Tank Capacity is an average over all vehicles of their average percents full during a month (see Percent Full During a Month).

It is given by:

$$p = \frac{\sum_i w_i c_i \bar{p}_i}{\sum_i w_i c_i}$$

where

w_i = the weight for the i^{th} vehicle in the sample;

c_i = the tank capacity (in gallons) for the i^{th} vehicle;

and

\bar{p}_i = the average percent full for the month of the i^{th} vehicle.

Fuel Used is the respondent's report of the type of fuel that is typically put in the fuel tank.

Fuel Tank Capacity is the size of the vehicle's fuel tank in U.S. gallons. Data for automobiles was taken from Automotive News which provides fuel tank size for foreign and U.S. automobiles. Data for trucks and vans were the figures provided by the respondent on the fuel purchase log.

Gallons Consumed refers to the number of gallons of fuel used by the vehicle during the month. Gallons consumed is equal to gallons purchased minus the difference in the fuel tank levels at the beginning of the month and at the end of the month. For example, consider a vehicle with a 20-gallon tank that was half full at the beginning of the month and three-quarters full at the end of the month. Gallons consumed in this case would equal the gallons purchased minus one-fourth of the tank capacity or five gallons. For vehicles missing fuel meter readings, the gallons consumed is the same as gallons purchased.

Gallons Purchased refers to the total number of gallons of fuel added to the household vehicle's tank.

Gallons in Tanks refers to the amount of fuel stored in vehicle tanks. Gallons in tanks for a vehicle is derived from the average percent of tank full for the month and the vehicle tank size.

Gasoline Lines Data. In June 1979, Response Analysis Corporation (RAC) began collecting data for the EIA on the fuel-purchasing situation faced by motorists in the United States (48 contiguous States and the District of Columbia). The data are obtained from a subsample of the residential energy consumption surveys being conducted. Households participating in the monthly transportation interviews are asked a series of questions concerning the fuel-purchasing situation in their area during the two weeks preceding the interviews which are performed at the end of each month.

Household includes up to 12 persons who occupy a housing unit.

"Occupy" means the housing unit was the person's usual or permanent place of residence at the time of the first field contact. The household includes babies, lodgers, boarders, employed persons who live in the housing unit, and persons who usually live in the household but are away traveling or in the hospital. The household does not include persons who are normally members of the household but who were living away from home such as college students or members of the armed forces at the time of the interview. By definition, the count of households is the same as the count of occupied housing units.

A "housing unit" is a structure or part of a structure where a household (family or individual) lives or could live. It has a separate entrance from the outside or from a common hall or lobby, or it has cooking facilities for the exclusive use of the occupants. Housing units do not

include group quarters such as prisons, hospitals, dormitories, nursing homes, fraternity houses, or convents. Hotel or motel rooms, mobile homes, boats, tents, or trailers are considered housing units if occupied. "Occupied housing unit" means that someone was living in it as his/her usual or permanent place of residence at the time of the first field contact.

Owner/Renter 'owner' means the owner or co-owner is a household member of the unit, even if the unit is mortgaged or not fully paid for. 'Renter' means that no member of the household is the owner or co-owner, and the unit is contracted to the household for either a fee, for services rendered, or 'rent free'. Unless shown separately, 'rent free' households are grouped together with renters.

Metropolitan refers to households located within Standard Metropolitan Statistical Areas (SMSA's) as defined in the 1970 Census. Except in New England, an SMSA is a county or group of contiguous counties that contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. The contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties. "Nonmetropolitan" refers to households not located within SMSA's as defined in the 1970 Census.

Miles Driven refers to the total number of miles the household vehicle was driven during the reporting month. Miles driven is computed by subtracting the vehicle's odometer reading at the first of the month from its odometer reading at the end of the month.

Percent of Tank Full refers to the proportion of the vehicle's tank that is filled with fuel. The percent of tank full is derived from the fuel meter reading showing the level of fuel in the tank. The respondent recorded the fuel meter reading on a pictorial representation of the fuel meter after starting the engine at each of the following times:

- Beginning of the month (before the first use of the vehicle on the first day of the month).
- End of the month (after the last use of the vehicle on the last day of the month).
- After each purchase.

Percent of Tank Full Before Purchase refers to the level of fuel in the tank before fuel was added at the time of purchase. The percent of tank full before purchase was calculated by subtracting the proportion of the tank filled with newly purchased fuel (gallons purchased divided by the tank capacity in gallons) from the proportion of the tank full after purchase.

Percent Full Between Purchases is the average of the percent of tank full after the earlier purchase and the percent full before the next purchase.

It is given by:

$$\bar{p} = (P_a + P_b)/2,$$

where

P_a = the percent full after the earlier purchase;

and

P_b = the percent full before the next purchase.

One may consider the beginning of a month as "after a purchase" and the end as "before a purchase."

Percent Full During a Month represents the average position of the vehicle's fuel guage during the month of recordkeeping and is derived for each vehicle from its average percents full between purchases. Suppose there are m purchases during a month, numbered 1 to m . Call the beginning of the month, purchase number 0, and the end of the month, purchase $m + 1$. Then the average percent full during the month is given by:

$$\bar{p} = \frac{\sum_{j=0}^m \bar{p}_j d_j}{\sum_{j=0}^m d_j}$$

where

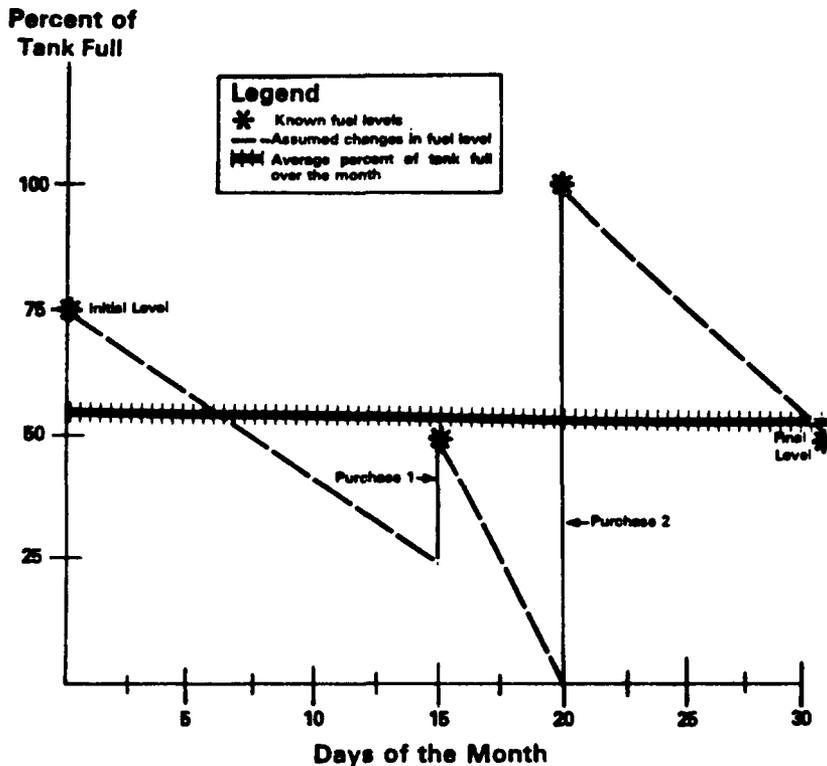
\bar{p}_j = the average percent full between purchases j and $j + 1$

and

d_j = the number of days between purchases j and $j + 1$.

The diagram on the following page describes the fuel purchases and use for a vehicle for one 30-day month. Initially, the tank was three-quarters full. The first purchase, on the 15th day of the month, filled the tank halfway; the second purchase, on the 20th day, filled the tank completely. On the last day of the month the tank was half full.

The average percent of tank full for the first 15 days was $(75 + 25)/2$ or 50 percent; the five days between the first and second purchases it was $(50 + 0)/2$ or 25 percent; and for the last 10 days it was $(100 + 50)/2$ or 75 percent. Averaging, these values using the number of days between purchases as weights, we get $\bar{p} = [(15 \times 50 + 5 \times 25 + 10 \times 75)/30] = 54.2$ percent, approximately, as the average percent of the tank full for the month.



Purchase refers to the occasion when fuel is added to the vehicle's tank regardless of whether cash, check, or credit is used for payment.

Renters includes households which pay rent and households which occupy housing on a rent-free basis.

Rural refers to nonurban areas.

Size of Vehicle refers to industry-defined categories based generally on the vehicle's intended market, body size, and body configuration. Vehicles are grouped into the following categories based on the year, make, and model of the vehicle: subcompact (for example, Vega, Pinto), compact (Nova, Maverick), intermediate (Malibu, Torino), full size (Impala, LTD), pickup (C10, F100), and van (Maxivan, Econoline). Pick-ups and vans are included in the 'other' category in the tables.

Urban includes housing in areas of 2,500 or more inhabitants as defined in the 1970 Census.

Used on the Job means the vehicle was used at work for purposes other than commuting to or from work.

Vehicles are all motorized vehicles used by U.S. households for personal transportation excluding motorcycles, mopeds, large trucks, and buses. They include automobiles, station wagons, passenger vans, cargo vans, motor homes, pickup trucks, jeeps, or similar vehicles owned (being bought) by one or more members of the household. Vehicles also include company cars, pickup trucks, taxicabs, and other motorized vehicles that are not owned by household members but which are regularly available to household members for their personal use and ordinarily kept at home. Cars rented or leased for one month or more are included.

Not included are motorized vehicles used solely for business purposes, such as police cars or other Government-owned vehicles. Dismantled or dilapidated vehicles in an early stage of being junked or immobile vehicles used only as a source of power for some piece of machinery are not included. Vehicles used primarily for competition or display purposes such as racing cars, stock cars, or antique cars not used as passenger automobiles are not included. Vehicles kept by students who live away at school or kept by persons who reside on military bases or similar institutional settings are not included.

Note: In the NIECS interview, vehicles were defined to include motorcycles, mopeds, and motorized bicycles, large trucks, and buses, but these vehicles have been excluded from the Transportation Panel and, therefore, do not appear in the above definition.

Timely Statistical Energy Data

... from the
Energy
Information
Administration

Overview

Monthly Energy Review

Coal

Weekly Coal Production

Electricity

Electric Power Monthly

Gas

Natural and Synthetic Gas
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Oil

Weekly Petroleum Status
Report

Projections

Short-Term Energy Outlook
(Quarterly)

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