



U.S. Department
of Transportation

**Research and
Special Programs
Administration**

National Transportation Statistics

Annual Report

September 1983

- ★ Air Carrier
- ★ General Aviation
- ★ Modal Profiles
- ★ Energy Cost and Consumption



- ★ Truck ★ Highway
- ★ Bus ★ Transportation Energy
- ★ Cargo Operation
- ★ Vehicle Miles



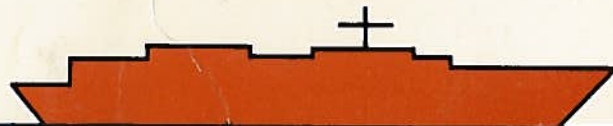
- ★ Railroads
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- ★ Operating Expenses / Revenue
- ★ Local Transit



- ★ Automobile
- ★ Performance Indicators
- ★ Economic Data
- ★ Inventory ★ Passenger Miles



- ★ Water Transit
- ★ Recreational Boating
- ★ Transportation Trends
- ★ Safety Statistics



Transportation Systems Center

~~ERRATA~~

This page replaces existing page 42.

OIL PIPELINE PROFILE

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Operating Revenues (\$ millions)					
ICC-regulated	1,249.0 ^a	6,141.0 ^c	6,678.0 ^u	18.3	8.7
Non-regulated	243.0	682.0	742.0	11.8	8.8
Total	1,492.0	6,823.0	7,420.0	17.4	8.6
Operating Expenses (\$ millions)					
ICC-regulated	712.2 ^b	n/a	n/a	-	-
II. INVENTORY					
Number of ICC-regulated Companies	99.0	128 ^t	143.0 ^j	3.8	11.7
Number of Employees					
ICC-regulated Companies	14,791.0	21,300.0 ^{r,k}	21,900.0 ^k	4.0	2.8
Miles ICC-regulated pipeline	n/a	169,349.0 ^j	n/a	-	-
Total mileage ¹	219,899.0 ^f	237,501.0 ^f	237,643.0 ^f	0.8	0.1
III. PERFORMANCE					
Intercity Ton-Miles (millions)					
Crude Petroleum	n/a	362,600.0 ^v	333,100.0 ^v	-	-8.1
Petroleum Products	n/a	225,600.0 ^w	230,600.0 ^w	-	2.2
Total	444,000.0 ^u	588,200.0 ^x	563,700.0 ^x	2.9	-4.2
Tons Transported (millions)					
Crude petroleum	460.0 ^e	413.0 ^e	n/a	-	-
Petroleum products (delivered from lines)	347.0 ^h	508.0 ^h	n/a	-	-
Total	807.0 ⁱ	921.0 ⁱ	n/a	-	-
Average Length of Haul (statute miles)					
Crude petroleum	301.0 ^d	n/a	n/a	-	-
Petroleum products	347.0	n/a	n/a	-	-

¹ Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

n/a = not available, r = revised

Source: The following data references are listed in Appendix A, p. 178.

<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	26) p. 4	k	43) p. 177
b	18) Appendix E, Table 15	t	41) Personal Communication
c	27) p. 2	u	28) p. 5,7
d	26) p. 14	v	59) Table 2
e	12) Table 2	w	59) Table 3
f	28) p. 35	x	59) Table 1
h	12) Table 3		
i	12) Table 1		
j	25) p. 101 & Personal Communication		

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CONVERSION FACTORS

Heat Content for Various Fuels

Fuel Oils		Natural Gasoline	4,620,000 Btu/bbl
Crude	5,800,000 Btu/bbl	Petroleum Coke	6,024,000 Btu/bbl
Residual	6,287,000 Btu/bbl	Asphalt	6,636,000 Btu/bbl
Motor Gasoline	5,253,000 Btu/bbl	Wax	5,537,000 Btu/bbl
Aviation Gasoline	5,048,000 Btu/bbl	Road Oil	6,636,000 Btu/bbl
Jetfuel (Kerosene)	5,670,000 Btu/bbl	Natural Gas	
Jetfuel (Naphtha)	5,355,000 Btu/bbl	Liquid	3,925,000 Btu/bbl
Distillate (Diesel Oil)	5,825,000 Btu/bbl	Dry (Non-utility)	1,016 Btu/ft
Crude Petroleum	5,800,000 Btu/bbl	Coal	
Ethane	3,082,000 Btu/bbl	Anthracite	25,170,000 Btu/Short Ton
Still Gas	6,000,000 Btu/bbl	Bituminous and Lignite	25,070,000 Btu/Short Ton
Lubricants	6,065,000 Btu/bbl	Coke	26,000,000 Btu/Short Ton
		Electricity Consumption	3,412 Btu/kWh

Volume Conversions

From	To	in. ³	ft ³	U.S. gal	Imp. gal	liter	bbl
in. ³	1	1	5.787 x 10 ⁻⁴	4.329 x 10 ⁻³	3.605 x 10 ⁻³	0.01639	1.031 x 10 ⁻⁴
ft ³	1728	1728	1	7.481	6.2292	28.32	0.1781
U.S. gal	231	231	0.1337	1	0.8327	3.785	2.381 x 10 ⁻²
Imp. gal	277.4	277.4	0.1606	1.201	1	4.545	2.859 x 10 ⁻²
liter	61.02	61.02	3.531 x 10 ⁻²	0.2642	0.2200	1	6.29 x 10 ⁻³
bbl	9702	9702	5.615	42	34.972	158.97	1

Mass Conversions

From	To	lb (avoirdupois)	kg	Short ton	Long ton	Metric ton
lb (avoirdupois)	1	1	0.4536	5.0 x 10 ⁻⁴	4.4643 x 10 ⁻⁴	4.5362 x 10 ⁻⁴
kg	2.205	2.205	1	1.1023 x 10 ⁻³	9.8425 x 10 ⁻⁴	1.0 x 10 ⁻³
Short ton	2000	2000	907.2	1	0.8929	0.9072
Long ton	2240	2240	1016	1.12	1	1.016
Metric ton	2205	2205	1000	1.102	0.9842	1

Length Conversions

From	To	cm	in.	ft	yd	m	mile	km
cm	1	1	0.3937	3.281 x 10 ⁻²	1.0936 x 10 ⁻²	1.0 x 10 ⁻²	6.214 x 10 ⁻⁶	1.0 x 10 ⁻⁵
in.	2.54	2.54	1	8.333 x 10 ⁻²	2.778 x 10 ⁻²	2.54 x 10 ⁻²	1.578 x 10 ⁻⁵	2.54 x 10 ⁻⁵
ft	30.48	30.48	12	1	0.333	0.3048	1.894 x 10 ⁻⁴	3.048 x 10 ⁻⁴
yd	91.44	91.44	36	3	1	0.9144	5.682 x 10 ⁻⁴	9.144 x 10 ⁻⁴
m	100	100	39.37	3.281	1.0936	1	6.214 x 10 ⁻⁴	1.0 x 10 ⁻³
mile	160,934	160,934	63,360	5280	1760	1609	1	1.609
km	100,000	100,000	39,370	3281	1093.6	1000	0.6214	1

Energy Conversions

From	To	ft-lb	kg-m	hp-hr	Metric hp-hr	Btu	kWhr	Joule
ft-lb	1	1	0.1383	5.0505 x 10 ⁻⁷	5.12 x 10 ⁻⁷	1.285 x 10 ⁻³	3.766 x 10 ⁻⁷	1.356
kg-m	7.233	7.233	1	3.653 x 10 ⁻⁶	3.704 x 10 ⁻⁶	9.295 x 10 ⁻³	2.724 x 10 ⁻⁶	9.80665
hp-hr	1.98 x 10 ⁶	1.98 x 10 ⁶	2.7375 x 10 ⁵	1	1.0139	2544	0.7457	2.6845 x 10 ⁶
Metric hp-hr	1.953 x 10 ⁶	1.953 x 10 ⁶	270,000	0.9863	1	2510	0.7355	2.648 x 10 ⁶
Btu	778.2	778.2	107.6	3.93 x 10 ⁻⁴	3.985 x 10 ⁻⁴	1	2.931 x 10 ⁻⁴	1055
kWhr	2.655 x 10 ⁶	2.655 x 10 ⁶	3.671 x 10 ⁵	1.341	1.3596	3412	1	3.6 x 10 ⁶
Joule	0.7376	0.7376	0.10197	0.3725 x 10 ⁻⁶	0.3777 x 10 ⁻⁶	0.9478 x 10 ⁻³	0.2778 x 10 ⁻⁶	1

1 quad Btu = .4724 million bbl crude per day = .1724 billion barrels crude per year

INTRODUCTION

Developing and maintaining vital transportation statistics is one of the missions of the U.S. Department of Transportation's Transportation Systems Center (TSC). This publication is produced to support this mission and is intended to disseminate national transportation and energy statistics to the transportation and energy communities.

While most of these statistics are available from various sources such as government agencies and trade associations, they are presented here in one convenient and comprehensive report. Particular attention has been taken in documenting the sources of all data. These sources are noted either on the same page as the data or in Appendix A -- Source Information.

The reader is urged to utilize the Source Information, and to go directly to the given source for any additional information or explanation regarding the data in this Publication.

Four different formats are used -- 1) Tree Displays, 2) Modal Profiles, 3) Performance Indicators, and 4) Transportation Trends -- to spotlight various aspects of the major transportation modes. In addition, two supplemental data sections detail the role of transportation in the economy and the relation of energy to transportation. Time series transportation statistics are presented for the period 1971-1981/1982. Energy consumption and supply-and-demand data cover the same period and extend back to 1955.

TREE DISPLAYS

Figure 2 illustrates the interrelations of the various modes via a tree display. This format presents the relationship between and within each transportation mode for the following areas:

- Expenditures and Revenues
- Vehicle-Miles
- Passenger-Miles
- Cargo Ton-Miles
- Number of Vehicles
- Number of Fatalities
- Energy Consumed

Because of the variety of data sources, the totals may not always equal the sums of the subordinate data. Sources for each statistic may be found by tracing its parenthetical reference number to Appendix A. Where data are not available or not applicable, the block contains the letters "n/a".

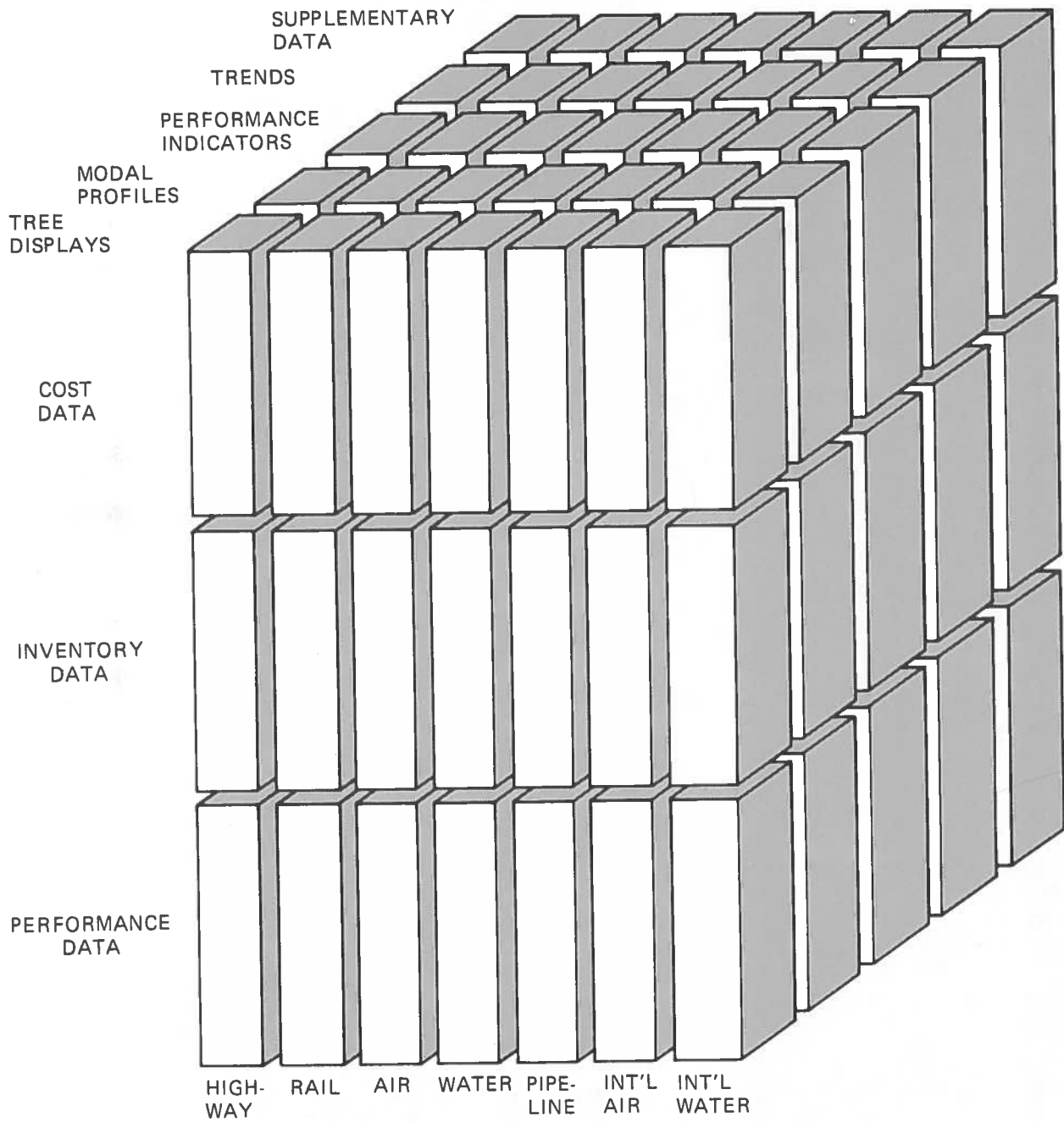


Figure 1. Organization of the Data

TREE DISPLAYS 1981

Figure 4. Vehicle-Miles (Millions) - 1981

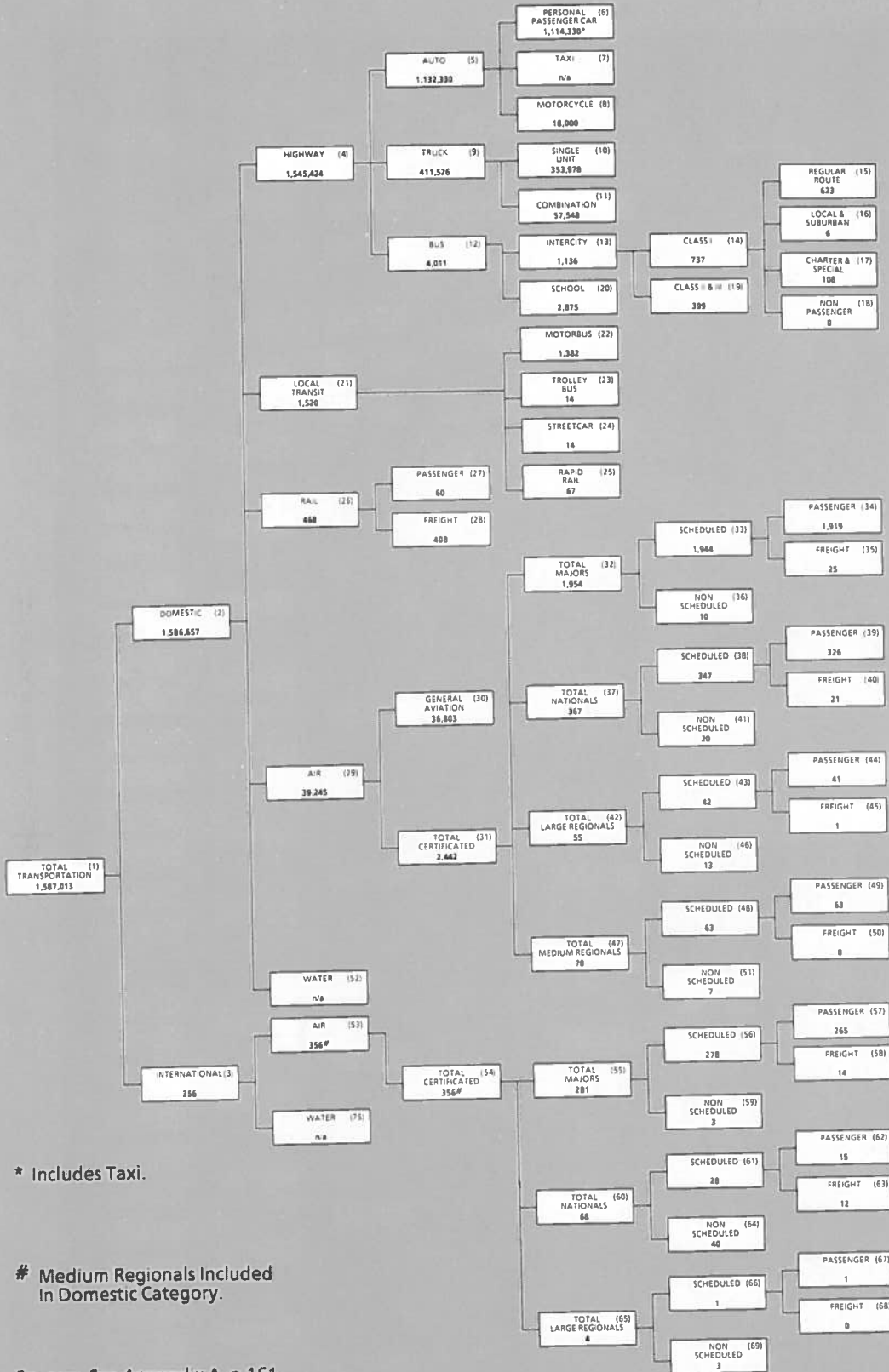
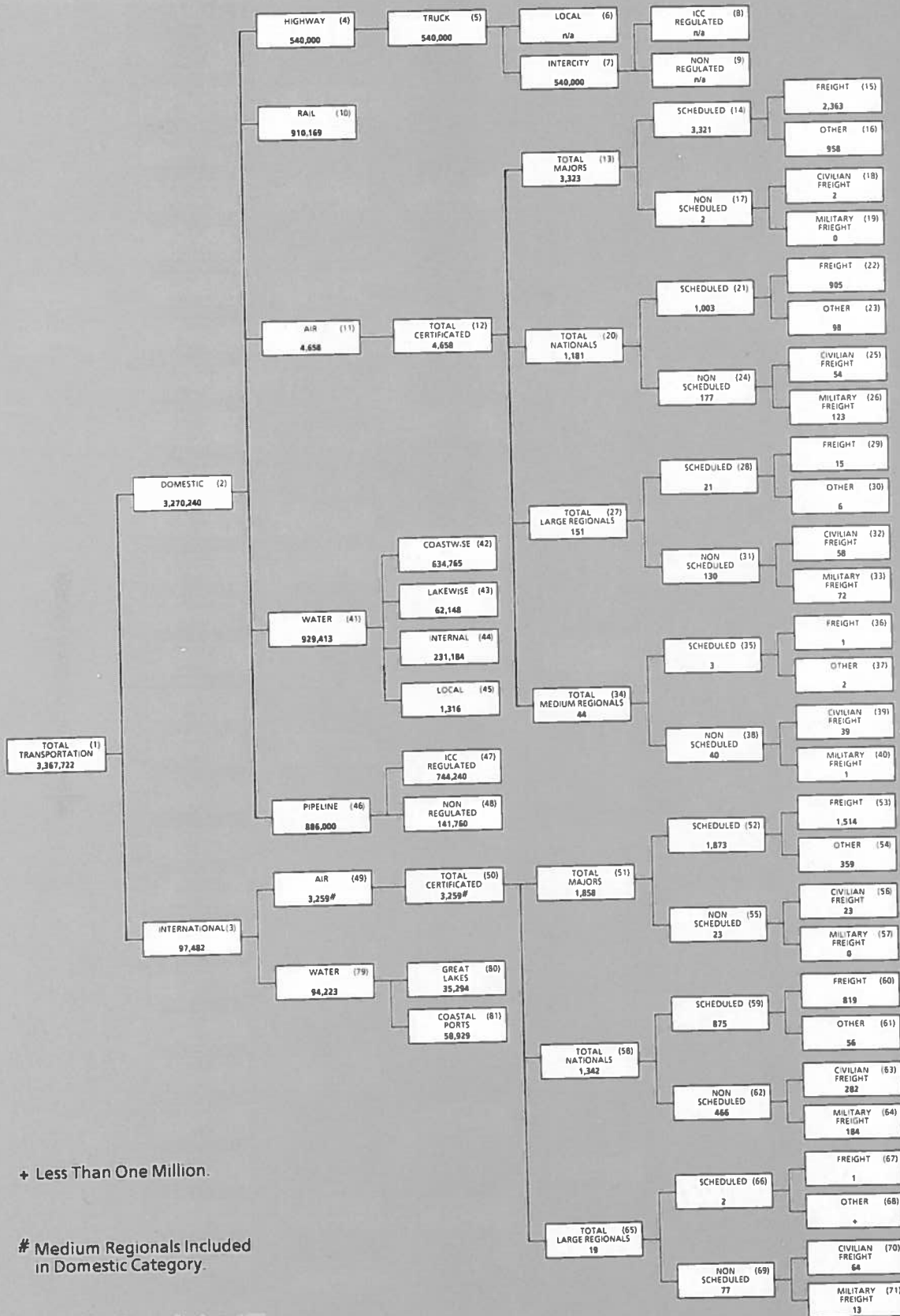


Figure 6. Cargo Ton-Miles (Millions) - 1981

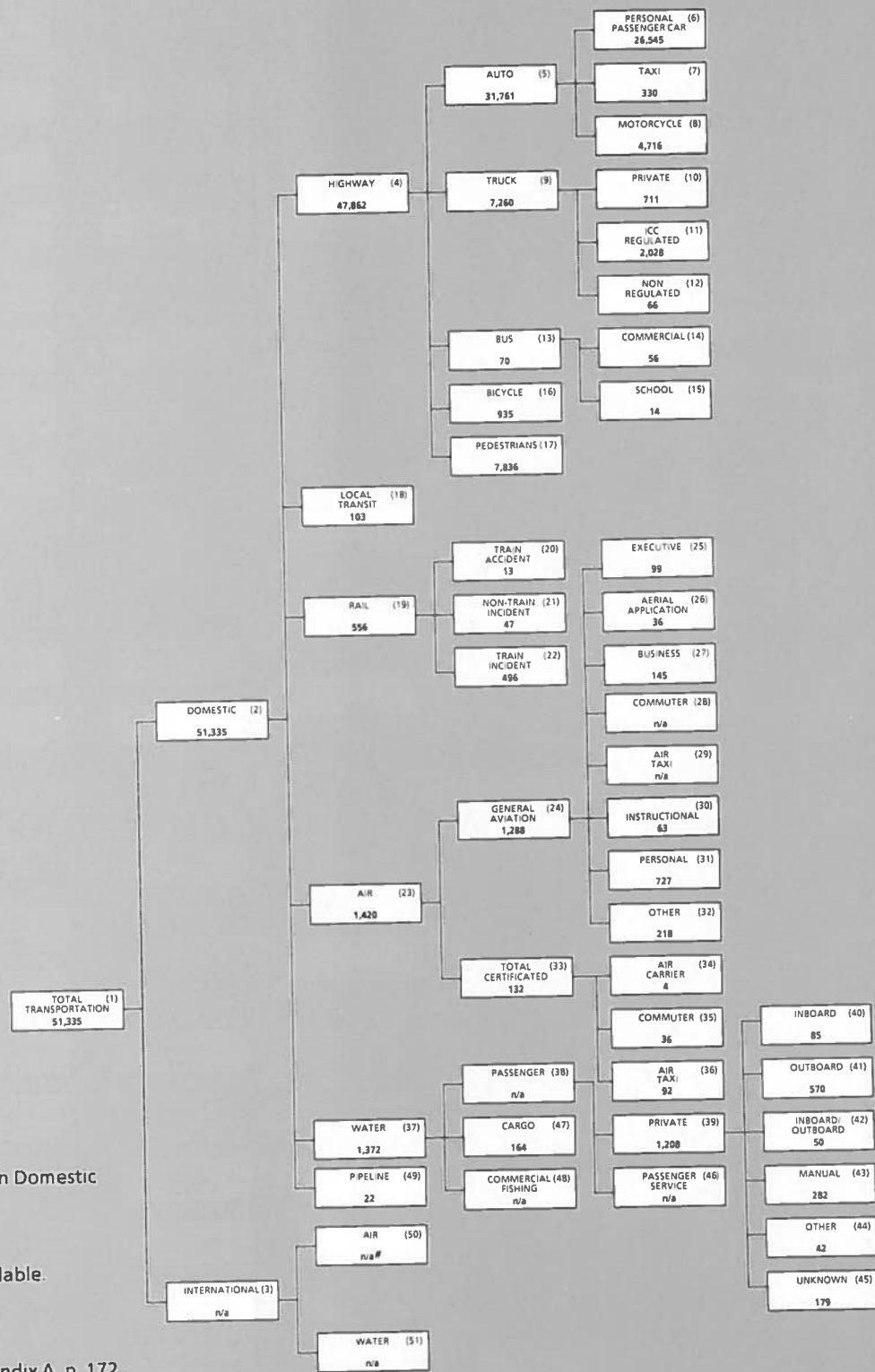


+ Less Than One Million.

Medium Regionals Included in Domestic Category.

Source: See Appendix A, p. 167.

Figure 8. Number of Fatalities - 1981



Data Included in Domestic Category.

n/a Data not available.

Source: See Appendix A, p. 172.

MODAL PROFILES 1971, 1980 and 1981

MODAL PROFILE SOURCE REFERENCES AND PERCENT CHANGE CALCULATION

Specific source references are obtained as follows: the letter directly to the right of the data element applies to all subsequent data elements in that column until the next letter appears. In some cases, data are shown which may not appear directly in the sources listed. These were obtained by addition/subtraction of referenced data or of other data in its column, and are marked with an asterisk.

Air Carrier Profile

For example:

1980

330.6 q

306.6

24.0

57.0 s

reference letter q
also applies to the two
subsequent data elements

reference letter s refers to
a different data source

The specific source number and page or table reference may then be found at the end of each modal profile. All sources are listed in Appendix A--Source Information.

The Percent Change 1980-1981 column refers to the usual percent difference between 1980 data and 1981 data. The average annual percent change 1971-1981 is equal to $C \times 100$, where C is obtained from the following relationship: $D^{81} = D^{71} (1 + C)^{10}$. (Note D^{71} and D^{81} refer to 1971 and 1981 data, respectively; C is the change; and the relationship is derived from the compound interest formula.)

AIR CARRIER PROFILE (Cont.)

	<u>1971</u>	<u>1980¹</u>	<u>1981¹</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
Number of Aircraft Available for Service					
Total Domestic and International	2,536.0	2,726.0 ²	2,763.0 ²	0.9	1.4
Majors	n/a	2,159.0	2,092.0	-	-3.1
Nationals	n/a	380.0	406.0	-	6.8
Regionals (Includes large and medium)	n/a	187.0	265.0	-	41.7
Number of Employees					
Total Domestic and International	291,809.0	351,740.0 ²	343,367.0 ²	1.6	-2.4
Majors	n/a	306,416.0	291,375.0	-	-4.9
Nationals	n/a	40,997.0	45,428.0	-	10.8
Regionals (Includes large and medium)	n/a	4,327.0	6,564.0	-	51.7
Supplemental	5,229.0	n/a	n/a	-	-

III. PERFORMANCE⁴

Aircraft Revenue-Miles (millions)					
Domestic					
Certificated, all services	2,044.7 ^k	2,523.3 ^m	2,442.4 ^m	1.8	-3.2
Scheduled services	2,003.9	2,471.0	2,396.0	1.8	-3.0
Nonscheduled services	40.8	52.3	46.4	1.3	-11.3
Supplemental	35.5 ⁿ	n/a	n/a	-	-
Majors, all services	n/a	2,113.7 ^o	1,953.4 ^o	-	-7.6
Scheduled services	n/a	2,098.7	1,943.8	-	-7.4
Nonscheduled services	n/a	15.0	9.6	-	-36.0
Nationals, all services	n/a	330.6 ^q	366.7 ^q	-	11.0
Scheduled services	n/a	306.6	346.9	-	13.1
Nonscheduled services	n/a	24.0	19.8	-	-17.5
Large Regionals, all services	n/a	57.0 ^s	55.8 ^t	-	-2.1
Scheduled services	n/a	45.0	42.2	-	-6.2
Nonscheduled services	n/a	12.0	13.6	-	13.3
International					
Certificated, all services	n/a	400.8 ^u	356.3 ^u	-	-11.1
Scheduled services	n/a	345.2	307.3	-	-11.0
Nonscheduled services	n/a	55.6	49.0	-	-11.9
Supplemental	n/a	n/a	n/a	-	-
Majors, all services	n/a	329.4 ^v	280.9 ^v	-	-14.7
Scheduled services	n/a	321.7	278.3	-	-13.4
Nonscheduled services	n/a	8.7	2.6	-	-70.0
Nationals, all services	n/a	76.5 ^w	67.5 ^w	-	-11.8
Scheduled services	n/a	22.8	27.7	-	21.2
Nonscheduled services	n/a	43.7	39.8	-	-8.9
Large Regionals, all services	n/a	317.6 ^x	4.0 ^y	-	-98.7
Scheduled services	n/a	315.0	1.0	-	-99.7
Nonscheduled services	n/a	2.6	3.0	-	15.4
Medium Regionals, all services	n/a	23.2 ^z	70.5 ^{aa}	-	203.9
Domestic and International	n/a	2,947.4	2,869.2	-	-2.7
Total Certificated	n/a	2,947.4	2,869.2	-	-2.7

AIR CARRIER PROFILE (Cont.)

	<u>1971</u>	<u>1980¹</u>	<u>1981¹</u>	<u>1971-1981</u> <u>Average</u> <u>Annual</u> <u>% Change</u>	<u>1980-1981</u> <u>% Change</u>
Nationals, all services	n/a	8,659.7 ^w	10,227.9 ^w	-	18.1
Scheduled services	n/a	1,315.0	2,648.0	-	101.4
Nonscheduled services	n/a	7,344.7	7,579.9	-	3.2
Large Regionals, all services	n/a	330.3 ^x	250.8 ^y	-	-24.1
Scheduled services	n/a	55.5	54.3	-	-2.2
Nonscheduled services	n/a	274.8	196.5	-	-28.5
Medium Regionals, all services					
Domestic and International	n/a	250.5 ^z	1,351.9 ^{aa}	-	439.7
Total Certificated	n/a	267,722.0	261,415.2	-	-2.3
Revenue Passenger Enplanement (millions)					
Domestic					
Certificated, all services	n/a	275.3 ^m	267.3 ^m	-	-3.0
Scheduled services	n/a	272.9	265.3	-	-2.8
Nonscheduled services	n/a	2.4	2.0	-	-16.7
Majors, all services	n/a	223.3 ^o	206.3 ^o	-	-7.6
Scheduled services	n/a	222.0	205.4	-	-7.5
Nonscheduled services	n/a	1.3	0.9	-	-30.8
Nationals, all services	n/a	47.1 ^q	51.4 ^q	-	9.1
Scheduled services	n/a	46.2	50.6	-	9.5
Nonscheduled services	n/a	0.9	0.8	-	-11.1
Large Regionals, all services	n/a	3.7 ^s	5.0 ^t	-	35.1
Scheduled services	n/a	3.6	5.0	-	38.9
Nonscheduled services	n/a	0.1	n/a	-	-
International					
Certificated, all services	n/a	26.5 ^u	23.2 ^u	-	-12.5
Scheduled services	n/a	24.1	20.7	-	-14.1
Nonscheduled services	n/a	2.4	2.5	-	4.2
Majors, all services	n/a	24.0 ^v	19.5 ^v	-	-18.8
Scheduled services	n/a	23.5	19.4	-	-17.5
Nonscheduled services	n/a	0.5	0.1	-	-80.0
Nationals, all services	n/a	2.3 ^w	3.3 ^w	-	43.5
Scheduled services	n/a	0.5	1.2	-	140.0
Nonscheduled	n/a	1.8	2.1	-	16.7
Large Regionals, all services	n/a	0.2 ^x	0.2 ^y	-	0.0
Scheduled services	n/a	0.1	0.1	-	0.0
Nonscheduled services	n/a	0.1	0.1	-	0.0
Medium Regionals, all services					
Domestic and International	n/a	1.1 ^z	4.9 ^{aa}	-	345.5
Total Certificated	n/a	302.9	295.4	-	-2.5
Revenue Passenger Load Factor (%)					
Domestic					
Certificated, scheduled services	n/a	50.3 ^m	50.7 ^u	-	0.8
Majors, scheduled services	n/a	49.8 ^o	50.2 ^v	-	0.8
Nationals, scheduled services	n/a	54.0 ^q	54.6 ^q	-	1.1
Large Regionals, scheduled services	n/a	44.7 ^s	52.7 ^t	-	17.9
International					
Certificated, scheduled services	n/a	56.6 ^u	57.5 ^u	-	1.6
Majors, scheduled services	n/a	55.0 ^v	56.0 ^v	-	1.8
Nationals, scheduled services	n/a	70.2 ^w	67.5 ^w	-	-3.9
Large Regionals, scheduled services	n/a	55.0 ^x	54.8 ^y	-	-0.4
Medium Regionals, all Services					
Domestic and International	n/a	44.5 ^z	43.3 ^{aa}	-	-2.7

AIR CARRIER PROFILE (Cont.)

	<u>1971</u>	<u>1980¹</u>	<u>1981¹</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
International					
Certificated, all services	n/a	3,353.4 ^u	3,259.2 ^u	-	-2.8
Scheduled services	n/a	2,857.7	2,712.3	-	-5.1
Nonscheduled services	n/a	495.7	546.9	-	10.3
Majors, all services	n/a	1,946.7 ^v	1,857.9 ^v	-	-4.6
Scheduled services	n/a	1,902.8	1,835.4	-	-3.5
Nonscheduled services	n/a	43.9	22.5	-	-48.8
Nationals, all services	n/a	1,395.6 ^w	1,341.7 ^w	-	-3.9
Scheduled services	n/a	956.0	875.0	-	-8.5
Nonscheduled services	n/a	439.6	466.7	-	6.2
Large Regionals, all services	n/a	11.4 ^x	19.4 ^y	-	70.2
Scheduled services	n/a	n/a	1.7	-	-
Nonscheduled services	n/a	11.4	17.7	-	55.3
Medium Regionals, all services					
Domestic and International	n/a	3.1 ^z	43.6 ^{aa}	-	1,306.5
Total Certificated	n/a	7,884.9	7,960.6	-	1.0
Air Carrier Accidents					
Operating under 14 CFR 121					
All scheduled service	43.0 ^{cc}	15.0 ^{cc}	25.0 ^{cc}	-5.3	66.7
Nonscheduled service	4.0	4.0	1.0	-12.9	-75.0
Operating under 14 CFR 135					
All scheduled service	34.0	38.0	33.0	-0.4	-13.2
Nonscheduled (on-demand Air Taxis)	93.0	170.0	155.0	5.2	-8.8
Total	174.0	227.0	214.0	2.1	-5.7
Fatal Air Carrier Accidents					
Operating under 14 CFR 121					
All scheduled service	7.0	0.0	4.0	-5.4	-
Nonscheduled service	0.0	1.0	0.0	-	-
Operating under 14 CFR 135					
All scheduled service	7.0	8.0	10.0	3.6	25.0
Nonscheduled (On-demand Air Taxis)	22.0	45.0	39.0	5.9	-13.3
Total	36.0	54.0	43.0	1.8	-20.4
Air Carrier Fatalities					
Operating under 14 CFR 121					
All scheduled service	198.0	0.0	4.0	-32.3	-
Nonscheduled service	0.0	1.0	0.0	-	-
Operating under 14 CFR 135					
All scheduled service	41.0	37.0	36.0	-1.3	-2.7
Nonscheduled (On-demand Air Taxis)	62.0	103.0	92.0	4.0	-10.7
Total	301.0	141.0	132.0	-7.9	-6.4

n/a = not available, r = revised

- 1 Domestic encompasses operations within and between the 50 states of the United States, the District of Columbia, Puerto Rico and the Virgin Islands. It also encompasses Canadian and Mexican transborder operations. All other operations are considered International.
- 2 Includes scheduled and nonscheduled (charter) operators. By Sec. 2 of the Airline Deregulation Act of 1978 Act "charter air carrier" and "charter air transportation" replaced supplemental air carriers and supplemental air transportation which were formerly sec. 101(36) and (37) of the Act. The 24 pre-deregulation supplemental carriers all now have scheduled service authority.
- 3 Scheduled includes total of freight, air express, U.S. mail and foreign mail. Nonscheduled includes total of civilian freight and other revenue; also military freight and other revenue.
- 4 Certificated is now referred to as Form 41 beginning in 1981.

GENERAL AVIATION PROFILE

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Expenditures (\$ millions)					
Aircraft	3,103.0 ^a	7,619.0 ^a	8,377.0 ^d	10.40	10.0
Operating Costs	290.0	2,306.0	2,803.0	25.50	21.6
Total	2,813.0	5,313.0	5,574.0	7.09	4.9
II. INVENTORY					
Number of Active Aircraft					
Executive	n/a	14,860.0 ^h	18,582.0 ^h	-	25.1
Business	n/a	49,391.0	47,716.0	-	-3.4
Commuter Carrier	n/a	944.0	1,023.0	-	8.4
Instructional	n/a	14,862.0	14,993.0	-	0.9
Personal	n/a	96,222.0	95,510.0	-	-0.7
Aerial Application	n/a	7,294.0	11,360.0	-	55.7
Air Taxi	n/a	7,615.0	7,226.0	-	-5.1
Rental	n/a	11,829.0	10,585.0	-	-6.6
Other Work*	n/a	2,813.0*	1,491.0	-	-47.0
Other	n/a	5,216.0	4,741.0	-	-9.1
Total	133,900.0 ^c	211,046.0	213,227.0	4.8	1.0
III. PERFORMANCE					
Number of Miles Flown (millions)					
Total	3,143.0 ^e	5,203.8 ^e	n/a	n/a	n/a
Number of Hours Flown (millions)					
Personal	7.3 ^c	8.9 ^j	8.2 ^j	1.2	-7.9
Business	7.1	8.4	8.1	1.3	-3.6
Commuter Carrier	n/a	1.0	1.0	-	0.0
Air Taxi	n/a	3.5	2.8	-	-20.0
Instructional	6.4	5.7	5.6	-1.3	-1.8
Executive	n/a	5.3	6.2	-	17.0
Rental	n/a	3.9	3.8	-	-2.6
Other Work*	n/a	1.1*	0.4	-	63.6
Aerial Application	n/a	2.0	3.8	-	90.0
Other	0.4	1.0	0.8	7.2	-20.0
Total	25.5	41.0	40.7	4.8	-0.7
Number of Fatalities					
Instructional	n/a	73.0 ^f	63.0 ^f	-	13.7
Personal	n/a	803.0	727.0	-	-9.5
Business	n/a	126.0	145.0	-	15.0
Executive	n/a	66.0	99.0	-	50.0
Aerial Application	n/a	32.0	36.0	-	12.5
Air Taxi	n/a	n/a	n/a	-	-
Commuter Carrier	n/a	n/a	n/a	-	-
Other	n/a	152.0	218.0	-	43.4
Total	1,355.0 ^b	1,252.0 ^g	1,288.0 ^g	-0.5	2.9

HIGHWAY PROFILE

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Government Expenditures (\$ millions)					
Federal					
Highway Trust Fund	100.0 ^a	375.0 ^b	340.0 ^a	13.0	-9.3
Other	393.0	576.0	587.0	4.1	1.9
Total Federal	493.0	951.0	927.0	6.5	-2.5
State and local					
State and D.C.	15,246.0	25,936.0	25,413.0	5.2	-2.0
Local	6,765.0*	14,168.0*	14,820.0*	8.2	4.6
Total State and local	22,011.0	40,104.0	40,233.0	6.2	0.3
Total	22,504.0	41,055.0	41,160.0	6.2	0.3
II. INVENTORY**					
Rural Mileage					
Under State Control	712,785.0 ^c	701,846.0 ^d	725,850.0 ^d	0.2	3.4
Under local control					
County roads	1,726,603.0	1,686,693.0	1,587,256.0	-0.8	-5.9
Town and township roads	497,902.0	507,856.0	491,220.0	-0.1	-3.3
Other local roads	31,766.0	75,221.0	157,868.0	17.4	109.9
Total	2,256,271.0	2,269,770.0	2,236,344.0	-0.1	-1.5
Under Federal Control	196,839.0	262,010.0	256,257.0	2.7	-2.2
Urban Mileage					
Under State Control	77,386.0	79,359.0	90,349.0	1.6	13.9
Under local control					
Country roads	n/a	27,515.0	60,571.0	-	120.1
Town and township roads	n/a	19,474.0	56,432.0	-	189.8
Other local roads	n/a	496,131.0	423,125.0	-	-14.7
Total	515,661.0	543,120.0	540,128.0	0.5	-0.6
Under Federal Control	n/a	753.0	1,536.0	-	104.0
Total Urban Mileage	593,047.0	624,053.0	632,013.0	0.6	1.3
Total Rural and Urban Mileage	3,758,942.0	3,955,387.0	3,852,697.0	0.3	-2.6

* Figure obtained by addition/subtraction and may not appear directly in data source.

** 1980, 1981 now based on merged Highway Performance Monitoring System (HPMS) data & may vary from previous years.
n/a = not available

Source: The following data references are listed in Appendix A, p. 178.

<u>Source</u>	<u>Reference Number/Location</u>
a	46) Table HF-10
b	48) Table HF-11, supplement sheet
c	46) Table M-1
d	46) Table HM-10

AUTOMOBILE PROFILE (Cont.)

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
Number of Vehicles in All					
Accidents					
Motorcycles	300,000.0 ⁿ	510,000.0 ⁿ	490,000.0 ⁿ	5.0	-3.9
Passenger cars	23,800,000.0	22,800,000.0	22,900,000.0	-0.4	0.4
Taxis	190,000.0	230,000.0	250,000.0	2.8	8.7
Number of Vehicles in Fatal					
Accidents					
Motorcycles	2,300.0	4,500.0	4,700.0	7.4	4.4
Passenger cars	51,300.0	44,600.0	41,600.0	-2.1	-6.7
Taxis	230.0	500.0	500.0	8.1	0.0
Number of Occupant & Non Occupant					
Fatalities					
Motor Vehicles	52,542.0 ^h	51,091.0 ^h	49,301.0 ^h	-0.6	-3.5
Passenger cars	33,840.0	27,449.0 ^r	26,615.0	-2.4	-3.0
Taxis	130.0 ⁿ	330.0 ⁿ	330.0 ⁿ	1.5	0.0
Motorcycles	2,650.0 ^h	5,144.0 ^{hr}	4,902.0 ^h	6.3	-4.7
Bicycles ⁵	860.0	965.0	936.0	0.9	-3.0
Pedestrians ⁵	9,100.0	8,070.0	7,838.0	-1.5	-2.9
Fatalities in Vehicular					
Accidents ⁶					
Passenger car	n/a	36,373.0	35,109.0	-	-3.5
Motorcycle	n/a	5,339.0	5,043.0	-	-5.5
Occupant Fatality Rate					
Per 100 million vehicle-miles					
Passenger car	3.60	2.47	2.39	-4.0	-3.2
Motorcycle	17.60	28.58	27.23	4.5	-4.7
Per 10,000 registered vehicles					
Passenger car	3.65	2.26	2.16	-5.1	-4.4
Motorcycles	7.93	8.99	8.41	0.6	-6.5
Vehicle Involvement Rate					
Per 100 million vehicle-miles					
Passenger car	3.66	3.51	3.48	-0.5	-0.9
Motorcycle	17.88	28.86	27.56	4.4	-4.5
Per 10,000 registered vehicles					
Passenger car	3.71	3.21	3.15	-1.6	-1.9
Motorcycle	8.05	9.07	8.51	0.6	-6.2

n/a = not available, r = revised

* Figure obtained by addition/subtraction and may not appear directly in data source.

1 Includes passenger cars, taxis, and motorcycles. In addition, 1980 and 1981 reflect changes in FHWA reporting methods and may not be comparable to previous years.

2 Urban consists of travel on all roads and streets in Urban places of 5,000 or greater population.

3 Derived by multiplying passenger car and taxi vehicle-miles by an average rate of 2.2.

4 Derived by multiplying motorcycle vehicle-miles by an average occupancy rate of 1.1.

5 Involvement only with motor vehicle.

6 Includes all fatalities in the accident in which the vehicle types were listed.

Source: The following data references are listed in Appendix A, p. 178.

<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	34) Table 2.4	g	42) p. 711	j	46) Table VM-1
b	35) Table 2.4, p. 40	h	53) Personnal Communication (NRD-30)	n	22) p. 56
c	46) Table MV-2	i	43) p. 174	t	46) Table DL-1
f	46) Table MV-1				

BUS PROFILE (Cont.)

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
All buses					
Rural					
Interstate rural	n/a	490.0	503.0	n/a	2.7
Other arterial rural	n/a	2,110.0	1,125.0	n/a	-46.7
Other rural	n/a	700.0	1,396.0	n/a	99.4
All rural	n/a	3,300.0	3,024.0	n/a	-8.4
Urban					
Interstate urban	n/a	500.0	531.0	n/a	6.2
Other urban	n/a	2,600.0	2,860.0	n/a	10.0
All urban ⁴	2,196.0	3,100.0	3,391.0	4.4	9.4
Total Rural and Urban	n/a	6,400.0	6,415.0	n/a	0.2
Revenue Passenger-Miles (millions)					
Intercity bus, total	25,500.0 ^b	27,400.0 ^b	26,900.0 ^{Pb}	0.5	-1.8
Intercity bus, Class I*	17,940.0	17,080.0	15,830.0 ^P	-1.2	-7.3
Number of Revenue Passengers (millions)					
Intercity bus, total	395.0	365.0	375.0 ^P	-0.5	2.7
Intercity bus, Class I*	167.0	132.0	126.0 ^P	-2.8	-4.6
Average Passenger Trip Length (Miles) ²					
Intercity bus, total	64.6 ^b	75.1 ^b	71.7 ^{Pb}	1.1	-4.5
Intercity bus, Class I*	107.4	129.4	126.0 ^P	1.6	-2.6
Average Miles Travelled per Vehicle					
Commercial	31,949.0 ^g	32,765.0 ^g	32,987.0 ^g	0.3	0.7
School and Nonrevenue Bus	7,198.0	7,592.0	6,585.0	-0.9	-13.3
All buses	12,819.0	12,103.0	11,795.0	-0.8	-2.5
Average Passenger Load Factor (%)					
Intercity bus, Class I*	47.0 ^j	47.0 ^e	45.0 ^j	-0.4	-4.3
Number of Fatalities					
School bus related - total	n/a	150.0 ^h	144.0 ^h	-	-4.0
School bus occupants	n/a	9.0	14.0	-	55.6
Other vehicle occupants	n/a	88.0	81.0	-	-8.0
Non-occupants	n/a	53.0	49.0	-	-7.5
Occupant Fatalities					
All buses	n/a	46.0	56.0	-	21.7
Fatalities in Vehicular Accidents ³					
All buses	n/a	390.0	392.0	-	0.5
Occupant Fatality Rate					
Per 100 million vehicle-miles					
All buses	n/a	0.72	0.87	-	20.8
Per 10,000 registered vehicles					
All buses	n/a	0.87	1.03	-	18.4
Vehicle Involvement Rate					
Per 100 million vehicle-miles					
All buses	n/a	5.16	5.32	-	3.1
Per 10,000 registered vehicles					
All buses	n/a	6.24	6.27	-	0.5

TRUCK PROFILE

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Revenues (\$ millions)					
Local	41,622.0 ^a	58,155.0 ^a	65,461.0 ^w	4.63	12.6
Intercity					
ICC-regulated	16,700.0	43,000.0	47,100.0	10.93	9.5
Non-ICC-regulated	20,849.0	47,384.0	55,318.0	11.45	16.7
Operating Revenues of Class I Intercity Motor Carriers (millions)					
Freight, intercity, common carriers	11,880.0 ^b	26,691.0 ^c	28,856.0 ^{pc}	9.28	8.1
Freight, intercity, contract carriers	404.4	1,139.0	1,052.0 ^p	10.0	-7.6
Freight, local cartage	503.9	340.0	305.0 ^p	-4.9	-10.3
Trans. for other Classes I and II carriers	102.3	187.0	165.0 ^p	4.8	-11.8
Others	120.7	1,981.0	2,153.0 ^p	33.4	8.7
Total	13,011.2	30,338.0	32,531.0 ^p	9.6	7.2
Operating Expenses of Class I Intercity Motor Carriers (\$ millions)	12,237.7	29,012.0	31,241.0 ^p	45.0	7.7
II. INVENTORY					
Number of Truck Registrations					
Private and commercial	18,805,523.0 ^e	32,238,223.0 ^e	33,043,285.0 ^e	5.8	2.5
Federal	154,864.0 ^f	209,101.0 ^f	203,867.0 ^f	2.8	-2.5
State, county, municipal	842,303.0	1,189,917.0	1,203,958.0	3.6	1.2
Total	19,802,490.0	33,637,241.0	34,451,110.0	5.9	2.4
Total Number of Employees					
Trucking and Trucking Terminals	995,000.0 ⁱ	1,189,300.0 ^j	1,166,000.0 ^j	1.6	-2.0
Number of Companies, Class I Intercity Carriers of Property	1,355.0 ^b	835.0 ^c	740.0 ^{pc}	-5.9	-11.4
Number of Employees, Class I Intercity Carriers of Property	506,765.0 ^d	471,458.0	502,990.0	-0.1	6.7
III. PERFORMANCE					
Vehicle Miles (millions) ²					
Urban ³					
Interstate Urban	n/a	26,500.0 ^k	31,031.0 ^k	-	17.1
Other Urban	n/a	146,850.0	153,152.0	-	4.3
All Urban	85,567.0 ^k	173,350.0	184,183.0	8.0	6.3
Rural					
Interstate Rural	n/a	43,200.0	49,706.0	-	15.1
Other Arterial Rural	n/a	154,070.0	83,310.0	-	-46.0
Other Rural	n/a	13,950.0	94,327.0	-	576.2
All Rural	n/a	211,220.0	227,343.0	-	7.6
Total Rural and Urban	n/a	384,570.0	411,526.0	-	7.0
Average Miles Travelled per Vehicle					
Single-unit trucks	9,794.0	10,070.0	10,663.0	0.9	5.9
Combination trucks	43,779.0	42,705.0	45,837.0	0.5	7.3
All trucks	11,465.0	11,433.0	11,945.0	0.4	4.5
Ton-Miles (millions)					
Intercity	445,000.0 ^d	555,000.0 ^{rw}	540,000.0 ^w	2.0	-2.7
Taxes Assignable to Operations (\$ millions)					
State highway-user taxes	3,669.0 ^u	6,731.0 ^u	7,157.0 ^u	6.9	6.3
Federal highway-user taxes	2,299.0	3,157.0	3,094.0	3.0	-2.0
Total highway-user taxes	5,968.0	9,888.0	10,251.0	5.6	3.7

TRUCK PROFILE (Cont.)

Source: The following data references are listed in Appendix A, p. 178.

<u>Source</u>	<u>References Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	26 & 27) pp.2,4	i	42) p.174
b	18) Appendix E, Table 10	j	43) p.176
c	20) Appendix E, Table 6	k	46) Table VM-1
d	18) Appendix E, Table 3	s	26) p.14
e	46) Table MV-1	t	49) pp.99,100
f	46) Table MV-9	u	5) p.3
h	53) 1971- Personal Communication, 1980 & 1981- Table 1	v	5) ATA, Dept. of Economics & Taxation, Personal Communication.
		w	28) pp. 5,7

LOCAL TRANSIT PROFILE (Cont.)

	<u>1979¹</u>	<u>1980²</u>	<u>1981³</u>	<u>1979-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
II. INVENTORY					
Number of Systems					
Single Motor Bus Properties	219.0 ^b	188.0 ^a	174.0 ^c	-10.9	-7.5
All Properties	321.0 ^s	319.0 ^t	336.0 ^u	2.3	5.3
Motor Bus	304.0 ^g	301.0 ^h	311.0 ⁱ	1.1	3.3
Rail Rapid	9.0	9.0	9.0	0.0	0.0
Streetcar	7.0	7.0	8.0	6.9	14.3
Trolley Bus	6.0	5.0	5.0	-8.7	0.0
Demand Response	98.0	118.0	147.0	22.5	24.6
Ferryboat	2.0	2.0	3.0	22.5	50.0
Other	9.0	6.0	6.0	-18.4	0.0
Number of Vehicles					
All Properties	61,014.0 [*]	66,834.0 [*]	69,813.0 [*]	7.0	4.5
Motor Bus	48,781.0 ^g	53,661.0 ^h	56,109.0 ⁱ	7.3	4.6
Rail Rapid	9,509.0	9,405.0	9,615.0	0.6	2.2
Streetcar	884.0	996.0	1,089.0	11.0	9.3
Trolley Bus	721.0	831.0	768.0	3.2	-7.6
Demand Response	1,053.0	1,671.0	1,966.0	36.6	17.7
Ferryboat	10.0	10.0	16.0	27.0	60.0
Other	56.0	260.0	250.0	111.3	3.9
Number of Employees					
All Properties	163,872.3 ^{j*}	173,286.9 ^{k*}	175,229.5 ^{m*}	3.4	1.1
Motor Bus	115,543.1	121,519.6	121,612.5	2.6	0.1
Rail Rapid	42,314.7	44,478.0	45,210.7	3.7	1.7
Streetcar	2,181.6	2,765.3	3,237.4	21.8	17.1
Trolley Bus	1,408.2	1,653.6	1,753.5	11.6	6.0
Demand Response	2,176.0	2,345.3	2,258.4	1.9	-3.7
Ferryboat	227.7	223.0	848.0	9.3	280.3
Other	21.0	302.1	309.0	283.6	2.3
III. PERFORMANCE					
Revenue Vehicle-Miles (thousands)					
Motor Bus	1,323,741.1 ⁿ	1,402,920.5 ^o	1,382,002.6 ^q	2.2	-1.5
Rail Rapid	67,138.5	68,594.4	67,415.4 ^v	0.2	-1.7
Streetcar	6,696.4	13,975.5	14,041.2	44.8	0.5
Trolley Bus	12,109.4	13,060.3	13,544.5 ^q	5.8	3.7
Demand Response	n/a	33,022.8	42,281.7	-	28.0
Ferryboat	144.7	139.8	274.1	37.6	96.1
Total All Modes	1,409,830.1	1,531,713.3	1,519,559.5	3.8	-0.8
Unlinked Passenger Trips (millions)					
Motor Bus	5,570.1	5,740.5	5,285.8	-2.6	-7.9
Rail Rapid	1,432.7	1,846.8	1,809.1 ^v	12.4	-2.0
Streetcar	122.3	126.5	132.5	4.1	4.7
Trolley Bus	136.0	125.3	152.8 ^q	6.0	22.0
Demand Response	n/a	11.8	11.7	-	-0.1
Ferryboat	4.2	4.6	24.9	143.5	441.3
Total All Modes	7,265.3 [*]	7,855.5 [*]	7,416.8 [*]	1.0	-5.6
Passenger Miles (millions)					
Motor Bus	17,766.7	20,793.6	19,134.4	3.8	-8.0
Rail Rapid	3,160.3	8,703.6	8,588.5 ^v	64.9	1.3
Streetcar	355.2	336.4	377.3	3.1	12.2
Trolley Bus	218.7	305.9	251.5 ^q	7.2	17.8
Demand Response	n/a	60.0	70.3	-	17.2
Ferryboat	16.3	18.7	112.6	162.8	502.1
Total All Modes	21,517.2 [*]	30,218.2 [*]	28,534.6 [*]	15.2	-5.6

WATER TRANSPORT PROFILE

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Revenues (\$ millions)					
Domestic Freight	1,979.0 ^{s*}	6,437.0 ^{a*}	7,036.0 ^{b*}	13.5	9.3
Coastal waterways	825.0	2,963.0	3,399.0	15.2	14.7
Inland waterways	547.0	1,810.0	1,873.0	13.1	3.5
Great Lakes	222.0	520.0	561.0	9.7	7.9
Locks, channels, etc.	385.0	1,144.0	1,203.0	12.1	5.2
International Freight	3,195.0	8,279.0	8,734.0	10.6	5.5
Domestic passengers, intercity	12.0	20.0	20.0	5.2	0.0
International passenger ¹	241.1	306.0	347.0	3.7	13.4
Total Passenger	253.0	326.0	367.0	3.8	12.6
Revenue of Class A and B Carriers by Standard Coastal Waterways (\$ millions)					
Line service operating revenues					
Freight	306.4 ^c	n/a	n/a	-	-
Passenger	10.2	n/a	n/a	-	-
Other	12.3	n/a	n/a	-	-
Other operating revenue	3.0	n/a	n/a	-	-
Revenue from terminal operations	28.9	n/a	n/a	-	-
Rental and motor carrier revenue	33.3	n/a	n/a	-	-
Total waterline operating revenues	394.0	n/a	n/a	-	-
Revenues of U.S. Commercial Fishing Fleet					
U.S. Commercial Landings (\$ million)	651.0 ^d	2,237.0 ^e	2,388.0 ^e	13.9	6.8
Coastal and intercoastal service	83.0 ^c	n/a	n/a	-	-
Charter	61.0	n/a	n/a	-	-
Total vessel operating revenues	681.0	n/a	n/a	-	-
Total waterline operating revenues	749.0	n/a	n/a	-	-
Operating Expenses of Class A and B Carriers by Inland and Intercoastal Waterways (\$ millions)	348.0	n/a	n/a	-	-
Operating Expenses of Maritime Carriers (\$ millions)	728.5	n/a	n/a	-	-
II. INVENTORY					
Number of Companies, Class A & B Carriers Inland and Coastal Waterways	77.0	54.0 ^t	n/a	-	-
Number of Companies, Maritime Carriers	18.0	n/a	n/a	-	-
Number of Employees					
Ships, boat building, and repairing	170,400.0 ^u	220,500.0 ^f	228,600.0 ^f	3.0	3.7
Water transportation	192,900.0	212,700.0 ^r	216,300.0	1.2	1.7

WATER TRANSPORT PROFILE (Cont.)

	<u>1971</u>	<u>1980</u>	<u>1981</u>	1971-1981 Average Annual % Change	1980-1981 % Change
Average Haul, Domestic System (miles-per-ton)					
Coastwise	1,482.8 ^x	1,914.8 ^h	1,971.4 ^h	2.9	3.0
Internal	336.7	405.0	444.0	2.8	9.9
Lakewise	499.3	536.4	538.5	0.8	0.4
Local	15.2	16.9	14.1	-0.8	-16.6
Overall Average	628.1	858.4	884.0	3.5	3.0
Cargo Capacity (net tons)					
Total non-self-propelled vessels ³	27,197,323.0 ^y	44,875,116.0 ^y	49,933,447.0 ^y	6.3	11.3
Dry cargo barges and scows	19,710,605.0	34,486,851.0	38,031,076.0	7.0	10.3
Tank barges	7,486,718.0	10,388,265.0	11,902,371.0	4.7	14.6
Total self-propelled vessels ³	18,082,585.0	23,906,346.0	26,277,603.0	3.8	9.9
Dry cargo/passenger	9,555,835.0	8,011,587.0	7,998,876.0	-1.8	-0.2
Tankers	8,526,419.0	15,894,753.0	18,278,727.0	7.9	15.0
Total Number of Marine Accidents in Waterborne Transport⁴	2,577.0 ^m	5,738.0 ^{rm}	5,217.0 ^m	5.8	-9.1
Total Number of Fatalities in Waterborne Transport⁵	243.0 ⁿ	147.0 ⁿ	164.0 ^{pm}	-3.9	11.6
Inspected, total	77.0	27.0	24.0 ^p	-11.0	-11.0
Passenger and ferry, large and small	32.0	5.0	-	-	-
Freight	2.0	8.0	-	-	-
Cargo, barge	1.0	n/a	-	-	-
Tank ships and tank barges	33.0	4.0	-	-	-
Government owned vessels	n/a	0.0	-	-	-
Miscellaneous	9.0	10.0	-	-	-
Uninspected, total	166.0	120.0	140.0 ^{pm}	-1.7	16.7
Commercial fishing	74.0	60.0	-	-	-
Tugs	19.0	14.0	-	-	-
Foreign	6.0	2.0	-	-	-
Miscellaneous	67.0	44.0	-	-	-
Total Number of Injuries in Waterborne Transport⁵	163.0	176.0	175.0 ^{pm}	0.7	-0.6
Inspected, total	43.0	43.0	-	-	-
Passenger and ferry, large and small	13.0	10.0	-	-	-
Freight	13.0	8.0	-	-	-
Cargo, barge	n/a	n/a	-	-	-
Tank ships and tank barges	1.0	9.0	-	-	-
Government owned vessels	n/a	2.0	-	-	-
Miscellaneous	16.0	18.0	-	-	-
Uninspected, total	120.0	133.0	-	-	-
Commercial fishing	21.0	28.0	-	-	-
Tugs	20.0	27.0	-	-	-
Foreign	8.0	6.0	-	-	-
Miscellaneous	71.0	72.0	-	-	-
Number of Fatalities in Recreational Boating					
Inboard	129.0 ^v	100.0 ^w	85.0 ^k	-4.1	-15.0
Outboard	798.0	609.0	570.0	-3.0	-6.4
Inboard/outboard	n/a	47.0	50.0	-	6.4
Jet	n/a	10.0	4.0	-	-60.0
Sail	94.0	43.0	28.0	-11.4	-34.9
Manual (oars and paddle)	225.0	272.0	282.0	2.3	3.7
Other	106.0	14.0	10.0	-21.0	-28.6
Propulsion Unknown	230.0	265.0	179.0	-2.5	-32.5
Total	1,582.0	1,360.0	1,208.0	-2.7	-11.2

RAIL PROFILE
A. CLASS I RAILROADS

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981</u> <u>Average</u> <u>Annual</u> <u>% Change</u>	<u>1980-1981</u> <u>% Change</u>
I. FINANCIAL					
Revenues, Class I Line-Haul Railroads (\$ millions)					
Passenger	294.1 ^a	438.4 ^a	534.2 ^a	6.2	21.9
Freight	12,689.0	26,103.0	28,925.4	8.6	10.8
Other	475.5	1,464.2	1,438.9	11.7	-1.7
Total Operating revenues	12,689.0	28,103.9 ^r	30,898.6	9.3	10.0
Operating Expenses, Class I Line-Haul Railroads ² (\$ millions)	11,947.4	26,250.0 ^r	28,586.9	9.1	8.9
II. INVENTORY					
Number of Vehicles, Class I Railroads					
Freight-carrying cars	1,410,160.0 ^c	1,101,343.0 ^c	1,072,047.0 ^c	-2.7	-2.7
Passenger train cars	8,713.0 ^d	4,347.0 ^d	3,945.0 ^d	-7.6	-9.3
Locomotives	27,189.0 ^e	27,977.0 ^e	27,423.0 ^e	0.1	-2.0
Number of Companies, Class I Railroads	69.0 ^b	40.0 ^f	38.0 ^f	-5.9	-5.0
Number of Employees, Class I Railroads	544,333.0 ^g	458,332.0 ^g	436,397.0 ^g	-2.2	-4.8
Line Mileage, Line-Haul Railroads	205,220.0 ^h	179,000.0 ^h	168,000.0 ^u	-2.0	-6.2
III. PERFORMANCE					
Car Mileage, Class I Railroads (millions)					
Freight	29,622.5 ⁱ	29,709.8 ^{ri}	27,968.4 ⁱ	-0.6	-5.9
Passenger	262.7	60.3 ^r	60.8	-13.6	0.8
Motorcar	92.4	93.0	97.7	0.6	5.1
Total	29,977.5	29,863.1 ^r	28,126.9	-0.6	-5.8
Train Mileage, Class I Railroads (millions)					
Freight	429.5	428.5	407.5	-0.5	-4.9
Passenger	53.0	31.0	29.7	-5.6	-4.2
Total	482.5	459.5	437.2	-1.0	-4.9
Locomotive Mileage, Class I Railroads (millions)					
Freight	1,554.0 [*]	1,531.1 [*]	1,474.9 [*]	-0.5	-3.7
Passenger	63.7 [*]	14.2 [*]	14.0 [*]	-14.1	-1.4
Total	1,617.7	1,545.3	1,488.9	-0.8	-3.7
Revenue Passengers Carried, Class I Railroads (millions)					
Commutation	201.3 ^q	214.6 ^q	n/a	-	-
Other than Commutation ¹	71.5	85.6 ^r	n/a	-	-
Total ¹	272.8	300.2	302.0 ^s	1.1	0.9
Revenue Passenger Miles, Class I Railroads (millions)					
Commutation	4,498.0	5,070.2 ^r	5,171.0 ^z	1.4	2.0
Other than Commutation ¹	4,403.0	5,925.0 ^r	6,244.0 [*]	3.6	5.4
Total ¹	8,833.1	10,995.1 ^r	11,415.0	2.6	3.8

**RAIL PROFILE
B. AMTRAK**

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Revenues (\$ thousands)					
Passenger	86,207,042.0 ^a	368,240.0 ^a	412,626.0 ^b	- 41.4	12.1
Commutation	2,057,916.0	4,879.0	n/a	-	-
Other than Commutation	84,149,126.0	363,361.0 [*]	99,722.0	-49.0	-72.6
Other	14,703.0 ^b	85,273.0 ^b	n/a	-	-
Total Operating revenues	100,924.0	453,513.0	512,348.0	17.6	13.0
Operating Expenses	179,593.0	1,081,239.0	1,160,098.0	20.5	7.3
II. INVENTORY					
Number of Vehicles					
Passenger train cars	1,165.0 ^a	2,128.0 ^a	1,830.0 ^a	4.6	-14.0
Locomotives	n/a	448.0	398.0	-	-11.2
Number of Companies	1.0	1.0	1.0	0.0	0.0
Number of Employees	164.0	21,416.0	20,458.0	62.0	-4.5
Line Mileage	n/a	23,940.0 ^d	23,775.0 ^d	-	-0.7
III. PERFORMANCE					
Car mileage (millions)					
Passenger	140.1 ^a	235.2 ^a	222.8 ^a	4.8	-5.3
Train Mileage (millions)					
Passenger	16.5 [*]	29.5 [*]	30.4 [*]	6.3	3.1
Locomotive Mileage (millions)					
Passenger	38.2	40.6	37.9	-0.1	-6.7
Revenue Passengers Carried (millions)					
Commutation	1.8	3.4	3.4 ^g	6.6	0.0
Other passenger	6.8	17.4	17.2	9.7	-1.2
Total	10.6	20.8	20.6	6.9	-0.1
Revenue Passenger Miles (millions)					
Commutation	71.1	134.7	129.0	6.1	-4.2
Other passenger	1,922.3	4,368.5	4,633.0	9.2	6.1
Total	1,993.4	4,503.2	4,762.0	9.1	5.8
Average Passenger Trip Length (miles)					
Commutation	39.4	40.0	37.9	-0.4	-5.3
Other passenger	218.9	250.9	269.4	2.1	7.4

* Figure obtained by addition/subtraction and may not appear directly in data source.

Source: The following data references are listed in Appendix A, p. 178.

<u>Source</u>	<u>Reference Number/Location</u>
a	9) pp. 18
b	9) p. 17
d	10) p. 62
e	28) p. 16
f	28) p. 14
g	60) Amtrak, Personal Communication

OIL PIPELINE PROFILE

	<u>1971</u>	<u>1980</u>	<u>1981</u>	<u>1971-1981 Average Annual % Change</u>	<u>1980-1981 % Change</u>
I. FINANCIAL					
Operating Revenues (\$ millions)					
ICC-regulated	1,249.0 ^a	6,141.0 ^c	6,678.0 ^u	18.3	8.7
Non-regulated	243.0	682.0	742.0	11.8	8.8
Total	1,492.0	6,823.0	7,420.0	17.4	8.6
Operating Expenses (\$ millions)					
ICC-regulated	712.2 ^b	n/a	n/a	-	-
II. INVENTORY					
Number of ICC-regulated Companies	99.0	128 ^t	143.0 ^j	3.8	11.7
Number of Employees					
ICC-regulated Companies	14,791.0	21,300.0 ^{r,k}	21,900.0 ^k	4.0	2.8
Miles ICC-regulated pipeline	n/a	169,349.0 ^j	n/a	-	-
Total mileage ¹	219,899.0 ^f	237,501.0 ^f	237,643.0 ^f	0.8	0.1
III. PERFORMANCE					
Intercity Ton-Miles (millions)					
Crude Petroleum	n/a	362,600.0 ^v	333,100.0 ^v	-	-8.1
Petroleum Products	n/a	225,600.0 ^w	230,600.0 ^w	-	2.2
Total	444,000.0 ^u	588,200.0 ^x	563,700.0 ^x	2.9	-4.2
Tons Transported (millions)					
Crude petroleum	460.0 ^e	413.0 ^e	n/a	-	-
Petroleum products (delivered from lines)	347.0 ^h	508.0 ^h	n/a	-	-
Total	807.0 ⁱ	921.0 ⁱ	n/a	-	-
Average Length of Haul (statute miles)					
Crude petroleum	301.0 ^d	n/a	n/a	-	-
Petroleum products	347.0	n/a	n/a	-	-

¹ Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

n/a = not available, r = revised

Source: The following data references are listed in Appendix A, p. 178.

<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	26) p. 4	k	43) p. 177
b	18) Appendix E, Table 15	t	41) Personal Communication
c	27) p. 2	u	28) p. 5,7
d	26) p. 14	v	59) Table 2
e	12) Table 2	w	59) Table 3
f	28) p. 35	x	59) Table 1
h	12) Table 3		
i	12) Table 1		
j	25) p. 101 & Personal Communication		

**SELECTED PASSENGER
AND CARGO PERFORMANCE
INDICATORS BY MODE
1971, 1980 and 1981**

**SELECTED PASSENGER AND CARGO PERFORMANCE
INDICATORS BY MODE, 1971, 1980 AND 1981 (Cont.)**

	<u>1971</u>	<u>1980</u>	<u>1981</u>
AUTOMOBILE (Cont.)			
Vehicle-miles of travel per capita, passenger cars, taxis, motorcycles			
Rural			
Interstate rural	n/a	399.8	384.6
Other arterial rural	n/a	1,317.2	800.0
Other rural	n/a	304.3	806.4
All rural	n/a	2,021.2	1,991.0
Urban			
Interstate urban	n/a	582.5	589.9
Other urban	n/a	2,369.4	2,357.4
All urban	2,538.5	2,951.9	2,947.2
Total rural and urban	n/a	4,893.9	4,859.7
Passenger-miles per capita			
Passenger cars and taxis, total travel	9,989.0	10,768.6	10,690.1
Motorcycles, total travel	80.1	87.2	86.3
Vehicle-miles of travel per vehicle, passenger cars, taxis			
Main rural roads	6,395.7	5,923.3	8,442.1
Local rural roads	1,953.3	3,286.2	1,240.1
Urban streets	3,938.0	3,386.9	3,393.1
Total travel	12,293.0	12,496.4	13,075.3
Passenger-miles per vehicle			
Passenger cars and taxis	22,263.4	20,238.5	19,995.3
Motorcycles	4,982.7	3,476.7	3,413.8
BUS			
U.S. population per intercity bus	9,444.2	10,614.8	10,816.4
Vehicle-miles per capita			
Commercial buses			
Rural			
Interstate rural	n/a	1.4	1.4
Other arterial rural	n/a	3.8	2.1
Other rural	n/a	0.4	2.0
All rural	n/a	5.6	5.4
Urban			
Interstate urban	n/a	1.5	1.5
Other urban	n/a	8.4	8.6
All urban	8.5	9.8	10.0
Total rural and urban	n/a	15.4	15.4

**SELECTED PASSENGER AND CARGO PERFORMANCE
INDICATORS BY MODE, 1971, 1980 and 1981 (Cont.)**

	<u>1979</u>	<u>1980</u>	<u>1981</u>
LOCAL TRANSIT			
Total Operating expenses (dollars) per vehicle-mile			
Motorbus	2.5	2.8	3.2
Rail rapid	4.1	4.4	5.0
Streetcar	6.9	5.9	6.5
Trolley bus	3.3	3.8	3.6
Demand response	1.4	1.4	1.7
Total annual passenger-miles per vehicle (thousands)			
Motorbus	386.4	406.0	361.5
Rail rapid	1,124.4	948.6	928.0
Streetcar	356.9	341.2	349.4
Trolley bus	372.9	371.7	329.1
Demand response	36.4	37.2	36.5
Total annual passenger-miles per vehicle-mile			
Motorbus	3.9	3.8	3.5
Rail rapid	3.9	4.7	4.6
Streetcar	8.8	8.2	8.3
Trolley bus	10.5	9.3	10.4
Demand response	0.3	0.3	0.3
	<u>1971</u>	<u>1980</u>	<u>1981</u>
WATER TRANSIT			
Ton-miles per capita, domestic water			
Coastwise	1,742.0	2,778.5	2,768.2
Internal	780.1	1,000.8	923.9
Lakewise	340.3	271.8	271.1
Local	6.0	0.7	0.6
Total	2,868.4	4,051.8	3,963.8
Tons of freight hauled per capita, domestic water			
Coastwise	1.2	1.5	1.4
Internal	2.3	2.4	2.3
Lakewise	0.7	0.5	0.5
Local	0.4	0.4	0.4
Total	4.6	4.8	4.6
CLASS I RAILROADS			
Revenue passenger-miles per capita			
Commutation	21.7	22.3	22.5
Other	21.3	26.1	27.2
Total	43.0	48.4	49.7

Table 10. Number of New Vehicles Purchased by Mode, 1971-1981

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Air Carrier (All Services) Fixed-Wing	230	230	295	263	314	238	180	225	160	n/a	n/a
General Aviation	7,450	9,765	13,671	14,026	14,043	15,648	16,624	16,456	17,048	11,877	9,547
Passenger Car and Taxi**	10,250,000	10,949,000	11,439,000	8,871,000	8,640,000	10,110,000	11,185,000	11,312,000	10,558,800	8,980,000	8,535,000
Motorcycles	1,565,000	1,725,000	1,255,000	1,580,000	990,000	740,000	970,000	1,015,000	1,010,000	1,250,000	1,350,000
Mopeds	-	-	-	13,000	32,000	78,000	190,000	350,000	130,000	180,000	67,000
Bicycles	8,900,000	13,900,000	15,200,000	14,100,000	7,300,000	8,100,000	9,400,000	9,400,000	10,800,000	9,000,000	8,900,000
Truck (Domestic)	2,053,100	2,446,000	2,915,000	2,511,000	2,351,000	3,040,000	3,500,600	6,920,860	3,120,159	2,231,500	1,972,200
Intercity Bus (Class I)	831	917	833	626	733	619*	709	635	680	800 ^e	2,200 [†]
Local Transit											
Motor Bus	2,514	2,904	3,200	4,818	5,261	4,475	2,437	3,805	3,440	4,572	4,059
Subway and Elevated	0	0	0	0	0	4	62	35	70	32	87
Surface Rail	250	360	238	92	127	472	506	172	94	130	121
Trolley Coach	1	1	1	0	1	260	198	0	141	98	0
Total	2,764	3,265	3,439	4,910	5,389	5,481	3,203	4,012	3,745	4,832	4,267
Class I Railroad											
Freight Cars	45,408	37,931	34,171	36,315	41,692	30,836	27,098	28,003	28,640	31,193	20,900
Locomotives	1,179	1,377	1,165	1,018	772	438	820	1,214	1,709	1,466	470
Pass. Car and Pullman	281	334	73	85	156	44	20	42	43	44	0
Total	46,868	35,409	35,419	37,418	42,620	31,318	27,938	29,259	30,392	32,703	21,370
Amtrak (est. 1971)											
Pass. Car and Pullman	-	0	10	0	109	305	133	1	56	108	119
Locomotives	-	0	67	362	30	58	4	75	39	17	43
Total	-	0	77	362	139	363	137	76	95	125	162
Water											
Merchant Vessels	15	15	30	20	15	16	18	14	15	23	12
Gross Tonnage	419,000	439,000	987,000	697,000	452,000	616,000	920,198	911,791	1,148,530	693,200	427,979

n/a = not available, e = estimate

* Change in Class I definition.

** Includes domestic and imported vehicles.

† 1981 data includes all carriers.

Source: See Appendix A, p. 188.

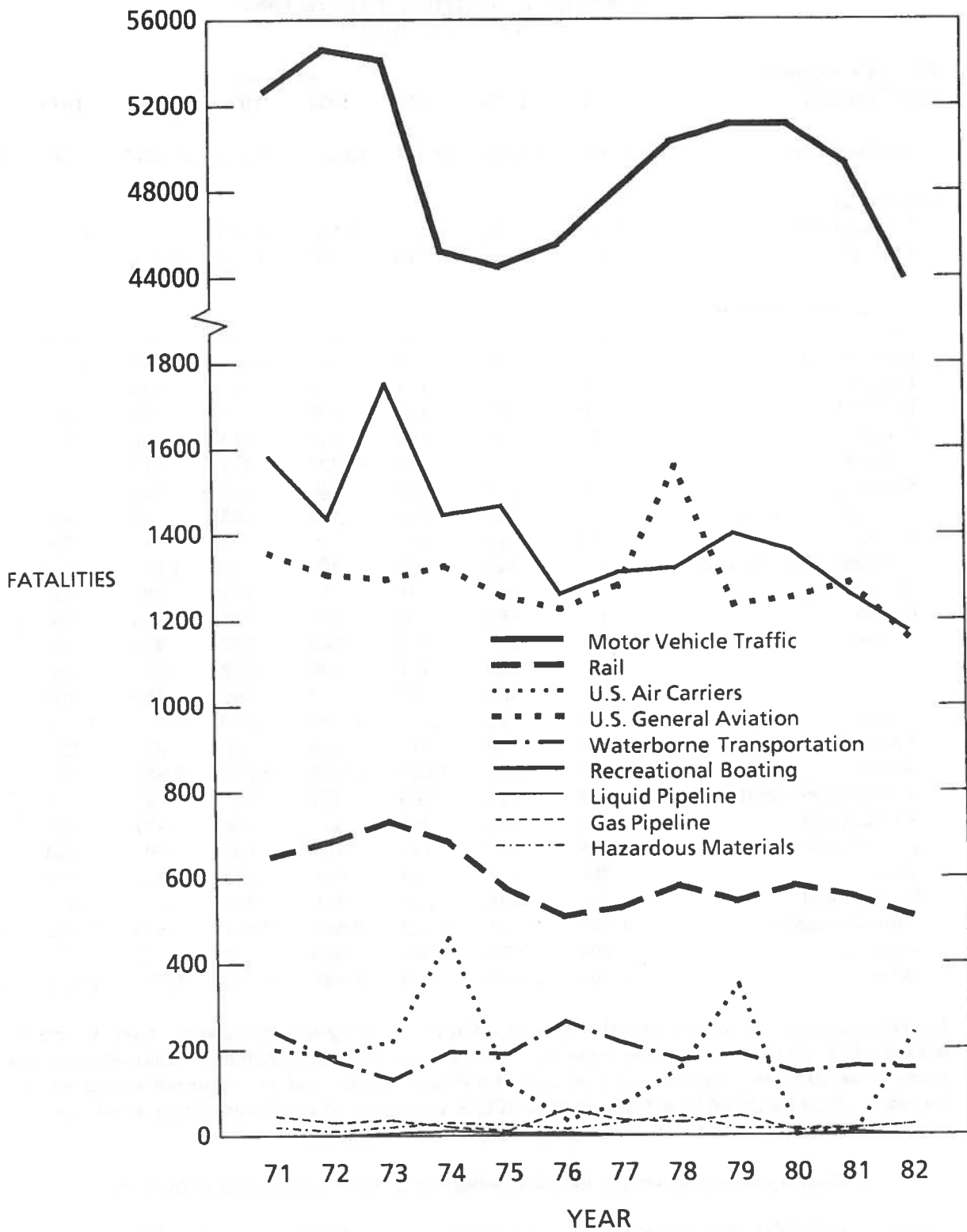


Figure 18. Number of Fatalities by Mode, 1971-1981

Table 13. Air Travel Departures Between the United States and Foreign Countries, 1975 to 1982
(Thousands)

Flag of Carrier and Country	Departures							
	1975	1976	1977	1978	1979	1980	1981	1982
Total Passengers	12,053	13,136	13,804	15,800	18,128	19,256	19,911	19,322
Flag of Carrier								
United States	5,913	6,519	6,889	7,834	9,142	9,369	9,581	9,485
Foreign	6,141	6,617	6,915	7,966	8,986	9,886	10,330	9,837
Country of debarkation ¹								
Australia	103	121	134	159	222	245	258	252
Bahamas, The	704	706	719	865	925	1,006	927	1,009
Belgium	134	128	105	100	173	231	238	283
Bermuda	372	412	414	405	444	467	417	413
Brazil	206	192	181	217	252	291	301	303
Colombia	171	184	204	230	272	299	315	300
Denmark	188	203	210	214	238	254	243	235
Dominican Republic	322	358	390	402	419	443	466	464
France	470	503	539	569	646	635	646	647
Germany, Fed. Rep. of	649	728	824	897	1,003	1,178	1,149	1,164
Greece	123	167	185	198	220	190	189	197
Hong Kong	59	67	51	76	127	152	166	144
Ireland	163	175	195	200	236	212	219	234
Italy	409	404	448	486	517	495	460	500
Jamaica	416	346	197	370	432	382	435	526
Japan	1,183	1,178	1,204	1,272	1,534	1,602	1,697	1,779
Korea, Rep. of	60	57	66	80	134	186	187	212
Mexico	1,524	1,655	1,570	2,062	2,537	2,886	3,157	2,516
Netherlands Antilles	184	237	230	256	302	282	322	297
Netherlands	304	289	314	338	422	409	443	477
Phillipines	81	105	111	138	132	160	178	175
Spain	260	231	259	295	292	273	288	321
Switzerland	224	282	323	311	305	306	315	330
United Kingdom	1,446	1,722	1,984	2,478	2,609	2,840	2,989	2,607
Venezuela	198	234	281	356	424	518	571	571
Other	2,222	2,812	3,034	3,026	3,529	3,504	3,524	3,366

Covers passengers on international commercial flights departing from U.S. airports. Excludes traffic between U.S. and Canada, border crossers, crewmen, and military personnel. Travelers between U.S. ports in the 50 States, Puerto Rico, Guam, or the Virgin Islands, and any other outlying area are included. Data compiled from flight reports of U. S. Immigration and Naturalization Service. Selection of countries based on minimum of 225,000 arrivals in 1981.

¹ Country where passenger boarded/deboarded a direct flight to/from the U.S.

Source: U.S. DOT, Transportation Systems Center, Center for Transportation Information, Cambridge, Mass., *U.S. International Air Travel Statistics*, annual, beginning with 1975.

SUPPLEMENTARY DATA
Section I: Transportation and the Economy
1971 - 1981

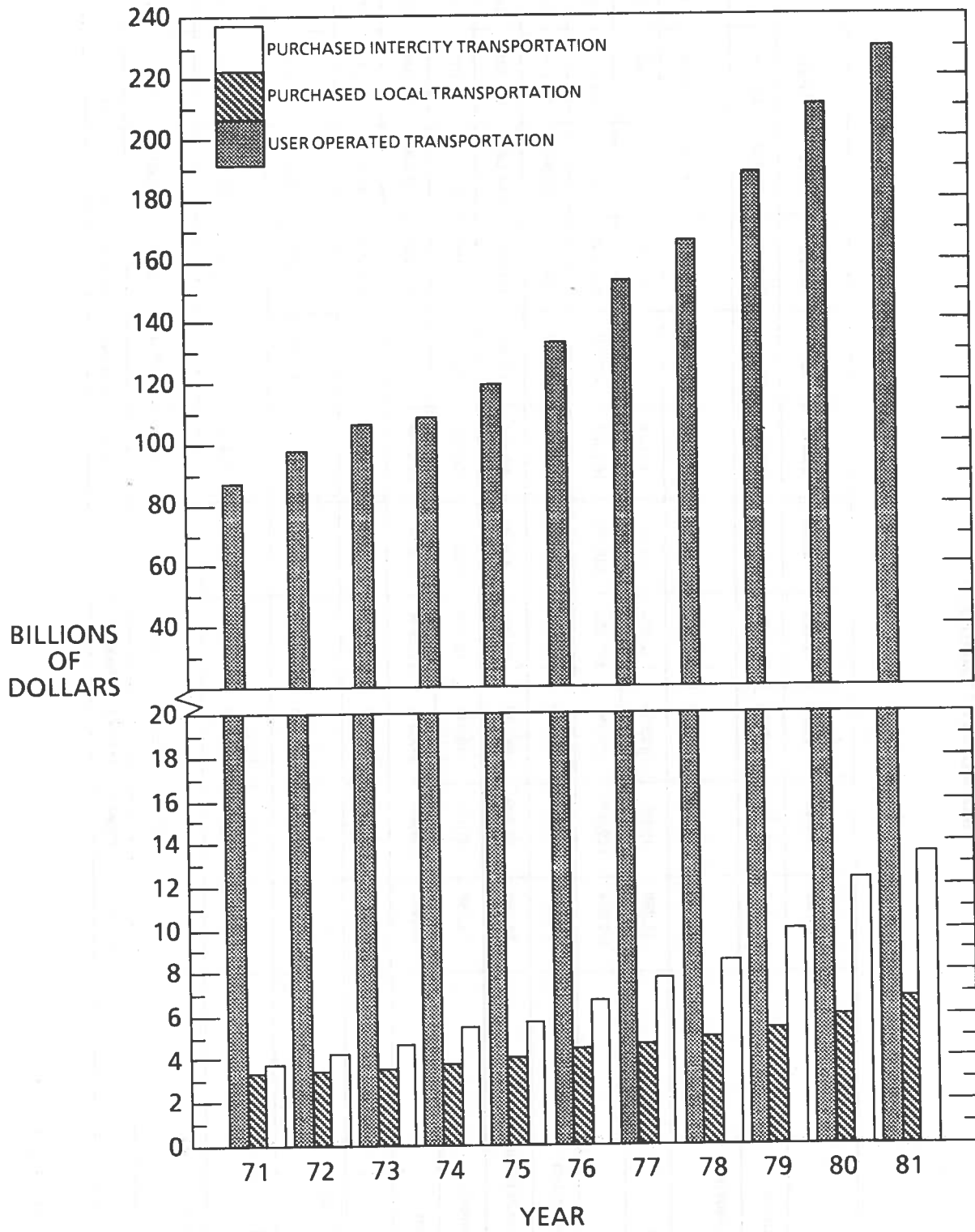
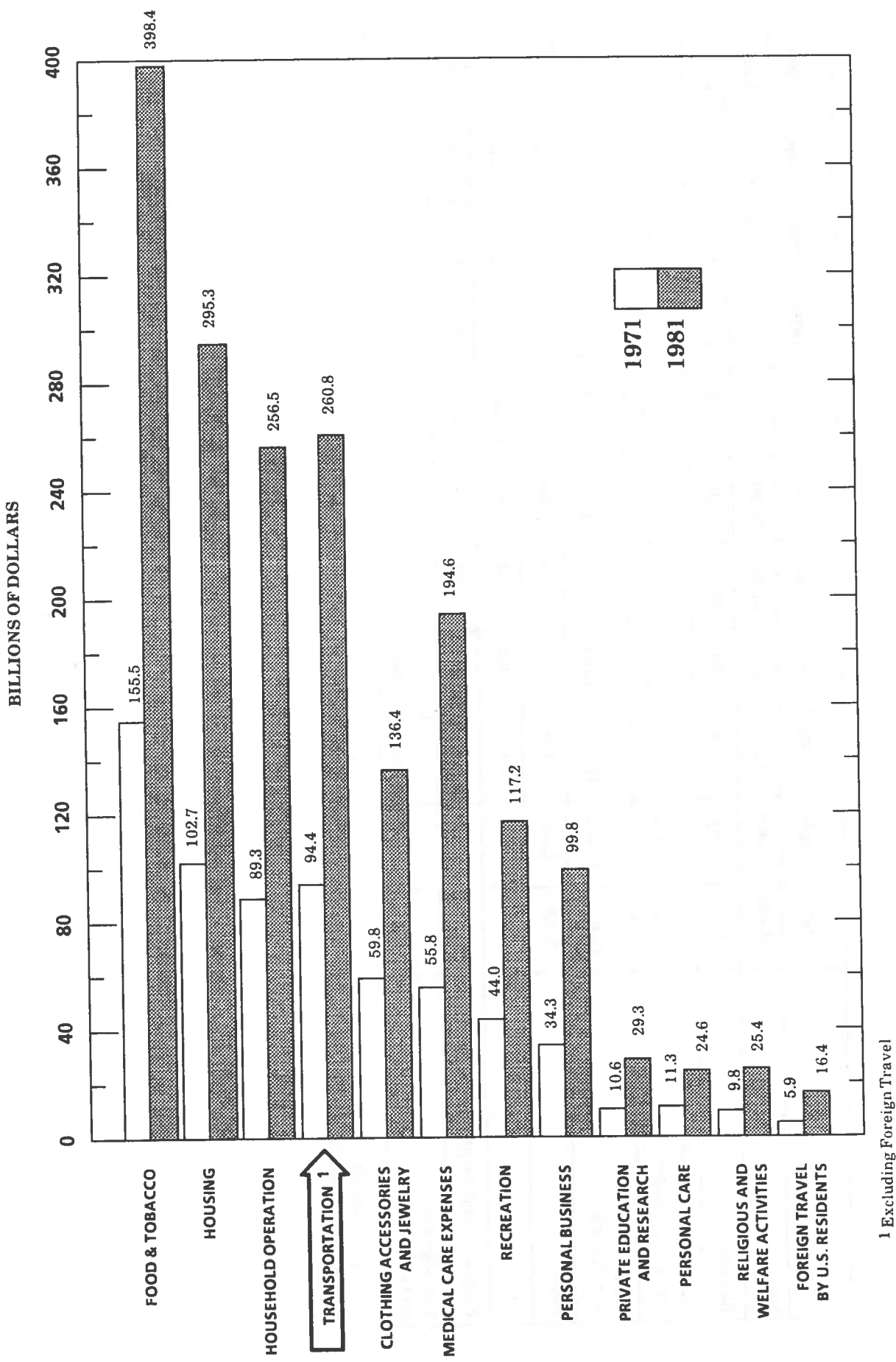


Figure 19. Personal Consumption Expenditures by Transportation Sector, 1971-1981



1 Excluding Foreign Travel

Figure 20. Personal Consumption Expenditures by Type of Product, 1971 and 1981

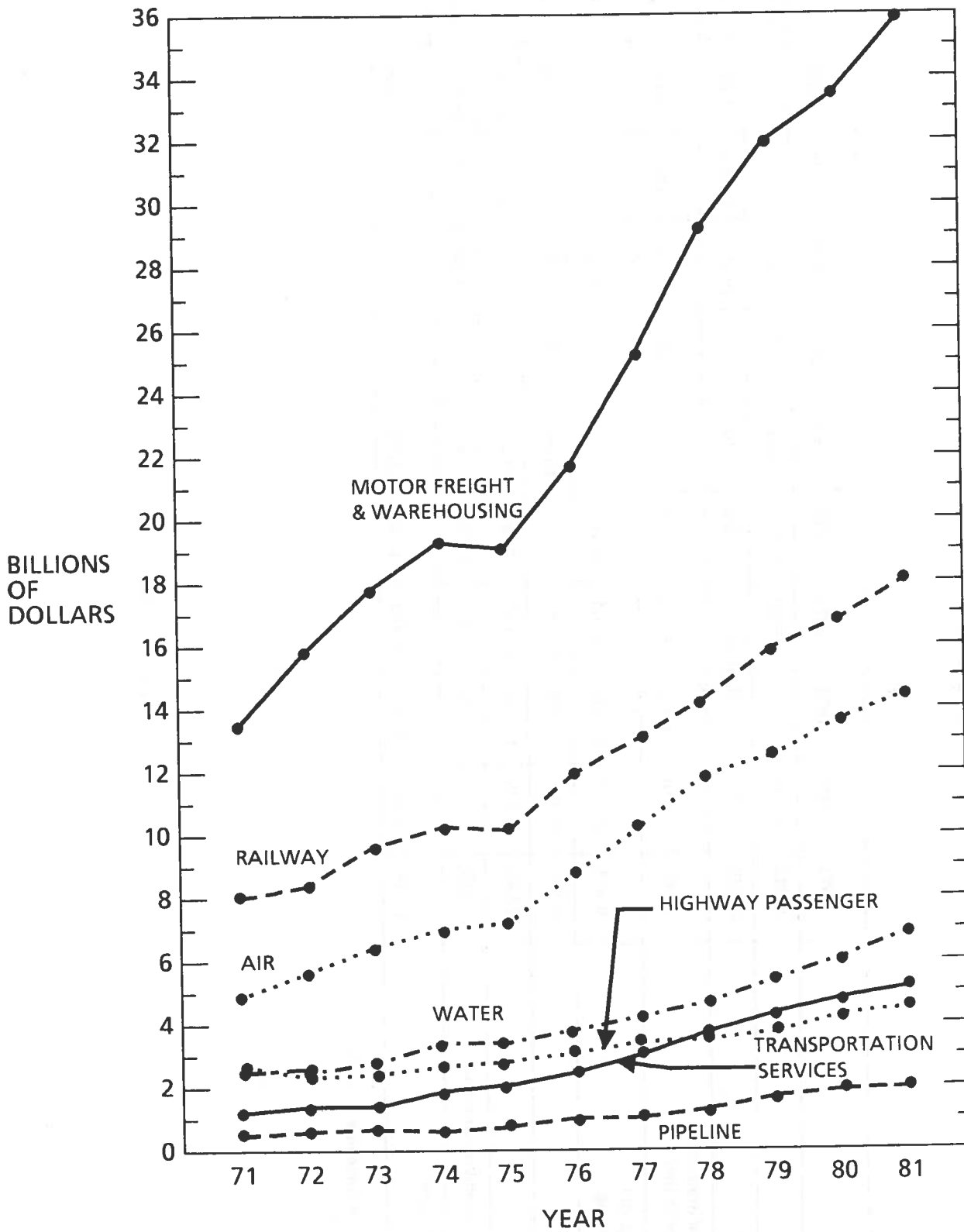


Figure 21. National Income by Transportation Sector, 1971-1981

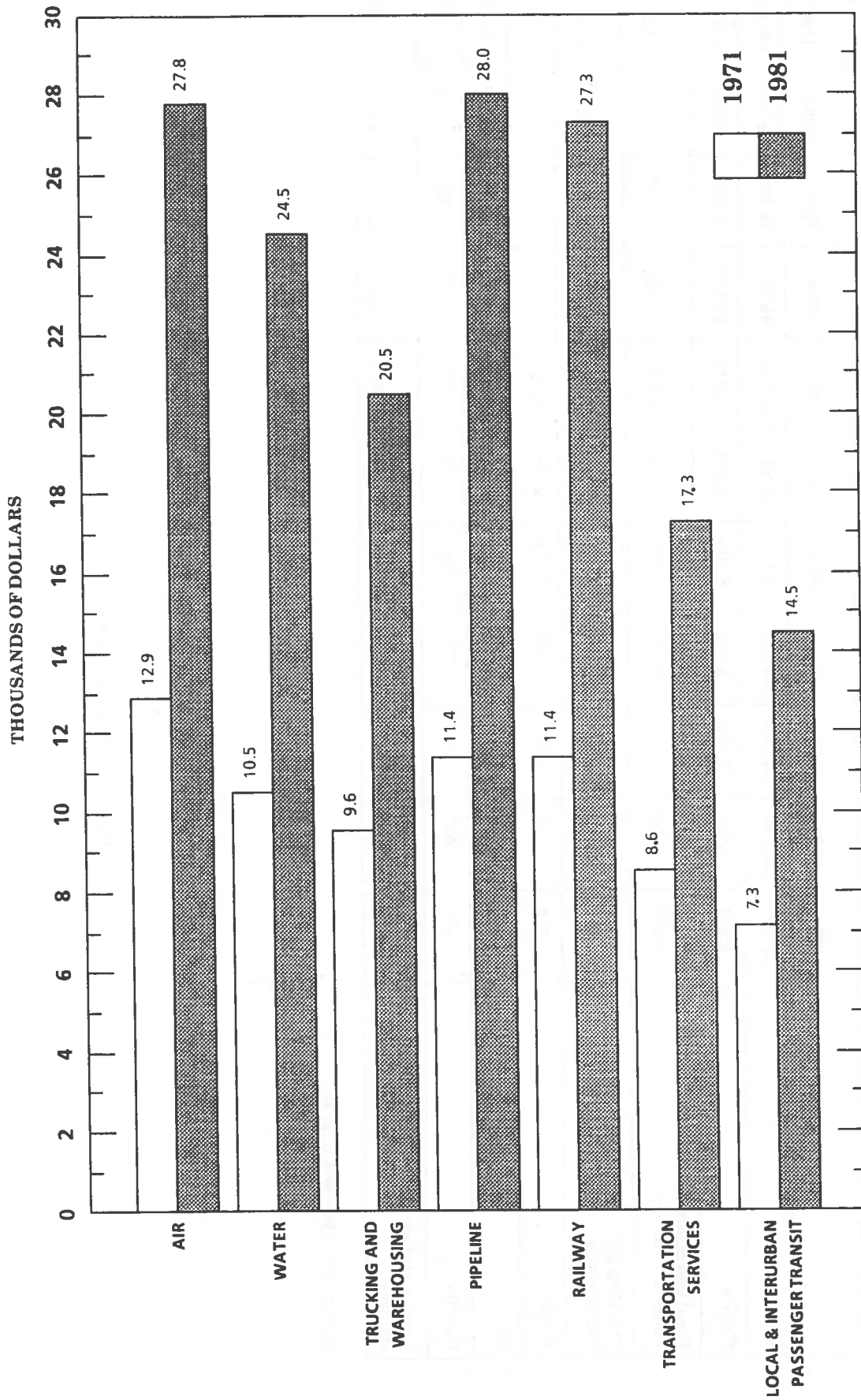


Figure 22. Average Annual Earnings per Full-Time Employee by Transportation Sector, 1971 and 1981

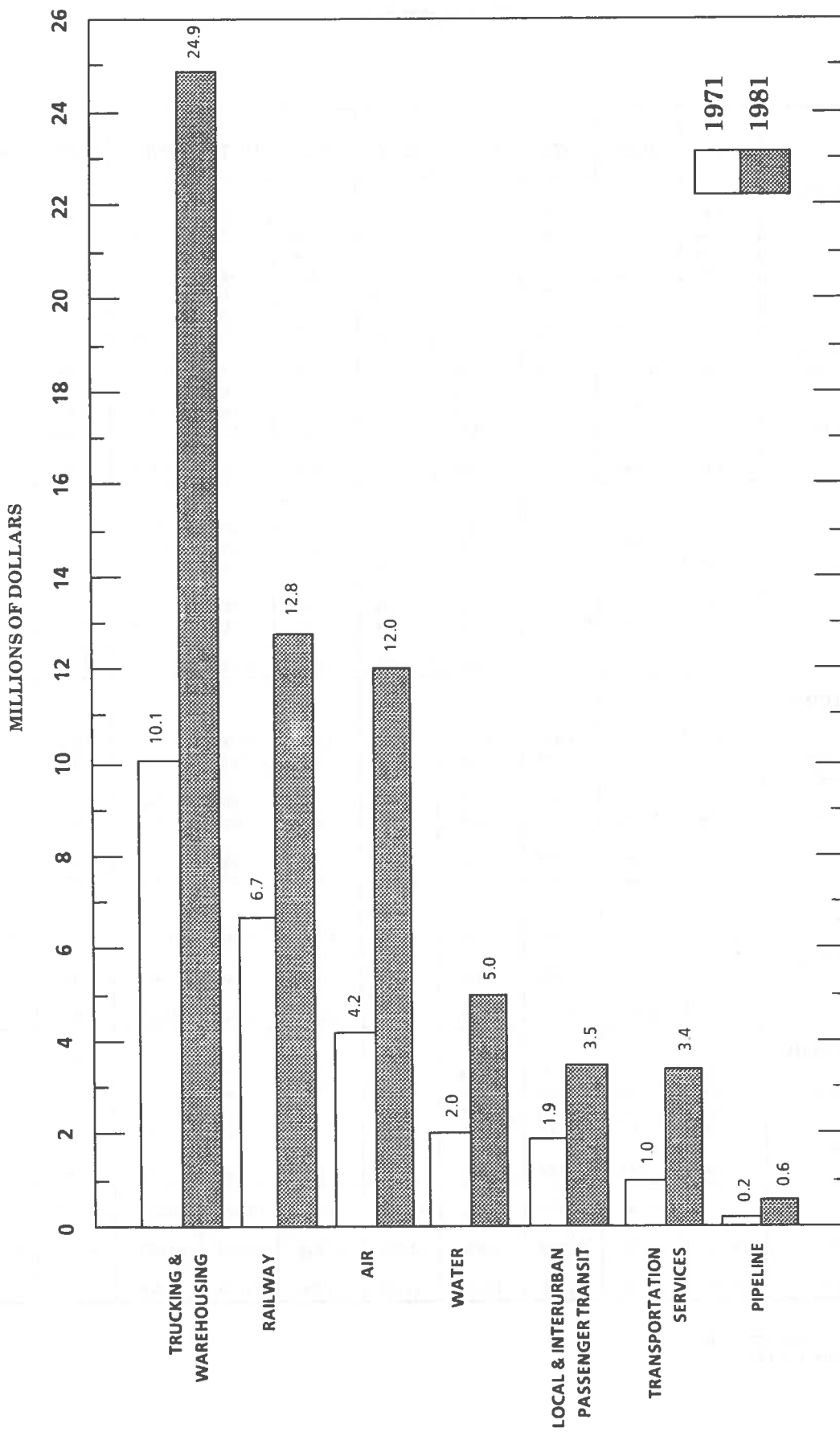


Figure 23. Wages and Salaries by Transportation Sector, 1971 and 1981

Table 34. Employment in Transportation and Related Industries, 1980-1990
(thousands)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
TRANSPORT SECTOR												
Air	453	455	444	455	489	522	567	603	644	684	751	733
Bus - intercity	38	38	39	36	37	35	33	30	29	31	26	25
Local Transport	79	82	82	80	87	92	100	109	119	128	138	155
Railroad	532	496	430	376	376	359	332	309	299	293	280	263
Oil Pipeline	21	22	21	17	16	16	15	16	16	19	19	19
Gas Pipeline(transmission)	45	47	48	47	47	46	48	44	43	37	37	38
(distribution)	52	42	42	46	46	62	59	60	60	64	64	63
Taxi	53	46	42	40	39	38	36	35	36	34	33	32
Trucking and Truck												
Terminals	1,189	1,168	1,125	1,132	1,227	1,285	1,297	1,361	1,434	1,538	1,534	1,009
Public Warehousing	91	88	84	85	91	96	99	107	114	115	117	538
Water	213	219	202	191	191	186	176	174	174	173	174	188
Transportation Services	198	211	220	229	253	276	282	296	316	331	350	←
Total	2,964	2,914	2,779	2,734	2,899	3,013	3,044	3,144	3,284	3,447	3,523	3,125
EQUIPMENT MFG.												
Aircraft and Parts	652	646	601	578	593	636	678	700	695	711	706	671
Motor Vehicles and Equip.	789	789	699	848	957	977	960	952	941	945	895	870
Railroad Equipment	71	54	37	30	35	33	29	28	32	34	33	30
Ship & Boat Building												
and Repair	221	231	210	183	192	187	185	187	193	194	187	178
Other	38	39	42	47	51	51	50	52	51	48	45	42
Total	1,771	1,759	1,589	1,686	1,828	1,884	1,902	1,919	1,912	1,932	1,866	1,791
RELATED INDUSTRIES												
Automotive and												
Accessories Retailers	1,048	1,023	994	1,043	1,140	1,213	1,258	1,301	1,362	1,295	1,273	1,220
Automotive Wholesalers	418	415	413	402	425	433	431	430	431	456	460	446
Automotive Repair,												
Services, and Parking	571	578	580	619	683	731	763	795	837	888	928	882
Gasoline Service Stations	561	563	550	556	575	589	596	608	627	642	650	627
Highway and Street												
Construction	268	211	218	231	244	257	265	269	254	234	241	219
Petroleum	533	617	622	556	564	550	471	442	448	436	443	440
Other Industries:												
Truck Drivers and												
Deliverymen	1,931	1,904	1,883	1,836	2,019	2,050	2,050	2,160	2,155	2,105	2,095	2,148
Shipping and Receiving												
Clerks	498	507	482	407	432	477	455	476	521	550	546	550
Total	5,828	5,818	5,742	5,094	6,082	6,300	6,289	6,481	6,635	6,606	6,636	6,532
GOVERNMENT EMPLOY.												
U.S. DOT	72	59	62	63	63	61	61	62	63	66	65	66
State and Local Highway	559	530	527	527	540	549	550	553	555	563	568	590
U.S. Postal Service	92	93	93	92	95	104	110	113	116	117	115	113
Other	13	13	10	10	9	11	9	9	11	12	11	10
Total	736	695	692	692	707	725	730	737	745	758	759	779
Total Transportation	11,299	11,186	10,802	10,206	11,516	11,922	11,965	12,281	12,577	12,743	12,784	12,227
Total Civilian Labor Force	97,545	99,562	98,849	102,083	106,049	108,063	109,084	113,679	115,978	117,689	117,287	116,877
Percent Transportation	11.6%	11.2%	10.9%	9.9%	10.9%	11.1%	11.0%	10.8%	10.8%	10.8%	10.9%	10.5%

Source: See Appendix A, pp. A-19, A-20.

From VNTSC NTS.

Table 34. Employment in Transportation and Related Industries, 1980-1990
(thousands)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
TRANSPORT SECTOR											
Air	453	455	444	455	489	522	567	603	644	684	751
- intercity	38	38	39	36	37	35	33	30	29	31	26
- Local Transport	79	82	82	80	87	92	100	109	119	128	138
Railroad	532	496	430	376	376	359	332	309	299	293	280
- Pipeline	21	22	21	17	16	16	15	16	16	19	19
- Gas Pipeline(transmission)	45	47	48	47	47	46	48	44	43	37	37
- Oil Pipeline(distribution)	52	42	42	46	46	62	59	60	60	64	64
- Other	53	46	42	40	39	38	36	35	36	34	33
- Trucking and Truck Terminals	1,189	1,168	1,125	1,132	1,227	1,285	1,297	1,361	1,434	1,538	1,534
- Public Warehousing	91	88	84	85	91	96	99	107	114	115	117
- Water	213	219	202	191	191	186	176	174	174	173	174
- Transportation Services	198	211	220	229	253	276	282	296	316	331	350
Total	2,964	2,914	2,779	2,734	2,899	3,013	3,044	3,144	3,284	3,447	3,523
TRANSPORTATION EQUIPMENT MFG.											
Aircraft and Parts	652	646	601	578	593	636	678	700	695	711	706
- Motor Vehicles and Equip.	789	789	699	848	957	977	960	952	941	945	895
- Railroad Equipment	71	54	37	30	35	33	29	28	32	34	33
- Ship & Boat Building											
- Ship Repair	221	231	210	183	192	187	185	187	193	194	187
- Other	38	39	42	47	51	51	50	52	51	48	45
Total	1,771	1,759	1,589	1,686	1,828	1,884	1,902	1,919	1,912	1,932	1,866
RELATED INDUSTRIES											
Automotive and Accessories Retailers	1,048	1,023	994	1,043	1,140	1,213	1,258	1,301	1,362	1,295	1,273
- Automotive Wholesalers	418	415	413	402	425	433	431	430	431	456	460
- Automotive Repair, Services, and Parking	571	578	580	619	683	731	763	795	837	888	928
- Gasoline Service Stations	561	563	550	556	575	589	596	608	627	642	650
- Highway and Street Construction	268	211	218	231	244	257	265	269	254	234	241
- Petroleum	533	617	622	556	564	550	471	442	448	436	443
- Other Industries:											
- Truck Drivers and Deliverymen	1,931	1,904	1,883	1,836	2,019	2,050	2,050	2,160	2,155	2,105	2,095
- Shipping and Receiving Clerks	498	507	482	407	432	477	455	476	521	550	546
Total	5,828	5,818	5,742	5,094	6,082	6,300	6,289	6,481	6,635	6,606	6,636
GOVERNMENT EMPLOY.											
- DOT	72	59	62	63	63	61	61	62	63	66	65
- State and Local Highway	559	530	527	527	540	549	550	553	555	563	568
- Postal Service	92	93	93	92	95	104	110	113	116	117	115
- Other	13	13	10	10	9	11	9	9	11	12	11
Total	736	695	692	692	707	725	730	737	745	758	759
Transportation	11,299	11,186	10,802	10,206	11,516	11,922	11,965	12,281	12,577	12,743	12,784
Civilian Labor Force	97,545	99,562	98,849	102,083	106,049	108,063	109,084	113,679	115,978	117,689	117,287
Transportation	11.6%	11.2%	10.9%	9.9%	10.9%	11.1%	11.0%	10.8%	10.8%	10.8%	10.9%

: See Appendix A, pp. A-19, A-20.

Table 21. National Transportation and Economic Trends, 1971-1981
(Billions)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Total Passenger-Miles Index*	2,224 122	2,341 129	2,420 133	2,368 130	2,449 135	2,570 141	2,674 147	2,815 155	2,777 153	2,704 149	n/a n/a
Total Cargo Ton-Miles Index*	2,225 112	2,330 117	2,452 123	2,442 123	2,285 115	2,423 122	2,531 127	2,875 145	2,952 ^r 149	2,984 150	n/a n/a
Population (millions) Index*	207 105	209 106	211 107	213 108	215 109	218 110	220 111	222 112	225 114	227 115	229 116
Industrial Production Index*	110	120	130	129	118	131	138	146	153	147	151
Gross National Product (current dollars) Index*	1,055 133	1,158 146	1,307 165	1,413 178	1,529 193	1,700 214	1,887 238	2,128 ^r 268	2,414 ^r 304	2,633 ^r 331	2,938 370

^r = revised.

n/a = Not available.

* Index = 100 in 1967.

Source: See Appendix A, p. 195.

SUPPLEMENTARY DATA
Section II: Energy in Transportation

Part 1. Energy Consumption

**Table 24. U.S. Energy Consumption by the Transportation Sector
(at 5-Year Intervals 1955-1965 and Annually 1966-1982)**

Year	Coal ¹		Petroleum		Natural Gas ²		Total Fossil Fuels	Sales of Electricity ³	Total Transportation Consumption	Total Gross Energy Consumption	
	Million Short Tons	Trillion ⁴ Btu	Million Barrels	Trillion ⁴ Btu	Trillion Cubic Feet	Trillion ⁴ Btu	Trillion Btu	Million Kilowatt-Hours	Trillion Btu	% of Total Gross Energy Consumption	Quadrillion Btu
1955	17.0	439	1,627.9	8,804	0.25	259	9,502	4,563	9,518	24.3	39.17
1960	3.0	80	1,877.6	10,118	0.35	362	10,560	4,770	10,576	24.0	44.08
1965	0.7	19	2,201.0	11,861	0.50	516	12,396	4,652	12,412	23.4	52.99
1966	0.6	16	2,314.1	12,475	0.54	558	13,049	4,514	13,064	24.7	55.99
1967	0.5	13	2,427.3	13,095	0.58	599	13,707	4,572	13,724	24.5	57.89
1968	0.4	11	2,627.9	14,185	0.59	608	14,804	4,540	14,820	25.6	61.32
1969	0.3	8	2,741.2	14,794	0.63	650	15,452	4,531	15,468	25.2	64.53
1970	0.3	8	2,832.4	15,284	0.72	742	16,034	4,633	16,050	24.0	66.83
1971	0.2	5	2,945.6	15,889	0.74	763	16,657	4,537	16,673	24.4	68.30
1972	0.2	5	3,125.6	16,853	0.77	791	17,649	4,440	17,664	24.7	71.63
1973	0.1	3	3,296.0	17,795	0.73	745	18,543	4,186	18,557	24.9	74.61
1974	0.1	3	3,219.3	17,375	0.67	686	18,064	4,258	18,079	24.8	72.76
1975	*	**	3,259.5	17,585	0.58	592	18,177	4,273	18,192	25.7	70.71
1976	*	**	3,422.1	18,476	0.55	560	19,036	4,338	19,051	25.6	74.51
1977	*	**	3,555.1	19,215	0.53	540	19,755	4,212	19,769	25.9	76.33
1978	*	**	3,697.5	20,000	0.53	538	20,538	4,336	20,553	26.3	78.18
1979	*	**	3,646.4	19,800	0.60	611	20,411	4,256	20,426	26.1	78.91
1980	*	**	3,491.6	19,001	0.63	645	19,646	4,275	19,661	25.9	75.99
1981	*	**	3,456.6	18,790	0.64	656	19,446	4,206	19,460	26.3	73.98
1982	*p	**	3,394.5e	18,429	0.59	605	19,034	4,288 p	19,049	26.9	70.92

Note: Sum of components may not equal total due to independent rounding.

p = preliminary, e = estimated, r = revised

* Less than 0.05 million short tons.

** Less than 1 trillion Btu's.

1 Bituminous Coal and Lignite only. 2 Pipeline fuel. 3 Includes only energy used by Railroads and Railways.

4 Btu's derived by multiplying by conversion factors on p. 237 for bituminous coal and lignite consumption by Non-Utility, p. 236 for Natural Gas consumption by Non-Utility, p. 234 for petroleum in Transportation Use, and p. 233 for Electricity consumption, DOE, 1982 Annual Energy Review

Source: U.S. Department of Energy, 1982 Annual Energy Review.

Coal: Table 55; Petroleum: Table 30; Natural Gas: Table 47; Total Gross Energy Consumption: Table 4.

Edison Electric Institute, Statistical Year Book, 1978, 1971 and Historical Statistics Through the Year 1970.

Sales of Electricity: 1955-1978: Ibid., Section IV, Table 19s; 1979-1980: Ibid., Source and Disposition of Electricity, Dec. 1980.

Sales of Electricity: 1981-1982. Statistical Year Book, current edition.

Table 25. Fuel Consumption by Mode of Transportation, 1971-1981

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Class I Railroads											
Locomotives											
Diesel Oil, gals x 10 ⁶	3,819	3,999	4,141	4,112	3,732	3,890	3,982	3,966	4,069	3,942	3,774
Electricity, kWh x 10 ⁶	584	435	346	467	422	353	417	331	309	190	81
Coal, tons	1,191	1,400	1,202	1,160	1,160	1,421	1,569	1,275	1,421	908	n/a
Motor Cars											
Diesel Oil, gals x 10 ⁶	4	3	3	4	4	5	3	2	3	2	1
Electricity, kWh x 10 ⁶	756	715	901	847	857	790	986	991	1,062	968	380
Air											
Certified Carriers											
Aviation Gasoline, gals x 10⁶											
Jet Fuel, gals x 10 ⁶	10,140	10,302	10,671	9,546	9,507	9,808 †	10,268 †	10,639 †	11,369 †	11,311 †	10,588 †
General Aviation ³											
Aviation Gasoline, gals x 10⁶											
Jet Fuel, gals x 10 ⁶	508	584	411	443	412	432	456	518	570	520	489
	226	245	304	357	453	495	536	763	736	766	759
Highway											
Gasoline, gals x 10⁶											
Pass. Cars & Taxis	69,213	73,121	77,619	73,770	76,010	78,398	80,225	83,312	79,793	73,375	72,080
Motorcycles	301	342	392	447	447	448	451	463	440	360	360
Diesel & Gasoline, gals x 10⁶											
Commercial Buses ²	631	561	520	525	553	574	583	615	618	696	711
School Buses	316	320	327	333	342	390	401	407	405	380	376
Single-unit Trucks ¹	18,221	22,118	22,755	21,125	21,868	24,914	26,255	27,780	28,544	29,241	30,824
Combination Trucks	8,865	8,600	8,860	10,101	9,764	10,974	11,709	12,491	12,315	10,909	10,463
Water Transport											
Residual Fuel Oil, gals x 10⁶											
Distillate Fuel Oil, gals x 10 ⁶	3,307	3,273	3,881	3,824	4,060	4,933	5,417	6,615	8,003	8,952	7,922
Gasoline, gals x 10⁶											
	880	929	1,125	1,040	1,098	1,190	1,408	1,579	1,631	1,478 ^r	1,723
	645	687	717	697	730	764	774	812	780	1,052	1,093
Transit											
Electricity, KWH x 10⁶											
Rapid Transit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,984	2,469	2,611	2,617
Streetcar	n/a	n/a	n/a	n/a	n/a	n/a	n/a	22	124	131	153
Trolley Bus	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11	55	48	45
Other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	3	3
Total	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2,017	2,643	2,793	2,818
Gallons of Motor Fuel, gals x 10⁶											
Gasoline	29	20	12	7	5	5	8	8	18	11	9
Diesel Oil	257	253	283	316	365	389	403	362	376	411	424
Propane	27	24	15	3	3	1	1	0	3	3	2
Pipelines											
Natural Gas, cu. ft. x 10⁶											
	742,592	766,156	728,177	668,834	582,963	548,323	532,669	530,451	600,964	634,622	642,325
Total⁴											
Non-Highway Use of Gasoline x 10⁶											
	3,913	3,824	3,896	3,623	3,642	3,778	3,725	3,577	3,645	3,655	3,515

r = revised

n/a = not available

1 Includes non-freight truck movements.

2 Includes intercity and urban buses.

3 Data for 1971-1972 calculated by method different from that used for 1973-1981 data.

4 Private, commercial, and public non-highway use of gasoline.

† Includes Aviation Gasoline.

Source: See Appendix A, p. 196.

**Table 31. Motor Fuel and Energy Consumption by the U.S. Transit Industry
(at 5-Year Intervals 1955-1965 and Annually 1966-1981)**

Year	Kilowatt Hours Consumed (In Millions)				Gallons of Motor Fuel Used (In Millions)		
	Heavy Rail	Light Rail	Trolley Coach	Total	Gasoline	Diesel Oil	Propane
1955	1,900	910	720	3,530	246.0	172.6	30.3
1960	2,098	393	417	2,908	153.6	208.1	38.3
1965	2,185	218	181	2,584	91.5	248.4	32.7
1966	2,075	226	166	2,467	76.0	256.0	33.6
1967	2,194	180	157	2,531	57.8	270.3	33.0
1968	2,250	179	157	2,586	45.7	274.2	32.2
1969	2,291	173	154	2,618	40.0	273.8	31.6
1970	2,261	157	143	2,561	37.2	270.6	31.0
1971	2,262	153	141	2,556	29.4	256.8	26.5
1972	2,149	146	133	2,428	19.6	253.3	24.4
1973	2,098	140	93	2,331	12.3	282.6	15.2
1974	n/a	n/a	n/a	2,630	7.5	316.4	3.1
1975	n/a	n/a	n/a	2,646	5.0	365.1	2.6
1976	n/a	n/a	n/a	2,576	5.2	389.2	1.0
1976	n/a	n/a	n/a	2,303	8.1	402.8	1.2
1978	n/a	n/a	n/a	2,017	8.0	362.0	0.4
1979	n/a	n/a	n/a	2,648	18.0	376.0	3.0
1980	n/a	n/a	n/a	2,793	11.0	411.0	3.0
1981	n/a	n/a	n/a	2,818	9.0	424.0	2.0

n/a = not available

Source: 1955-1977: American Public Transit Association, *Transit Fact Book*, 1981 edition, Table 17.

1978-1981: UMTA, *National Urban Mass Transportation Statistics, Section 15 Reports*, May 1981, June 1982, Nov. 1982, Sept. 1983, Table 11.1.

**Table 33. Domestic Demand for Refined Petroleum
Products Supplied to End-Use Sectors
(Trillion Btu's per Day)¹
(at 5-Year Intervals 1955-1965 and Annually 1966-1982)**

Year	Residential and Commercial	Industrial	Transportation	Transportation as % of Total	Electric Utilities ²	Total
1955	7.85	14.01	24.12	51.0	1.31	47.29
1960	9.53	15.77	27.65	50.8	1.44	54.39
1965	10.57	18.66	32.50	51.0	2.01	63.74
1966	10.71	19.55	34.18	51.1	2.44	66.88
1967	11.06	19.58	35.88	51.8	2.76	69.28
1968	11.45	20.24	38.76	52.6	3.26	73.71
1969	11.66	21.15	40.53	52.2	4.32	77.66
1970	11.78	21.43	41.87	51.8	5.81	80.89
1971	11.75	21.63	43.53	52.0	6.81	83.72
1972	12.08	23.38	46.05	51.2	8.48	89.99
1973	12.01	25.02	48.75	51.1	9.62	95.40
1974	10.97	23.89	47.60	52.5	9.23	91.69
1975	10.45	22.41	48.18	53.7	8.69	89.73
1976	11.41	24.71	50.49	52.5	9.50	96.11
1977	11.53	26.90	52.64	51.7	10.69	101.76
1978	11.14	27.16	54.79	52.7	10.94	104.03
1979	9.46	28.97	54.25	53.3	9.01	101.69
1980	8.31	26.06	51.92	55.5	7.19	93.48
1981	7.19	22.76	51.48	58.9	6.01	87.44
1982 ³	6.80	21.53	50.49	60.7	4.32	83.14

Note: Sum of components may not equal total due to independent rounding.

¹ Data derived by multiplying figures on source page by conversion factors in each end-user sector column on page 234 in D.O.E.'s *1982 Annual Energy Review*.

² These data are deliveries to electric utilities and do not equate to consumption by electric utilities.

³ Estimated.

Source: U.S. Department of Energy, EIA, *1982 Annual Energy Review*, Table 30.

Table 35. Deliveries of Distillate Fuel Oil by Use
(Thousands of Barrels)
(at 5-Year Intervals 1955-1970 and Annually 1971-1981)

Year	Heating Oils	Industrial Use	Oil Company Fuel	Electric Utility	Railroads	Vessel Bunkering	Military Use	Diesel Type		All Other	Total
								On Highway	Off Highway		
1955	356,589	43,606	8,597	5,884	84,668	16,675	10,945	23,446	20,769	9,948	581,127
1960 ¹	438,010	34,271	8,347	4,742	86,490	18,730	10,793	36,467	38,095	7,380	633,325
1965	475,992	42,484	10,430	3,661	86,436	15,532	14,953	73,776	50,346	13,281	786,891
1970	521,135	43,668	11,518	24,770 ²	88,416	19,503	12,447	148,796	46,123	10,874	927,250
1971	522,475	50,731	14,088	35,329	86,251	20,959	17,427	166,981	46,925	10,154	971,320
1972	543,337	60,388	13,405	68,334	97,001	22,125	20,187	189,055	50,186	10,852	1,074,807
1973	536,856	67,306	14,902	77,950	102,828	26,786	19,598	221,420	55,541	11,876	1,135,063
1974	493,223	64,036	13,805	84,661	102,949	24,757	17,748	221,033	48,743	10,131	1,081,086
1975	488,388	63,993	13,633	63,420	93,191	26,138	18,004	217,906	48,977	10,096	1,043,746
1976	540,895	79,956	14,523	60,570	97,467	28,330	17,574	242,820	54,429	11,365	1,150,929
1977	538,845 ^r	96,502	19,954	76,681	99,306	33,512	20,121	264,412	66,452	14,394	1,561,043
1978	533,069	94,797	19,410	77,175	99,841	37,591	20,320	290,943	69,856	14,059	1,617,830
1979	n/a	99,583	22,043	46,579	103,493	41,725	18,570	327,402	65,212	34,812	1,816,673
1980	n/a	86,089	24,205	31,812	102,022	35,201	19,138	323,431	51,705	19,994	1,068,733
1981	n/a	80,216	29,185	18,192	100,482	41,025	17,763	340,002	38,851	21,032	1,065,601

r = revised.

n/a = not available.

¹ Includes Alaska and Hawaii.

² Includes gas turbine plants in 1970 and subsequent years.

Source: 1955-1976: American Petroleum Institute, *Basic Petroleum Data Book*, Section VII, Table 11, 11a.
1977-1981: U.S. Department of Energy, *Petroleum Supply Annual 1981*, Volume 1, Table 12, p. 173.

**Table 37. Price Trend of Gasoline vs. Other Consumer Goods and Services
(at 5-Year Intervals 1955-1970 and Annually 1971-1982)**

Year	Retail Price of Regular Grade Gasoline (Cents Per Gallon)				Price Indexes of Regular and Premium Gasoline and Other Consumer Items (Index: 1967 = 100)						
	Service Station Price	State and Federal Taxes	Service Station Price	All Items	Food	Rent	Apparel and Upkeep	Regular and Premium Gasoline	Entertainment*		
										Incl. Taxes	Food
1955	21.42	7.65	29.07	80.2	81.6	84.3	84.1	83.6	76.7		
1960	20.99	10.14	31.13	88.7	88.0	91.7	89.6	92.5	87.3		
1965	20.70	10.45	31.15	94.5	94.4	96.9	93.7	94.9	95.9		
1970	24.55	11.14	36.69	116.3	114.9	110.1	116.1	105.6	113.4		
1971	25.20	11.23	36.43	121.3	118.4	115.2	119.8	106.3	119.3		
1972	24.46	11.67	36.13	125.3	123.5	119.2	122.3	107.6	122.8		
1973	26.88	11.94	38.83	133.1	141.4	124.3	126.8	118.1	125.9		
1974	40.41	12.00	52.41	147.7	161.7	130.6	136.2	159.9	139.8		
1975	45.44	11.77	57.22	161.2	175.4	137.3	142.3	170.8	144.4		
1976	47.44	12.03	59.47	170.5	180.8	144.7	147.6	177.9	151.2		
1977	50.70	12.37	65.20 ^r	181.5	192.2	153.5	154.2	188.2	157.9		
1978	53.09	12.62	88.20 ^r	195.4	211.4	164.0	159.6	195.3	176.6		
1979	74.33	13.46	122.10 ^r	217.4	234.5	176.0	166.6	265.6	188.5		
1980	107.35	14.37	122.10 ^r	246.8	254.6	191.6	178.4	369.1	205.3		
1981	n/a	n/a	135.30	272.4	274.6	224.0	191.8	410.9	235.8		
1982	n/a	n/a	128.10	n/a	n/a	n/a	n/a	389.3	n/a		

* Includes reading materials, sporting goods, toys and hobbies, and entertainment services.

^r = revised

Source: Price of Gasoline and CPI: 1955-1980: American Petroleum Institute, *Basic Petroleum Data Book*, Section VI, Table 4/4a.
1981-1982: DOL: Bureau of Labor Statistics, personal communication.

Price Indexes of Gasoline: 1955-1977: Bureau of Labor Statistics, *Handbook of Labor Statistics*, 1978, Table 122, p. 422.
1978-1982: DOL: Bureau of Labor Statistics, personal communication.

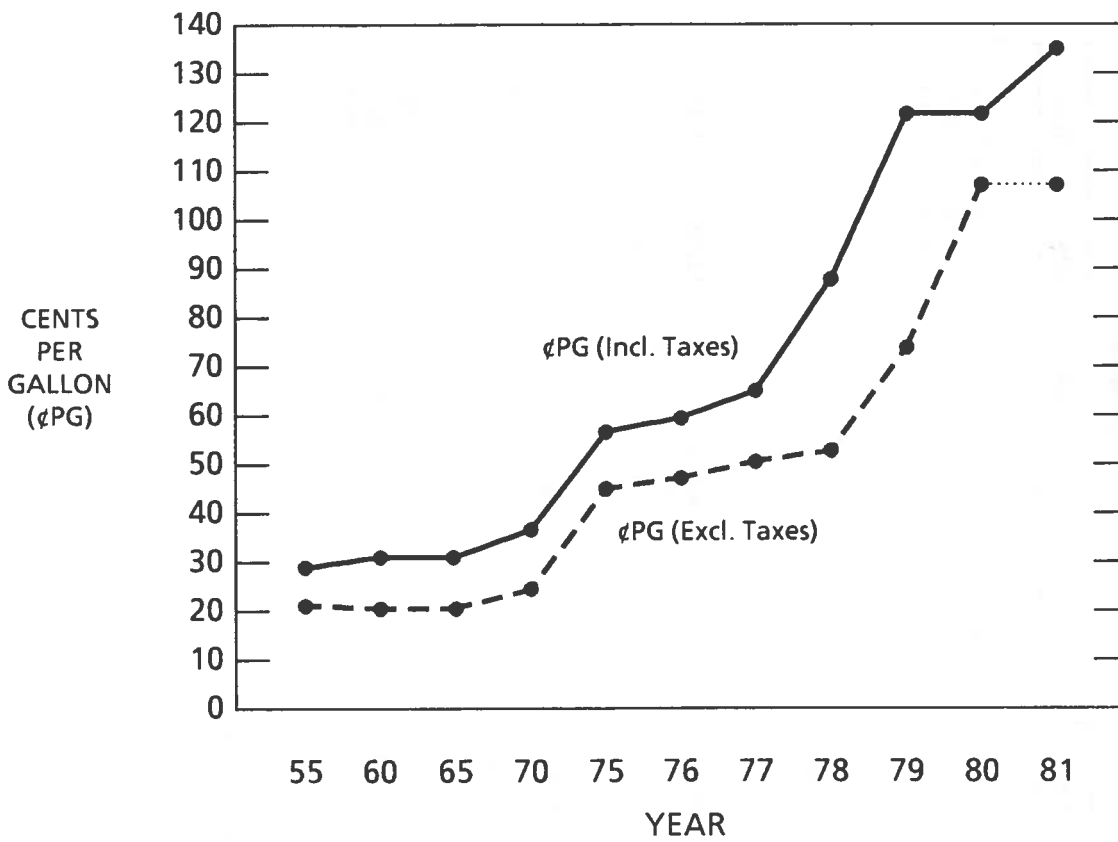


Figure 25. Price Trend of Regular Grade Gasoline Prices, 1955-1981

Source: See Appendix A, p. 176.

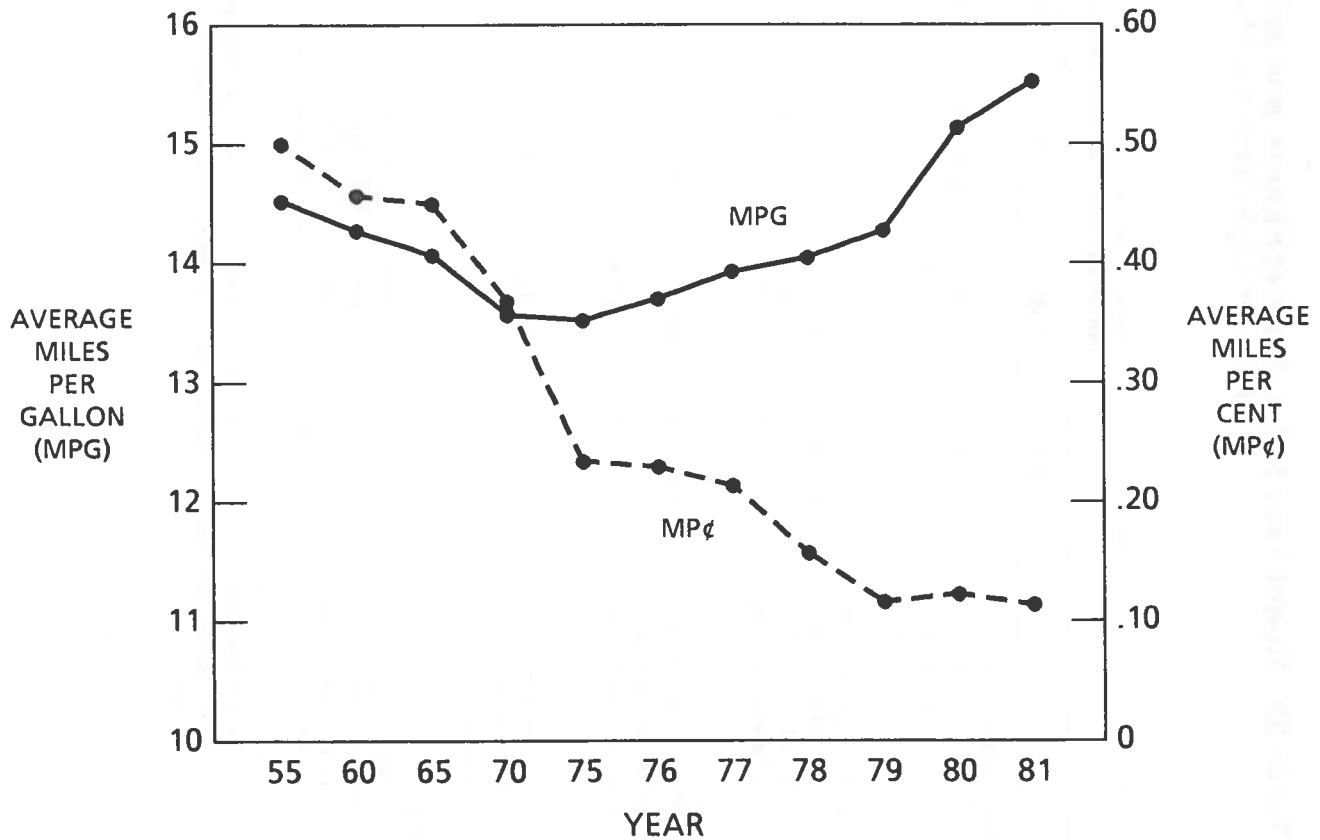


Figure 26. Average Fuel Efficiency of U.S. Passenger Cars, 1955-1981

Source: See Appendix A, p. 176.

Table 40. Model Year Sales, Market Shares, and Sales-Weighted Fuel Efficiencies of Domestic and Import Automobiles, Model Years 1978-1982^a

	Domestic and Domestic-Sponsored				Import					
	1978	1979	1980 ^b	1981	1982	1978	1979	1980 ^b	1981	1982
MINICOMPACT										
Total sales, units	504,127	317,514	251,887	34,764	n/a	458,695	331,291	192,279	269,573	221,694
Market share, %	5.4	3.6	3.3	0.5	n/a	26.3	17.4	8.6	12.6	11.0
Fuel economy, mpg	23.8	24.4	27.4	26.8	n/a	30.6	30.3	31.8	33.2	35.9
SUBCOMPACT										
Total sales, units	1,071,103	2,027,297	1,988,545	1,268,409	1,032,945	989,895	1,203,538	1,688,834	1,573,955	1,404,498
Market share, %	11.5	22.7	26.2	19.1	18.4	56.7	63.4	75.1	73.5	70.0
Fuel economy, mpg	22.1	23.5	25.1	26.9	29.9	28.0	27.6	29.4	30.9	31.6
COMPACT										
Total sales, units	1,578,922	733,215	484,891	1,037,586	974,861	116,462	161,386	160,774	148,206	254,522
Market share, %	17.0	8.2	6.4	15.6	17.4	6.7	8.5	7.2	6.9	12.7
Fuel economy, mpg	19.8	19.4	22.9	29.0	31.8	20.8	21.6	23.3	24.4	26.9
MIDSIZE										
Total sales, units	3,561,288	3,679,802	3,345,990	3,113,806	2,530,583	5,511	14,960	16,565	n/a	2,538
Market share, %	38.3	41.3	44.1	46.8	45.1	0.3	0.8	0.7	n/a	0.1
Fuel economy, mpg	18.9	19.1	21.1	23.3	25.0	12.9	17.9	21.1	n/a	19.0
LARGE										
Total sales, units	2,530,206	2,116,298	1,472,517	1,107,627	995,559	n/a	n/a	n/a	n/a	n/a
Market share, %	27.2	23.7	19.4	16.7	17.7	n/a	n/a	n/a	n/a	n/a
Fuel economy, mpg	17.1	17.7	19.6	20.9	20.9	n/a	n/a	n/a	n/a	n/a
TWO SEATER										
Total sales, units	43,229	39,655	40,708	88,969	79,724	174,275	188,571	190,414	149,845	122,243
Market share, %	0.5	0.4	0.5	1.3	1.4	10.0	9.9	8.5	7.0	6.1
Fuel economy, mpg	16.5	15.1	16.5	24.2	26.8	20.7	20.7	21.5	22.9	23.2
FLEET										
Total sales, units	9,288,875	8,913,781	7,584,538	6,651,161	5,613,672	1,744,838	1,899,746	2,248,866	2,141,579	2,005,495
Market share, %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel economy, mpg	19.0	19.7	22.0	24.2	25.9	27.0	26.4	28.1	29.9	30.6

n/a = Not available.

^a These figures represent only those sales that could be matched to corresponding EPA fuel economy values.

^b Model year consists of 13 months, September 1979 through September 1980.

Source: Oak Ridge National Laboratory, *Motor Vehicle MPG and Market Shares Report*, October 1982

Table 42. Estimated Cost of Owning and Operating a Large Size 1981 Model Automobile, Including Fuel (Total costs in dollars, costs per mile in cents)¹

Item	First Year (14,500 miles)		Second Year (13,700 miles)		Totals & Averages for Twelve Years (120,000 miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Cost Excluding Taxes:						
Depreciation	2,457.00	16.94	1,421.00	10.37	9,232.00	7.69
Scheduled Maintenance	(98.85)	(.68)	(194.95)	(1.42)	(1,918.21)	(1.60)
Nonscheduled Repairs and Maintenance	(66.75)	(.46)	(117.55)	(.86)	(4,314.13)	(3.60)
Total Repairs and Maintenance	165.60	1.14	312.50	2.28	6,232.34	5.20
Replacement Tires	21.01	.14	19.80	.14	868.20	.72
Accessories	1,039.69	7.17	982.39	.08	154.67	.13
Gasoline	1,039.69	7.17	982.39	7.17	8,604.80	7.17
Oil	11.25	.08	20.25	.15	207.00	.17
Insurance	461.00	3.18	445.00	3.25	3,991.00	3.33
Parking and Tolls	<u>113.68</u>	<u>.78</u>	<u>107.10</u>	<u>.78</u>	<u>939.48</u>	<u>.78</u>
Total	4,281.12	29.51	3,319.41	24.22	30,229.49	25.19
Taxes and Fees:						
State:						
Gasoline	76.76	.53	72.53	.53	635.30	.53
Registration	20.00	.14	20.00	.15	240.00	.20
Titling	461.60	3.18	-	-	461.60	.38
Operating Cost Sales Tax ²	(.09)	-	(.72)	(.01)	(106.26)	(.09)
Nonoperating Cost Sales Tax	(.90)	(.01)	(2.29)	(.02)	(22.87)	(.02)
Total Sales Tax	<u>.99</u>	<u>.01</u>	<u>3.01</u>	<u>.03</u>	<u>129.13</u>	<u>.11</u>
Subtotal	559.35	3.86	95.54	.71	1,466.03	1.22
Federal:						
Gasoline	34.12	.24	32.24	.24	282.36	.24
Oil ²	.08	-	.14	-	1.42	-
Tires	<u>4.83</u>	<u>.03</u>	<u>4.57</u>	<u>.03</u>	<u>37.60</u>	<u>.03</u>
Subtotal	<u>39.03</u>	<u>.27</u>	<u>36.95</u>	<u>.27</u>	<u>321.38</u>	<u>.27</u>
Total Taxes	598.38	4.13	132.49	.98	1,787.41	1.49
Operating Costs	3,511.24	24.21	2,094.61	15.29	15,996.55	13.33
Ownership Costs	1,368.26	9.43	1,357.29	9.91	16,020.35	13.35
Total of All Costs	4,879.50	33.64	3,451.90	25.20	32,016.90	26.68

¹ This estimate covers the total cost of a medium priced, large size four-door sedan, purchased for \$9,232 and operated 120,000 miles over a 12-year period. Baltimore area prices, considered to be in the middle range, were used.

² Where costs per mile are less than .005 cent, a dash (-) appears.

Source: U.S. DOT, FHWA, *Cost of Owning and Operating Automobiles and Vans, 1982*.

Table 44. Estimated Cost of Owning and Operating a Compact Size 1981 Model Automobile, Including Fuel (Total costs in dollars, costs per mile in cents)¹

Item	First Year (14,500 miles)		Second Year (13,700 miles)		Totals & Averages for Twelve Years (120,000 miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Cost Excluding Taxes:						
Depreciation	1,206.00	8.32	984.00	7.18	7,111.00	5.93
Scheduled Maintenance	(66.10)	(.46)	(172.10)	(1.26)	(1,495.92)	(1.25)
Nonscheduled Repairs and Maintenance	<u>(67.00)</u>	<u>(.46)</u>	<u>(117.80)</u>	<u>(.86)</u>	<u>(3,739.92)</u>	<u>(3.12)</u>
Total Repairs and Maintenance	133.10	.92	289.90	2.12	5,235.84	4.37
Replacement Tires	13.85	.10	13.05	.10	572.50	.48
Accessories	14.44	.10	13.78	.10	175.79	.15
Gasoline	736.52	5.08	695.81	5.08	6,095.13	5.08
Oil	11.25	.08	20.25	.15	207.00	.17
Insurance	461.00	3.18	445.00	3.25	3,991.00	3.33
Parking and Tolls	<u>113.68</u>	<u>.78</u>	<u>107.10</u>	<u>.78</u>	<u>939.48</u>	<u>.78</u>
Total	2,689.84	18.56	2,568.89	18.76	24,327.74	20.29
Taxes and Fees:						
State:						
Gasoline	54.38	.38	51.37	.37	450.02	.38
Registration	20.00	.14	20.00	.15	240.00	.20
Titling	355.55	2.45	-	-	355.55	.30
Operating Cost Sales Tax ²	(.10)	-	(.73)	(.01)	(81.61)	(.07)
Nonoperating Cost Sales Tax	<u>(1.00)</u>	<u>(.01)</u>	<u>(1.27)</u>	<u>(.01)</u>	<u>(17.41)</u>	<u>(.01)</u>
Total Sales Tax	<u>1.10</u>	<u>.01</u>	<u>2.00</u>	<u>.02</u>	<u>99.02</u>	<u>.08</u>
Subtotal	431.03	2.98	73.37	.54	1,144.59	.96
Federal:						
Gasoline	24.17	.17	22.83	.17	200.01	.17
Oil ²	.08	-	.14	-	1.42	-
Tires	<u>2.99</u>	<u>.02</u>	<u>2.83</u>	<u>.02</u>	<u>27.72</u>	<u>.02</u>
Subtotal	<u>27.24</u>	<u>.19</u>	<u>25.80</u>	<u>.19</u>	<u>229.15</u>	<u>.19</u>
Total Taxes	458.27	3.17	99.17	.73	1,373.74	1.15
Operating Costs	1,024.02	7.07	1,031.91	7.54	12,314.81	10.27
Ownership Costs	2,124.09	14.66	1,636.15	11.95	13,386.67	11.17
Total of All Costs	3,148.11	21.73	2,668.06	19.49	25,701.48	21.44

¹ This estimate covers the total cost of a medium priced, compact size four-door sedan, purchased for \$7,111 and operated 120,000 miles over a 12-year period. Baltimore area prices, considered to be in the middle range, were used.

² Where costs per mile are less than .005 cent, a dash (-) appears.

Source: U.S. DOT, FHWA, *Cost of Owning and Operating Automobiles and Vans*, 1982.

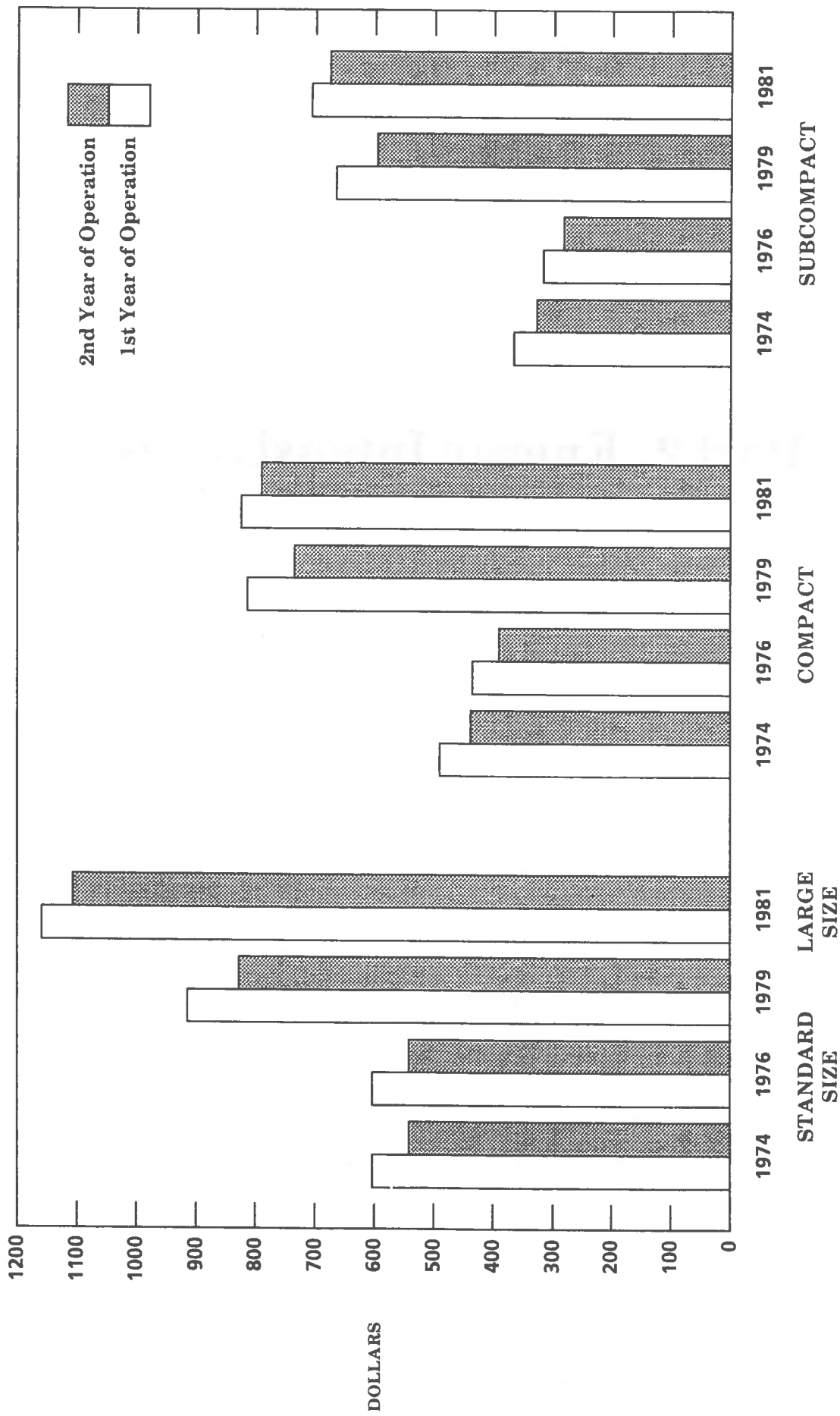
Table 46. Estimated Cost of Owning and Operating a 1981 Model Passenger Van, Including Fuel
(Total costs in dollars, costs per mile in cents)¹

Item	First Year (14,500 miles)		Second Year (13,700 miles)		Totals & Averages for Twelve Years (120,000 miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Cost Excluding Taxes:						
Depreciation	3,983.00	27.47	1,846.00	13.47	12,877.00	10.73
Scheduled Maintenance	(96.85)	(.67)	(177.85)	(1.30)	(1,555.62)	(1.30)
Nonscheduled Repairs and Maintenance	<u>(67.50)</u>	<u>(.47)</u>	<u>(161.53)</u>	<u>(1.18)</u>	<u>(5,069.15)</u>	<u>(4.22)</u>
Total Repairs and Maintenance	164.35	1.14	339.38	2.48	6,624.77	4.22
Replacement Tires	15.12	.10	14.24	.10	874.58	.73
Accessories	18.09	.27	17.28	.13	345.17	.29
Gasoline	1,262.52	8.71	1,192.91	8.71	10,448.54	8.71
Oil	13.50	.09	24.75	.18	240.75	.20
Insurance	585.00	4.03	567.00	4.14	5,327.00	4.44
Parking and Tolls	<u>113.68</u>	<u>.78</u>	<u>107.10</u>	<u>.78</u>	<u>939.48</u>	<u>.78</u>
Total	6,155.26	42.44	4,108.66	29.99	37,677.29	31.40
Taxes and Fees:						
State:						
Gasoline	93.21	.64	88.07	.64	771.42	.64
Registration	30.00	.21	30.00	.22	360.00	.30
Titling	643.85	4.44	-	-	643.85	.54
Operating Cost Sales Tax ²	<u>(.13)</u>	<u>-</u>	<u>(1.65)</u>	<u>(.01)</u>	<u>(110.84)</u>	<u>(.09)</u>
Nonoperating Cost Sales Tax	<u>(1.21)</u>	<u>(1.01)</u>	<u>(1.82)</u>	<u>(.01)</u>	<u>(24.75)</u>	<u>(.02)</u>
Total Sales Tax	<u>1.35</u>	<u>.01</u>	<u>3.47</u>	<u>.02</u>	<u>135.59</u>	<u>.11</u>
Subtotal	768.40	5.30	121.54	.88	1,910.86	1.59
Federal:						
Gasoline	41.43	.29	39.14	.29	342.86	.29
Oil ²	.09	-	.17	-	1.65	-
Tires	<u>6.53</u>	<u>.05</u>	<u>6.18</u>	<u>.05</u>	<u>60.84</u>	<u>.05</u>
Subtotal	<u>48.05</u>	<u>.34</u>	<u>45.49</u>	<u>.34</u>	<u>405.35</u>	<u>.34</u>
Total Taxes	816.45	5.64	167.03	1.22	2,316.21	1.93
Operating Costs	1,613.71	11.13	1,635.74	11.94	18,860.11	15.72
Ownership Costs	5,358.00	36.95	2,639.95	19.27	21,133.39	17.61
Total of All Costs	6,971.71	48.08	4,275.69	31.21	39,993.50	33.33

¹ This estimate covers the total cost of a passenger van purchased for \$12,877 and operated 120,000 miles over a 12-year period. Baltimore area prices, considered to be in the middle range, were used.

² Where costs per mile are less than .005 cent, a dash (-) appears.

Source: U.S. DOT, FHWA, *Cost of Owning and Operating Automobiles and Vans, 1982*.



See Appendix A, p.

Figure 27. Estimated Annual Automobile Gasoline and Oil Costs, Including Taxes, by Size and Year of Operation

Table 49. Energy Intensiveness of Certificated Air Carriers (All Services), 1971-1981

Year	Aircraft Miles (millions)		Fuel Consumed (million gal.)		Passenger-Miles (millions)		Passenger Load Factor (%)		Btu/Passenger-Mile		
	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Total
1971	1,934	379	7,799	2,353	110,100	39,640	41.0	46.3	9,563	8,014	9,153
1972	1,954	378	7,966	2,349	121,820	43,420	44.3	49.2	8,828	7,303	8,427
1973	2,018	379	8,354	2,345	130,720	43,900	31.6	37.5	8,628	7,211	8,271
1974	1,869	339	7,509	2,045	133,720	40,460	55.5	38.3	7,581	6,823	7,405
1975	1,885	310	7,558	1,949	136,000	37,320	54.6	52.3	7,502	7,050	7,405
1976	1,995	305	8,008	1,800	151,370	40,460	55.6	55.6	7,142	6,006	6,092
1977	2,078	319	8,417	1,851	163,220	42,860	55.8	56.4	6,962	5,830	6,726
1978	2,249	359	8,726	1,913	187,812	49,185	61.0	63.7	6,272	5,251	6,060
1979	2,471	388	9,376	1,993	212,701	57,018	62.8	63.8	5,951	4,719	5,690
1980	2,523	401	9,218	2,093	204,368	63,354	58.0	62.8	6,089	4,460	5,704
1981	2,442	356	8,555	2,033	201,435	58,629	57.4	63.7	5,733	4,681	5,496

Note: Heat equivalent factor used in Btu conversion is 5,670,000 Btu/barrel.

Source: Aircraft Miles:

1971-1979: CAB, *Air Carrier Traffic Statistics*, Dec. 1980, pp. 5, 15. Similar tables in earlier editions.

1980-1981: *Ibid.*, Dec. 1981 and 1982, pp. 2, 3.

Fuel Consumed:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973 edition, p. 65.

1973-1975: *Ibid.*, supplement, 1975, 1977, p. 5, Table 2.

1976-1979: *Ibid.*, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1980 and 1979*, Tables 2, 3, 4, 6 and 7. Similar tables in earlier editions.

1980-1981: *Ibid.*, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1982 and 1981*.

Passenger Miles:

1971-1980: CAB, *Air Carrier Traffic Statistics*, pp. 4, 5. Similar tables in earlier editions.

1980-1981: *Ibid.*, Dec. 1981 and 1982, pp. 2, 3.

Passenger Load Factor:

1971-1979: CAB, *Air Carrier Traffic Statistics*, Dec. 1980, pp. 5, 15. Similar tables in earlier editions.

1980-1981: *Ibid.*, Dec. 1981 and Dec. 1982, pp. 2, 3.

Table 51. Energy Intensiveness of Automobiles and Motorcycles, 1971-1981

Year	Auto Pass-Miles (millions)	Motorcycle Pass-Miles (millions)	Fuel Consumed (Million gal.)		Autos (Btu/pass.- miles)	Motorcycle (Btu/pass.- miles)
			Autos	Motorcycles		
1971	2,066,024	16,558	69,213	301	4,188	2,272
1972	2,170,095	18,800	73,121	342	4,212	2,274
1973	2,237,094	21,553	77,619	392	4,337	2,274
1974	2,179,586	24,582	73,770	447	4,231	2,273
1975	2,261,866	24,586	76,010	447	4,201	2,273
1976	2,366,676	24,659	78,398	448	4,141	2,271
1977	2,461,028	24,823	80,226	451	4,075	2,271
1978	2,693,512	25,463	83,312	463	3,866	2,274
1979	2,623,191	24,211	79,793	440	3,802	2,272
1980	2,557,340	19,800	73,375	360	3,586	2,273
1981	2,562,959	19,800	71,720	360	3,498	2,273

Note: Passenger-Mile data is based on vehicle-miles obtained from the FHWA and an average occupancy rate of 2.2 for automobiles and 1.1 for motorcycles.

The heat equivalent factor used for Btu conversion is 125,000 Btu/gal.

Source: Passenger-Miles and Fuel Consumed:
FHWA, *Highway Statistics*, annual issues, Table VM-1.

**Table 53. Energy Intensiveness of Local Transit Buses and School Buses
1971-1981**

Year	Vehicle-Miles (millions)		Fuel Consumed		Btu/Vehicle-Mile	
	Motor Bus	School Bus	Motor Bus (Diesel) (million gal.)	School Bus (Gasoline) (million gal.)	Motor Bus	School Bus
	1971	1,376	2,212	257	316	25,905
1972	1,308	2,359	253	320	26,828	16,956
1973	1,370	2,412	283	327	28,651	16,946
1974	1,431	2,450	316	333	30,628	16,990
1975	1,526	2,500	365	342	33,175	17,100
1976	1,581	2,862	389	390	34,127	17,034
1977	1,623	2,950	403	401	34,440	16,991
1978	1,329*	2,991	359*	407	37,461*	17,009
1979	1,461*	2,980	374*	405	35,506*	16,988
1980	1,541*	2,900	409*	380	36,813*	16,379
1981	1,522*	2,875	420*	376	38,275*	16,348

* Data not directly comparable to prior years because of change in data source.

Note: The heat equivalent factors used for Btu conversions are:
Automotive gasoline = 125,000 Btu/gal. (School Bus)
Distillate oil = 138,700 Btu/gal. (Motor Bus)

Source: School Bus: FHWA, *Highway Statistics*, annual issues, Table VM-1.
Motor Bus: 1971-1977: APTA, *Transit Fact Book*, 1981 edition, Table 13 and 17.
1978-1981: UMTA, *National Urban Mass Transportation Statistics, Section 15 Reports*, May 1981, June 1982, Nov. 1982 and Sept. 1983, Table 15.1.

Table 56. Energy Intensiveness of Amtrak Service, 1973-1981

Year	Revenue Passenger-Miles (10 ⁶)	Fuel Consumed (million gal.)						Total Fuel Consumed (10 ⁹ Btu)*	Btu/Revenue Passenger-Mile*
		Locomotive		Rail Motor Car		Electric*			
		Diesel	Electric*	Diesel	Electric*				
1973	3,809	75.6	181.5	0.4	92.9	11,477	3,013		
1974	4,259	64.8	182.3	0.7	94.8	10,030	2,355		
1975	3,753	63.1	180.3	6.7	94.0	10,617	2,829		
1976	4,268	67.1	183.3	9.8	87.6	11,590	2,716		
1977	4,204	66.9	187.4	14.9	76.3	12,245	2,913		
1978	4,154	69.6	197.4	17.7	64.7	13,003	3,130		
1979	4,867	70.0	247.9	7.4	79.9	11,854	2,436		
1980	4,503	63.5	253.8	5.6	43.9	10,600	2,354		
1981	4,633	48.9	215.5	3.2**	63.0	8,177	1,765		

* Does not include electric power generation and distribution losses; which, if included, would increase figures shown by about 20%.

** Includes Turbo-Train.

Note: The heat equivalent factors used in Btu conversion are:

Diesel = 138,700 Btu/gal.

Electric = 3,412 Btu/kwh.

Source: Revenue Passenger-Miles:

1972-1980: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p. 18.

1981: Amtrak, Marketing Dept., personal communication.

Fuel Consumed:

1973-1980: AAR, personal communication.

1981: Amtrak, Mechanical Dept., personal communication.

Part 3. Energy Transport

**Table 57. Energy Transported by Foreign and Domestic Waterborne Commerce,
by Type of Traffic and Commodity, Calendar Year 1981
(Net Traffic in Tons of 2,000 Pounds)**

Commodity	Total	Foreign		Total	Coastwise	Domestic		Local	Intra-territory
		Imports	Exports			Lakewise	Internal		
Total, all commodities ¹	1,941,558,947	447,191,504	409,910,646	1,054,456,787	321,989,988	115,418,165	520,668,720	93,249,873	3,130,051
Coal and lignite	284,594,626	922,124	112,206,194	171,466,308	3,643,785	20,309,100	138,811,534	8,701,889	-
Crude petroleum	432,187,890	261,226,666	26,509	170,934,715	131,630,966	-	35,290,233	4,013,516	-
Gasoline	83,096,185	6,466,1563	316,780	76,313,252	41,593,556	802,182	26,273,023	7,507,814	136,677
Jet Fuel	11,873,426	-	-	11,873,426	6,644,326	199,215	4,670,896	193,798	165,191
Kerosene	2,683,485	61,465	73,769	2,548,251	1,145,870	7,118	883,177	407,154	4,932
Distillate fuel oil	71,255,422	6,123,940	282,914	64,848,568	28,774,381	712,534	21,881,671	12,867,476	612,506
Residual fuel oil	187,852,177	40,844,798	5,666,790	141,340,589	56,286,737	1,346,290	43,958,679	38,371,227	1,377,656
Lubricating oils and greases	14,400,390	6,966,360	2,307,879	5,126,151	3,023,577	240	1,947,961	153,964	409
Naptha, mineral spirits, solvents, nec	6,868,901	-	-	6,868,901	3,033,611	15,352	2,853,174	555,022	411,742
Asphalt, tar and pitches	7,369,373	1,179,458	61,428	6,128,487	2,462,421	311,216	3,052,569	302,280	1
Coke, petroleum coke	15,213,093	467,531	10,537,717	4,207,845	1,025	60,177	3,708,150	438,493	-
Liquified gases, coal gases, natural gas, and natural gas liquids	5,734,012	2,973,996	1,289,313	1,470,703	281,587	93	1,121,309	67,227	488
Asphalt building materials	95,968	-	72,659	23,309	16,242	-	7,050	-	17
Petroleum and coal products, nec	3,913,933	234,967	91,196	3,587,770	1,362,329	5,520	715,337	1,482,594	21,990

nec = not elsewhere classified.

1 Includes the energy commodities listed in the table plus all other commodities.

Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1981, Section 1, Table 2, Total and SIC codes (Total, 1121, 1311, 2911-2991).

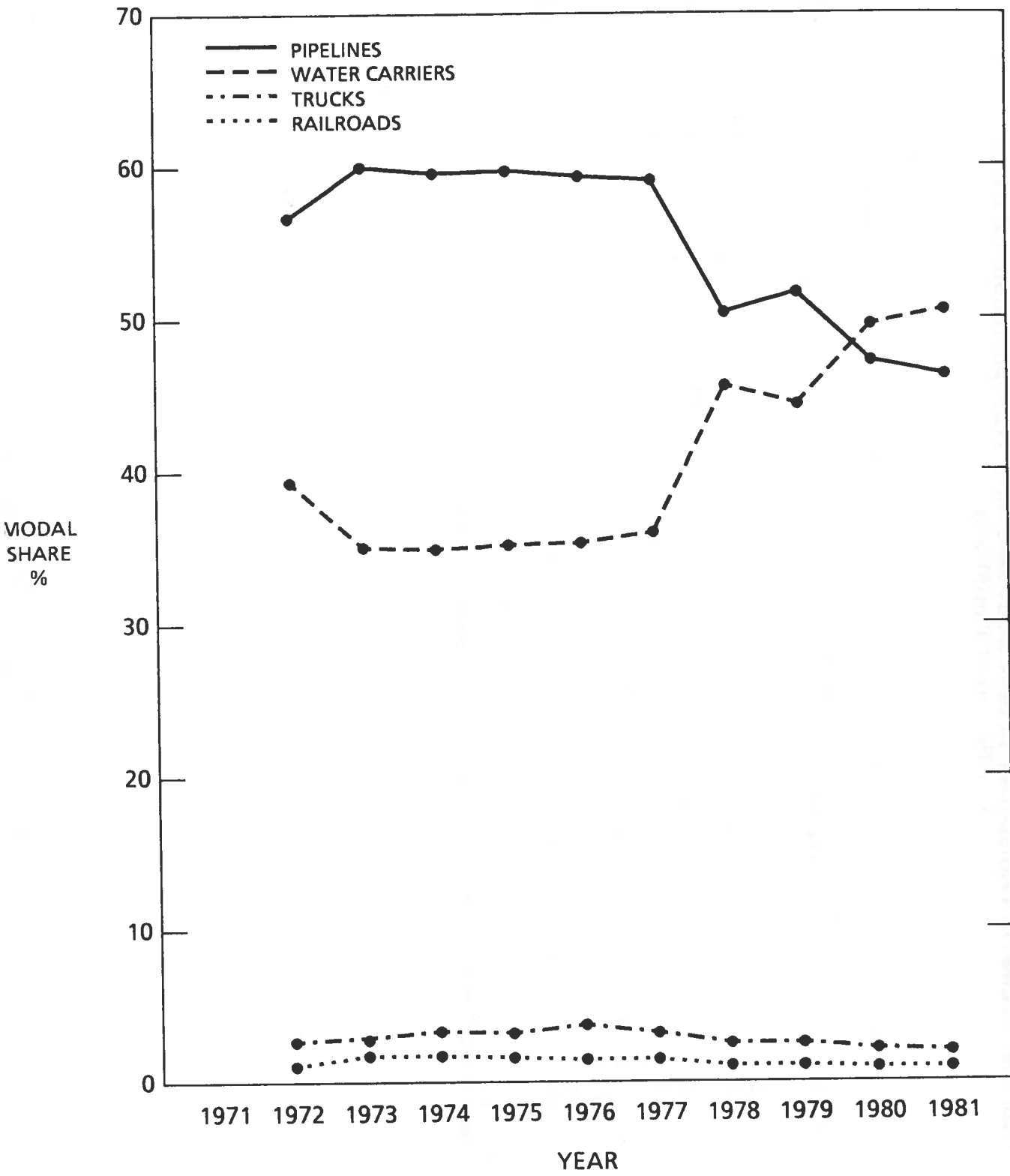


Figure 30. Crude Petroleum and Petroleum Products Transported in the U.S. by Modal Share, 1971-1981

(Billions of Ton-Miles)

Year	Pipelines		Water Carriers		Trucks ¹		Railroads		Total Ton-Miles
	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	Ton-Miles	Percent of Total	
1971	n/a	-	n/a	-	n/a	-	n/a	-	n/a
1972	191.3	40.1	254.0	53.3	22.0	4.6	9.5	2.0	476.8
1973	205.0	42.7	238.0	49.5	23.7	4.9	13.7	2.9	480.4
1974	203.0	41.5	244.0	49.9	27.7	5.7	14.1	2.9	488.8
1975	219.0	42.5	257.4	50.0	26.2	5.1	12.6	2.4	515.2
1976	212.0	40.5	269.1	51.4	30.4	5.8	12.4	2.3	523.9
1977	219.4	41.3	270.2	50.9	27.6	5.2	13.7	2.6	530.9
1978	226.3	42.2	269.3	50.2	28.6	5.3	12.5	2.3	536.7
1979	236.1	44.2	257.4	48.2	27.8	5.2	12.9	2.4	534.2
1980	225.6	45.8	230.4	46.8	24.3	5.0	12.0	2.4	492.3
1981	230.6	48.3	212.3	44.4	22.7	4.8	12.1	2.5	477.7

¹ Estimates

Source: Association of Oil Pipelines, *Shifts in Petroleum Transportation, 1983, Table 3.*

**Table 62. U.S. Petroleum Pipeline Mileage (As of December 31)
(at 3-Year Intervals 1956-1965 and Annually 1970-1981)**

Year	Crude-Oil Trunk Lines		Refined-Oil Trunk Lines		Total Trunk Lines		Crude-Oil Gathering Lines		Total Petroleum Pipelines	
	ICC Lines	All Lines ¹	ICC Lines	All Lines ¹	ICC Lines	All Lines ¹	ICC Lines	All Lines ¹	ICC Lines	All Lines
1956	61,855	78,594	29,465	36,420	91,350	115,014	51,336	73,526	142,686	188,540
1959	61,860	70,317	37,732	44,483	99,592	114,800	49,567	75,182	149,159	189,982
1962	61,702	70,355	45,288	53,200	106,990	123,555	48,063	76,988	155,053	200,543
1965	63,981	n/a	50,791	n/a	114,772	n/a	46,640	n/a	161,412	213,765
1970	63,030	75,143	59,335	72,396	122,365	147,539	46,587	71,132	175,735 ²	218,671
1971	60,946	n/a	61,525	n/a	122,471	n/a	45,759	n/a	174,722 ²	219,899
1972	59,757	n/a	64,701	n/a	124,458	n/a	42,893	n/a	173,532 ²	221,127
1973	57,435	76,250	64,919 ³	78,038	122,354 ³	154,288	41,655	69,247	170,691 ²	223,535
1974	57,602	n/a	68,609 ³	n/a	126,211 ³	n/a	41,577	n/a	173,341 ²	224,712
1975	54,658	n/a	66,620 ³	n/a	121,278 ³	n/a	42,582 ^r	n/a	172,680 ²	225,889
1976	58,544	77,972 ⁴	67,913 ³	81,296 ⁴	126,457 ³	159,268 ⁴	39,235	67,798 ⁴	174,072 ²	227,066 ⁴
1977	59,739	n/a	60,099	n/a	119,838	n/a	34,703	n/a	154,541	229,380 ⁴
1978	59,981	n/a	65,114	n/a	125,095	n/a	36,539	n/a	161,634	231,647 ⁴
1979	58,606	n/a	74,261	n/a	132,867	n/a	36,927	n/a	169,794	234,480 ⁴
1980	59,560	n/a	74,510	n/a	134,070	n/a	35,279	n/a	169,349	237,501 ⁴
1981	57,904	n/a	76,353	n/a	134,257	n/a	38,558	n/a	172,815	237,643 ⁴

n/a = not available

r = revised

1 Triennial Data.

2 Total mileage includes pipelines classified as "other than owned" by the ICC. In 1967 "other than owned" pipeline mileage was 6,255 miles.

3 Includes 273 miles of coal slurry pipeline.

4 Date of data is January 1, of each year.

ICC Lines are now Federal Energy Regulatory Commission.

Source: ICC Lines: 1956-1976: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, Pipelines, December 31, 1976, Table 2 and equivalent tables in earlier editions.
1977-1981: Penn Well Publishing Co., *Oil and Gas Journal*, Aug. 13, 1979, p. 90; Aug. 11, 1980, p. 86; Nov. 23, 1981, p. 101; Nov. 22, 1982.

All Lines: 1956-1977: Department of Energy, *Energy Data Reports*, Crude Oil and Product Pipelines, Triennial, January 1, 1977, Table 1.
1978-1981: Not available.

Total Petroleum (All Lines)

1956-1979: Transportation Association of America, *Transportation Facts and Trends*, July 1978, p. 31, Dec. 1981, p. 13.

1980-1981: Transportation Policy Associates, *Transportation in America*, March 1983, p. 35.

(Million D.W.T.)

Size	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
10 - 25,000 dwt	24.1	23.5	22.6	21.9	19.7	17.5	16.1	14.8	14.2	14.1	13.8
25 - 45,000 dwt	28.0	28.1	29.5	30.5	28.8	27.3	26.6	24.6	24.2	24.6	26.0
45 - 65,000 dwt	22.6	22.5	22.4	22.6	21.9	19.9	18.2	16.1	15.3	16.1	16.6
65 - 125,000 dwt	39.4	40.2	41.6	46.4	51.2	54.4	54.2	50.8	51.2	52.5	55.4
125 - 205,000 dwt	12.0	13.1	14.8	18.0	23.6	28.7	32.3	33.3	33.4	33.0	31.2
205 - 285,000 dwt	42.5	58.6	78.2	105.5	125.9	138.8	142.2	142.6	142.2	139.1	131.2
285,000 dwt and over	2.3	3.5	6.5	10.9	20.3	34.1	42.9	46.3	47.4	45.4	46.0
Total	170.9	189.5	215.6	255.8	291.4	320.7	332.5	328.5	327.9	324.8	320.2

Source: British Petroleum Co., *BP Statistical Review of the World Oil Industry, 1981*, p. 24.

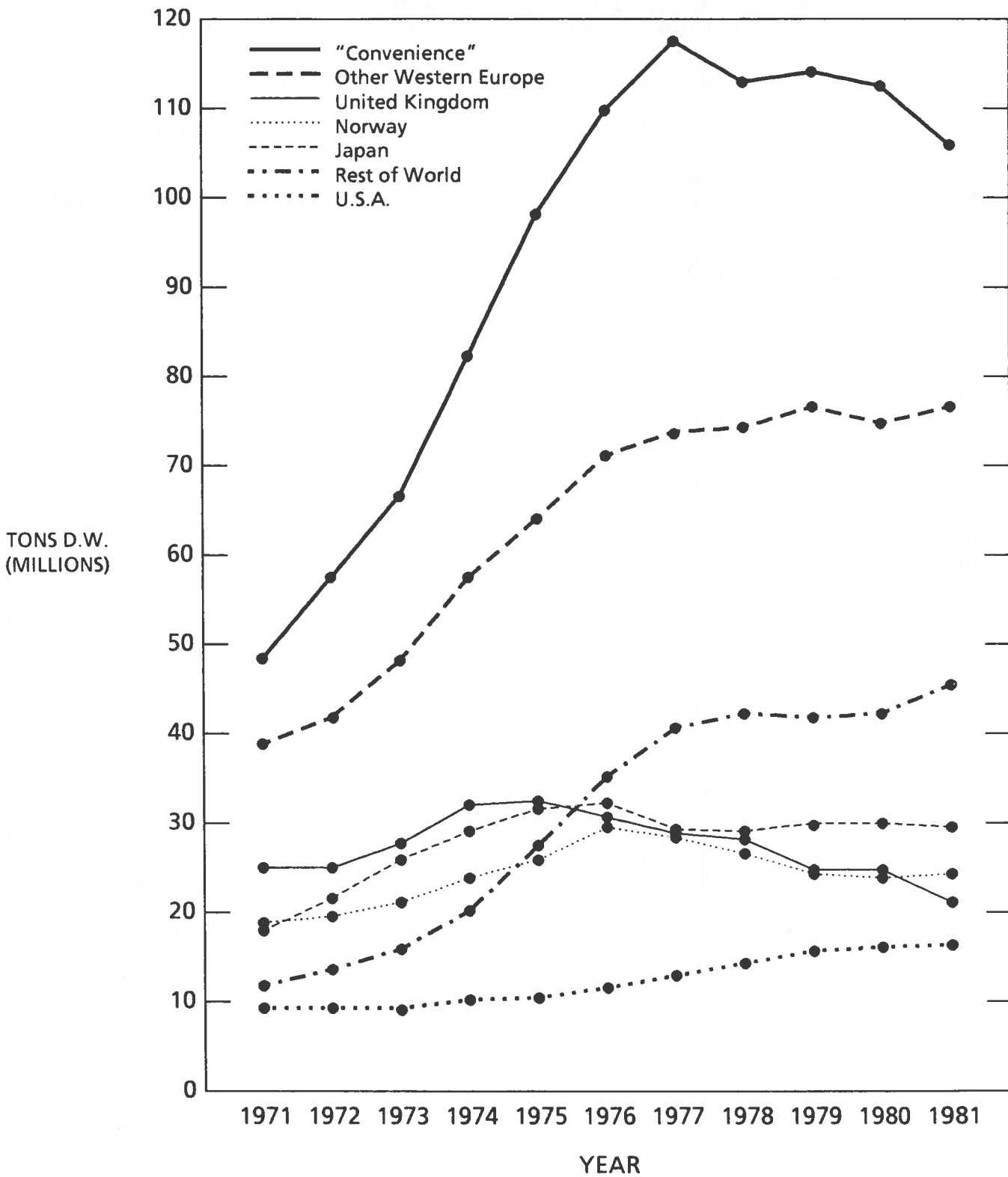


Figure 31. World Tanker Fleet by Flag, 1971-1981

**Table 67. Number and Mileage of Privately Owned U.S. Railroad Tank Cars
(As of December 31)
(At 5-Year Intervals 1955-1965 and Annually 1966-1981)**

Year	Number			Mileage		
	Petroleum Tank Cars	Other Tank Cars	Total	Petroleum Tank Cars	Other Tank Cars	Total
1955	121,405	24,372	145,777	1,818,573,349	343,450,999	2,162,024,348
1960	126,070	29,541	155,611	1,784,388,610	390,823,252	2,175,211,862
1965	123,738	31,488	155,226	1,324,976,232	310,989,383	1,635,965,615
1966 ¹	80,592	76,844	157,436	960,989,876	765,728,108	1,726,717,984
1967	74,973	69,749	144,722	890,942,715	566,944,276	1,457,886,991
1968	75,581	70,310	145,891	894,093,477	572,310,905	1,466,404,382
1969	76,217	71,187	147,404	902,041,283	565,623,358	1,467,664,641
1970	75,434	68,151	143,585	871,494,171	577,724,890	1,449,219,061
1971	72,815	65,380	138,195	831,561,636	560,666,789	1,392,228,425
1972	75,387	72,619	148,006	905,119,533	662,865,785	1,567,985,318
1973	75,878	73,548	149,426	985,628,840	748,616,769	1,734,240,609
1974	113,642	39,968	153,610	1,027,780,341	834,784,466	1,862,564,807
1975	101,298	40,083	141,381	1,209,334,628	285,278,275	1,494,612,903
1976	114,672	42,728	157,400	1,486,374,353	313,365,488	1,799,739,841
1977	115,695	43,842	159,537	1,497,026,704	348,881,029	1,845,907,733
1978	120,040	39,676	160,316	1,522,906,554	366,585,626	1,889,492,180
1979	104,772	43,941	148,713	1,384,998,317	391,100,719	1,776,099,036
1980	n/a	n/a	n/a	n/a	n/a	n/a
1981	n/a	n/a	n/a	n/a	n/a	n/a

¹ One fleet previously included in the "petroleum" category has been reclassified as "other".
Source: Interstate Commerce Commission, "Transport Statistics in the United States, Part 4, "Private Car Lines," December 31, 1979, p. 2, and equivalent tables in earlier editions. As of 1980 this data is no longer available.

Part 4. Energy Supply and Demand

Table 71. Domestic Supply and Demand for Naphtha Type Jet Fuel, 1965-1982
(Daily Averages in Thousands of Barrels)

Year	Supply			Stocks as of Dec. 31 (barrels x 10 ³)	Demand			
	Production	Imports	New Supply		Change in Stocks	Total Demand	Exports	Domestic Demand
1965	226	44	270	8,338	-	270	2	268
1966	245	35	280	7,235	-3	283	4	279
1967	300	15	315	9,037	+5	310	5	305
1968	332	19	351	8,904	-	351	5	346
1969	287	14	301	8,556	-1	302	5	297
1970	230	20	250	6,621	5	255	6	249
1971	234	30	264	6,990	+1	263	3	260
1972	209	33	242	6,147	-2	244	2	242
1973	181	36	217	5,599	-2	219	2	217
1974	195	27	222	5,529	-	222	-	222
1975	180	28	208	5,222	-1	209	-	209
1976	187	15	202	6,495	+3	199	-	199
1977	186	21	207	6,285	-1	208	-	208
1978	182	19	201	5,960	-1	202	-	202
1979	176	22	198	5,599	-2	200	-	200
1980	188	31	219	6,308	+2	217	-	217
1981	193	7	200	6,925	-1	199	1	198
1982	200	5	205	5,673	+4	208	1	207

Source: 1965-1975: American Petroleum Institute, *Basic Petroleum Data Book* Section VII, Table 14.

1976-1980: U.S. Department of Energy, *Petroleum Statement, Monthly*,
December 1980, 1979, 1978, 1977, Table 2, (converted to daily averages, using
column 6).

1981-1982: *Ibid.*, December 1981, Table 2a, 3a, February 1983, Table 3, 5.

**Table 73. Bituminous Coal and Lignite Supply and Disposition
(at 5-Year Intervals 1955-1965 and Annually 1966-1982)
(Million Short Tons)**

Year	Supply						Disposition		
	Production		Imports	Change in Consumer Stocks ¹ **	Losses and Unaccounted Foi ² **	Total	Exports	Consumption	Total
	Underground	Surface							
1955	343.5	121.2	464.6	0.3	0.8	8.9	51.3	423.4	474.7
1960	284.9	130.6	415.5	0.3	3.0	-1.8	36.5	380.4	416.9
1965	332.7	179.4	512.1	0.2	-2.1	-1.0	50.2	459.1	509.3
1966	338.5	195.4	533.9	0.2	2.9	-1.3	49.3	486.3	535.6
1967	349.1	203.5	552.6	0.2	-18.7	-4.0	49.5	480.6	530.1
1968	344.1	201.1	545.2	0.2	7.6	2.8	50.6	499.7	550.3
1969	347.1	213.4	560.5	0.1	5.0	-1.8	56.2	507.6	563.8
1970	338.8	264.1	602.9	*	-11.3	-5.7	70.9	515.0	585.9
1971	275.9	276.3	552.2	0.1	2.1	-3.5	56.6	494.2	550.8
1972	304.1	291.3	595.4	*	-26.1	5.0	56.0	518.3	574.3
1973	299.4	292.4	591.7	0.1	12.3	5.6	52.9	556.9	609.8
1974	277.3	326.1	603.4	2.1	7.9	-0.5	59.9	553.0	612.9
1975	292.8	355.6	648.4	0.9	-31.7	5.5	65.7	557.5	623.2
1976	294.9	383.8	678.7	1.2	-6.4	-15.3	59.4	598.8	658.2
1977	266.0	425.4	691.3	1.6	-21.3	2.5	53.7	620.5	674.2
1978	242.2	423.0	655.1	3.0	11.0	-18.2	39.8	621.3	661.2
1979 ^r	320.3	456.0	776.3	2.1	-34.9	-1.4	64.8	677.3	742.1
1980	336.9	486.7	823.6	1.2	-20.6	-15.2	89.9 ^r	699.1	789.0
1981	315.9	502.5	818.4	1.0	19.5	-0.1	110.3	728.5	838.8
1982 ^p	316.0	513.2	829.2	0.7	-9.5	-11.4	105.3	703.7	809.1

^r = revised

^p = preliminary

* Less than 0.05 million short tons.

** Note: Revised to exclude stocks on the Upper Great Lake docks.

¹ Changes of stocks at electric utility power plants, other industries, and retail dealers. Negative numbers denote a net addition to stocks or reduction in supply. Positive numbers denote a net withdrawal from stocks or an addition to supply.

² Difference between apparent demand (production plus imports less exports and less changes in consumers stocks) and reported consumption.

Source: 1955-1980: U.S. Department of Energy, EIA, *Coal Data--A Reference*, July 1982.

1981-1982: DOE, *Weekly Coal Report*, May 6, 1983.

**Table 75. Natural Gas Supply and Disposition
(at 5-Year Intervals 1955-1965 and Annually 1966-1982)
(Trillion Cubic Feet)**

Year	Supply				Disposition				Net Dry ³ Natural Gas Production		
	Marketed Production	Imports	Withdrawal from Storage	Total Supply	Consumption	Extraction Loss ¹	Exports	Storage Injections		Adjustments ²	Total Disposition
1955	9.41	0.01	0.44	9.85	8.69	0.38	0.03	0.51	0.25	9.85	9.03
1960	12.77	0.16	0.71	13.64	11.97	0.54	0.01	0.84	0.27	13.64	12.23
1965 ⁴	16.04	0.46	0.96	17.46	15.28	0.75	0.03	1.08	0.32	17.46	15.29
1966	17.21	0.48	1.14	18.83	16.45	0.74	0.02	1.21	0.40	18.83	16.47
1967	18.17	0.56	1.13	19.87	17.39	0.78	0.08	1.32	0.30	19.87	17.39
1968	19.32	0.65	1.33	21.30	18.63	0.83	0.09	1.43	0.33	21.30	18.49
1969	20.70	0.73	1.38	22.80	20.06	0.87	0.05	1.50	0.33	22.80	19.83
1970	21.92	0.82	1.46	24.20	21.14	0.91	0.07	1.86	0.23	24.20	21.01
1971	22.49	0.93	1.51	24.94	21.79	0.88	0.08	1.84	0.34	24.94	21.61
1972	22.53	1.02	1.76	25.31	22.10	0.91	0.08	1.89	0.33	25.31	21.62
1973	22.65	1.03	1.53	25.21	22.05	0.92	0.08	1.97	0.20	25.21	21.73
1974	21.60	0.96	1.70	24.26	21.22	0.89	0.08	1.78	0.29	24.26	20.71
1975	20.11	0.95	1.76	22.82	19.54	0.87	0.07	2.10	0.24	22.82	19.24
1976	19.95	0.96	1.92	22.84	19.95	0.85	0.06	1.76	0.22	22.84	19.10
1977	20.03	1.01	1.75	22.79	19.52	0.86	0.06	2.31	0.04	22.79	19.16
1978	19.97	0.97	2.16	23.10	19.63	0.85	0.05	2.28	0.29	23.10	19.12
1979	20.47	1.25	2.05	23.77	20.24	0.81	0.06	2.30	0.37	23.77	19.66
1980 ^r	20.38	0.98	1.97	23.34	19.88	0.78	0.05	1.95	0.68	23.34	19.60
1981	20.18	0.90	1.93	23.01	19.40	0.77	0.06	2.23	0.55	23.01	19.40
1982	18.53	0.97	2.08	21.59	17.94	0.71	0.06	2.38	0.50	21.59	17.82

r = revised

1 Quantity converted to natural gas plant liquids and transferred to petroleum supply and disposition.

2 Includes transmission losses, changes in above ground storage, and unaccounted for gas.

3 Marketed production less losses due to extraction of liquids.

4 Beginning with 1965 data, all volumes are shown on pressure base of 14.73 psia at 60° F.

Note: Sum of components may not equal total due to independent rounding.

Source: U.S. Department of Energy, 1982 Annual Energy Review, Table 46.

**Table 77. Domestic Demand for Naphtha and Kerosene-Type Jet Fuel
(Thousand Barrels)
(1965-1982)**

Year	Naphtha Type Total	Barrels Per Day	Kerosene Type Total	Barrels Per Day	Naphtha and Kerosine	Barrels Per Day	Annual Percentage Change
1965	97,813	268	121,819	334	219,632	602	-0.2
1966	101,635	278	142,751	391	244,386	670	+11.3
1967	111,546	306	189,224	518	300,770	824	+23.0
1968	126,601	346	222,777	609	349,378	955	+16.2
1969	108,518	297	253,213	694	361,731	991	+3.5
1970	90,927	249	262,051	718	352,978	967	-2.4
1971	94,732	260	273,991	751	368,723	1,010	+4.5
1972	88,495	242	293,995	803	382,490	1,045	+3.7
1973	79,220	217	307,407	842	386,627	1,059	+1.1
1974	81,171	222	281,429	771	362,600	993	-6.2
1975	76,543	210	288,747	791	365,290	1,001	+0.7
1976	72,713	199	288,645	789	361,358	987	-1.1
1977	75,888	208	303,369	831	379,257	1,039	+5.0
1978	72,546	202	313,108	858	385,654	1,060	+1.7
1979	72,925	200	319,774	876	392,699	1,076	+1.8
1980	79,283	217	311,813	852	391,096	1,069	-0.4
1981	72,495	199	295,626	809	368,121	1,008	-5.9
1982	75,754	208	292,529	801	368,283	1,009	+0.4

Source: 1965-1975: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, Petroleum Statement, Annual, Table 1.

1976-1982: U.S. Department of Energy, *Petroleum Statement, Monthly*, December 1981, 1980, 1979, 1978, 1977, Table 2; February 1983, Table 3.5.

APPENDIX A

Source Information

Figure 3. Expenditures and Revenues, 1981 (Cont.)

- (19) Local Transit: UMTA, *National Urban Mass Transportation Statistics, 1982 Section 15 Report*, Sept. 1983, Table 02.2. Total operating revenue for all properties.
- (20) Motorbus: *Ibid.*, Operating revenues for single motor bus properties only.
- (21) Trolley Coach: Not available.
- (22) Light Rail: Not available.
- (23) Heavy Rail: Not available.
- (24) Rail: Sum of Passenger and Cargo. Includes Amtrak.
- (25) Rail, Passenger: Sum of Class I Rail and Amtrak.
- (26) Rail, Class I: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p. 3. Total passenger service operating revenue (501-3).
- (27) Rail, Amtrak: *Ibid.*, p. 17. Total operating passenger service revenues.
- (28) Rail, Cargo: *Ibid.*, p. 3. Class I freight service revenue (501-3).
- (29) Air: Sum of General Aviation and Air Carrier.
- (30) General Aviation: TPA, *Transportation In America*, First Edition, Mar. 1983, p. 11. Figure represents the sum of operating costs and total retail value of new general aviation aircraft.
- (31) Air Carrier: Same as Total Certificated figure, block (32).
- (32) Total Certificated: CAB, *Air Carrier Financial Statistics*, Dec. 1982, p. 1. Total operating revenues, domestic operations.
- (33) Total Domestic Majors: *Ibid.*, p. 3. Total operating revenues in scheduled and nonscheduled services.
- (34) Passenger: *Ibid.*, p. 3. Sum of passenger revenues in scheduled and nonscheduled service.
- (35) Freight: *Ibid.*, p. 3. Sum of scheduled and nonscheduled freight revenues.
- (36) Total Domestic Nationals: *Ibid.*, p. 27. Total operating revenues in scheduled and nonscheduled services.
- (37) Passenger: *Ibid.*, p. 27. Sum of scheduled and nonscheduled passenger service.
- (38) Freight: *Ibid.*, p. 27. Sum of scheduled and nonscheduled freight service.
- (39) Total Domestic Large Regionals: *Ibid.*, p. 45. Total operating revenues in scheduled and nonscheduled service.
- (40) Passenger: *Ibid.*, p. 45. Sum of scheduled and nonscheduled passenger service.

Figure 4. Vehicle-Miles, 1981

- (1) Total Transportation: Sum of Domestic and International.
- (2) Domestic: Sum of Highway, Local Transit, Rail, and Air, Water data not available.
- (3) International: Includes Total Certificated, Water data not available.
- (4) Highway: Sum of Auto, Truck, and Bus.
- (5) Auto: Sum of Personal Passenger Car and Motorcycle.
- (6) Personal Passenger Car: Federal Highway Administration, *Highway Statistics*, 1981, Table VM-1. Includes total rural and urban. This figure includes Taxi.
- (7) Taxi: Data for taxi are included in the Personal Passenger Car category.
- (8) Motorcycle: Federal Highway Administration, *Highway Statistics*, 1981, Table VM-1. Includes total rural and urban.
- (9) Truck: *Ibid.*
- (10) Single-Unit: *Ibid.*
- (11) Combinations: *Ibid.*
- (12) Bus: Sum of Intercity Bus and School Bus.
- (13) Intercity Bus: American Bus Association, *Bus Facts*, 1982, p. 2. Includes Class I, II, and III carriers reporting to the ICC and Intrastate carriers. Preliminary figure.
- (14) Class I: *Ibid.*, p. 6. Total vehicle-miles operated. Preliminary figure.
- (15) Regular-route: *Ibid.*, Regular-route intercity service. Preliminary figure.
- (16) Local and Suburban: *Ibid.*, Local and suburban service. Preliminary figure.
- (17) Charter and Special: *Ibid.*, Charter and special service. Preliminary figure.
- (18) Non-Passenger: *Ibid.*, Non-passenger service. Preliminary figure.
- (19) Class II and III: Figure derived by subtracting Class I from Intercity Bus.
- (20) School Bus: Federal Highway Administration, *Highway Statistics*, 1981, Table VM-1. Includes total rural and urban.
- (21) Local Transit: UMTA, *National Urban Mass Transportation Statistics, 1982 Section 15 Report*, Sept. 1983, Tables 15.1, 16.1. Total revenue vehicle miles for all modes.
- (22) Motorbus: *Ibid.*
- (23) Trolley Bus: *Ibid.*

Figure 4. Vehicle-Miles, 1981 (Cont.)

- (47) Total Domestic Medium Regionals: *Ibid.*, p. 112. Includes domestic and international operations. Sum of scheduled, line 27, and nonscheduled, line 50, services.
- (48) Scheduled: *Ibid.*, p. 112, line 27.
- (49) Passenger: *Ibid.*, p. 112, line 25.
- (50) Freight: *Ibid.*, p. 112, line 26.
- (51) Nonscheduled: *Ibid.*, p. 112, line 50.
- (52) Water: Not available.
- (53) International Air: Same as Total International Certificated, block (54).
- (54) Total International Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1982, p. 3. Sum of scheduled aircraft revenue miles, line 27, and nonscheduled aircraft revenue miles, line 50.
- (55) Total International Majors: *Ibid.*, p. 6. Sum of scheduled, line 27, and nonscheduled, line 50.
- (56) Scheduled: *Ibid.*, p. 6. line 27.
- (57) Passenger: *Ibid.*, p. 6. line 25.
- (58) Freight: *Ibid.*, p. 6. line 26.
- (59) Nonscheduled: *Ibid.*, p. 6. line 27.
- (60) Total International Nationals: *Ibid.*, p. 47. Sum of scheduled, line 27, and nonscheduled, line 50, services.
- (61) Scheduled: *Ibid.*, p. 47. line 27.
- (62) Passenger: *Ibid.*, p. 47. line 25.
- (63) Freight: *Ibid.*, p. 47. line 26.
- (64) Nonscheduled: *Ibid.*, p. 47. line 50.
- (65) Total International Large Regionals: *Ibid.*, p. 86. Sum of scheduled, line 27, and nonscheduled, line 50, services.
- (66) Scheduled: *Ibid.*, p. 86. line 27.
- (67) Passenger: *Ibid.*, p. 85. line 25.
- (68) Freight: *Ibid.*, p. 86. line 26.
- (69) Nonscheduled: *Ibid.*, p. 86. line 50.
- (70) Total International Medium Regionals: Data included in domestic operations, block (47).

Figure 5. Passenger-Miles, 1981 (Cont.)

- (22) Total Domestic Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1982, p. 2. Revenue passenger miles, all services, line 1.
- (23) Total Domestic Majors: *Ibid.*, p. 5. Sum of scheduled, line 9, and nonscheduled, line 40, services.
- (24) Scheduled: *Ibid.*, line 9.
- (25) First Class: *Ibid.*, line 7.
- (26) Coach: *Ibid.*, line 8.
- (27) Nonscheduled: *Ibid.*, line 41.
- (28) Civilian: *Ibid.*, line 39.
- (29) Military: *Ibid.*, line 40.
- (30) Total Domestic Nationals: *Ibid.*, p. 46. Sum of scheduled, line 9, and nonscheduled, line 40, services.
- (31) Scheduled: *Ibid.*, line 9.
- (32) First Class: *Ibid.*, line 7.
- (33) Coach: *Ibid.*, Line 8.
- (34) Nonscheduled: *Ibid.*, line 41.
- (35) Civilian: *Ibid.*, line 39.
- (36) Military: *Ibid.*, line 40.
- (37) Total Domestic Large Regionals: *Ibid.*, p. 85. Sum of scheduled, line 9, and nonscheduled, line 41, services.
- (38) Scheduled: *Ibid.*, line 9.
- (39) First Class: *Ibid.*, line 7.
- (40) Coach: *Ibid.*, Line 8.
- (41) Nonscheduled: *Ibid.*, line 41.
- (42) Civilian: *Ibid.*, Line 39
- (43) Military: *Ibid.*, Line 40.
- (44) Total Domestic Medium Regionals: *Ibid.*, p. 112. Includes domestic and international operations. Sum of scheduled, line 9, and nonscheduled, line 41, services.
- (45) Scheduled: *Ibid.*, line 9.

Figure 5. Passenger-Miles, 1981 (Cont.)

- (70) First Class: *Ibid.*, line 7.
- (71) Coach: *Ibid.*, line 8.
- (72) Nonscheduled: *Ibid.*, line 41.
- (73) Civilian: *Ibid.*, line 39.
- (74) Military: *Ibid.*, line 40.
- (75) Total International Medium Regionals: Data included in domestic operations, block (44).
- (82) Water: Not Available.

Figure 6. Cargo Ton-Miles, 1981

- (1) Total Transportation: Sum of Domestic and International.
- (2) Domestic: Sum of Highway, Rail, Air, Water and Pipeline.
- (3) International: Sum of Air and Water.
- (4) Highway: Figure represents total intercity ton-miles of motor vehicle transport. Local truck and intercity bus ton-miles are not available.
- (5) Truck: Intercity truck ton-miles only.
- (6) Local Truck: Not available.
- (7) Intercity: TPA, *Transportation In America*, First Edition, Mar. 1983, p. 7. Total Intercity ton-miles.
- (8) ICC Regulated: Not available.
- (9) Non-Regulated: Not available.
- (10) Rail: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p. 6, line 50.
- (11) Air: Same as Total Domestic Certificated, block (12).
- (12) Total Domestic Certificated: CAB. *Air Carrier Traffic Statistics*, Dec. 1982, p. 2. Freight, Express, U.S. and Foreign Mail Revenue ton miles, all services, line 3.
- (13) Total Domestic Majors: *Ibid.*, p. 5, line 3.
- (14) Scheduled: *Ibid.*, p. 5. Sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
- (15) Freight: *Ibid.*, p. 5. line 18.
- (16) Other: *Ibid.*, p. 5. Sum of lines 19-21.

Figure 6. Cargo-Ton-Miles, 1981 (Cont.)

- (42) Coastwise: *Ibid.*
- (43) Lakewise: *Ibid.*
- (44) Internal: *Ibid.*
- (45) Local: *Ibid.*
- (46) Pipeline: TPA, *Transportation In America*, March 1983, p. 9. Intercity ton-miles.
- (47) ICC-Regulated: Estimated to be 84% of total pipeline.
- (48) Non-Regulated: Estimated to be 16% of total pipeline.
- (49) Air: Same as Total International Certificated, block (50).
- (50) Total International Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1982, p. 15, line 3.
- (51) Total International Majors: *Ibid.*, p. 6, line 3.
- (52) Scheduled: *Ibid.*, p. 6. Sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
- (53) Freight: *Ibid.*, p. 6, line 18.
- (54) Other: *Ibid.*, p. 6. Sum of lines 19-21.
- (55) Nonscheduled: *Ibid.*, p. 6. Sum of Civilian Freight, line 44, and Military Freight, line 45.
- (56) Civilian Freight: *Ibid.*, p. 6, line 44.
- (57) Military Freight: *Ibid.*, p. 6, line 45.
- (58) Total International Nationals: *Ibid.*, p. 47, line 3.
- (59) Scheduled: *Ibid.*, p. 47. Sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
- (60) Freight: *Ibid.*, p. 47, line 18.
- (61) Other: *Ibid.*, p. 47. Sum of lines 19-21.
- (62) Nonscheduled: *Ibid.*, p. 47. Sum of Civilian Freight, line 44, and Military Freight, line 45.
- (63) Civilian Freight: *Ibid.*, p. 47, line 44.
- (64) Military Freight: *Ibid.*, p. 47, line 45.
- (65) Total International Large Regionals: *Ibid.*, p. 86, line 3.
- (66) Scheduled: *Ibid.*, p. 86. Sum of Freight, Air Express, U.S. Mail and Foreign Mail, lines 18-21.
- (67) Freight: *Ibid.*, p. 86, line 18.

Figure 7. Number of Vehicles, 1981 (Cont.)

- (14) Class I: *Ibid.*, p. 6, Class I carriers including Greyhound and Trailways.
- (15) Class II and III: Figure derived by subtracting Class I from Intercity.
- (16) School: FHWA, *Highway Statistics*, 1981, Table MV-10. (Total school and other non-revenue buses).
- (17) Local Transit: UMTA, *National Urban Mass Transportation Statistics, 1982 Section 15 Report*, Sept. 1983, Table 17.1.
- (18) Motorbus: *Ibid.*
- (19) TrolleyBus: *Ibid.*
- (20) Streetcar: *Ibid.*
- (21) Rail Rapid: *Ibid.*
- (22) Rail: Sum of passenger and freight.
- (23) Rail, Passenger: AAR, *Statistics of Railroads of Class I*, Dec 1982, p. 11, line 8.
- (24) Rail, Freight: *Ibid.*, p. 10.
- (25) Air: Sum of General Aviation and Total Certificated.
- (26) General Aviation: FAA, Office of Management Systems, *General Aviation Activity and Avionics Survey*, December 1982, Table 2-9.
- (27) Rental: *Ibid.*
- (28) Business: *Ibid.* This category includes Business and Executive Transportation.
- (29) Commercial: *Ibid.* This category includes Air Taxi, Commuter Carrier and Aerial Application.
- (30) Instructional: *Ibid.*
- (31) Personal: *Ibid.*
- (32) Other: *Ibid.* This category includes Other Work.
- (33) Total Certificated: Includes domestic and international aircraft. Sum of Major, National and Regional airlines.
- (34) Majors: CAB, Financial and Cost Analysis Division, personal communication.
- (35) Nationals: *Ibid.*
- (36) Regionals: *Ibid.* Includes Large and Medium Regional airlines.

Figure 8. Number of Fatalities, 1981 (Cont.)

- (8) Motorcycle: U.S. DOT, NHTSA/NRD-30, *Fatal Accident Reporting System (FARS)*, 1981, Table 1.
- (9) Truck: *Ibid.*
- (10) Private: U.S. DOT, FHWA, *Accidents of Motor Carriers of Property*, 1980-1981, p. 2.
- (11) ICC Regulated: *Ibid.*, BMCS Authorized category.
- (12) Non-Regulated: *Ibid.*, BMCS Exempt category.
- (13) Bus: Sum of commercial and school bus occupant fatalities.
- (14) Commercial Bus: U.S. Department of Transportation, NHTSA/NRD-30, *FARS*, 1981, Table 1.
- (15) School Bus: *Ibid.*, p. i.
- (16) Bicycle: *Ibid.*, Table 3.
- (17) Pedestrian: *Ibid.*, Table 3. Motor vehicle involvement only.
- (18) Local Transit: RSPA, *Transportation Safety Information Report, 1982 Annual Summary*, Table 1, p. 4.
- (19) Rail: *Ibid.*, Table 1, p. 4. This figure includes railroad passengers, employees, trespassers, and others killed in railroad operations. It does not include those killed in rail/highway grade crossing accidents (728), which are included in the highway fatality figure.
- (20) Train Accident: *Ibid.*, p. 33.
- (21) Non-Train Incident: *Ibid.*, p. 34.
- (22) Train Incident: *Ibid.*, p. 35.
- (23) Air: Sum of General Aviation and Total Certificated.
- (24) General Aviation: National Transportation Safety Board, Safety Studies and Analysis Division, (SP-10), personal communication.
- (25) Executive: *Ibid.*
- (26) Aerial Application: *Ibid.*
- (27) Business: *Ibid.*
- (28) Commuter: Not available.
- (29) Air Taxi: Not available.
- (30) Instructional: *Ibid.*

Figure 9. Energy Consumed in Transportation (Converted to 10¹² Btu), 1981

- (1) Total Transportation: Sum of Domestic and International.
- (2) Domestic: Sum of Highway, Local Transit, Rail, Air, Water and Pipeline.)
- (3) International: Includes Total Certificated, Water data not available.
- (4) Highway: Sum of Personal Passenger Car, Truck, and Bus.
- (5) Personal Passenger: Sum of Personal Passenger Car, Taxi, and Motorcycle.
- (6) Personal Passenger Car (includes Taxi): FHWA, *Highway Statistics*, 1981, Table VM-1, multiplied by the conversion factor of motor gasoline (125,000 Btu/gallon).
- (7) Taxi: Included in Passenger Car.
- (8) Motorcycle: FHWA, *Highway Statistics*, 1981, Table VM-1, multiplied by the conversion factor of motor gasoline (125,000 Btu/gallon).
- (9) Truck: Sum of Single-Unit and Combination.
- (10) Single-Unit: FHWA, *Highway Statistics*, 1981, Table VM-1, multiplied by the conversion factor of motor gasoline (125,000 Btu/gallon).
- (11) Combination: *Ibid.*, multiplied by the conversion factor of distillate fuel oil (138,700 Btu/gallon).
- (12) Bus: Sum of Class I Intercity, School Bus, and Transit Motorbus.
- (13) Class I Intercity: ABA, *Bus Facts*, 1982, p. 9, multiplied by the conversion factor of distillate fuel oil (138,700 Btu/gallon).
- (14) School Bus: FHWA, *Highway Statistics*, 1981, Table VM-1, multiplied by the conversion factor of motor gasoline (125,000 Btu/gallon).
- (15) Motorbus: UMTA, *National Urban Mass Transportation Statistics, 1982 Section 15 Report*, Sept. 1983, Table 11.1. Figure derived by the addition of motor gasoline, diesel (distillate fuel oil) and LPG/LNG, converted to Btu using the following conversion factors. Gasoline (138,700 Btu/gallon), diesel (125,000 Btu/gallon) and LPG/LNG (93,452 Btu/gallon).
- (16) Local Transit: *Ibid.* Figure includes electric consumption for motor bus, rail rapid, streetcar, and trolley bus. Data derived by multiplying by the conversion factor of electricity (1kwh = 3412 Btu).
- (17) Rail: Sum of Passenger and Class I Freight.
- (18) Passenger: Sum of Class I Passenger and Amtrak.
- (19) Class I Rail Passenger: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p. 16, lines 3 and 10, multiplied by the conversion factor of distillate fuel oil (138,700 Btu/gallon), excludes electricity.
- (20) Amtrak: Amtrak Mechanical Department, personal communication.

Figure 26. Average Fuel Efficiency of U.S. Passenger Cars, 1955-1981

MPG: FHWA, *Highway Statistics*, annual issues, Table VM-1.

MPG: U.S. DOT, Transportation Systems Center computation.

**Figure 27. Estimated Annual Automobile Gasoline and Oil Costs,
Including Taxes, by Size and Years of Operation**

1974, 1976: U.S. DOT, FHWA, *Cost of Operating an Automobile*, 1974, 1976.

1979, 1981: *Ibid.*, *Cost of Owning and Operating Automobiles and Vans*, 1979, 1982.

Figure 29. Principal Commodities Carried by Water, Calendar Year 1981

1980: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1981.

Profile References (Cont.)

- (23) National Transportation Safety Board, Information Systems Division, personal communication.
- (24) *Ibid.*, *News Release SB 81-1*, January 13, 1981; *News Release SB 83-1*, Jan 7, 1983.
- (25) *Oil and Gas Journal*, November 23, 1981 and November 22, 1982.
- (26) Transportation Association of America, *Transportation Facts and Trends*, 12th edition, 1975.
- (27) *Ibid.*, 17th edition, December 1981.
- (28) Transportation Policy Associates, *Transportation In America*, March 1983, 1st Edition, July 1983 Supplement.
- (29) U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, Calendar Year 1980.
- (30) *Ibid.*, Calendar Year 1981.
- (31) U.S. Coast Guard, *Boating Statistics*, 1971,
- (32) *Ibid.*, 1980, 1981.
- (33) *Ibid.*, *Proceedings of the Marine Safety Council*, December 1971 and February 1983.
- (34) U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts of the U.S., 1929-1979 Statistics*.
- (35) *Ibid.*, *Survey of Current Business*, July 1981, July 1982.
- (36) *Ibid.*, *Fisheries of the U.S.*, 1974, 1980, April 1981.
- (37) *Ibid.*, Bureau of the Census, *Statistical Abstract of the United States*, 1977, 98th edition; 1978, 99th edition, 1981, 102nd edition, 1982-83, 103rd edition.
- (38) U.S. Department of Energy, Energy Information Administration, *Natural Gas Annual*, 1981.
- (39) *Ibid.*, *Energy Data Reports*, Petroleum Statement, Annual, 1980.
- (40) *Ibid.*, *Statistics of Interstate Natural Gas Pipeline Companies*, October 1981, 1982.
- (41) *Ibid.*, National Energy Information Center, personal communication.
- (42) U.S. Department of Labor, Bureau of Statistics, *Employment and Earnings*, 1909-1978 Bulletin 1312-11, July 1979.
- (43) *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982.

TABLE REFERENCES

Table 1. Average Passenger Revenue Per Passenger Mile, 1971-1981

Certificated Air Carrier, Domestic Operations, Scheduled Service:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 81, 85, and 88.

1973-1981: CAB, *Air Carrier Financial Statistics*, Dec. 1974, 1976, 1978, 1980, 1981, 1982, p. 2, lines 1, 2, 3; *Air Carrier Traffic Statistics*, 1974-1982 December Issues, p. 4/5, lines 7, 8, 9. Passenger revenue (*Financial Statistics*, p. 2) divided by revenue passenger-miles (*Traffic Statistics*, p. 4/5), gives average passenger revenue per passenger mile for First Class, Coach and Total, i.e., line 1 divided by line 7, line 2 divided by line 8, and line 3 divided by line 9.

Class I Rail:

1971-1979: AAR, *Statistics of Railroads of Class I*, November 1980, p. 8, Lines 2, 3, 4 and p. 18, Lines 12, 13, 14. All Class I average passenger revenue per passenger mile data was calculated by dividing passenger revenue by passenger miles and subtracting Amtrak and Auto-Train passenger revenue and revenue passenger mile data. As of 1978, Auto-Train is no longer Class I.

1980-1981: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p.1, passenger revenue (Acct. 102) divided by passenger mile data abstracted from Transportation Policy Associates, *Transportation In America*, Mar. 1983, p.14.

Amtrak:

1971-1981: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p. 17, passenger revenue (Acct. 102) divided by passenger mile data, abstracted from Transportation Policy Associates, *Transportation in America*, March 1983, p. 14.

Class I Intercity Bus:

1971-1979: ABA, *Bus Facts*, 1981, p. 12.

1980-1981: ABA, *Bus Facts*, 1982, p. 7.

Consumer Price Index:

1971-1980: U.S. Department of Commerce, BEA, *Survey of Current Business*, July issues, p. S-6.

1981: *Ibid.*, July issue, p. S-5.

Table 2. Average Freight Revenue Per Ton-Mile, 1971-1981

Certificated Air Carrier, Domestic Operations, Scheduled Service:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 93.

1973-1980: CAB, *Air Carrier Financial Statistics*, Dec. 1974, 1976, 1978, 1980, 1981, 1982, p. 2, line 4; *Air Carrier Traffic Statistics*, 1974-1980 December issues, p. 4/5, line 18. Freight revenue (*Financial Statistics*) divided by revenue ton-miles of freight (*Traffic Statistics*).

1981: CAB *Air Carrier Financial Statistics* Dec. 1982, p. 1, Freight revenue; *Air Carrier Traffic Statistics* p. 2, Line 18, divided by revenue ton-miles.

Class I Rail:

1971-1974: ICC, *Transport Economics*, Vol. III, No. 2, 1976, p. 14.

1975-1976: *Ibid.*, Vol. V, No. 1, 1978, p. 11.

1977-1980: AAR, *Operating and Traffic Statistics*, August 1981.

1981: Transportation Policy Associates, *Transportation in America*, March. 83, p. 19.

Table 3. Average Passenger Fare, 1971-1981 (Cont.)

Amtrak:

1971-1979: AAR, *Statistics of Railroads of Class I*, Nov. 1980, p. 18. The average passenger fare was calculated by dividing passenger revenue by revenue passengers carried.

1980: AAR, *Operating & Traffic Statistics*, August 1981, p. 7/8.

1981: Not available.

Table 4. Total Operating Revenues, 1971-1981

Certificated Air Carriers:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973. Sum of overall operating revenues in total domestic operations (p. 216) and total international and territorial operations (p. 227).

1973-1979: CAB, *Air Carrier Financial Statistics*, 1974-1980 December issues, p. 1, line 19.

1980: *Ibid.*, Dec. 81, p.1.

1981: *Ibid.*, Dec.82, p.1.

Supplemental Air Carriers:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 69.

1973-1980: CAB, *Air Carrier Financial Statistics*, 1974-1980 December issues, Table 3, Sheet No. 1, line 9.

1981: Not available.

Intercity Bus, Class I:

1971-1981: ABA, *Bus Facts*, 1982, p. 5.

Local Transit:

1971-1977: Not available.

1978-1981: UMTA, Section 15 Reports, May 1981, June 1982, Nov. 1982, Sept. 1983, Table 02.2.

Oil Pipeline, ICC Regulated only:

1971-1979: TAA, *Transportation Facts and Trends*, 1975 edition, 1978 edition, Dec. 1981 edition p.2/4.

1978-1981: TPA, *Transportation In America*, March 1983, p. 5.

Gas Pipeline:

1971-1981: Transmission Companies: American Gas Association, *Gas Facts*, annual issues, Table titled "Composite Income Accounts Investor-Owned Gas Utility Industry Transmission Companies".

1971-1981: Distribution Companies: *Ibid.*, Annual issues, Table titled "Composite Income Accounts Investor-Owned Gas Utility Industry Distribution Companies".

Class I Intercity Motor Carriers of Property:

1971-1980: ICC, *95th Annual Report of the ICC*, 1981, Table 8 and equivalent tables in earlier editions.

1981: *Ibid.*, *96th Annual Report of the ICC*, 1982, Table 6.

Class I Rail:

1971-1979: AAR, *Statistics of Railroads of Class I*, November 1980, p. 13, line 1. (1979 Figure excludes Rock Island Railroad).

1980-1981: *Ibid.*, Dec. 1982, p.13, line 1.

Table 5. Vehicle-Miles, 1971-1981 (Cont.)

Class I Rail:

Passenger Train:

1971-1979: AAR, *Statistics of Railroads of Class I*, November 1980, p. 12, line 15.

1980-1981: *Ibid.*, December 1982, p. 12, line 15.

Freight Train:

1971-1979: AAR, *Statistics of Railroads of Class I*, November 1980, p. 12, line 12.

1980-1981: *Ibid.*, December 1982, p. 12, line 12.

Amtrak:

1971-1981: AAR, *Statistics of Railroads of Class I*, Dec. 1982, p. 18.

Table 6. Passenger-Miles, 1971-1981

Air Carrier:

Certificated:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 106. Sum of total domestic passenger miles in scheduled service (line 11) and non-scheduled service (line 47).

1973-1979: CAB, *Air Carrier Traffic Statistics*, 1974-1980, December issues, p. 4/5. Sum of lines 9 and 41.

1980-1981: *Ibid.*, 1981-1982, December issues, p.2, line 1.

Supplemental:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 197, line 4.

1973-1980: CAB, *Air Carrier Traffic Statistics*, 1974-1980, December issues, Part III, sheet 1, line 4.

1981: *Ibid.*, 1982 December issue. Data is sum of domestic charter operations for all types of carriers.

General Aviation:

1971-1980: TAA, *Transportation Facts and Trends*, December 1981, p. 6.

1981: TPA, *Transportation In America*, March 1983, p. 13.

Highway:

Passenger Car and Taxi:

1971-1981: FHWA, *Highway Statistics*, 1981, Table VM-1 and equivalent tables in earlier editions. Vehicle-miles multiplied by a constant average occupancy of 2.2.

Intercity Bus:

1971-1981: ABA, *Bus Facts*, 1982, p. 2.

Class I Rail:

Commutation and Other Than Commutation:

1971-1979: AAR, *Statistics of Railroads of Class I*, p. 8 and p. 18. Amtrak and Auto-Train data (p. 18) subtracted from Class I data (p. 8).

1980: AAR, *Operating & Traffic Statistics*, August 1981, p. 8.

1981: Not available.

Amtrak:

Commutation and Other Than Commutation:

1971-1979: AAR, *Statistics of Railroads of Class I*, November 1980, p. 18.

1980: AAR, *Operating & Traffic Statistics*, August 1981, p. 8.

1981: Amtrak, personal communication, Marketing Department.

Table 8. Basic Intercity Mileage Within the Continental United States, 1971-1981 (Cont.)

Oil Pipelines:

Total:

1971-1981: TPA, *Transportation In America*, March 1983, p. 35.

Crude Oil Products, and Gathering Lines:

1971-1976: DOE, *Energy Data Reports*, Crude Oil and Product Pipelines, Triennial, January 1, 1977, Table 1.

1977-1981: Not available.

Gas Pipelines:

Total Pipelines; Distribution Mains, Transmission Pipelines, and Field and Gathering Lines.

1971-1981: AGA, *Gas Facts*, 1981, Table 46.

Inland Waterways:

1971-1979: American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1979, and previous years, pp. 1, 2.

1980-1981: U.S. Army Corps of Engineers, personal communication.

Highways:

1970-1975: FHWA, *Highway Statistics*, Summary to 1975, Table FM-210.

1976-1979: *Ibid.*, *Highway Statistics*, annual issues, Table FM-1/FM-2.

1980-1981: *Ibid.*, 1980 and 1981 editions, Table HM-14.

Airways:

1971-1981: FAA, *FAA Statistical Handbook of Aviation*, 1981, Table 2.1. Mileage equals sum of VHF low altitude direct and VHF jet route mileages multiplied by 1.151 to convert from nautical miles.

Table 9. Number of Vehicles, 1971-1981

Air Carrier:

1971-1972: CAB, *Handbook of Airline Statistics*, 1973, Part VII, Table 7a and similar tables in earlier editions or by special communication from CAB.

1973: CAB, Statistical Data Division, personal communication.

1974: CAB, Supplement to *Handbook of Airline Statistics*, Dec. 1975, p. 126.

1975: CAB, Bureau of Accounts and Statistics: Special communication based on CAB Form 41, Schedule T-2.

1976: CAB, Supplement to *Handbook of Airline Statistics*, Dec. 1977, Part VII, Table 7A.

1977-1981: CAB, Bureau of Carrier Accounts and Audits: Special communication based on CAB Form 41, Schedules B-7, B-8, and B-43.

General Aviation:

1971-1977: FAA, *FAA Statistical Handbook of Aviation*, 1978, Table 8.3 and equivalent tables in earlier editions.

1978-1981: FAA, *General Aviation Activity and Avionics Survey*, March 1980, January 1981, December 1981, December 1982, Table 2-6.

Motorcycle:

1971-1981: FHWA, *Highway Statistics*, 1981, Table VM-1 and same table in earlier editions.

Table 10. Number of New Vehicles Purchased, By Mode, 1971-1981 (Cont.)

General Aviation:

1971-1978: FAA, *Statistical Handbook of Aviation*, Calendar Year 1978, Table 9-2.
1979-1981: General Aviation Manufacturers Association, personal communication, data includes shipments of aircraft only.

Passenger Car and Taxi:

1971-1980: DOC, Bureau of Economic Analysis, *Survey of Current Business*, July issues, p. S-36/S-40.
1981: *Ibid.*, July issue, p. S-32.

Motorcycle:

1971-1981: Motorcycle Industry Council, Inc. 1982 *Motorcycle Statistical Annual*, p. 12.

Mopeds:

1974-1981: Motorcycle Industry Council, Inc., 1982 *Motorcycle Statistical Annual*, p. 12.

Bicycle:

1971-1981: Bicycle Mfg. Assoc. of America, personal communication.

Truck:

1971-1980: DOC, Bureau of Economic Analysis, *Survey of Current Business*, July issues, p. S-36/S-40.
1981: *Ibid.*, July issue, p. S-32. Total of light, medium, and heavy duty.

Intercity Bus (Class I):

1971-1980: ABA, personal communication.
1981: *Ibid.*, 1981 data includes all carriers--not just Class I.

Local Transit (New Passenger Vehicles Delivered):

1971-1980: APTA, *Transit Fact Book*, 1981 edition, Table 16.
1981: *Ibid.*, 1982/1983 edition, Table 14.

Class I Rail:

Freight Cars:

1971-1981: AAR, *Statistics of Railroads of Class I*, December 1982, p. 10.

Locomotives:

1971-1981: *Ibid.*, *Statistics of Railroads of Class I*, December 1982, p. 9, line 19.

Passenger Cars and Pullman:

1971-1981: *Ibid.*, *Statistics of Railroads of Class I*, December 1982, p. 11, line 10.

Amtrak:

1971-1981: AAR, *Statistics of Railroads of Class I*, December 1982, p. 18.

Water: Merchant Vessels and Gross Tonnage:

1971-1977: DOC, *Merchants Fleets of the World*, 1977, p. 18; 1976, p. 44; 1975, p. 31; 1974, p. 19; 1973, p. 13; 1972, p. 13; 1971, p. 13; 1970, p. 12.
1978-1981: DOT, Maritime Administration, personal communication, MAR-573.

Table 11. Number of Fatalities by Mode, 1971-1982 (Cont.)

Liquid Pipeline:

1971-1981: DOT/TSC, *Transportation Safety Information Report*, 1981 Annual Summary.

1982: *Ibid.*, *Transportation Safety Information Report*, 1982 Annual Summary.

Gas Pipeline:

1971-1981: DOT/TSC, *Transportation Safety Information Report*, 1981 Annual Summary.

1982: *Ibid.*, *Transportation Safety Information Report*, 1982 Annual Summary.

Hazardous Materials:

1971: DOT/TSC, *Transportation Safety Information Report*, 1981 Annual Summary

1972-1982: *Ibid.*, *Transportation Safety Information Report*, 1982 Annual Summary

Table 15. Personal Consumption Expenditures by Transportation Sector, 1971-1981

1971-1976: U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts of the U.S.*, 1929-1976 Statistics, Table 2.4, lines 63-81.

1977-1981: *Ibid.*, *Survey of Current Business*, July 1982, Table 2.4, lines 63-81. (excluding line 67)

Table 16. Personal Consumption Expenditures by Type of Product, 1971-1981

1971-1976: U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts of the U.S.*, 1929-1976 Statistics, Table 2.4, lines 2, 11, 20, 23, 28, 44, 55, 63, 82, 98, 102, and 104.

1977-1981: *Ibid.*, *Survey of Current Business*, July 1982, Table 2.4.

Table 17. National Income by Transportation Sector, 1971-1981

1971-1976: U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Tables*, 1972-1976, Table 6.3B, lines 38-45.

1977-1981: *Ibid.*, *Survey of Current Business*, July 1982, Table 6.3B, lines 38-45.

Table 18. Average Annual Earnings Per Full-Time Employee by Transportation Sector, 1971-1981

1971-1976: U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts*, 1926-1976, Table 6.9B, lines 38-45.

1977-1981: *Ibid.*, *Survey of Current Business*, July 1982, Table 6.9B, lines 38-45.

Table 19. Wages and Salaries by Transportation Sector, 1971-1981

1971-1976: U.S. Department of Commerce, Bureau of Economic Analysis, *National Income and Product Accounts*, 1929-1976, Table 6.6B, lines 38-45.

1977-1981: *Ibid.*, *Survey of Current Business*, July 1982, Table 6.6B, lines 38-45.

Table 20. Employment in Transportation and Related Industries, 1971-1981 (Cont.)

Transportation Services:

1971-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 47, p. 719.

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 47, p. 176.

Equipment Manufacturing:

Aircraft and Parts:

1971-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 372, p. 363.

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 372, p. 91.

Motor Vehicles and Equipment:

1971-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 301, 371. Sum of motor vehicles and equipment and tires..

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 301 and 371. Sum of motor vehicles and equipment and tires.

Railroad Equipment:

1971-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 374, p. 381.

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 374, p. 94.

Ships and Boat Building and Repair:

1971-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 373, p. 372.

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 373, p. 93.

Other:

1971: *Ibid.*, *Employment and Earnings, United States, 1909-75*, sum of SIC 375 and 379, p. 332.

1972-1976: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, Sum of SIC 376 and 379.

Related Industries:

Automotive and Accessory Retailers:

1971: *Ibid.*, *Employment and Earnings, United States, 1908-1975*, sum of SIC 551, 2; p. 648 and SIC 553, p. 649.

1972-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 553, p. 763 and SIC 551, 2, p. 764.

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 551 and 553, p. 196. Sum of new and used automobile dealers and other auto and home supply stores.

Automotive Wholesalers:

1971-1976: *Ibid.*, *Employment and Earnings, United States, 1909-78*, SIC 501, p. 740.

1977-1981: *Ibid.*, *Supplement to Employment and Earnings, Revised Establishment Data*, June 1982, SIC 501, p. 183.

Table 20. Employment in Transportation and Related Industries, 1971-1981 (Cont.)

Total Civilian Labor Force:

1971-1981: *Ibid.*, U.S. DOC, *Statistical Abstract of the U.S.*, 103rd edition, Dec. 1982, Table 629 and similar tables in earlier editions.

Table 21. National Transportation and Economic Trends, 1971-1981

Passenger-Miles:

1971-1980: Summation of all modes from Table 6, p. 52. (This edition of NTS).

1981: Not available.

Ton Miles:

1971-1980: Summation of all modes from Table 7, p. 54. (This edition of NTS).

1981: Not available.

Population:

1971-1980: Department of Commerce, Bureau of the Census, *Statistical Abstract of the U.S.*, 102nd edition, December 1981, Table 8, p. 9.

1981: Department of Commerce, BOC, *Statistical Abstract of the U.S.*, 1982-83, Table 11, p. 12.

Industrial Production:

1971-1980: *Ibid.*, Bureau of Economic Analysis, *Survey of Current Business*, Vol. 61, No. 7, July 1981, p. S-2, and similar table in earlier editions.

1981: *Ibid.*, Bureau of Economic Analysis, *Survey of Current Business*, Vol 62, No. 7, July 1982, p. S-1.

Gross National Product:

1971-1980: *Ibid.*, Table 1.1, p. 11, and similar table in earlier editions.

1981: *Ibid.*, Table 1.1, p. 22.

Table 22. Expenditures and Overseas Travel by U.S. Residents and Foreign Visitors, 1971-1981

U.S. Residents - Overseas Travelers:

1971-1980: Department of Commerce, Bureau of the Census, *Statistical Abstract of the U.S.*, 102nd edition, December 1981, Table 414, p. 240.

1981; *Ibid.*, 103d edition, Dec. 1982, Table 412, p. 241.

Average Expenditures:

1971-1980: Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, May 1981, Table 6, p. 33 and similar table in earlier editions.

1981: *Ibid.*, June 1982, Table 6, p. 35.

Total Travel and Passenger Fare Transactions:

1971-1980: Department of Commerce, Bureau of the Census, *Statistical Abstract of the U.S.*, 102nd edition, December 1981, Table 414, p. 240.

1981: *Ibid.*, 103d edition, Dec. 1982, Table 412, p. 241.

Foreign Visitors to U.S.

1971-1980: *Ibid.*, Table 413, p. 239.

1981: *Ibid.*, 103d edition, Dec. 1982, Table 411, p. 240.

Table 25. Fuel Consumption by Mode of Transport, 1971-1981 (Cont.)

Transit:

Electricity:

1971-1977: Not available.

1978-1981: UMTA, Section 15 Reports, May 1981, June 1982, Nov. 1982, Sept. 1983. Table 11.1. Section 15 Reporting System began in 1978, data reported on a fiscal year basis.

Gallons of Motor Fuel:

1971-1977: APTA, *Transit Fact Book*, 1981 edition, Table 17.

1978-1981: UMTA, *Urban Mass Transportation Statistics, Section 15 Report*, May 1981, June 1982, Nov. 1982, Sept. 1983, Table 11.1. Section 15 Reporting System began in 1978, data reported on a fiscal year basis.

Pipelines:

1971-1974: American Gas Association, *Gas Facts*, 1975, Table 53.

1975: U.S. Department of the Interior, Bureau of Mines, *Natural Gas, Annual*, 1975, Table 6.

1976: U.S. Department of Energy, *Energy Data Reports, Natural Gas, Annual*, 1980, Table 10.

1977-1981: U.S. Department of Energy, *Natural Gas, Annual*, 1981, Table 13.

Total Non-Highway Use of Gasoline:

1971-1981: FHWA, *Highway Statistics*, 1981, Table MF-21 and similar table in earlier editions.

APPENDIX B

Glossary

ALL-CARGO CARRIER:

One of a class of air carriers holding certificates of public convenience and necessity (issued by the Civil Aeronautics Board) authorizing the performance of scheduled air freight, express, and mail transportation over specified routes as well as the conduct of nonscheduled operations, which may include passengers. These operations are conducted under 14 CFR 121.

ALL OPERATIONS:

Refers to all flight operations including test, training, ferry, scheduled and nonscheduled passenger and cargo service, both revenue and nonrevenue.

AVIATION GASOLINE (AVGAS):

All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D 910. Includes all refinery products within the gasoline range that are to be marketed straight or in blends as aviation gasoline without further processing (i.e., any refinery operation except mechanical blending). Also includes finished components in the gasoline range which will be used for blending or compounding into aviation gasoline.

CERTIFICATED CARRIER:

One of a class of air carriers holding certificates of public convenience and necessity issued by the CAB, authorizing the performance of scheduled air transportation over specified routes and a limited amount of nonscheduled operations. This general carrier grouping includes the all purpose carriers (i.e., the so-called passenger/cargo carriers) and the all-cargo carriers, and comprise all of the airlines certificated by the Board, except the supplemental air carriers. Certificated route air carriers are often referred to as "scheduled airlines," although they also perform nonscheduled service.

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY, "CC AND N":

A certificate issued to an air carrier under Section 401 of the Federal Aviation Act, by the Civil Aeronautics Board, authorizing the carrier to engage in air transportation.

COMMERCIAL OPERATOR:

A commercial operator is an air carrier certificated to engage in scheduled intrastate common carrier operations and private carriage in interstate operations. The intended interstate operations will not be in common carriage. A "CC and N" is not required of a commercial operator. These revenue operations are conducted under 14 CFR 121.

COMMUTER AIR CARRIERS:

Commuter air carriers are certificated air taxi operators who perform scheduled services, as defined by the CAB as "those operators who perform, pursuant to published schedules, at least five round trips per week between two or more points, or carry mail." These operations are conducted under 14 CFR 135.

MAJORS:

Carrier groups with annual operating revenues of \$1,000,000,000+. Included in this group are American, Braniff, Continental, Delta, Eastern, Northwest, Pan American, Republic, Trans World, United, USAir, and Western.

MEDIUM REGIONALS:

Carrier groups with annual operating revenues of \$0-\$9,999,999 (or that operate only aircraft with 60 seats or less or 18,000 pounds maximum payload or loss). Included in this group are AeroMech, Aerostar, Air Nevada, Air New England, Air North, Air North/Nenana, Altair, American Eagle, American International, American Trans Air, Apollo, Arista, Arrow, Aspen, Best, Big Sky, Britt, Cascade, Challenge, Cochise, Colgan, Elan, Emerald, Global, Golden Gate, Golden West, Great American, Gulf Air Transport, Guy-America, Imperial, Intercontinental, Jet Charter, Kodiak, L.A.B., Mid-South, Midstate, Mississippi Valley, Munz, NewAir, Northeastern, Overseas, Peninsula, Rich, Rocky Mountain, Sea Airmotive, Sky West, Sun Land, Swift Aire, T-Bird, Western Yukon, and Wright.

NAPHTHA-BASE JET FUEL:

A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees API and 10 to 90% distillation temperatures of 117 to 233 degrees C. Used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ramjet and petroleum.

NATIONALS:

Carrier groups with annual operating revenues of \$75,000,000-\$1,000,000,000. Included in this group are Air California, Air Florida, Airlift, Alaska, Aloha, Capitol, Flying Tiger/Metro Intl., Frontier, Hawaiian, Ozark, Pacific Southwest, Piedmont, Southwest, Texas International, Transamerica, Wien and World.

NONOPERATING INCOME AND EXPENSES:

Income and loss of commercial ventures not part of the common carrier air transport services of the accounting entity; other revenues and expenses attributable to financing or other activities that are extraneous to and not an integral part of air transportation or its incidental services.

NONREVENUE FLIGHTS:

Flights and flight stages involving training, test, technical, positioning for scheduled flights, ferry, company business, publicity and forced returns for which no remuneration is received.

NONSCHEDULED FREIGHT:

Property carried in charter operations.

NONSCHEDULED SERVICE:

Revenue flights not operated in regular scheduled service, principally contract and charter operations.

PASSENGER SERVICE EXPENSES:

Costs of activities contributing to the comfort, safety, and convenience of passengers while in flight and when flights are interrupted. Includes salaries and expenses of cabin attendants and passenger food expense.

PASSENGER REVENUE TON-MILE:

One ton of revenue passenger weight (including all baggage) transported 1 mile. The passenger weight standard for both "Domestic" and "International" operation is 200 pounds.

REVENUE PASSENGER ENPLANEMENTS:

The total number of passengers boarding aircraft derived from a standard number of passenger enplanements per on-line originating passenger.

REVENUE PASSENGER LOAD FACTOR:

The percent that revenue passenger-miles are of available seat-miles in revenue passenger services, representing the proportion of aircraft seating capacity that is actually sold and utilized.

REVENUE PASSENGER-MILE:

One revenue passenger transported 1 mile in revenue service. Revenue passenger-miles are computed by summation of the products of the revenue aircraft- miles flown on each interairport flight stage multiplied by the number of passengers carried on that flight stage.

REVENUE TON-MILE OF FREIGHT:

One short ton of freight transported 1 statute mile. Ton-miles are computed by summation of the products of the aircraft miles flown on each interairport flight stage multiplied by the number of tons carried on that flight stage.

SCHEDULED SERVICE:

Transport service operated over an air carrier's certificated routes, based on published flight schedules, including extra sections and related nonrevenue flights.

SCHEDULED ALL-CARGO CARRIER:

One of a class of air carriers holding Certificates of Public Convenience and Necessity, issued by the CAB, authorizing the performance of scheduled air freight, express, and mail transportation over specified routes, as well as the conduct of nonscheduled operations (charter), which may include passengers.

SUPPLEMENTAL AIR CARRIER:

One of a class of air carriers now holding certificates, issued by the CAB, authorizing them to perform passenger and cargo charter services supplementing the scheduled service of the certificated route air carriers. Supplemental air carriers are often referred to as "nonskeds," i.e., nonscheduled carriers.

MUNICIPAL MILEAGE:

Roads inside city, municipal district, or urban boundaries: includes extensions of the state primary system, and state secondary roads within delimited incorporated and unincorporated places, and mileage under local control; e.g., local city streets, roads, and public ways not under State control within such places.

RURAL MILEAGE:

Roads outside city, municipal district, or urban boundaries.

STATE AND LOCAL EXPENDITURES:

Disbursements for capital outlay, maintenance and traffic surfaces, administration and research, highway law enforcement and safety, and interest on debt.

STATE PRIMARY SYSTEM:

This refers to highways that have been so officially designated by States. They encompass the principal intercounty, intercity and interstate roads of all states.

STATE SECONDARY ROADS:

This mileage is reported in the tables for the States (taken from the Highway Statistics 1970 Bulletin) that have designated both a primary and secondary system.

AUTOMOBILE TERMINOLOGY

ACCIDENT:

An accident is an unintended event that produces injury or damage. The word "injury" includes "fatal injury."

COMPACT-SIZE CAR:

An automobile industry designation usually consisting of cars with a wheelbase between 101 and 111 inches. After 1975 these are included in the SMALL category

FATAL ACCIDENT:

A fatal accident is any motor vehicle or other road vehicle accident that results in fatal injuries to one or more persons.

INTERMEDIATE-SIZE CAR:

An automobile industry designation usually consisting of cars with a wheelbase between 112 and 118 inches.

LOCAL RURAL ROADS:

Streets outside urban boundaries other than principal arteries of travel.

EXPENDITURES--SCHOOL BUS:

This is the total expenditure for operation, maintenance, insurance, depreciation, operating taxes, licenses, and operating rents for vehicles used as school buses.

INTERCITY BUS--CLASS I:

An interstate motor carrier of passengers with an average annual gross revenue of at least \$1,000,000 is defined by the ICC as a Class I carrier.

INTERCITY BUS--TOTAL:

This figure includes Class I, II, and III interstate carriers, all of which report to the Interstate Commerce Commission, and intrastate carriers.

MOTORBUS:

Rubber-tired, self-propelled transit vehicle with fuel supply carried on board the vehicle.

REVENUE PASSENGERS:

Passengers on a commercial bus by or for whom a fare is paid.

REVENUE PASSENGER-MILES:

One revenue passenger carried 1 mile generates 1 passenger-mile. The revenue passenger miles reported thus represent the total distance traveled by all bus passengers.

SCHOOL AND NONREVENUE BUS:

Passengers using these are not directly charged for transportation, either on a "per passenger" or on a "per vehicle" basis.

TAXES ASSIGNABLE TO OPERATIONS:

Includes the amount of federal, state, county, municipal, and other taxing district taxes which relate to motor carrier operations and property use therein (except income taxes on ordinary income).

VEHICLE-MILE:

One vehicle traveling 1 mile generates 1 vehicle-mile. Thus, total vehicle-miles is the total mileage traveled by all vehicles.

TRUCK TERMINOLOGY

AVERAGE LENGTH OF HAUL (MILES):

The total number of ton-miles divided by the total number of tons carried.

COMMUTER RAIL:

Typically characterized as urban passenger train service for local short distance travel between a central city and adjacent suburbs. It does not include "heavy" rail rapid transit or light rail/streetcar service. Service of a predominantly intercity nature is excluded, except where a portion of it is operated under contract to a public transit agency for commuter purposes.

DIAL-A-RIDE OR DEMAND RESPONSE (DR) VEHICLES:

Rubber-tired passenger vehicles operated on city streets, propelled by gas, gasoline, or diesel engines, equipped to provide personal demand transit service, normally upon dispatch, and used exclusively for this service.

ELECTRIFIED ROADWAY (RAILROAD):

Track along which a locomotive or rail motor car can receive electrical power generated at a remote location.

FERRYBOATS (FB):

Vessels for carrying passengers and/or vehicles over a body of water. The vessels generally are steam or diesel powered conventional ferry vessels. They also may be hovercraft, hydrofoils, and other high-speed vessels.

FIXED GUIDEWAY MODES:

Any public mass transportation service which utilizes a separate right-of-way or rails. These modes include but are not limited to fixed rail, automated guideway transit, and exclusive facilities for buses and other high occupancy vehicles (i.e., motor buses on "exclusive" and "controlled access" rights-of-way). By statute, the fixed guideway category for Section 9 purposes also includes ferry boat and fixed catenary systems (e.g., trolley bus) which can share a right-of-way with other modes.

HEAVY RAIL:

Rail rapid transit services.

LIGHT RAIL:

Streetcar, trolley car, or light surface rail operations, including private right-of-way operations, typified by low platform stations, one-man operations at all times, capability for on-board fare collection, and actual on-board fare collection most of the time.

LINE MILES:

(See "Miles of Directional").

REVENUE PASSENGERS CARRIED:

The total number of transit rides from origin to destination taken by passengers. Thus, a multi-vehicle ride would be counted only once. A ride by a nonrevenue passenger would not be counted.

REVENUE VEHICLE-MILES:

One vehicle (bus, trolley car, subway car, etc.) traveling 1 mile while revenue passengers are on board generates 1 revenue vehicle-mile. The revenue vehicle-miles reported thus represent the total mileage traveled by vehicles in scheduled or unscheduled revenue-producing services.

SCHOOL BUSES:

Type I and Type II school vehicles as defined in Highway Safety Program Standard No. 17, used exclusively to transport students, personnel, and equipment.

STREETCARS (SC):

Relatively lightweight passenger rail cars operating singly or in short trains or fixed rails in right-of-way that is not always separated from other traffic for much of the way. Streetcars do not necessarily have the right-of-way at grade crossings with other traffic.

TROLLYBUSES (TB):

Rubber-tired, electrically powered passenger vehicles operated on city streets drawing power from overhead lines with trolleys.

UNLINKED PASSENGER TRIPS:

The number of passengers who board public transportation vehicles. Passengers are counted each time they board a vehicle, even though more than one vehicle may be used for a single journey from origin to destination.

VEHICLE MILES:

The total distance traveled by revenue vehicles, including both revenue miles and deadhead miles.

VEHICLE OPERATIONS EXPENSES:

The costs associated with operating vehicles, such as operators' wages and fringe benefits, fuel, tires, and vehicle licensing.

WATER TRANSPORT TERMINOLOGY

BULK CARRIER:

Carries dry cargo in bulk, stowed in cargo holds within vessel hull. Cargo is poured aboard from elevator spouts, conveyor belts or slurry pipelines. It is unloaded using grab buckets, conveyor systems or vacuum equipment. Only nine vessels, mostly converted tankships are presently eligible for domestic service. Commonly referred to as "dry bulker."

IMPORTS:

Inbound international freight.

INLAND AND COASTAL WATERWAYS INLAND AND COASTAL CHANNELS:

These terms include the Atlantic Coast Waterways, the Atlantic Intracoastal Waterway, the New York State Barge Canal System, the Gulf Coast Waterways, the Gulf Intracoastal Waterway, the Mississippi River System (including the Illinois Waterway), Pacific Coast Waterways, the Great Lakes, and all other channels (waterways) of the United States, exclusive of Alaska, that are usable for commercial navigation.

INTERNAL TRAFFIC:

Traffic is internal when the entire movement between ports or landings takes place on inland waterways. The following types of movements are also termed internal: movements involving carriage on both inland waterways and waters of the Great Lakes, inland movements that cross short stretches of open waters that link inland systems; marine products, sand and gravel taken directly from beds of the oceans, the Gulf of Mexico and important arms thereof, and movements between offshore installations and inland waterways.

INTERNATIONAL (FOREIGN) FREIGHT:

Movements between the United States and foreign countries and between Puerto Rico, the Virgin Islands and foreign countries. Trade between U.S. territories and possessions (i.e., Guam, Wake, American Samoa, etc.) and foreign countries is excluded. Traffic to or from the Panama Canal Zone is included.

INTERNATIONAL PASSENGER:

Any person traveling on a waterborne public conveyance between the United States and foreign countries and between Puerto Rico and the Virgin Islands and foreign countries.

INTRATERRITORIAL TRAFFIC:

Traffic between ports in Puerto Rico and the Virgin Islands, which are considered as a single unit.

LAKELIKE OR GREAT LAKES:

These terms apply to traffic between U.S. ports on the Great Lakes system. The Great Lakes system is treated as a separate system rather than as a part of the inland system.

LOCAL:

Movements of freight within the confines of a port, whether the port has only one or several arms or channels, except car-ferry and general ferry, are termed "local." The term is also applied to marine products, sand, and gravel taken directly from the Great Lakes.

MARITIME CARRIERS:

Maritime carriers operate on the open sea; i.e., their operations must include a foreign or international component and may include a domestic component.

TUG:

A strongly built, self-propelled boat used for towing and pushing.

RAILROAD TERMINOLOGY

AMTRAK (AMERICAN RAILROAD TRACKS):

Operated by the National Railroad Passenger Corporation of Washington, D.C. This rail system was created by President Nixon in 1970 and was given the responsibility for the operation of intercity, as distinct from suburban, passenger trains between points designated by the Secretary of Transportation.

AVERAGE HAUL:

The average distance in miles that 1 ton is carried. It is computed by dividing the number of ton-miles generated by the number of tons carried to generate that number of ton-miles.

AVERAGE PASSENGER TRIP LENGTH:

Calculated by dividing the number of revenue passenger miles by the number of revenue passengers carried.

CAR MILEAGE:

Movement of a car 1 mile is a car-mile.

Class I Railroad:

A railroad with an annual operating revenue of greater than \$5,000,000. Effective January 1, 1976, the minimum annual operating revenue requirement was raised to \$10,000,000; on January 1, 1978, the requirement was raised to \$50,000,000.

COMMUTATION TICKET:

A ticket intended for use by a person traveling on a daily basis, i.e., to and from work; such a ticket is typically valid for an extended time period (i.e., a week or a month); the charge for such a ticket reflects a discount from the sum of the one-way fares that would be paid by the ticket-holder for the period of validity in the absence of such a reduced-rate ticket.

EXPRESS REVENUE:

Revenue from transportation of express shipments and from the use of facilities on trains and at stations incidental to such transportation.

FREIGHT REVENUE:

Revenue from the transportation of freight and from the exercise of transit, stop-off, diversion, and reconsignment privileges, as provided for in tariffs.

REVENUE PASSENGERS CARRIED--COMMUTATION:

Number of one-way trips made by persons holding commutation tickets.

REVENUE PASSENGERS CARRIED--OTHER THAN COMMUTATION:

Number of one-way trips by passengers paying their fares at other than commutation ticket rates; this excludes passengers lawfully traveling without paying.

REVENUE PASSENGER-MILE:

One revenue passenger traveling 1 mile generates 1 revenue passenger-mile. The revenue passenger-miles reported thus represent the total distance traveled by all railroad passengers.

REVENUE TON-MILES:

The product of weight of the contents of a freight car in tons and the distance transported in miles; i.e., n tons moving m miles generate $n \times m$ revenue ton-miles.

TOTAL OPERATING REVENUES:

The amount or money that carriers become entitled to receive from transportation and from operations incident thereto.

OIL PIPELINE TERMINOLOGY

COKE:

The residue left by petroleum which has been distilled to dryness.

CRUDE OIL:

A mixture of hydrocarbons that exists in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface-separating facilities.

CRUDE OIL GATHERING LINES (PIPELINE SYSTEMS):

A network of pipelines transporting crude oil from individual wells to compressor station, processing point, or main trunk pipeline.

CRUDE OIL TRUNK LINES (PIPELINE SYSTEMS):

One of three types of pipeline network that is used to transport crude oil to the refineries for processing.

CRUDE RUNS:

Amount of crude actually processed by the refiner for the production of petroleum products, as distinct from capacity.

OTHER DISTILLATE FUEL OILS:

All other refined petroleum products not included in any other category and which, when produced in conventional distillation operations, have a boiling range from 10% point at 167 degrees C to 90% point at 375 degrees C. Included are products known as No. 1 and No. 4 distillate fuel oils and diesel oils.

PETROLEUM:

A material occurring naturally in the earth and predominantly composed of mixtures of chemical compounds of carbon and hydrogen with or without other nonmetallic elements such as sulfur, oxygen, nitrogen, etc. Petroleum may contain, or be composed of, such compounds in the gaseous, liquid, and/or solid state, depending on the nature of these compounds and the existent conditions of temperature and pressure.

PETROLEUM CONSUMPTION, ELECTRIC UTILITY SECTOR:

Domestic demand for all fuel oils at electric utilities.

PETROLEUM CONSUMPTION, INDUSTRIAL SECTOR:

Domestic demand for petroleum products for use by establishments engaged in processing unfinished materials into another form or product. Excludes industrial space heating.

PETROLEUM CONSUMPTION, "OTHER" SECTOR:

Domestic demand for miscellaneous products and for some agricultural uses.

PETROLEUM CONSUMPTION, RESIDENTIAL AND COMMERCIAL:

Domestic demand for petroleum products by private households and non-manufacturing establishments. Includes industrial space heating and road paving.

PETROLEUM CONSUMPTION, TRANSPORTATION SECTOR:

Domestic demand for petroleum products for on-highway use, aircraft and vessel bunkering, and railroad use.

REFINED PRODUCT TRUNK LINES (PIPELINE SYSTEMS):

One of three types of pipeline network that is used to transport refined petroleum products (i.e., gasoline, kerosene, residual oil, etc.) from the refineries to local distribution centers near large market areas.

RESIDUAL FUEL OIL:

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grade Nos. 5 and 6 oil, heavy diesel oil, Navy Special Fuel Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

ENERGY TERMINOLOGY

BTU--BRITISH THERMAL UNIT:

The amount of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit.

COAL:

A solid, brittle, more or less distinctly stratified combustible carbonaceous rock formed by partial to complete decomposition of vegetation. It varies in color from dark brown to black, is not fusible without decomposition, and is very insoluble. Coals can be ranked or divided into the following classes: (1) lignite, (2) sub-bituminous, (3) bituminous, (4) semibituminous, (5) semianthracite, and (6) anthracite.

COAL SLURRY:

Finely crushed coal mixed with sufficient water to form a fluid. To use coal slurry pumped through a pipeline as fuel, expensive drying and dewatering pretreatment is necessary.

COAL TAR:

A gummy, black substance produced as a byproduct when bituminous coal is distilled.

CONDENSATE:

The liquid resulting when a vapor is subjected to cooling and/or pressure reduction. Also, liquid hydrocarbons condensed from gas and oil wells.

FOSSIL FUELS:

Any naturally occurring fuel of an organic nature such as coal, crude oil, or natural gas.

IMPORTS:

All imports of crude petroleum, natural gas liquids, and petroleum products from foreign countries and receipts from Guam, Puerto Rico, the Virgin Islands, and the Hawaiian Trade Zone. The commodities included are crude oil, unfinished oils, plant condensate, and refined petroleum products.

INVENTORIES:

The amounts of crude oil, unfinished oil, petroleum products, and natural gas liquids held at refineries, at natural gas processing plants, in pipelines, at bulk terminals operated by refining and pipelines companies, and at independent bulk terminals. Crude oil held in storage on leases is also included; these stocks are known as primary stocks. Secondary stocks in those held by jobbers, dealers, service station operators, and consumers are excluded. Prior to 1975, stocks held at independent bulk terminals were classified as secondary stocks.

PIPELINE:

A line of pipe with pumping machinery and apparatus for conveying a liquid or gas.

GASOLINE:

A refined petroleum product which, by its composition, is suitable for use as a fuel in internal combustion engines.

GROSS NATIONAL PRODUCT (GNP):

Total value at market prices of all goods and services produced by the nation's economy. As calculated quarterly by the Department of Commerce, Gross National Product is the broadest available measure of the level of economic activity.

LOAD FACTOR:

The ratio of actual load to full capacity.

MILE (STATUTE):

5280 feet.

MOTOR GASOLINE:

A mixture of volatile hydrocarbons suitable for operation of an internal combustion engine whose major components are hydrocarbons with boiling points ranging from 78 to 217 degrees Centigrade whose source is distillation of petroleum and cracking, polymerization, and other chemical reactions by which the naturally occurring petroleum hydrocarbons are converted into those that have superior fuel properties.

PSI:

Pounds per square inch.

TOTAL VEHICLE-MILES OPERATED:

Sum of all passenger vehicle-miles operated in line (regular) service, special (charter) service, and nonrevenue service. When vehicles are operated in trains, each vehicle is counted separately: an eight-vehicle train operating for 1 mile equals 8 vehicle-miles.

TRANSPORTATION SECTOR:

Consists of both private and public passenger and freight transportation as well as government transportation, including military operations.

BIBLIOGRAPHY

- American Bus Association, *Bus Facts*, 1982 edition, Washington, D.C.
- American Gas Association, *Gas Facts*, 1971, 1981, Washington, D.C.
- American Petroleum Institute, *Basic Petroleum Data Book*, Jan 1983, Washington, D.C.
- American Public Transit Association, *Transit Fact Book*, 1981 edition, Washington, D.C.
- American Trucking Association (ATA), *Truck Taxes by State*, 30th Annual Edition, March 1982, Washington, D.C.
- ATA, *American Trucking Trends 1979-1980*, Washington, D.C.
- American Waterway Operators, *Inland Waterborne Commerce Statistics*, 1979, Washington, D.C.
- Association of American Railroads (AAR), *Statistics of Railroads of Class I in the U.S., Years 1971 to 1981*, December 1982, Washington, D.C.
- AAR, *Operating & Traffic Statistics*, August 1981, Washington, D.C.
- AAR, *Yearbook of Railroad Facts*, 1971, 1982 editions, Washington, D.C.
- Association of Oil Pipelines, *Shifts in Petroleum Transportation*, 1981, Washington, D.C.
- British Petroleum Co., *BP Statistical Review of the World Oil Industry*, 1981, London, England.
- Civil Aeronautics Board (CAB), *Air Carrier Financial Statistics*, December 1981 and 1982, Washington, D.C.
- CAB, *Air Carrier Traffic Statistics*, December 1981 and 1982, Washington, D.C.
- CAB, *Fuel Cost and Consumption*, Twelve months ended December 31, 1980 and 1979, Washington, D.C.
- CAB, *Handbook of Airline Statistics*, 1973 edition, December 1978 Supplement, Washington, D.C.
- Edison Electric Institute (EEI), *Statistical Yearbook*, 1971, 1978, Washington, D.C.
- Interstate Commerce Commission (ICC), 87th, 88th, 96th, *Annual Report of the ICC*; 1973, 1974, 1982, Washington, D.C.
- ICC, *Class I Railroads, Financial and Operating Statistics, Statement Number 100*; December 31, 1977; December 31, 1978; Washington, D.C.
- ICC, *Freight and Commodity Statistics*, Motor Carriers, 1974, Washington, D.C.
- ICC, *Transport Economics*, Vol III, No. 2, 1976; Vol. V, No. 1, 1978, Washington, D.C.
- ICC, *Transport Statistics in the United States*, Private Car Lines, Part 4, December 31, 1979, Washington, D.C.

Bibliography (Cont)

- DOE/EIA, *Natural Gas Annual*, 1981, Washington, D.C.
- DOE/EIA, *Coal Distribution*, Jan-Dec 1981, Washington, D.C.
- DOE/EIA, *Statistics of Interstate Natural Gas Pipeline Companies - 1981*, Washington, D.C.
- DOE/EIA, *Monthly Energy Review*, Washington, D.C.
- DOE, *Mineral Industry Surveys; Crude Oil and Product Pipelines*, Triennial, January 1, 1977, Washington, D.C.
- U.S. Department of Labor (DOL), Bureau of Labor Statistics, *Employment and Earnings*, 1909-1978, Bulletin 1312-11, July 1979, Washington, D.C.
- DOL, *Supplement to Employment and Earnings, Revised Establishment Data*, August 1981, June 1982.
- DOL, Bureau of Labor Statistics, *Monthly Labor Review*, Vol. 100, No. 9, September 1977; Vol. 101, No. 3, March 1978, Washington, D.C.
- DOL, *Handbook of Labor Statistics*, 1977, Washington, D.C.
- U.S. Department of Transportation (DOT), Federal Highway Administration, *Highway Statistics*, 1971, 1980, 1981, Washington, D.C.
- DOT, *Highway Statistics Summary to 1975*, October 1977, Washington, D.C.
- DOT, Federal Highway Administration, Bureau of Motor Carrier Safety, *Accidents of Motor Carriers of Property*, 1980-1981, Washington, D.C.
- DOT, Federal Highway Administration, Office of Highway Planning, *Cost of Owning and Operating Automobiles and Vans*, 1982, Washington, D.C.
- DOT, Federal Aviation Administration, FAA *Statistical Handbook of Aviation*, Calendar Year 1981, Washington, D.C.
- DOT, Office of Management Systems, *General Aviation Activity and Avionics Survey*, December 1982, Washington, D.C.
- DOT, Maritime Administration, *Merchant Fleets of the World*, December 1981, Washington, D.C.
- DOT, Research and Special Programs Administration, *Transportation Safety Information Report*, 1981 Annual Summary, September 1982; 1982 Annual Summary, June 1983.
- DOT, NHTSA/FHWA, *Highway Safety*, 1980, Washington, D.C.
- DOT, Federal Highway Administration, Bureau of Motor Carrier Safety, *Accidents of Motor Carriers of Passengers*, 1980-1981, Washington, D.C.
- DOT, Urban Mass Transportation Administration, *National Urban Mass Transportation Statistics, Section 15 Reports*, May 1981, June 1982, Nov. 1982, Sept. 1983, Washington, D.C.

