National Transportation Statistics

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ANNUAL REPORT

Prepared by

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Transportation Systems Center
Transportation Information Division
Statistical Information Reporting Branch
Kendall Sq., Cambridge MA 02142

USER SURVEY
NATIONAL TRANSPORTATION STATISTICS (NTS)

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15. Supplementary Notes

16. Abstract

This report is a summary of selected national transportation statistics from a wide variety of government and private sources. Included are cost, inventory, and performance data describing the passenger and cargo operations of the following modes: air carrier, general aviation, automobile, bus, truck, local transit, rail, water, oil pipeline, and gas pipeline. The report includes basic descriptors of U.S. transportation, such as operating revenues and expenses, number of vehicles and employees, vehicle miles and passenger miles, etc. A supplementary section includes Transportation and the Economy and Energy in Transportation. Energy in Transportation is divided into four parts: Energy Consumption, Energy Transport, Energy Intensiveness, and Energy Supply and Demand. Also included are the operating costs of automobiles of different sizes. In this edition, the selected data cover the period 1968 through 1978/1979.

17. Key Words	18. Distribution Statement
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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 1968-1978. Energy consumption and supply-and-demand data cover the same period and extend back to 1950.

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
Ton-Miles
Number of Vehicles
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 is shaded and no data are shown. Dotted lines indicate alternate groupings, e.g., "LIGHT RAIL" is contained in both "LOCAL TRANSIT" and "RAIL PASSENGER."

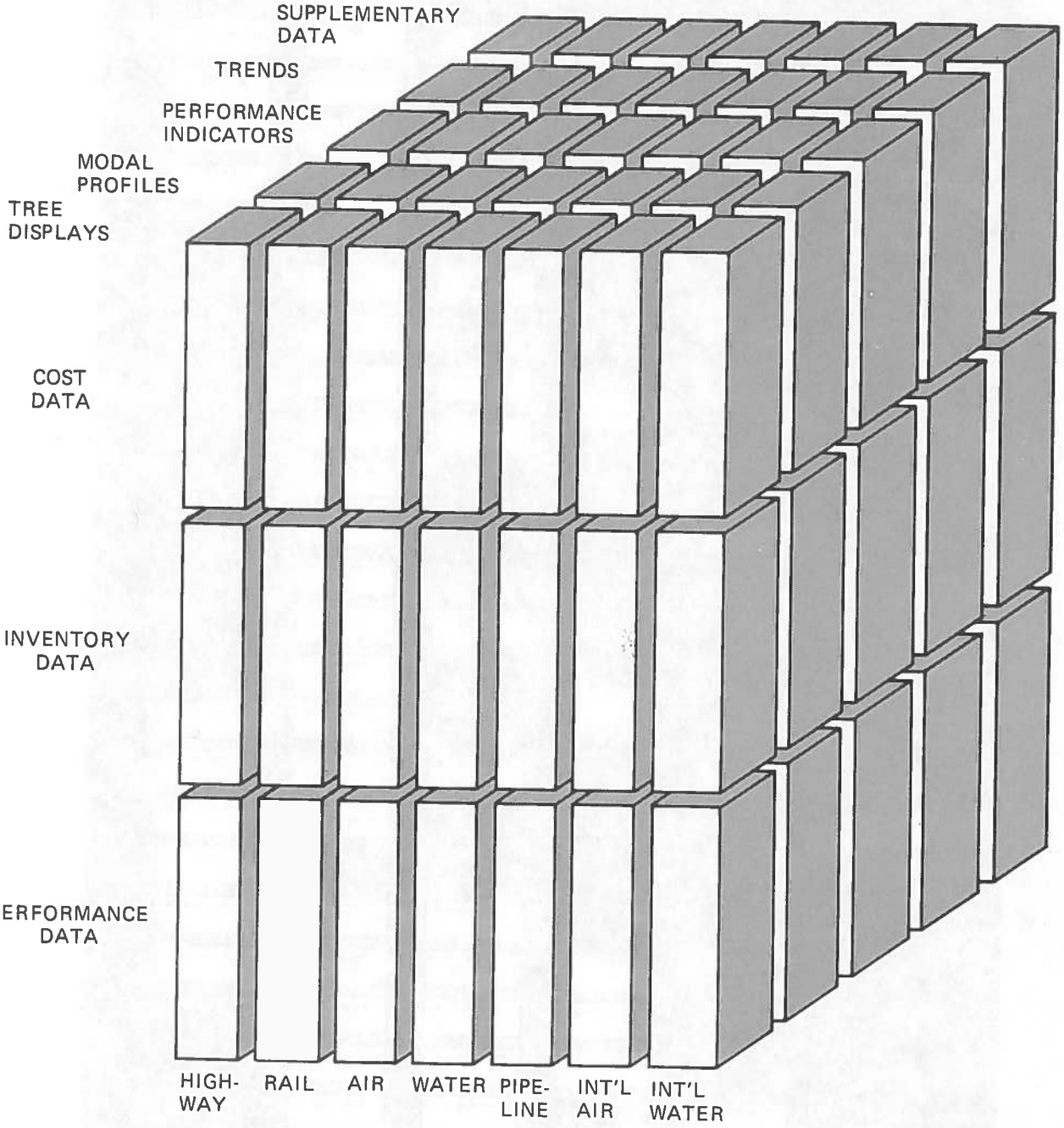
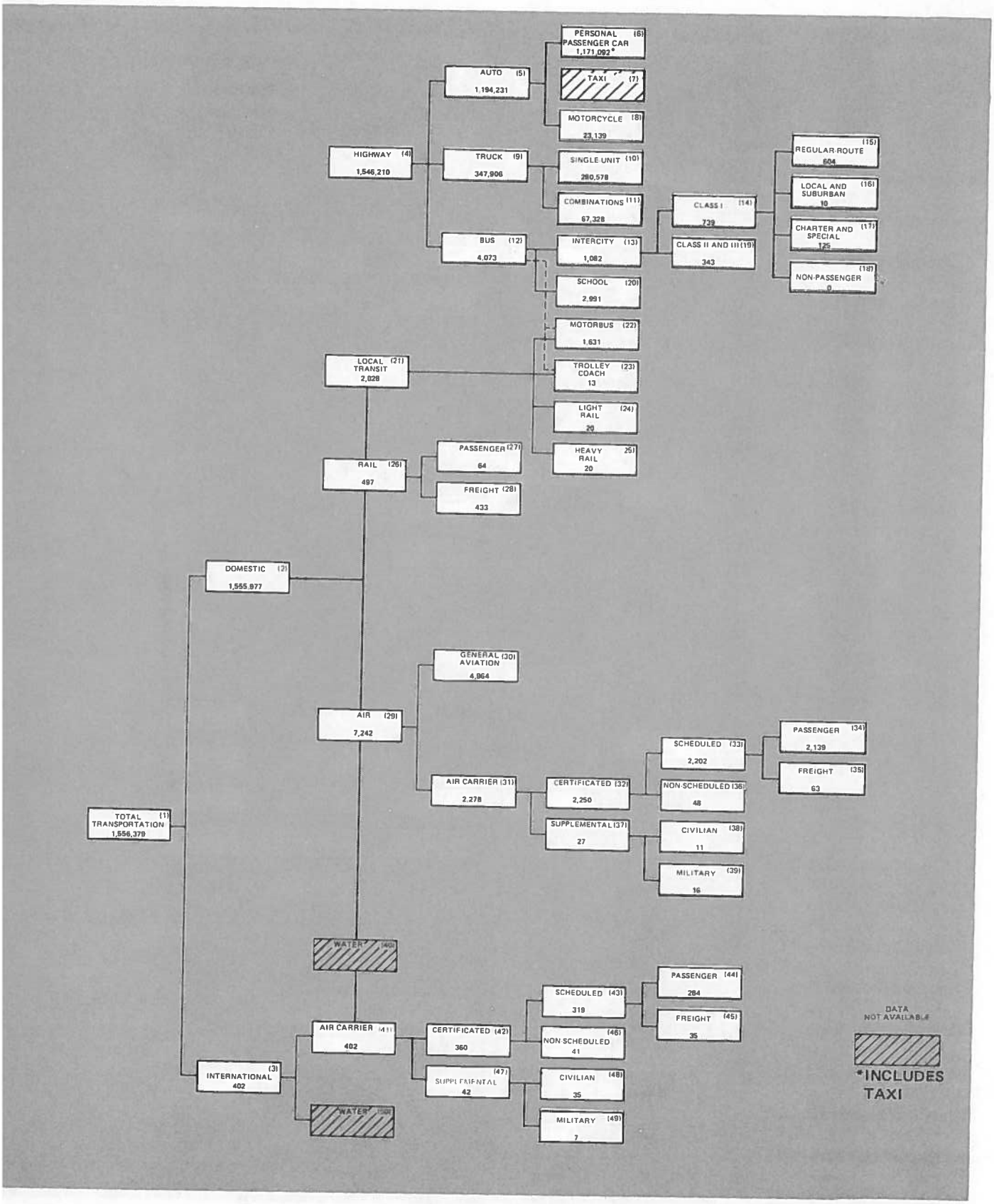


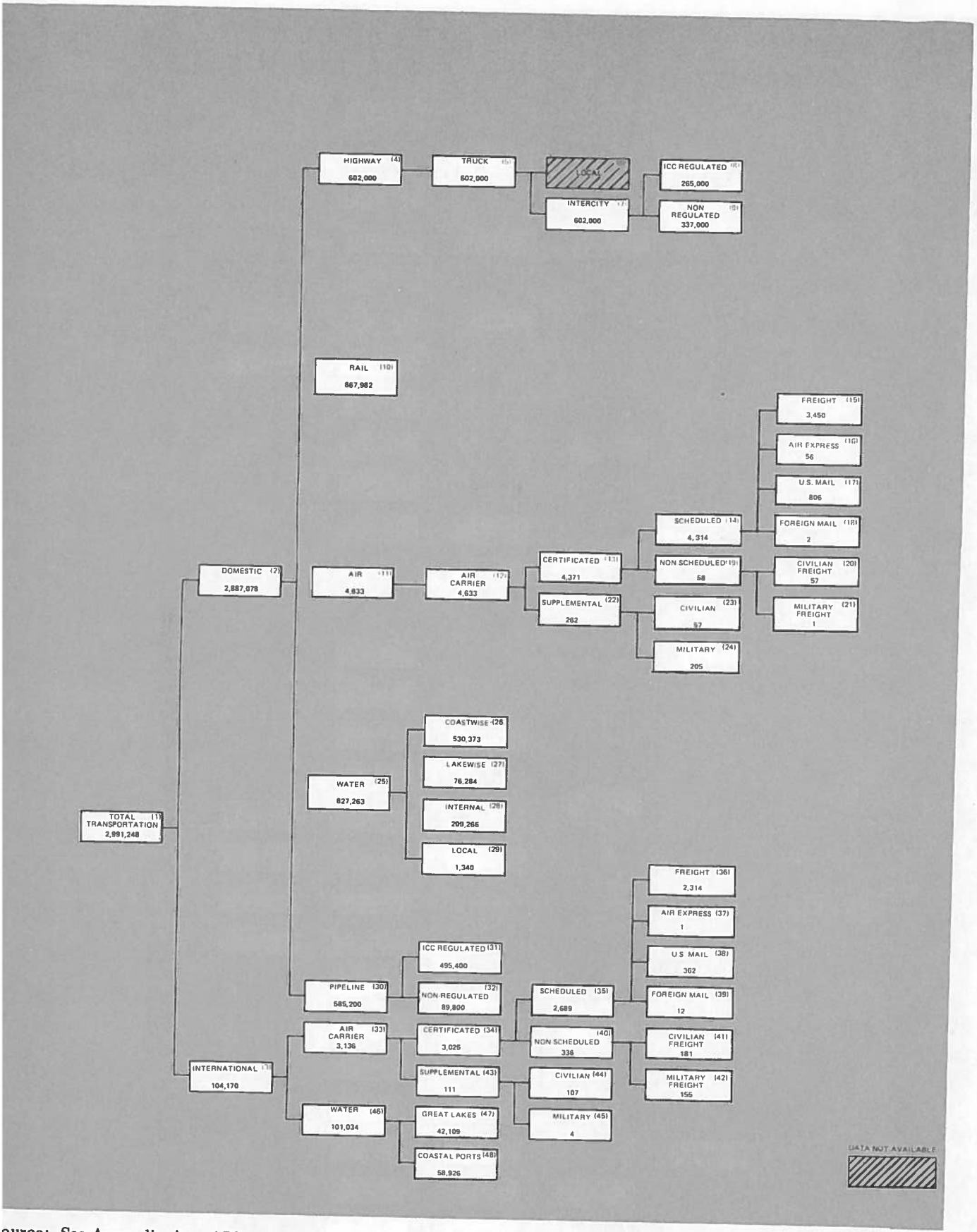
Figure 1. Organization of the Data

TREE DISPLAYS
1978



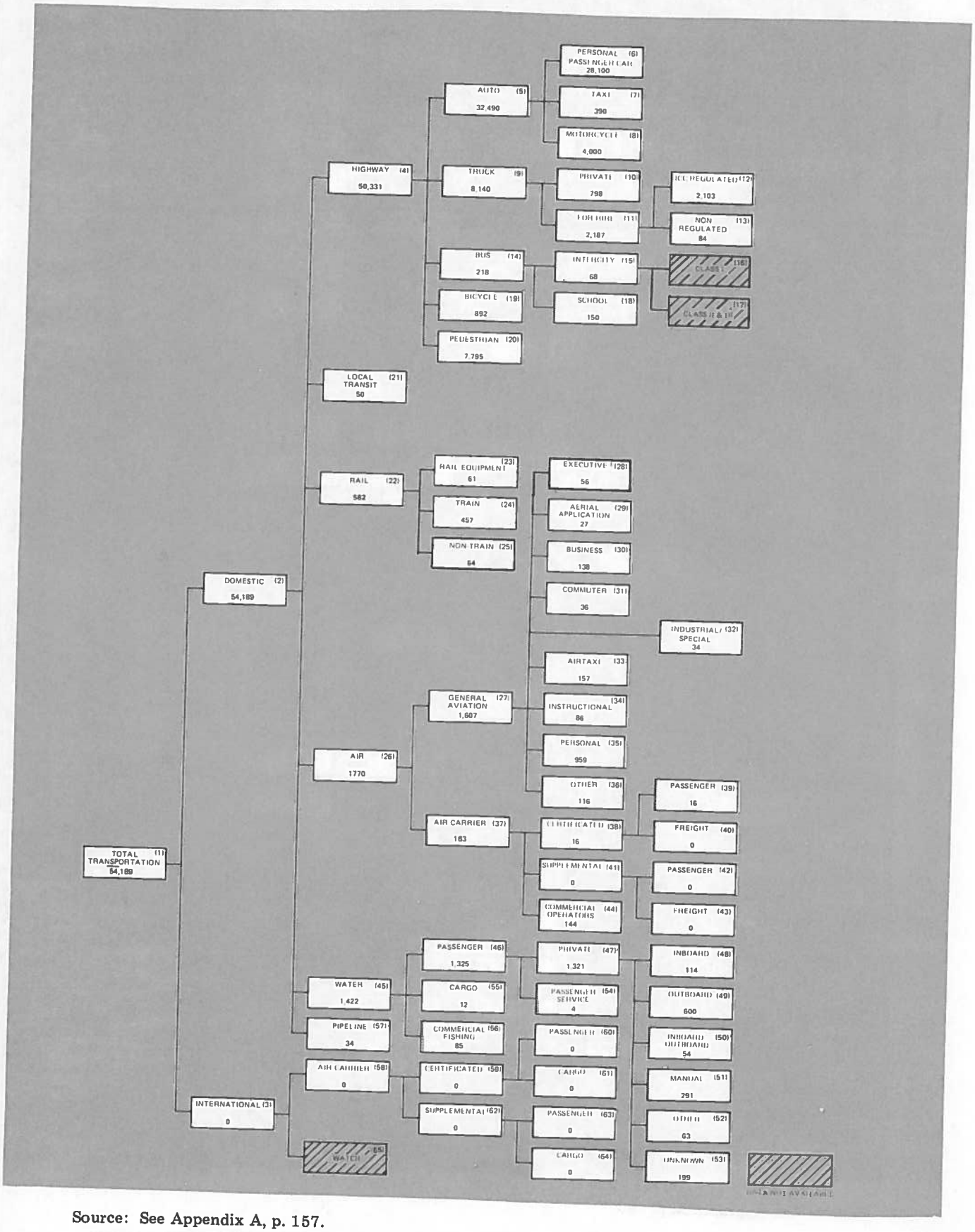
Source: See Appendix A, p. 148.

Figure 4. Vehicle-Miles (Millions) — 1978



ource: See Appendix A, p. 152.

Figure 6. Cargo Ton-Miles (Millions) - 1978



Source: See Appendix A, p. 157.

Figure 8. Number of Fatalities — 1978

MODAL PROFILES
1968, 1977 & 1978

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.

For example:

Air Carrier Profile

1977	
11,041.0k	← reference letter k also applies to the two subsequent data elements
504.1	
11,545.1	
3,056.6m	← reference letter m 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 1977-1978 column refers to the usual percent difference between 1977 data and 1978 data. The average annual percent change 1968-1978 is equal to C x 100, where C is obtained from the following relationship: $D_{78} = D_{68} (1 + C)^{10}$. (Note: D_{68} and D_{78} refer to 1968 and 1978 data, respectively; C is the change; and the relationship is derived from the compound interest formula.)

AIR CARRIER PROFILE (Cont.)

	1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
Aircraft Revenue-Hours (thousands)					
Domestic					
Certificated, all services	4,805.4n*	5,294.2q*	5,499.3q*	27.6	3.9
Scheduled service	4,686.5	5,152.9	5,380.3	1.4	4.4
Nonscheduled service	118.9	141.3	119.0	0.0	-15.9
Supplemental	177.1gg	74.1s	85.9s	-7.0	15.9
International					
Certificated, all services	1,132.1t*	745.6u*	735.3u*	-4.2	-1.4
Scheduled service	882.5	646.0	651.4	-3.0	0.8
Nonscheduled service	249.6	99.6	83.9	-10.3	-15.8
Supplemental	131.2gg	95.4s	93.5s	-3.3	-2.0
Total	6,245.8*	6,209.3	6,414.0*	0.3	3.3
Revenue Passenger-Miles (millions)					
Domestic					
Certificated, all services	92,111.7n*	163,218.7q	187,812.4q	7.4	15.0
Scheduled service	87,507.7	156,609.2	182,669.2	7.6	16.6
Nonscheduled service	4,604.0	6,609.5	5,143.1	1.1	-22.2
Supplemental	1,620.3gg	1,015.6s	1,267.2s	-2.4	24.8
International					
Certificated, all services	37,925.6t*	42,862.8u	49,184.9u	2.6	14.8
Scheduled service	26,450.6	36,609.6	44,111.9	5.3	20.5
Nonscheduled service	11,475.0	6,253.2	5,073.0	-7.8	-18.9
Supplemental	7,250.6gg	8,967.8s	8,731.8s	1.9	-2.6
Total	138,908.2*	216,064.9*	246,996.3*	5.9	14.3
Revenue Passenger Enplanements (millions)					
Domestic					
Certificated, all services	n/a	225.9q*	257.1q*	—	13.8
Scheduled service	145.8n	222.3	254.0	5.7	14.3
Nonscheduled service	n/a	3.6	3.1	—	-13.9
International					
Certificated, all services	n/a	19.8u*	22.3u*	—	12.6
Scheduled service	16.4t	18.0	20.8	2.4	15.1
Nonscheduled service	n/a	1.8	1.5	—	-15.9
Total	n/a	245.7*	279.4*	—	13.7
Revenue Passenger Load Factor (%)					
Domestic					
Certificated scheduled service	52.4n	55.8q	61.0q	1.5	9.3
International					
Certificated scheduled service	53.4t	56.4u	63.7u	1.8	7.3
Total	52.6v	55.9w	61.5w	1.6	10.0
Revenue Ton-Miles of Freight (millions)					
Domestic	2,216.7n*	3,389.4q*	3,769.0q*	5.5	11.2
Certificated, all services	1,918.3	3,153.9*	3,507.4*	6.2	11.2
Scheduled service	1,670.6	3,084.2	3,449.7	7.5	11.9
Nonscheduled service	247.7	69.7*	57.7*	-13.6	-17.2
Supplemental	298.4gg	235.5s	261.6s	-1.3	11.1
International	1,987.4t*	2,713.0u*	2,761.0u*	3.3	1.8
Certificated, all services	1,850.4	2,618.6*	2,650.0*	3.7	1.2
Scheduled service	1,134.2	2,301.0	2,313.5	7.4	0.5
Nonscheduled service	716.2	317.6*	336.5*	-7.3	6.0
Supplemental	137.0gg	94.4s	111.0s	-2.1	17.6
Total	4,204.1*	6,102.4*	6,530.0*	4.5	7.0

GENERAL AVIATION PROFILE

		1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
I.	FINANCIAL					
	Expenditures ($ millions)					
	Total	2,101n	5,245[r]a	5,633a	10.4	7.4
	Aircraft	445	1,515[r]	1,716	14.4	13.3
	Operating Costs	1,656	3,730[r]	3,917	9.0	5.0
II.	INVENTORY					
	Number of Active Aircraft					
	Total	124,237c	184,294k	198,778k	4.8	7.9
III.	PERFORMANCE					
	Number of Miles Flown (millions)					
	Business	1,406.3d	n/a	n/a	—	—
	Commercial	666.2	n/a	n/a	—	—
	Instructional	814.2	n/a	n/a	—	—
	Personal	777.2	n/a	n/a	—	—
	Other	37.0	n/a	n/a	—	—
	Total	3,700.9	4,402.1m	4,964.4m	3.0	12.8
	Number of Hours Flown (millions)					
	Personal	n/a	8.5k	9.6i	—	12.9
	Business	7.0e	6.8	8.0	1.3	17.7
	Air Taxi	4.8	4.1	4.4	-0.9	7.3
	Instructional	6.5	6.5	5.0	-2.6	-23.1
	Executive	n/a	3.5	4.9	—	40.0
	Commuter	n/a	2.8	3.3	—	17.9
	Industrial Special	n/a	0.5	0.7	—	40.0
	Aerial Application	n/a	2.1	2.1	—	0.0
	Other	0.2	0.9	1.3	20.6	44.4
	Total	24.1	36.8	39.3	5.0	6.8
	Number of Fatalities					
	Instructional	93f	63f	86f	-0.8	36.5
	Personal	845	766	959	1.3	23.1
	Business	133	109	138	0.4	0.9
	Executive	140	21	56	-8.8	166.7
	Aerial Application	41	36	27	-4.1	-19.4
	Air Taxi	109	166	157	3.7	18.7
	Commuter	n/a	n/a	36	—	—
	Industrial Special	n/a	n/a	34	—	—
	Other	140	234	114	-2.0	-35.9
	Total	1,501	1,395	1,607	0.7	24.0
	Accidents					
	Fatal	692g	702g	793g	1.4	13.0
	Total	4,968	4,286	4,494	-1.0	4.9
	Accident Rate per 100,000 Aircraft Hours Flown					
	Fatal	2.9	2.0	2.0	-3.7	0.0
	Total	20.6	12.0	11.4	-5.8	-5.0
	Accident Rate per Million Aircraft Miles Flown					
	Fatal	0.2f	0.2f	0.2f	0.0	0.0
	Total	1.3	1.0	0.9	-3.6	-7.9

r = revised, n/a = not available

Sources: The following data references are listed in Appendix A, pp. 175, 176, 177.

Source	Reference Number/Location
a	29) p. 5
b	46) Table 10-10
c	46) Tables 8.3/8.6
d	46) Tables 8.3/8.5
e	46) Tables 8.1/8.3
f	24) Personal Communication
g	55) Charts 25, 26, 27
i	48) Table 2-4
k	47) Table 2-9
m	26) Table 11
n	27) p. 5

AUTOMOBILE PROFILE

		1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
I.	FINANCIAL					
	Expenditures ($ millions)					
	New and used cars	32,979a	72,108*b	80,788*b	9.4	12.0
	Tires, tubes, accessories, and parts	4,479	9,518	10,440	8.8	9.7
	Gasoline and oil	18,992	46,668	50,908	10.4	9.1
	Tolls	504	879	918	6.2	4.4
	Insurance premiums less claims paid	3,019	7,412	8,594	11.0	16.0
	Auto registration fees	1,410c	2,468c	2,630c	6.4	6.6
	Driver's license fees	193	321	340	5.8	5.9
	Repair, greasing, washing, parking, storage, rental	7,292a	25,878b	29,499b	15.0	14.0
	Total	67,941	165,252*	184,117*	10.5	11.4
	Expenditures ($ millions)					
	Taxi	716	1,196	1,223	5.5	2.3
II.	INVENTORY					
	Number of Vehicle Registrations					
	Passenger cars and taxis	83,604,514e	112,287,522f	116,574,999f	3.4	3.8
	Motorcycles	2,089,060d	4,881,150	5,141,957	9.4	5.3
	Motor Vehicle Licensed Drivers (thousands)	105,410s	138,121s	140,844s	2.9	2.0
	Number of Employees					
	Taxis	111,200g	72,000i	68,000i	-4.8	-5.6
III.	PERFORMANCE					
	Vehicle-Miles (millions)[1]					
	Urban Streets	438,692j	665,952j	693,575j	4.7	4.1
	Main rural roads	272,906	396,711	418,441	4.4	5.5
	Local rural roads	102,432	78,552	82,215	-2.2	4.7
	Total travel	814,030	1,141,215	1,194,231	3.9	4.6
	Vehicle-Miles (millions)					
	Motorcycles	8,337	22,566	23,139	10.8	2.5
	Passenger car and taxis	805,693	1,118,649	1,171,092	3.8	4.7
	Total	814,030	1,141,215	1,194,231	3.9	4.6
	Passenger-Miles (millions)					
	Total travel, passenger cars and taxis[2]	1,772,525	2,461,028	2,693,512	4.3	9.5
	Total travel, motorcycles[3]	9,171	24,823	25,453	10.7	6.8
	Average Miles Travelled per Vehicle					
	Motorcycles	3,970	4,500	4,500	1.3	0.0
	Passenger cars and taxis	9,627	9,839	10,046	0.4	2.1
	Total	9,488	9,613	9,812	0.3	2.1
	Number of Vehicles in All Accidents					
	Motorcycles	220,000n	440,000n	450,000n	7.4	2.3
	Passenger cars	22,250,000	23,900,000	24,600,000	1.0	2.9
	Taxis	185,000	220,000	220,000	1.7	0.0
	Number of Vehicles in Fatal Accidents					
	Motorcycles	1,720	3,900	4,500	10.1	15.4
	Passenger cars	54,250	42,900	43,600	-2.2	1.6
	Taxis	220	570	600	10.6	5.3

BUS PROFILE

		1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
I.	FINANCIAL					
	Expenditures ($ millions)					
	School bus	981c	2,502a	2,760a	10.9	10.3
	Operating Revenues ($ millions)					
	Intercity bus, total	797.6b	1,303.1b	1,388.7Pb	5.7	6.6
	Intercity bus, Class I*	694.6	982.7	1,035.7P	4.1	10.5
	Operating Expenses ($ millions)					
	Intercity bus, total	708.7	1,247.6P	1,333.6P	6.5	6.9
	Intercity bus, Class I*	613.3	937.7P	996.8P	5.0	0.1
	Taxes Assignable to Operations ($ millions)[1]					
	Intercity bus, total	67.9	100.6P	100.7P	4.0	0.1
	Intercity bus, Class I*	58.8	76.2P	76.2P	2.6	-0.1
II.	INVENTORY					
	Number of Operating Companies					
	Intercity bus, total	1,050	1,050P	1,100P	0.6	4.8
	Intercity bus, Class I*	173	46P	46P	-12.4	0.0
	Number of Vehicles					
	Intercity bus, total	21,000	20,200	20,200	-0.4	0.0
	School bus	262,204d	391,393d	396,387d	4.2	1.3
	Intercity bus, Class I*	12,300b	8,360b	8,060b	-4.1	-3.6
	Number of Employees of Operating Companies					
	Intercity bus, total	47,300	44,000P	43,600P	-0.8	0.9
	Intercity bus, Class I*	37,487	29,700P	29,000P	-2.5	-2.4
	Miles of Highway Served					
	Intercity bus, total	264,000	276,000P	278,000P	0.5	0.7
	Intercity bus, Class I*	217,000	191,000P	193,000P	-1.2	1.1
III.	PERFORMANCE					
	Vehicle Miles (millions)					
	Commercial bus[2]					
	Urban streets	1,879g	1,760g	1,924P	0.2	9.3
	Main rural roads	948	1,086	1,071P	1.2	-1.4
	Local rural roads	204	91	90P	-7.9	-1.1
	Total travel	3,031	2,937	3,085P	0.2	5.0
	School and nonrevenue bus					
	Urban streets	365	909	925P	9.7	1.8
	Main rural roads	734	1,401	1,418P	6.8	1.2
	Local rural roads	838	640	648P	-2.5	1.3
	Total travel	1,937	2,950	2,991P	4.4	1.4
	All buses					
	Urban streets	2,244	2,669	2,849P	2.4	6.7
	Main rural roads	1,682	2,487	2,489P	4.0	0.1
	Local rural roads	1,042	731	738P	-3.4	1.0
	Total travel	4,968	5,887	6,076P	2.0	3.2
	Revenue Passenger-Miles (millions)					
	Intercity bus, total	24,500b	25,700Pb	25,400Pb	0.4	-1.2
	Intercity bus, Class I*	19,100	16,930P	16,300P	-1.6	-4.7
	Number of Revenue Passengers (millions)					
	Intercity bus, total	398	332P	335P	-1.7	0.9
	Intercity bus, Class I*	229.7	125.1P	123.0P	-6.1	-1.7

TRUCK PROFILE

		1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
I.	FINANCIAL					
	Revenues ($ millions)					
	Local	27,146a	60,739[r]a	67,630a	9.6	11.4
	Intercity					
	ICC-regulated	12,400	31,000	36,500	11.4	17.7
	Non-ICC-regulated	16,812	36,356[r]	43,069	9.9	18.5
	Operating Revenues of Class I Intercity Motor Carriers ($ millions)					
	Freight, intercity, common carriers.	8,807b	19,623c	23,954[P]c	10.5	22.1
	Freight, intercity, contract carriers	312	638	876[P]	10.9	37.3
	Freight, local cartage	321	816	293[P]	-0.9	-64.1
	Trans. for other Classes I and II carriers	76	155	249[P]	12.6	60.6
	Others	77	1,288	1,416[P]	33.8	9.9
	Total	9,593	22,520	26,788[P]	10.8	19.0
	Operating Expenses of Class I Intercity Motor Carriers ($ millions)	9,129d	21,337	25,428[P]	10.8	19.2
II.	INVENTORY					
	Number of Truck Registrations					
	Private and commercial	16,104,924e	28,311,953e	30,411,106e	6.6	7.4
	Federal	126,773f	199,791f	199,791f	4.7	0.0
	State, county, municipal	762,918	1,050,741	1,091,707	3.6	3.9
	Total	16,994,615e	29,562,485e	31,702,604e	6.4	7.2
	Total Number of Employees					
	Trucking and Trucking Terminals	959,200i	1,125,500j	1,181,100j	2.1	4.9
	Number of Companies, Class I Intercity Carriers of Property	1,252b	835c	885[P]c	-3.4	6.0
	Number of Employees, Class I Intercity Carriers of Property	469,045d	473,073	559,347[P]	1.8	18.2
III.	PERFORMANCE					
	Vehicle-Miles (millions)					
	Urban streets	72,353k	153,350k	161,836k	8.4	5.5
	Main rural roads	94,245	165,120	174,470	6.4	5.7
	Local rural roads	30,053	10,995	11,600	-9.1	5.5
	Total travel	196,651	329,465	347,906	5.9	5.6
	Average Miles Travelled per Vehicle					
	Single-unit trucks	9,857	9,400	9,249	-0.6	-1.6
	Combination trucks	43,299	50,206	49,267	1.3	-1.9
	All trucks	11,571	11,145	10,974	-0.5	-1.5
	Ton-Miles (millions)					
	Intercity	396,300m	555,000n	602,000n	4.3	8.5
	Taxes Assignable to Operations ($ millions)					
	State highway-user taxes	2,830u	5,856u	6,346u	8.4	8.4
	Federal highway-user taxes	1,822	2,994	3,323	6.2	11.0
	Total highway-user taxes	4,652	8,849	9,669	7.6	9.3
	Average Length of Haul (miles)					
	Class I intercity motor carriers					
	Common	258s	300q	301q	1.6	0.3

TRUCK PROFILE (Cont.)

p = preliminary, r = revised, n/a = not available

[1] Includes all fatalities in the accident in which the vehicle types listed were involved.

Source: The following data references are listed in Appendix A, pp. 175, 176, 177.

Source	Reference Number/Location
a	29) p. 4
b	19) p. 141, Table 18
c	21) p. 154, Table 8
d	19) p. 142, Table 19
e	49) Table MV-1
f	49) Table MV-9
g	51) p. 1,2,3,4
h	54) Personal Communication
i	44) p. 597
j	45) Table B-2, SIC 421,3
k	49) Table VM-1
m	19) p. 77
n	27) p. 8
q	22) Personal Communication
s	27) p. 14
u	7) p. 3

WATER TRANSPORT PROFILE

		1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
I.	FINANCIAL					
	Revenues ($ millions)					
	Domestic Freight	1,705a*	3,788a*	4,155*p	9.3	9.7
	Coastal waterways	683	1,426	1,512p	8.3	6.0
	Inland waterways	439	1,253	1,316p	11.6	5.0
	Great Lakes	210	429	493p	8.9	14.9
	Locks, channels, etc.	373	680	834p	8.4	22.6
	International Freight	2,917	6,686r	7,303	9.6	9.2
	Domestic passengers, intercity	11	19	20	6.2	5.3
	International passenger[1]	245	269	281	1.4	4.5
	Total Passenger	256	288	301	1.6	4.5
	Revenue of Class A and B Carriers by Standard Coastal Waterways ($ millions)					
	Line service operating revenues					
	Freight	229b	589c	651pc	11.0	10.5
	Passenger	10	17	18p	6.1	5.9
	Other	9*	29	35p	14.5	20.7
	Other operating revenue	5	4	5p	0.0	25.0
	Revenue from terminal operations	27	20	22p	-2.0	10.0
	Rental and motor carrier revenue	32*	36	46p	3.7	27.8
	Total waterline operating revenues	307	694	777p	9.7	12.0
	Revenues of U.S. Commercial Fishing Fleet					
	U.S. Commercial Landings ($ millions)	497f	1,515d	1,854d	14.1	22.4
	Revenues of Maritime Carriers ($ millions)					
	Coastal and intercoastal service	67b	177c	156pc	8.8	-11.9
	Charter	96	93	47p	-6.9	-49.5
	Total vessel operating revenues	728	1,539	1,773p	9.3	15.2
	Total waterline operating revenues	802	1,643	1,889p	8.9	15.0
	Operating Expenses of Classes A and B Carriers by Inland and Intracoastal Waterways ($ millions)	272	641	710p	10.1	-11.0
	Operating Expenses of Maritime Carriers ($ millions)	743b	1,497	1,706p	8.7	14.0
	Government Expenditures ($ millions)					
	Federal expenditures					
	Coast Guard	545h	n/a	n/a	—	—
	Merchant Marine	314	n/a	n/a	—	—
	Total waterways	392	n/a	n/a	—	—
	Inland and intracoastal waterways[2]	210	n/a	n/a	—	—
	State and local expenditures					
	Total waterways	407	n/a	n/a	—	—
II.	INVENTORY					
	Number of Companies, Class A and B Carriers Inland and Coastal Waterways	85b	68c	67pc	-2.4	-1.5
	Number of Companies, Maritime Carriers	18	4	3	-16.4	-25.0
	Number of Employees					
	Ships and boat buildings, and repairing	181,600g	222,300g	218,300g	1.9	-1.8
	Water transportation	240,800s	194,100s	206,500s	-1.5	6.4

WATER TRANSPORT PROFILE (Cont.)

	1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
Average Haul, Domestic System (miles-per-ton)					
Coastwise	1,421.1j	1,384.8j	1,769.7j	2.2	27.8
Internal	323.8	381.7	391.5	1.9	2.6
Lakewise	498.0	480.5	534.7	0.7	11.3
Local	17.5	15.1	14.3	-2.0	-5.3
Total	587.4	618.0	2,710.2	16.5	338.5
Cargo Capacity (net tons)					
Total non-self-propelled vessels	n/a	38,974,761cc	36,710,659cc	—	-5.8
Dry cargo barges and scows	n/a	29,454,921	29,838,851	—	1.3
Tank barges	n/a	9,519,840	9,467,565	—	-0.5
Total self-propelled vessels	n/a	18,725,937	20,253,358	—	8.2
Dry cargo/passenger	n/a	8,147,399	8,143,188	—	-0.1
Tankers	n/a	10,578,538	12,110,155	—	14.5
Sailing vessels	n/a	109	115	—	5.5
Total Number of Marine Accidents in Waterborne Transport[4]	2,570t	3,574t	4,268t	5.2	19.4
Total Number of Fatalities in Waterborne Transport[5]	140u	216k	179k	2.5	-17.1
Inspected, total	48*	30*	16*	-10.4	-46.7
Passenger and ferry, large and small	3	15	4	2.9	-73.3
Freight	37	4	9	-13.2	125
Cargo, barge	0	0	0	0.0	0.0
Tank ships and tank barges	4	9	3	-2.8	-66.7
Government owned vessels	0	0	0	0.0	0.0
Miscellaneous	4	2	0	—	-100.0
Uninspected, total	92*	186*	163*	5.9	-12.4
Commercial fishing	40	53	85	7.8	60.4
Tugs	9	10	20	8.3	100.0
Foreign	17	10	4	-13.5	-60.0
Miscellaneous	26	113	54	7.6	-52.2
Total Number of Injuries in Waterborne Transport[5]	89	136	119	2.9	-12.5
Inspected, total	37*	33*	39*	0.5	18.2
Passenger and ferry, large and small	8	5	14	5.8	180.0
Freight	9	9	12	2.9	33.3
Cargo, barge	1	0	0	—	0.0
Tank ships and tank barges	17	16	13	-2.6	-18.8
Government owned vessels	0	0	0	0.0	0.0
Miscellaneous	2	3	0	—	-100.0
Uninspected, total	52*	103*	80*	4.4	-22.3
Commercial fishing	15	23	19	2.4	-17.4
Tugs	5	22	18	13.7	-18.2
Foreign	5	11	12	9.1	9.1
Miscellaneous	27	47	31	4.1	-34.0

WATER TRANSPORT PROFILE (Cont.)

Source: The following data references are listed in Appendix A, pp. 175, 176, 177.

Source	Reference Number/Location
a	29) pp. 4, 5
b	19) pp. 146, 147, 148, 149
c	21) pp. 156, 157
d	40) p. 6
f	39) p. 6
g	44) p. 372
h	9) Tables 6, 7, 8, 9
i	30) Sec. 1, Table 1A, 1B
j	30) Part 5, Sec. 3, Table 1
k	34) p. 59
m	29) Personal Communication
n	34) p. 61
q	44) SIC 44
s	45) SIC 44
t	55) Chart 29, 28
u	34) p. 232
v	8) pp. 1, 2, 3
w	38) pp. 7, 18
x	33) p. 36
y	38) p. 2
z	27) p. 8
aa	33) pp. 20, 21
bb	33) p. 8
cc	32) Table 1
dd	27) Personal Communication
ee	27) pp. 4, 5

RAIL PROFILE
A. CLASS I RAILROADS (Cont.)

	1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
Average Passenger Trip Length, Class I Railroads (miles)					
Commutation[1]	21.5q	23.2q	23.4q	0.4	0.9
Other than commutation	94.9	73.3	68.5	-3.3	-6.6
Average Passenger Load Factor, Class I Railroads	30.9t	40.6s	39.6s	2.5	-2.5
Revenue Ton-Miles, Class I Railroads (millions)					
Freight	744,023.1j	826,292.0j	858,105.4j	1.4	3.9
Average Haul, Class I Railroads (miles)					
Freight	287.2	338.8	371.1	2.6	9.5
Number of Fatalities, Railroads and Grade Crossings					
Passengers on trains	11k	4m	13m	1.7	225.0
Employees on duty	146	114	122	-1.8	7.0
Employees not on duty	4	2	9	8.5	350.0
Contractor employees	n/a	3	2	—	-33.3
Trespassers	628	458	492	-2.4	7.4
Non-Trespassers	1,570	949	1,008	-4.3	6.2
Total Railroad and Grade Crossing	2,359	1,530	1,646	-3.5.	7.6
Grade Crossing only	1,546	996	1,064	-3.7	6.8
Railroad only	813	534	582	-3.3	9.0

+Amtrak and Auto-Train figures (Statistics of Railroads of Class I, September 1978, p. 16) subtracted from data given in source reference.

++Amtrak figures (Statistics of Railroads of Class I, December 1979, pp. 17, 18) subtracted from data given in source reference. As of 1978 Auto-Train is no longer Class I.

*Percent decrease largely due to separation of AMTRAK data, May 1971.

[1] Includes Amtrak and Auto-Train.

&Operating expenses under USOA include equipment, joint facility rents, leased roads and equipment, and all taxes except federal income.

Source: The following data references are listed in Appendix A, pp. 175, 176, 177.

Source	Reference Number/Location	Source	Reference Number/Location
a	10) pp. 8, 18	i	10) p. 12
b	10) p. 1, 2	j	10) p. 6
c	10) p. 10	k	52) Personal Communication
d	10) p. 11	m	55) Table 7
e	10) p. 9	n	11) p. 3
f	10) Table of Contents	q	10) p. 8
g	10) p. 5	s	29) p. 15
h	12) p. 46	t	27) p. 15

OIL PIPELINE PROFILE

		1968	1977	1978	1968-1978 Average Annual % Change	1977-1978 % Change
I.	FINANCIAL					
	Operating Revenues ($ millions)					
	ICC-regulated	1,023t	2,792[r]a	4,907a	17.0	75.8
	Non-regulated	182	417[r]	545	11.6	30.7
	Total	1,205	3,209[r]	5,452	16.3	69.9
	Operating Expenses ($ millions)					
	ICC-regulated	577b	n/a	n/a	—	—
	Taxes, ICC-regulated Companies ($ millions)					
	Federal	116	n/a	n/a	—	—
	Other	59	n/a	n/a	—	—
II.	INVENTORY					
	Number of ICC-regulated Companies	92	n/a	n/a	—	—
	Number of Employees, ICC-regulated Companies	15,958	n/a	n/a	—	—
	Mileage[1]	213,555f	n/a	n/a	—	—
III.	PERFORMANCE					
	Intercity Ton-Miles (millions)					
	ICC-regulated	332,300g	461,900[r]s	495,400s	4.1	7.3
	Non-regulated	59,000	84,500[r]	89,800	4.3	6.3
	Total	391,300	546,400[r]	585,200	4.1	7.1
	Tons Transported (millions)[2]					
	Crude petroleum[3]	n/a	463m*	451m*	—	-2.6
	Petroleum products (delivered from lines)	n/a	526q*	534q*	—	1.5
	Total	n/a	989	985	—	-0.4
	Average Length of Haul (statute miles)					
	Crude petroleum	297k	n/a	n/a	—	—
	Petroleum products	372	n/a	n/a	—	—

*Figure obtained by addition/subtraction and may not appear directly in data source.
[1]Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.
[2]Data has been converted from barrels to short tons per Table 2, Section XV, Basic Petroleum Data Book, American Petroleum Institute.
[3]Excludes crude oil imported for direct burning for fuel use by pipeline.

n/a = not available, r = revised

Source: The following data references are listed in Appendix A, pp. 175, 176.

Source	Reference Number/Location	Source	Reference Number/Location
a	29) p. 4	h	21) p. 139, Table 4
b	19) p. 153	i	21) p. 134, Table 4
c	21) p. 149, Table 15	k	27) p. 14
d	27) p. 8	m	42) Table 13
e	21) p. 138, Table 2	q	42) Table 28
f	27) p. 31	s	22) Personal Communication
g	19) pp. 77, 78	t	27) p. 4

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE 1968, 1977, AND 1978

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE, 1968, 1977 AND 1978 (cont.)

	1968	1977	1978
AUTOMOBILE (cont.)			
Passenger-miles per capita			
Passenger cars and taxis, total travel	8,889.3	11,373.5	12,352.2
Motorcycles, total travel	46.0	114.7	116.7
Vehicle-miles of travel per vehicle, passenger cars, taxis			
Urban streets	5,247.2	5,930.8	5,949.6
Main rural roads	3,264.2	3,533.0	3,589.5
Local rural roads	1,225.2	699.6	705.3
Total travel	9,736.7	10,163.4	10,244.3
Passenger-miles per vehicle			
Passenger cars and taxis	21,201.3	21,917.2	23,105.4
Motorcycles	4,390.0	5,085.5	4,950.1
BUS			
U.S. population per intercity bus	9,495.0	10,712.0	10,795.0
Vehicle-miles per capita			
Commercial buses	15.2	13.6	14.1
School and non-revenue buses	9.7	13.6	13.7
All buses	24.9	27.2	27.9
Vehicle-miles per capita, all buses			
Urban streets	11.3	12.3	13.1
Main rural roads	8.4	11.5	11.4
Local rural roads	5.2	3.4	3.4
Total travel	24.9	27.2	27.9
Revenue passenger-miles per capita			
Total intercity bus	122.9	118.8	116.5
Revenue passenger-miles per vehicle			
Total intercity bus (millions)	1.2	1.3	1.3
TRUCK			
Vehicle-miles per capita, all trucks			
Urban streets	362.9	708.9	742.2
Main rural roads	472.6	763.3	800.1
Local rural roads	150.7	50.8	53.2
Total travel	986.2	1,523.0	1,595.5
Vehicle-miles per truck registration			
Urban streets	4,257.4	5,187.3	5,104.8
Main rural roads	5,545.6	5,585.5	5,503.3
Local rural roads	176.8	371.9	365.9
Total travel	11,571.4	11,144.7	10,974.1
Intercity ton-miles per capita	1,987.5	2,564.9	2,760.7

SELECTED PASSENGER AND CARGO PERFORMANCE INDICATORS BY MODE, 1968, 1977 AND 1978 (cont.)

	1968	1977	1978
OIL PIPELINE			
Intercity ton-miles per capita	1,962.4	2,525.2	2,683.7
Intercity ton-miles per mile of line (millions)	1.8	n/a	n/a
Tons of petroleum transported per capita	n/a	4.6	4.5
GAS PIPELINE			
Cubic feet of gas consumed per capita (thousands)	91.1	90.2	90.0
Cubic feet of gas consumed per mile of transmission pipeline (millions)	104.6	103.4	102.9
Cubic feet of gas produced per capita (thousands)	96.9	92.5	91.6
Cubic feet of gas produced per mile of transmission pipeline (millions)	111.3	106.0	104.8
Operation expense per mile of transmission pipeline	19,415.9	81,572.5	96,270.7
Maintenance expense per mile of transmission pipeline	518.2	1,344.8	1,489.4

n/a = not available

Source: Per capita figures were based on 1968, 1977 and 1978 total resident populations of 199,399,000, 216,383,000, and 218,059,000, respectively (excluding Armed Forces abroad). The 1968 figure was obtained from the *Statistical Abstract of the United States, 1975*, Table 2, p. 5. The 1977 and 1978 figures were obtained from the *Statistical Abstract of the United States, 1979*, Table 11, p. 14.

All other figures were taken directly from the "Modal Profiles" section of this book.

TRANSPORTATION TRENDS
1968 - 1978

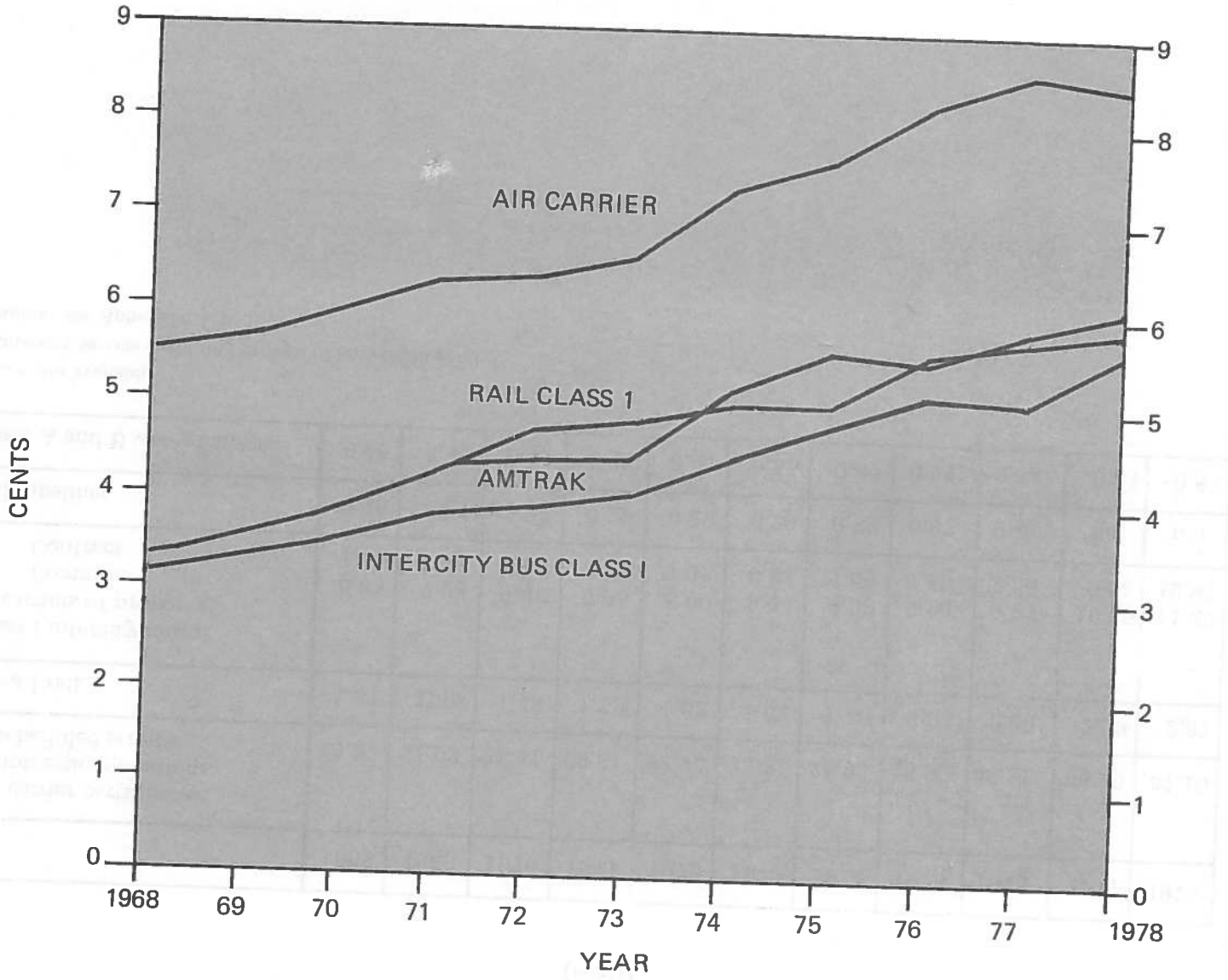


Figure 10. Average Passenger Revenue per Passenger-Mile, 1968-1978

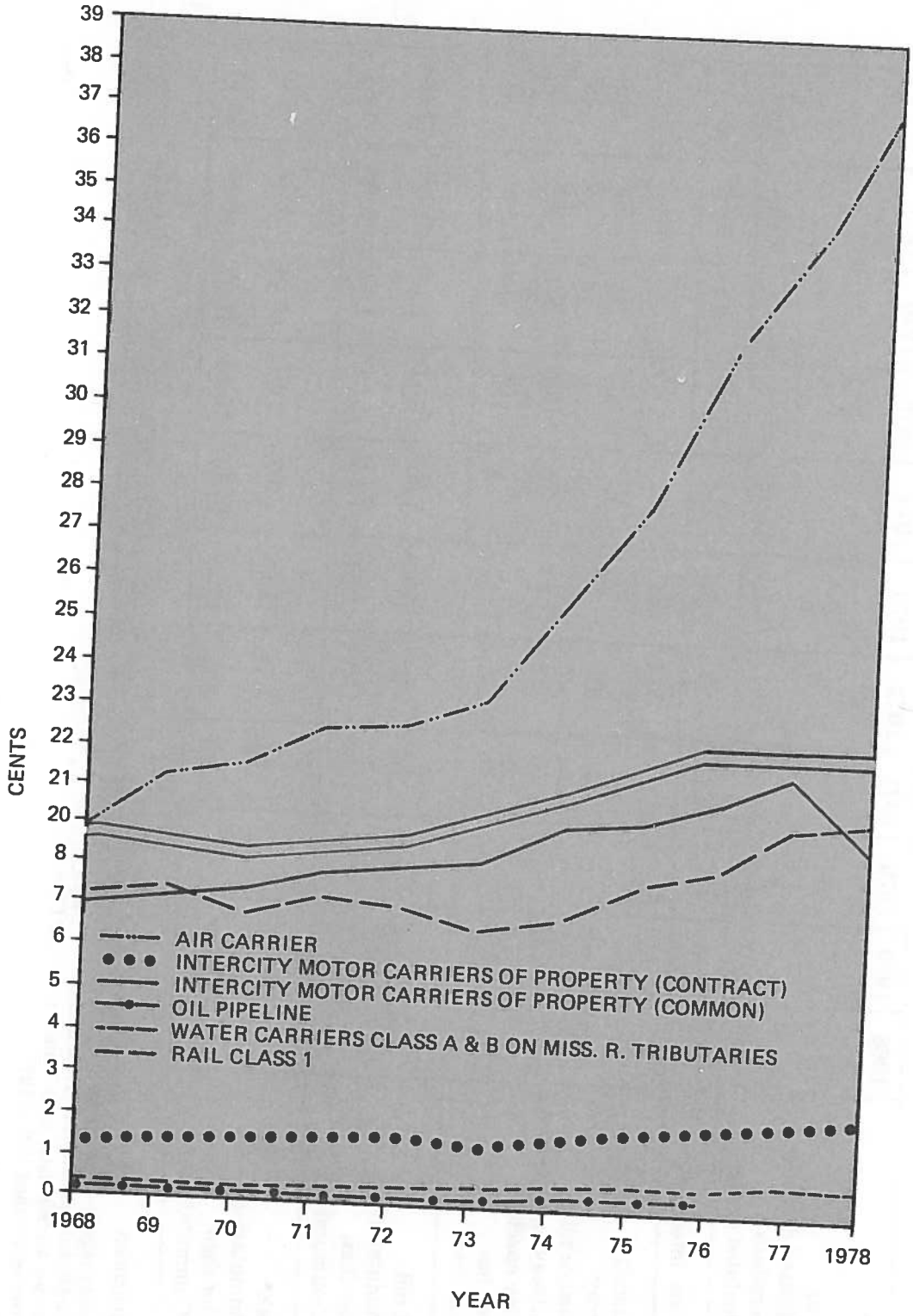


Figure 11. Average Freight Revenue per Ton-Mile, 1968-1978

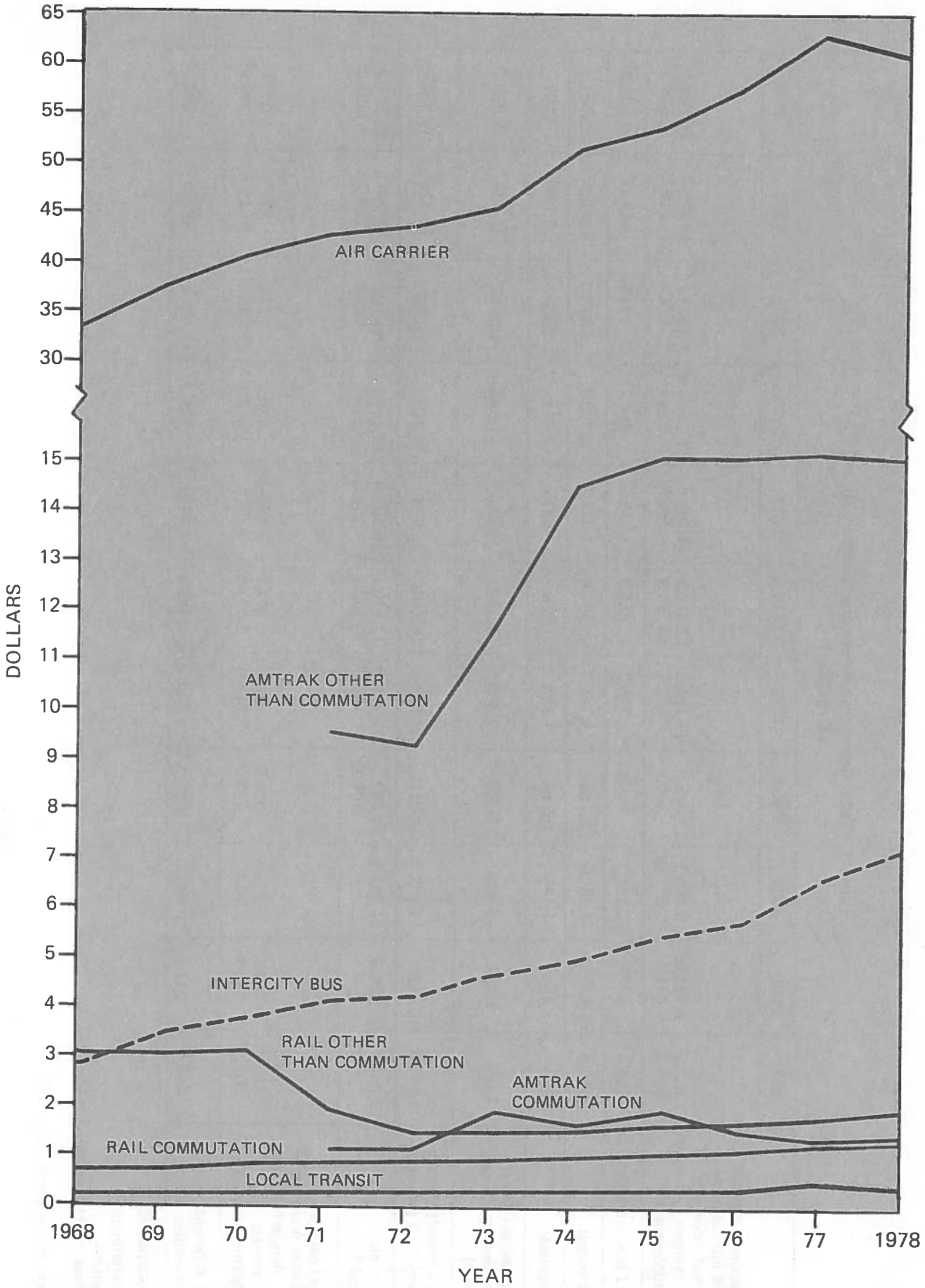


Figure 12. Average Passenger Fare, 1968-1978

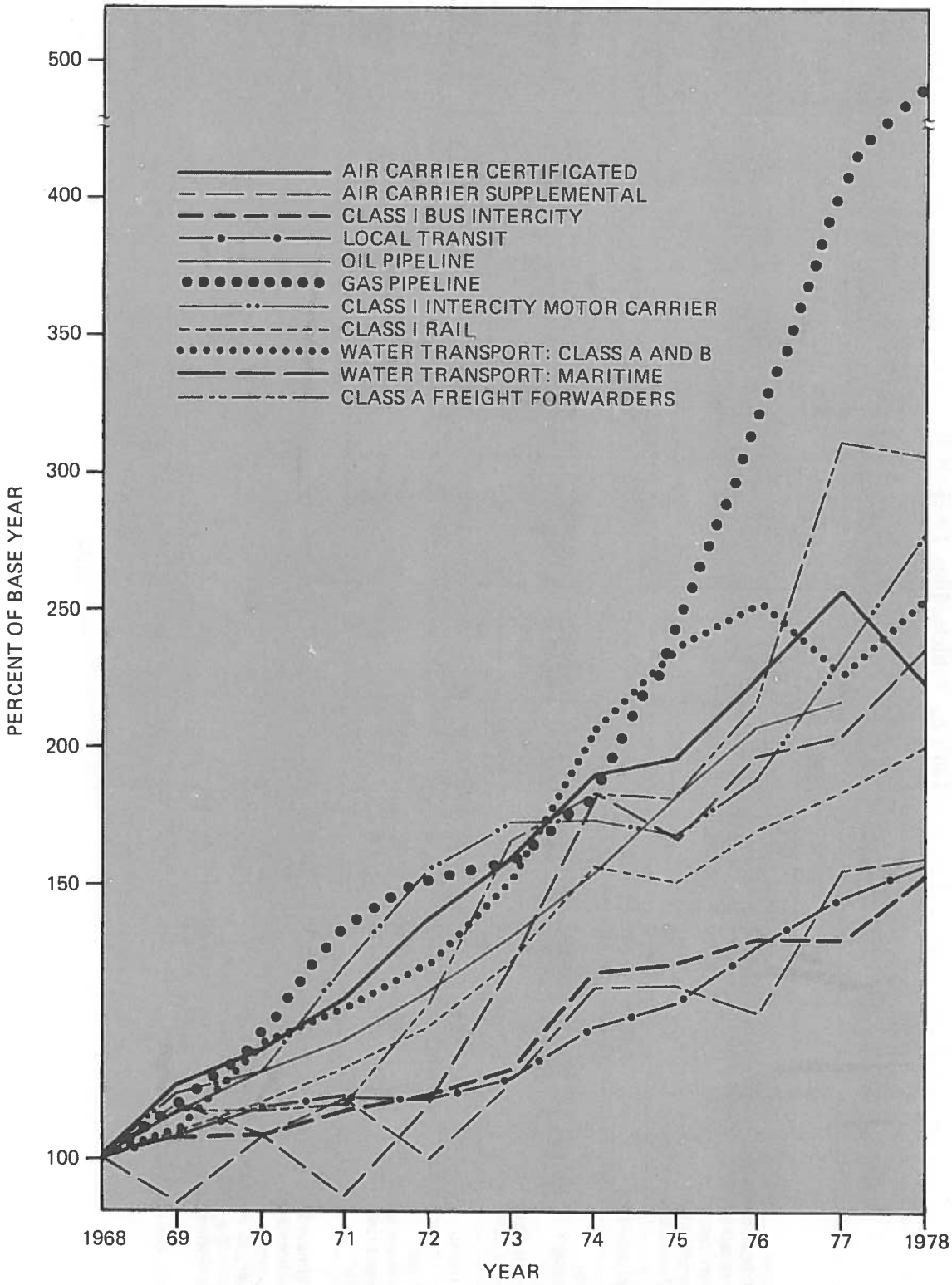


Figure 13. Total Operating Revenues, 1968-1978

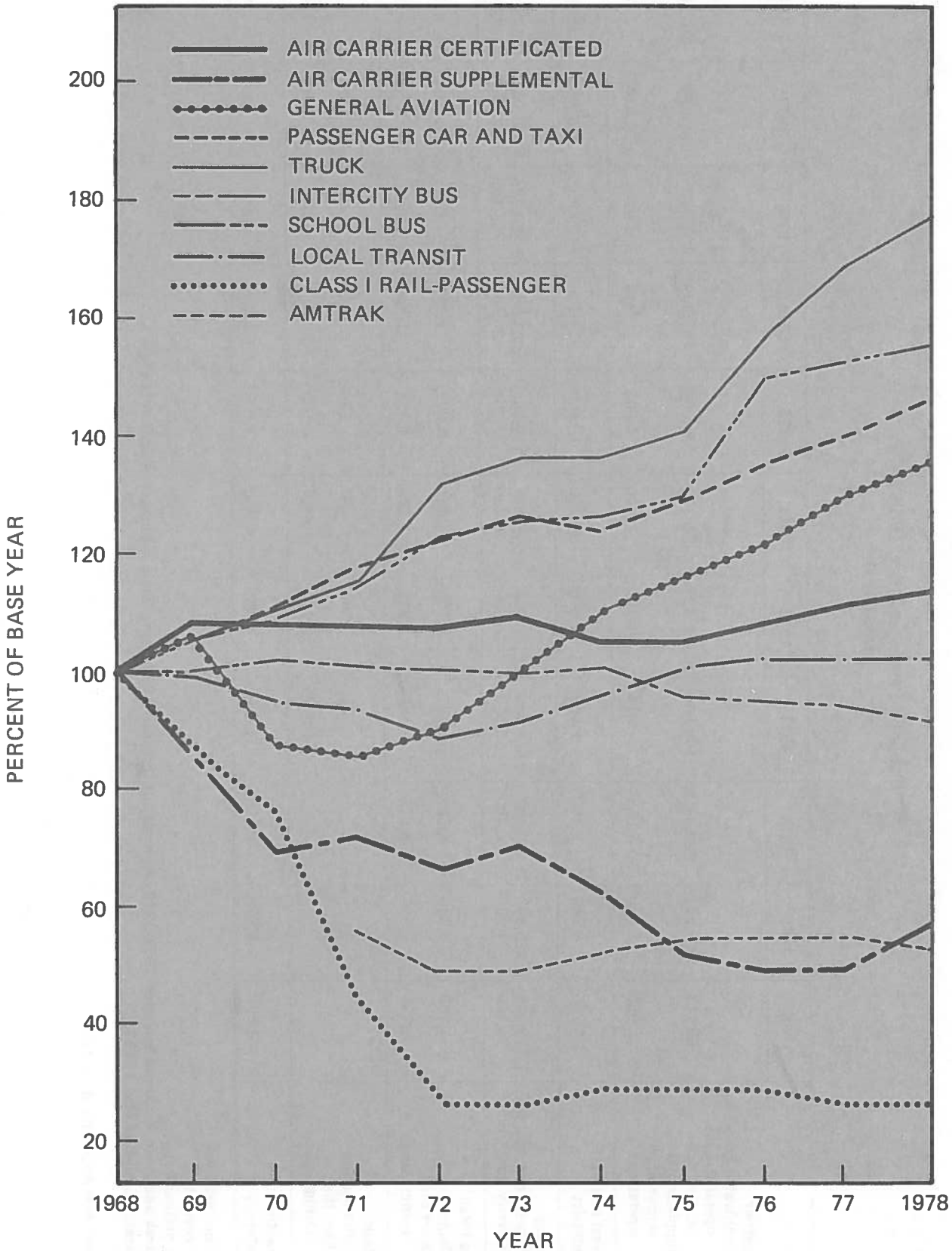


Figure 14. Vehicle-Miles, 1968-1978

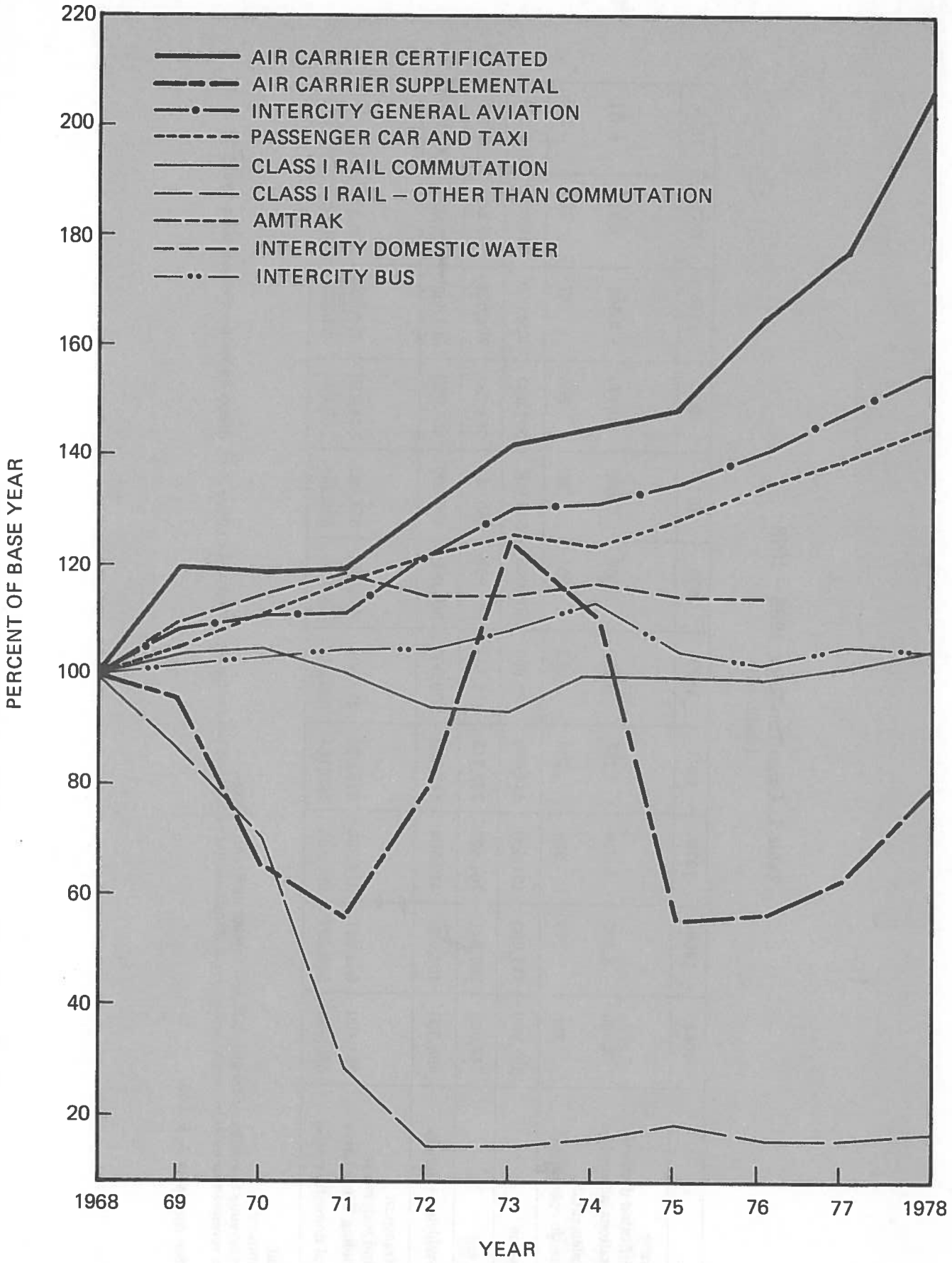


Figure 15. Passenger Miles, 1968-1978

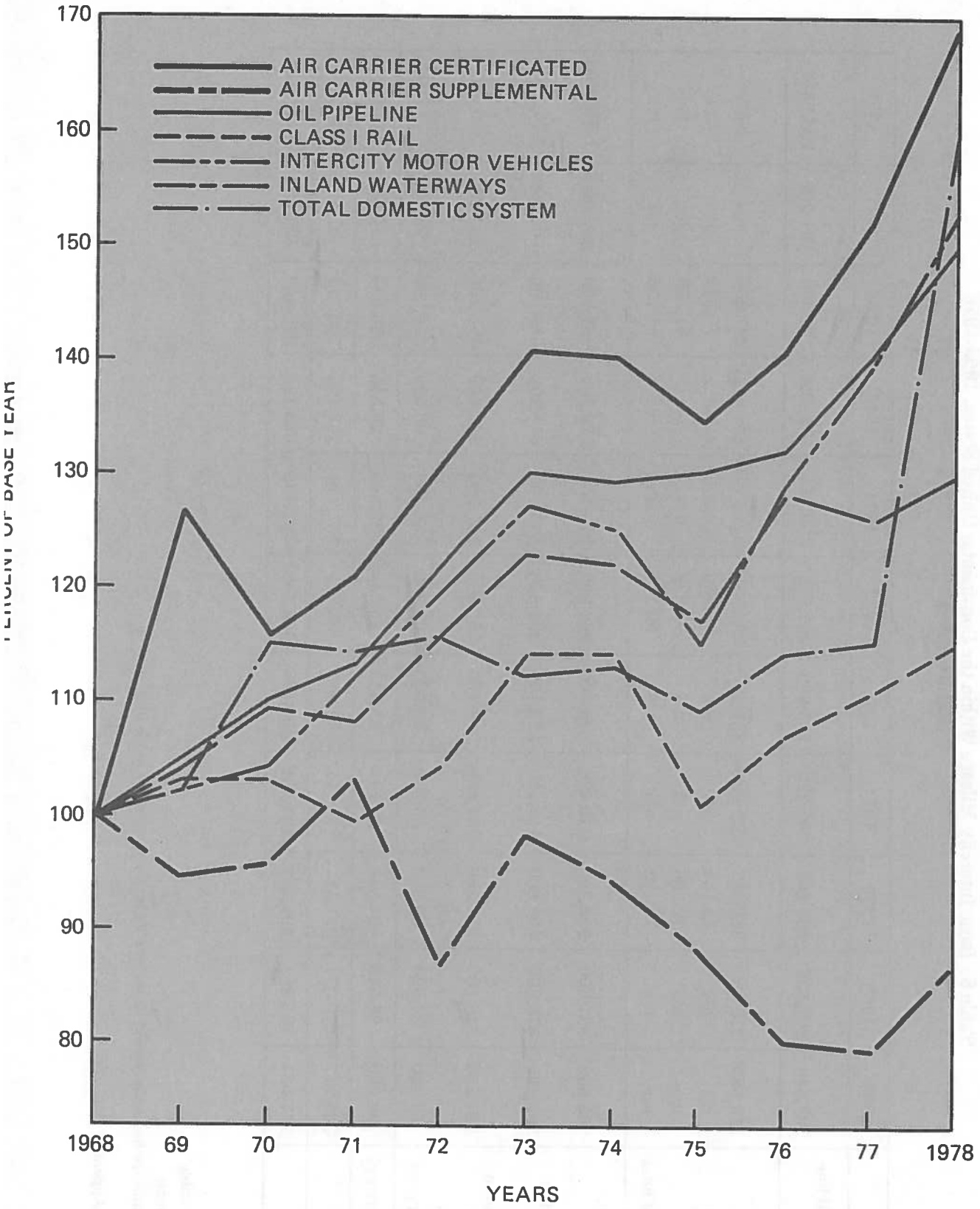


Figure 16. Cargo Ton-Miles, 1968-1978

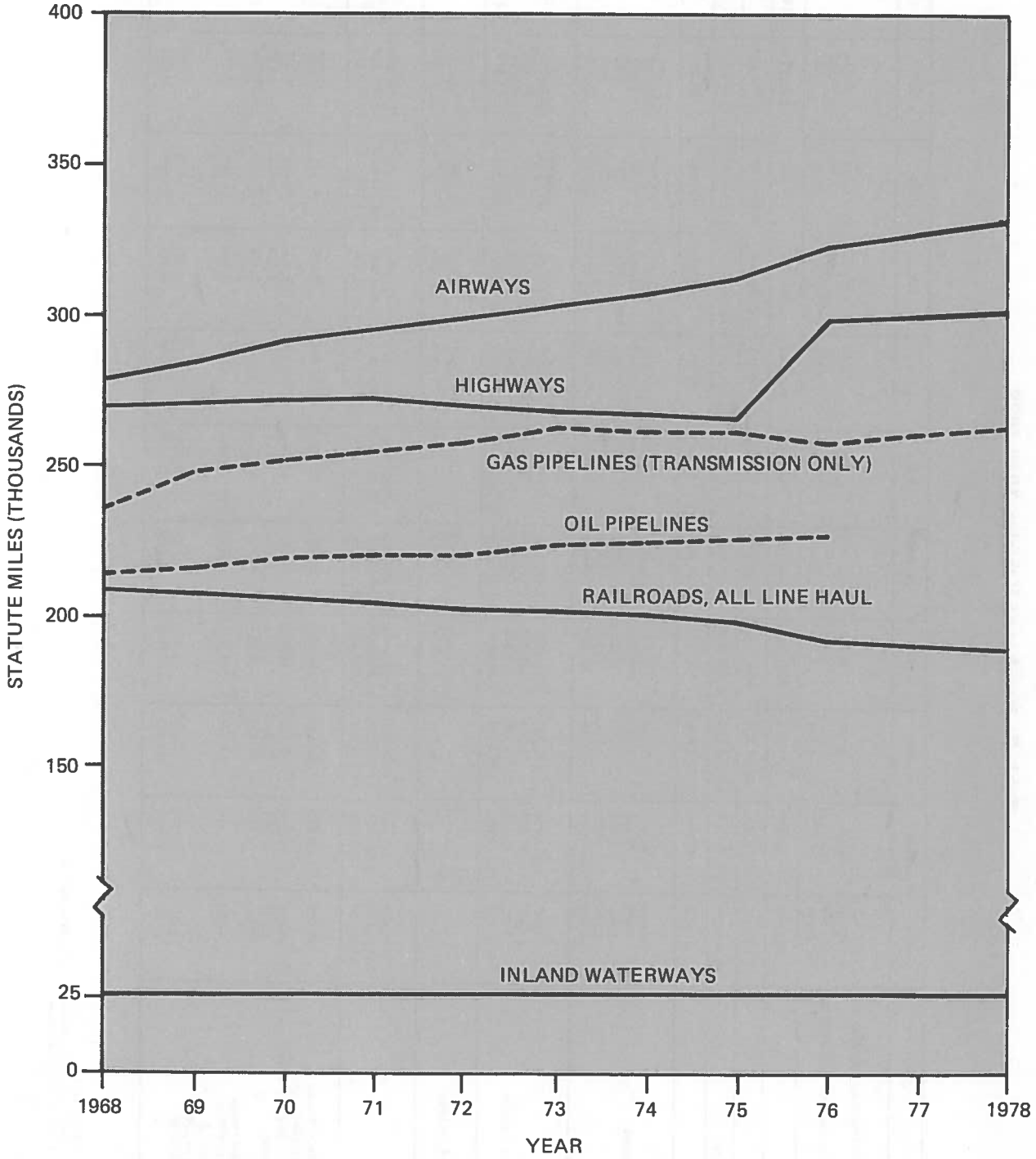


Figure 17. Basic Intercity Mileage Within the Continental United States, 1968-1978

Table 10. Number of New Vehicles Purchased, By Mode, 1968-1978

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Air Carrier (All Services)											
Fixed-Wing Transports	702	509	311	230	230	295	263	314	238	180	225
General Aviation	13,749	12,581	7,384	7,450	9,765	13,671	14,026	14,043	15,648	16,624	16,456
Passenger Car and Taxi	8,625,000	8,464,000	7,119,000	8,681,000	9,327,000	9,676,000	7,454,000	7,053,000	8,611,000	9,109,000	9,312,000
Motorcycles	n/a	680,000	1,125,000	1,565,000	1,725,000	1,255,000	1,580,000	990,000	740,000	970,000	1,015,000
Mopeds	—	—	—	—	—	—	13,000	32,000	78,000	190,000	350,000
Bicycles	7,500,000	7,100,000	6,900,000	8,900,000	13,900,000	15,200,000	14,100,000	7,300,000	8,100,000	9,400,000	9,400,000
Truck (Domestic)	1,807,000	1,936,000	1,746,000	2,011,000	2,486,000	2,915,000	2,511,000	2,248,000	2,944,000	3,353,000	3,773,000
Intercity Bus (Class I)	688*	617	867	831	917	833	626	733	619*	709	635
Local Transit											
Motor Bus	2,228	2,230	1,424	2,514	2,904	3,200	4,818	5,261	4,745	2,437p	3,805p
Subway and Elevated	0	0	0	0	0	0	0	0	4	62p	35
Surface Rail	384	650	308	250	360	238	92	127	472	506p	172p
Trolley Coach	0	0	0	1	1	1	0	1	260	198p	0p
Total	2,612	2,880	1,732	2,764	3,265	3,439	4,910	5,389	5,481	3,203p	4,012p
Class I Railroad											
Freight Cars	46,810	53,200	56,031	45,408	37,391	34,171	36,315	41,692	30,836	27,098	28,003p
Locomotives	978	1,158	1,029	1,179	1,377	1,165	1,018	772	438	820	1,214
Passenger Car and Pullman	65	240	302	281	334	83	85	265	349	153	43
Total	47,853	54,598	57,362	46,868	39,642	35,419	37,418	42,729	31,623	28,071	29,260
Amtrak**											
Passenger Car and Pullman	—	—	—	—	0	10	0	109	305	133	1
Locomotives	—	—	—	—	0	67	252	30	58	4	75
Total	—	—	—	—	0	77	252	139	363	137	76
Water											
Merchant Vessels	n/a	n/a	13	15	15	30	20	15	16	18	14
Gross Tonnage	n/a	n/a	342,000	419,000	439,000	987,000	697,000	452,000	616,000	920,198	1,148,530

n/a = not available
p = preliminary
*Change in Class I definition.
**Amtrak established in May, 1971.

Source: See Appendix A, p. 168.

SUPPLEMENTARY DATA
Section I: Transportation and the Economy
1968 - 1978

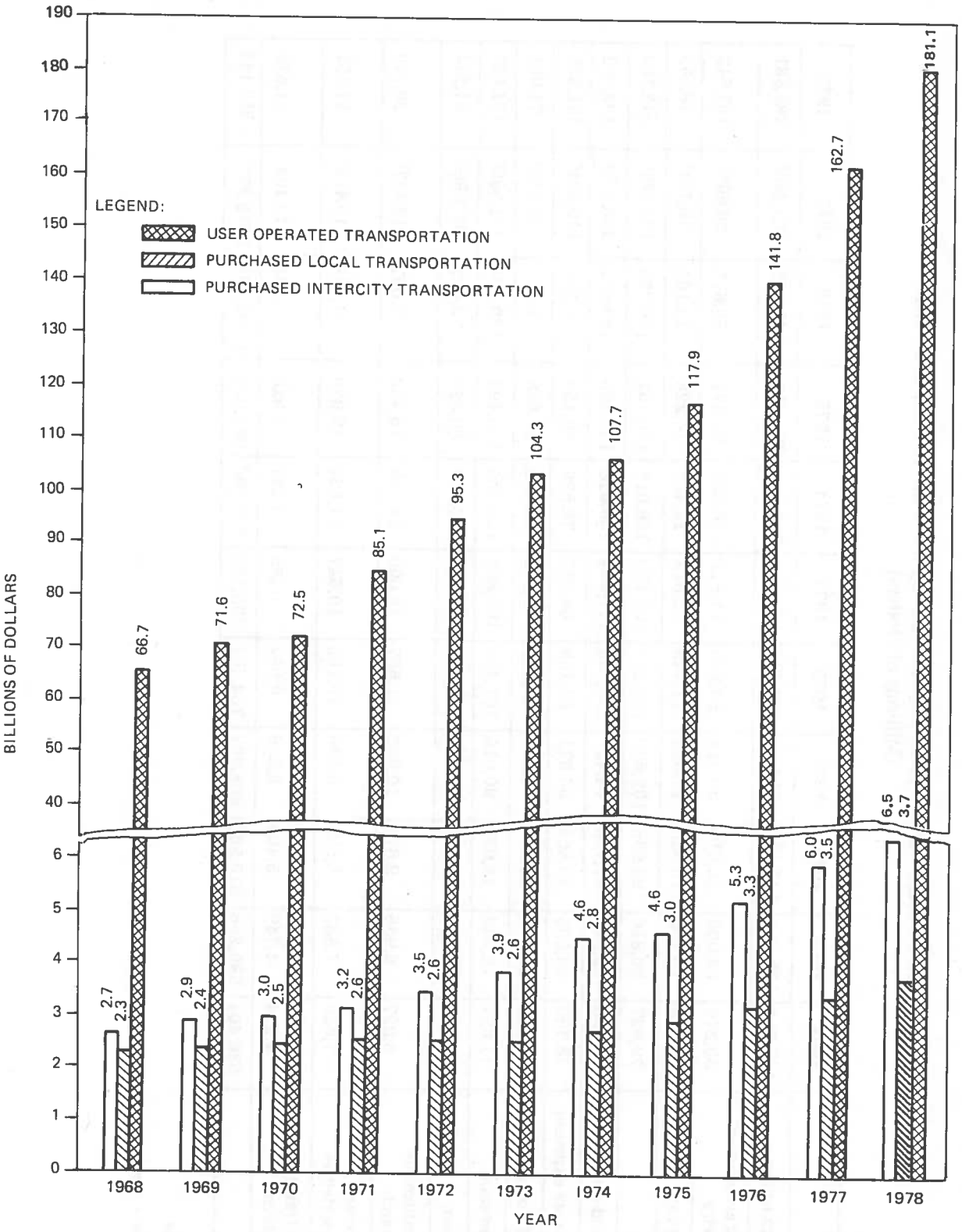


Figure 19. Personal Consumption Expenditures by Transportation Sector, 1968-1978

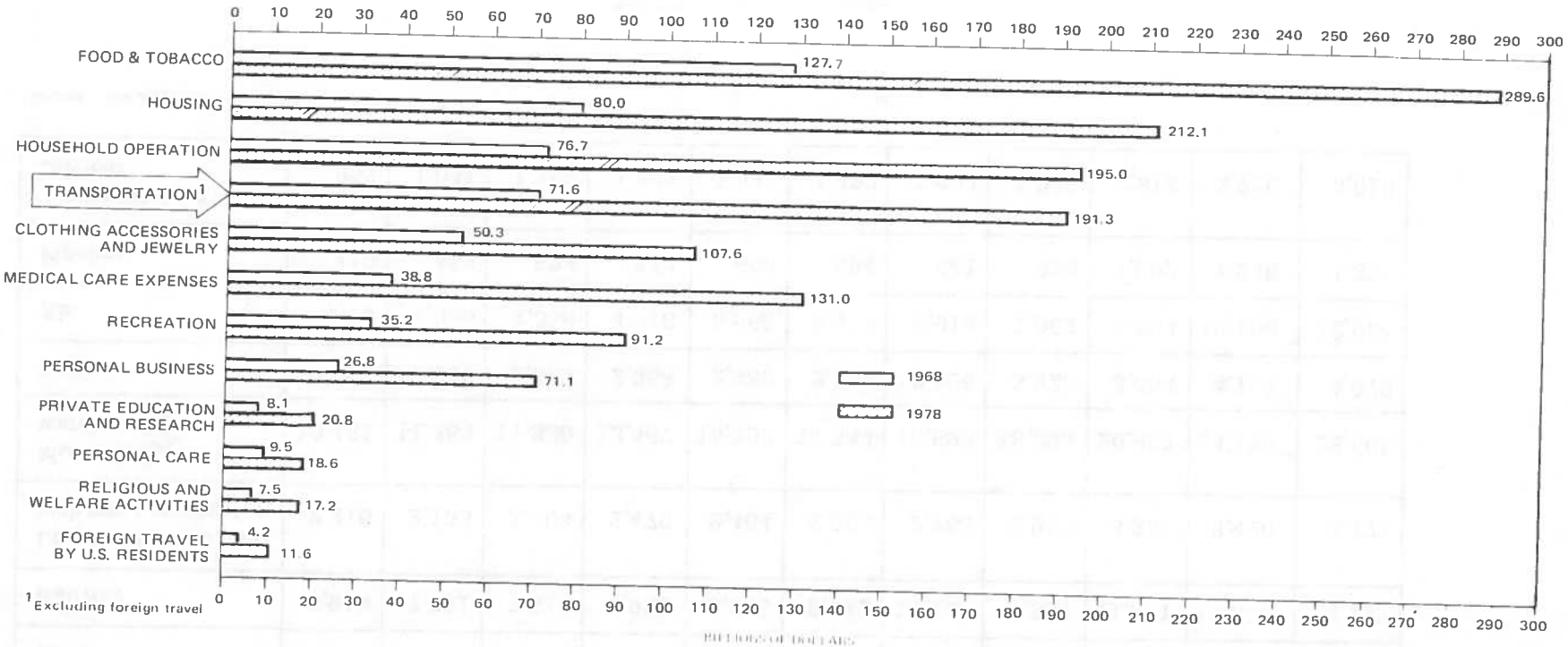


Figure 20. Personal Consumption Expenditures by Type of Product, 1968 and 1978

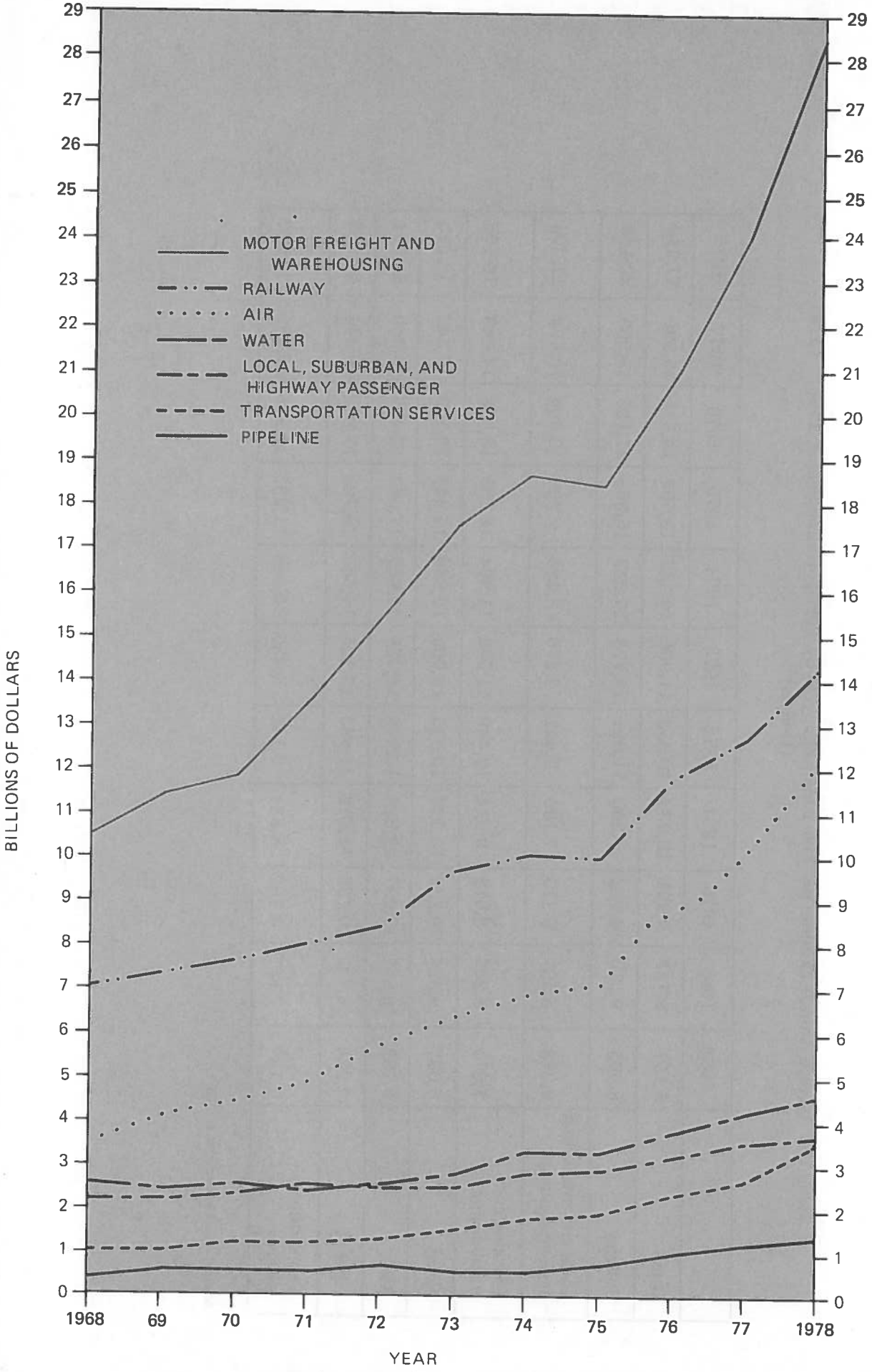


Figure 21. National Income by Transportation Sector, 1968-1978

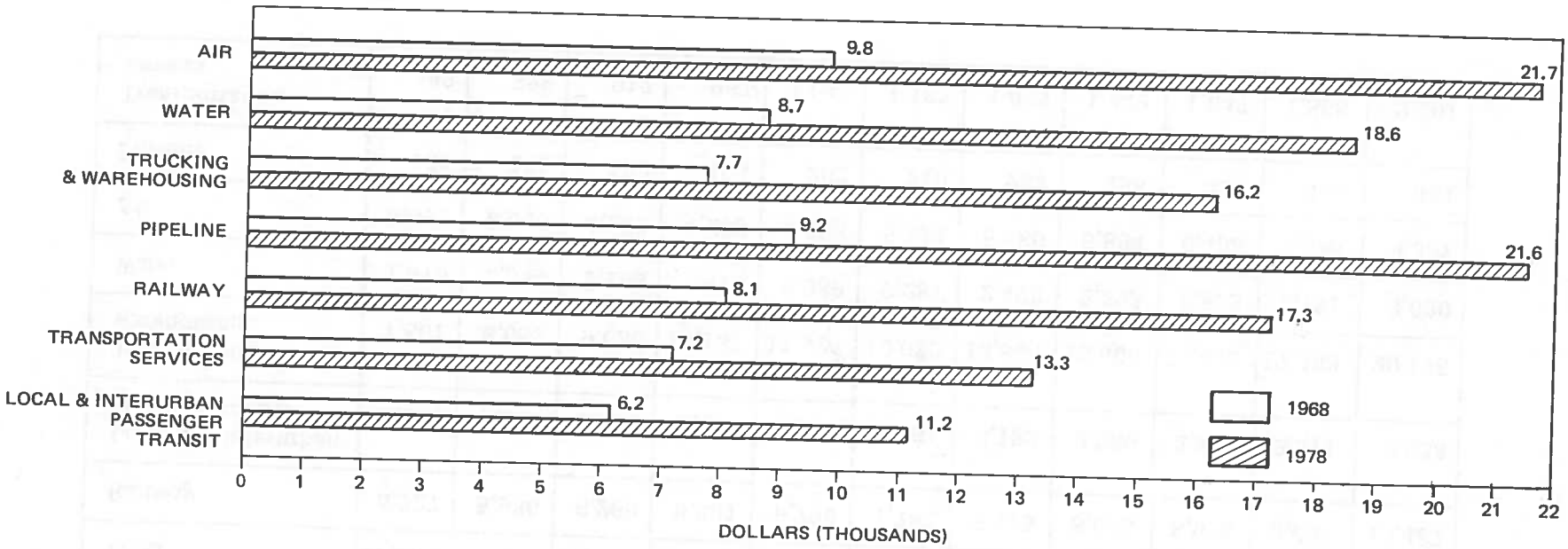


Figure 22. Average Annual Earnings per Full-Time Employees by Transportation Sector, 1968 and 1978

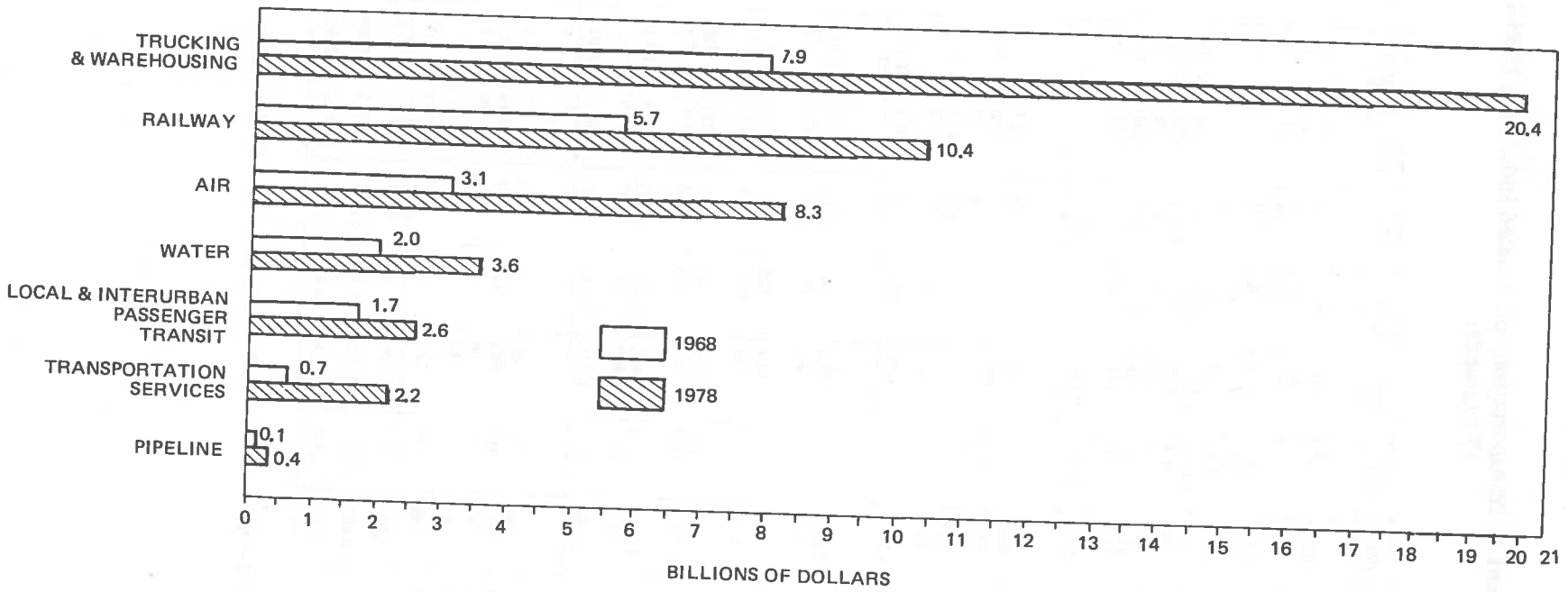


Figure 23. Wages and Salaries by Transportation Sector, 1968 and 1978

SUPPLEMENTARY DATA
Section II: Energy in Transportation

Part 1. Energy Consumption

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[4] Btu	Trillion Btu	% of Total Gross Energy Consumption	Quadrillion Btu
1950	63.0	1,651	1,248.3	7,053	0.13	135	8,839	5,881	20.1	8,859	26.4	33.62
1955	17.0	439	1,690.0	9,452	0.25	259	10,155	4,563	15.6	10,171	26.0	39.18
1960	3.0	80	1,932.5	10,737	0.35	362	11,175	4,770	16.3	11,191	25.4	44.08
1965	0.7	19	2,270.3	12,559	0.50	516	13,093	4,652	15.9	13,109	24.7	52.99
1966	0.6	16	2,383.5	13,040	0.54	558	13,613	4,514	15.4	13,628	24.5	55.99
1967	0.5	13	2,496.6	13,769	0.58	599	14,380	4,572	15.6	14,396	24.9	57.89
1968	0.4	11	2,704.7	14,887	0.59	608	15,505	4,540	15.5	15,521	25.3	61.32
1969	0.3	8	2,817.8	15,475	0.63	650	16,132	4,531	15.5	16,148	25.0	64.53
1970	0.3	8	2,901.8	15,969	0.72	742	16,718	4,633	15.8	16,734	25.0	66.82
1971	0.0	5	3,011.3	16,574	0.74	763	17,344	4,537	15.5	17,360	25.4	68.30
1972	0.2	5	3,187.9	17,533	0.77	791	18,329	4,440	15.1	18,344	25.6	71.63
1973	0.1	3	3,379.9	18,640	0.73	745	19,387	4,186	14.3	19,401	26.0	74.61
1974	0.1	3	3,296.0	17,920	0.67	686	18,608	4,258	14.5	18,623	25.7	72.76
1975	*	**	3,336.1	18,329	0.58	592	18,921	4,273	14.6	18,936	26.8	70.71
1976	*	**	3,499.0	19,070	0.55	561	19,631	4,338	14.8	19,646	26.5	74.51
1977	*	**	3,620.8	20,009	0.53	541	20,550	4,212	14.4	20,564	26.9	76.39
1978	*	**	3,682.9	20,352	0.53[r]	541[r]	20,893	4,336	14.8	20,908	26.8	78.15[r]
1979	*[p]	**	3,547.8[e]	19,194	0.52[e]	531	19,725	4,245[p]	14.5	19,740	25.3	78.02[p]

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 Gas.
[3] Includes only energy used by Railroads and Railways.
[4] Btu's derived by multiplying by conversion factors on pages 202 for coal-bituminous Consumption, 199 for petroleum by Non-Utility, 201 for Natural Gas, of DOE, *Annual Report to Congress, 1979, Volume Two.*

Source: U.S. Department of Energy, *Annual Report to Congress, 1979, Volume Two.*
Coal: Table 46; Petroleum: Table 26; Natural Gas: Table 39; Total Gross Energy Consumption: Table 4.
Edison Electric Institute, *Statistical Year Book*, 1978, 1971 and *Historical Statistics Through the Year 1970.*
Sales of Electricity: Ibid., Section IV, Table 19s.

Table 20. Fuel Consumption by Mode of Transportation, 1968-1978

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Class I Railroads											
Locomotives											
Diesel Oil, gals X 10^6	3,917	3,919	3,800	3,819	3,999	4,141	4,112	3,732	3,890	3,982	3,966
Fuel Oil, gals X 10^6	42	33	—	—	—	—	—	—	—	—	—
Electricity, KWH X 10^6	750	610	578	534	435[r]	346	467	422	353	417	331
Coal, tons	1,669	1,137	1,238	1,191	1,400	1,202	1,160	1,160	1,421	1,569	1,275
Motor Cars											
Diesel Oil, gals X 10^6	5	5	8	4	3	3	4	4	5	3	2
Electricity, KWH X 10^6	567	538	763	756	715	901	847	857	790	986	991
Air											
Certified Carriers											
Aviation Gasoline, gals X 10^6	128	33	15	12	13	n/a	n/a	n/a	n/a	n/a	n/a
Jet Fuel, gals X 10^6	8,891	10,113	10,085	10,140	10,302	10,700†	9,554†	9,507†	9,832†	10,577†	10,889†
General Aviation[3]											
Aviation Gasoline, gals X 10^6	495	522	551	508	584	411	443	412	432	456	518
Jet Fuel, gals X 10^6	115	168	208	226	245	304	357	453	495	536	763
Highway											
Gasoline, gals X 10^6											
Pass. Cars + Taxis	58,413	62,325	65,649	69,213	73,121	77,619	73,770	76,010	78,398[r]	80,225	83,312
Motorcycles	111	123	135	301	342	392	447	447	448[r]	451	463
Diesel + Gasoline, gals X 10^6											
Commercial Buses[2]	655	657	644	631	561	520	525	553	574	583	615
School Buses	277	290	300	316	320	327	333	342	390	401	407
Single-unit Trucks[1]	15,674	16,528	17,237	18,221	22,118	22,755	21,125	21,868	24,914[r]	26,255	27,780
Combination Trucks	7,808	8,199	8,363	8,865	8,600	8,860	10,101	9,764	10,975[r]	11,709	12,491
Water Transport											
Residual Fuel Oil, gals X 10^6	3,678	3,506	3,774	3,307	3,273	3,881	3,824	4,060	4,933[r]	5,417	6,615
Distillate Fuel Oil, gals X 10^6	766	793	819	880	929	1,125	1,040	1,098	1,190[r]	1,408	1,579
Gasoline, gals X 10^6	533	569	598	645	687	717	697	730	764	774	812
Transit											
Electricity, KWH X 10^6											
Rapid Transit	2,250	2,291	2,261	2,262	2,149	2,098	n/a	n/a	n/a	n/a	n/a
Surface Rail	179	173	157	153	146	140	n/a	n/a	n/a	n/a	n/a
Trolley	157	154	143	141	133	93	n/a	n/a	n/a	n/a	n/a
Total	2,586	2,618	2,561	2,556	2,428	2,331	2,630	2,646	2,576	2,303	2,223[p]
Gallons of Motor Fuel, gals X 10^6											
Gasoline	46	40	37	29	20	12	7	5	5	8	9[p]
Diesel Oil	274	274	271	257	253	283	316	365	389	403	422[p]
Propane	32	32	31	27	24	15	3	3	1	1	0
Pipelines											
Natural Gas, cu. ft. X 10^6	590,965	630,962	722,166	742,592	766,156	728,177	668,834	582,963	548,323	532,669	530,451
Total Non-Highway Use of Gasoline X 10^6 [4]	4,207	4,105	4,003	3,913	3,824	3,896	3,623	3,642	3,778	3,725	3,577

r = revised
p = preliminary
n/a = not available
[1] Includes non-freight truck movements.
[2] Includes intercity and urban buses.
[3] Data for 1965-1972 calculated by method different from that used for 1973-1977 data.
[4] Private, commercial, and public non-highway use of gasoline.
† Includes Aviation Gasoline.

Source: See Appendix A, p. 173.

...n Consumption and Travel by Personal Passenger Vehicles[2], 1968-1978

Year	Number[1] Registered (thousands)	Total[1] Vehicle Miles Traveled (millions)	Average Miles Traveled			Average Miles Traveled per Gallon			Total Fuel Consumed (millions of gallons)			Average Gallons Consumed per Vehicle		
			Passenger Cars	Motor-cycles	All Personal Passenger Vehicles	Passenger Cars	Motor-cycles	All Personal Passenger Vehicles	Passenger Cars	Motor-cycles	All Personal Passenger Vehicles	Passenger Cars	Motor-cycles	All Personal Passenger Vehicles
1968	85,793	814,030	9,627	3,970	9,488	13.79	75	13.91	58,413	111	58,524	698	53	682
1969	89,156	858,858	9,782	4,020	9,633	13.63	75	13.75	62,325	123	62,448	718	54	700
1970	92,095	900,992	9,978	3,605	9,783	13.57	75	13.70	65,649	135	65,784	735	48	714
1971	96,144	954,155	10,121	4,500[3]	9,926	13.57	50[3]	13.73	69,213	301	69,514	746	90[3]	723
1972	100,658	1,003,498	10,184	4,500	9,969	13.49	50	13.67	73,121	342	73,463	755	90	730
1973	106,119	1,036,455	9,992	4,498	9,767	13.10	50	13.29	77,619	392	78,011	763	90	736
1974	109,823	1,013,068	9,448	4,500	9,225	13.43	50	13.65	73,770	447	74,217	704	90	676
1975	111,679	1,050,472	9,634	4,500	9,406	13.53	50	13.74	76,010	447	76,457	712	90	685
1976	115,170	1,098,179	9 ,763	4,500	9,535	13.72	50	13.93	78,398	448	78,847	711	90	685
1977	118,711	1,141,215	9,839	4,500	9,613	13.94	50	14.15	80,225	451	80,677	706	90	680
1978	121,717	1,194,231	10,046	4,500	9,812	14.06	50	14.26	83,312	463	83,775	715	90	688

[1]Includes motorcyles.
[2]For the 50 states and District of Columbia.
[3]Significant differences in values for 1971 and the corresponding values for 1970 represents a change in the basic assumptions of miles per vehicle and miles per gallon, not a shift in the trend.

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table VM-1, annual issues.

Table 24. Fuel Consumption and Travel by Motor Trucks, 1968-1978

Year	Number Registered (thousands)	Total Vehicle Miles Traveled (millions)	Average Miles Traveled			Average Miles Traveled per Gallon			Total Fuel Consumed (millions of gallons)			Average Gallons of Fuel Consumed per Vehicle		
			Single-unit Trucks	Combinations	All Trucks	Single-unit Trucks	Combinations	All Trucks	Single-unit Trucks	Combinations	All Trucks	Single-unit Trucks	Combinations	All Trucks
1968	16,995	196,651	9,857	43,229	11,571	10.14	4.83	8.37	15,674	7,808	23,482	972	8,964	1,382
1969	17,871	206,680	9,871	42,453	11,565	10.12	4.81	8.36	16,528	8,199	24,727	976	8,826	1,384
1970	18,748	214,670	9,807	41,903	11,450	10.12	4.81	8.39	17,237	8,363	25,600	969	8,711	1,365
1971	19,802	227,037	9,794	43,779	11,465	10.12	4.81	8.38	18,221	8,865	27,086	968	9,102	1,368
1972	21,239	259,735	10,525	47,084	12,229	9.63	5.42	8.46	22,118	8,600	30,718	1,092	8,687	1,446
1973	23,233	267,147	9,868	46,716	11,538	9.63	5.42	8.45	22,755	8,860	31,615	1,025	8,620	1,361
1974	24,630	267,519	8,981	51,667	10,861	10.01	5.55	8.57	21,125	10,101	31,226	897	9,310	1,269
1975	25,776	274,454	8,882	49,125	10,648	10.01	5.69	8.68	21,868	9,764	31,632	887	8,633	1,227
1976	27,779	307,950	9,369	48,297	11,086	9.99	5.39	8.58	24,914	10,975	35,890	938	8,961	1,292
1977	29,562	329,465	9,400	50,206	11,145	10.13	5.42	8.68	26,255	11,709	37,964	928	9,263	1,284
1978	31,703	347,906	9,249	49,267	10,974	10.10	5.39	8.64	27,780	12,491	40,271	916	9,141	1,270

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Table VM-1, annual issues.

Table 26. Motor Fuel and Energy Consumption by the U.S. Transit Industry (at 5-Year Intervals 1950-1965 and Annually 1966-1978)

Year	Kilowatt Hours Consumed (In Millions)				Gallons of Motor Fuel Used (In Thousands)		
	Heavy Rail	Light Rail	Trolley Coach	Total	Gasoline	Diesel Oil	Propane
1950	2,000	2,410	841	5,251	430,000	98,600	*
1955	1,900	910	720	3,530	246,000	172,600	30,300
1960	2,098	393	417	2,908	153,600	208,100	38,300
1965	2,185	218	181	2,584	91,500	248,400	32,700
1966	2,075	226	166	2,467	76,000	256,000	33,600
1967	2,194	180	157	2,531	57,800	270,300	33,000
1968	2,250	179	157	2,586	45,700	274,200	32,200
1969	2,291	173	154	2,618	40,000	273,800	31,600
1970	2,261	157	143	2,561	37,200	270,600	31,000
1971	2,262	153	141	2,556	29,400	256,800	26,500
1972	2,149	146	133	2,428	19,647	253,250	24,400
1973	2,098	140	93	2,331	12,333	282,620	15,152
1974	n/a	n/a	n/a	2,630	7,457	316,360	3,142
1975	n/a	n/a	n/a	2,646	5,017	365,060	2,559
1976	n/a	n/a	n/a	2,576	5,203	389,187	960
1977	n/a	n/a	n/a	2,303	8,077	402,842	1,196[r]
1978[p]	n/a	n/a	n/a	2,223	9,318	422,017	13

n/a = not available
p = preliminary
r = revised
*Propane included with gasoline

Source: American Public Transit Association, *Transit Fact Book*, 1978-1979 Edition. Table 17.

Table 28. Domestic Demand for Refined Petroleum Products by End-Use Sector (Trillion Btu's per Day)[1] (At 5-Year Intervals 1950–1965 and Annually 1966-1979)

Year	Residential and Commercial	Industrial	Transportation	Transportation as % of Total	Electric Utilities[2]	Total
1950	8.14	7.35	19.02	53.0	1.61	35.92
1955	10.63	9.51	25.90	54.7	1.23	47.32
1960	12.95	10.78	29.34	53.9	1.39	54.45
1965	14.83	12.67	34.41	54.0	1.83	63.67
1966	14.99	13.24	35.73	54.1	2.19	66.09
1967	16.32	12.79	37.72	54.5	2.43	69.27
1968	16.07	14.15	40.67	55.2	2.81	73.70
1969	16.53	14.83	42.40	54.6	3.90	77.66
1970	17.00	15.02	43.75	54.1	5.06	80.89
1971	17.01	15.19	45.41	54.2	6.16	83.72
1972	17.55	17.00	47.91	53.2	7.59	90.04
1973	17.65	17.87	51.07	53.5	8.88	95.46
1974	15.88	17.24	49.10	54.2	8.32	90.53
1975	15.16	16.54	50.22	56.0	7.80	89.66
1976	16.30	18.53	52.10	54.7	8.23	95.16
1977	16.41	20.83	54.82	53.8	9.78	101.84
1978	16.69	21.16	55.76	53.9	9.95	103.50
1979[3]	19.08	20.03	52.59	51.9	9.65	101.35

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 Consumption of Petroleum Products column by each end-use sector column on page 199 in D.O.E.'s *Annual Report to Congress*, 1979, Volume Two.

[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, *Annual Report to Congress*, 1979, Volume Two, Table 26.

Table 30. U.S. Sales of Distillate Fuel Oil by Use
(Thousand Barrels)
(at 5-Year Intervals 1950-1965 and Annually 1966-1978)

Year	Heating Oils	Industrial Use	Oil Company Fuel	Electric Utility	Railroads	Vessel Bunkering	Military Use	Diesel Type			All Other	Total
								On Highway	Off Highway	Total		
1950	235,740	37,121	5,692	13,207	48,703	12,872	6,553	[1]	[1]	21,333	14,085	395,306
1955	356,589	43,606	8,597	5,884	84,668	16,675	10,945	23,446	20,769	44,215	9,948	581,127
1960[2]	438,010	34,271	8,347	4,742	86,490	18,730	10,793	36,467	38,095	74,562	7,380	683,325
1965	475,992	42,484	10,430	3,661	86,436	15,532	14,953	73,776	50,346	124,122	13,281	786,891
1966	472,778	47,108	10,485	3,612	89,104	16,642	16,303	81,516	54,260	135,776	17,905	809,713
1967	501,026	44,997	8,997	2,858	88,688	17,478	17,325	[1]	[1]	[1]	147,831	829,200
1968	510,682	45,795	9,975	8,509[3]	84,030	18,235	12,593	124,082	47,691	171,773	11,508	873,100
1969	511,768	42,456	13,867	12,158	86,429	18,877	13,958	138,814	49,439	188,253	12,534	900,300
1970	521,135	43,668	11,518	24,770	88,416	19,503	12,447	148,796	46,123	194,919	10,874	927,250
1971	522,475	50,731	14,088	35,329	86,251	20,959	17,427	166,981	46,925	213,906	10,154	971,320
1972	543,337	60,388	13,405	68,334	97,001	22,125	20,187	189,055	50,186	239,241	10,852	1,074,870
1973	536,856	67,306	14,902	77,950	102,828	26,786	19,598	221,420	55,541	276,961	11,876	1,135,063
1974	493,223	64,036	13,805	84,661	102,949	24,757	17,748	221,033	48,743	269,776	10,131	1,081,086
1975	488,388	63,993	13,633	63,420	93,191	26,138	18,004	217,906	48,977	266,883	10,096	1,043,746
1976[r]	540,895	79,956	14,523	60,570	97,467	28,330	17,574	242,820	54,429	297,249	11,365	1,150,929
1977	537,530	104,244	19,954	76,881	99,306	33,512	18,137	264,412	62,823	327,235	14,394	1,230,993
1978	533,069	94,797	19,410	77,175	99,841	37,591	20,320	290,943	69,856	360,799	14,059	1,257,061

p = preliminary
r = revised

[1] Data not available.
[2] Included Alaska and Hawaii.
[3] Includes gas turbine plants in 1968 and subsequent years.

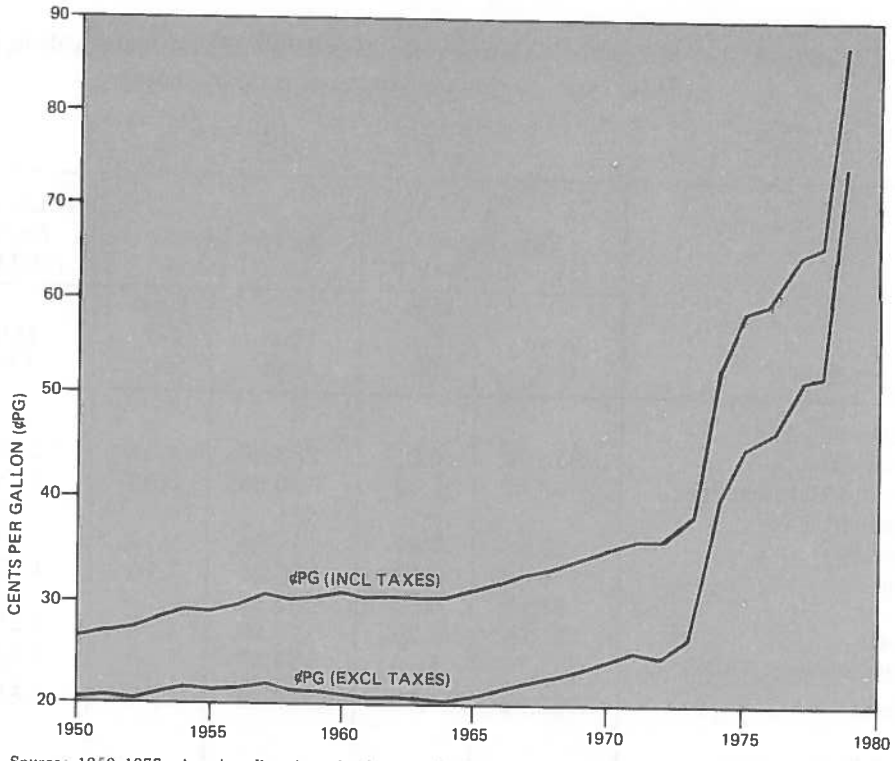
Source: 1950-1972: American Petroleum Institute, *Basic Petroleum Data Book*, Section VII, Table 13, 13a.
1973-1978: U.S. Department of Energy, *Energy Data Reports*, Fuel Sales, Annual, November 1979, Table 2.

Table 32. Price Trend of Gasoline vs. Other Consumer Goods and Services (at 5-Year Intervals 1950-1965 and Annually 1966-1979)

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 Excl. Taxes	State and Federal Taxes	Service Station Price Incl. Taxes	All Items	Food	Rent	Apparel and Upkeep	Regular and Premium Gasoline	Entertainment*
1950	20.08	6.68	26.76	72.1	74.5	70.4	79.0	71.8	74.4
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
1966	21.57	10.51	32.08	97.2	99.1	98.2	96.1	97.0	97.5
1967	22.55	10.61	33.16	100.0	100.0	100.0	100.0	100.0	100.0
1968	22.93	10.78	33.71	104.2	103.6	102.4	105.4	101.4	104.7
1969	23.85	10.99	34.84	109.8	108.9	105.7	111.5	104.7	108.7
1970	24.55	11.14	35.69	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	38.82	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	63.07	181.5	192.2	153.5	154.2	188.2	157.9
1978	53.09	12.62	65.71	195.4[r]	211.4	164.0	159.6	196.3	176.6
1979[p]	74.38	13.48	87.76	217.4	234.5	176.0	166.6	265.6	188.5

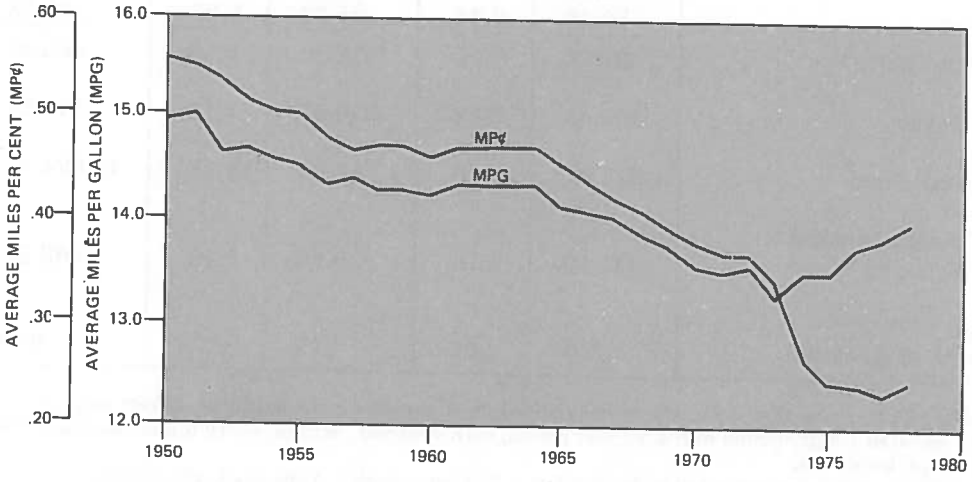
r = revised
p = preliminary
*Includes reading materials, sporting goods, toys and hobbies, and entertainment services.

Source: Price Indexes Regular and Premium Gasoline: 1950-1979: Department of Labor: *Monthly Labor Review*
1950-1979: American Petroleum Institute, *Basic Petroleum Book*, Section VI, Table 4.



Source: 1950-1977: American Petroleum Institute, *Basic Petroleum Data Book*, Section VI, Table 1, 4a.
1978: Platt's, *Oilgram Price Report*, 1978.

Figure 25. Price Trend of Regular Grade Gasoline Prices, 1950-1979



Source: MPG: Federal Highway Administration, *Highway Statistics*, Table VM-1, annual issues.
MP¢: U.S. Department of Transportation, Transportation Systems Center computation.

Figure 26. Average Fuel Efficiency of U.S. Passenger Cars, 1950-1978 (Average Miles per Gallon and Average Miles per Cent Cost of Gasoline)

Table 35. Estimated Cost of Operating a *Standard* Size 1974 Model Automobile, Including Fuel[1]
(Total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles)		Second Year (13,000 miles)		Totals and Averages for Ten Years (100,000 miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Costs Excluding Taxes:						
Depreciation	1,046.00	7.21	647.00	4.98	4,201.00	4.20
Repairs and Maintenance	122.96	0.85	158.01	1.21	2,933.94	2.94
Replacement Tires	18.63	0.13	16.71	0.13	385.99	0.38
Accessories	3.53	0.02	3.39	0.03	57.40	0.06
Gasoline	438.70	3.03	393.35	3.02	3,025.96	3.03
Oil	20.00	0.14	19.00	0.15	195.00	0.19
Insurance[2]	205.00	1.41	192.00	1.48	1,618.00	1.62
Garaging, Parking, Tolls, etc.	224.80	1.55	215.20	1.65	1,960.00	1.96
Total	2,079.62	14.34	1,644.66	12.65	14,383.29	14.38
Taxes and Fees:						
State:						
Gasoline	100.98	0.70	90.54	0.70	696.51	0.70
Registration	30.00	0.21	30.00	0.23	300.00	0.30
Tilting	170.04	1.17	—	—	170.04	0.17
Subtotal	301.02	2.08	120.54	0.93	1,166.55	1.17
Federal:						
Gasoline	44.88	0.31	40.24	0.31	309.56	0.31
Oil[3]	0.30	—	0.29	—	2.93	—
Tires	1.45	0.01	1.30	0.01	30.03	0.03
Subtotal	46.63	0.32	41.83	0.32	342.52	0.34
Total Taxes	347.65	2.40	162.37	1.25	1,509.07	1.51
Total of All Costs	2,427.27	16.74	1,807.03	13.90	15,892.36	15.89
Total Gasoline and Oil Costs, Including Taxes	604.86	4.18	543.42	4.18	4,229.96	4.23
Gasoline and Oil Costs as Percent of All Costs	25%	25%	30%	30%	27%	27%

[1] This estimate covers the total costs of a fully equipped, medium priced, standard size, 4-door sedan, *less* the average dealer discount allowed on that car, purchased for $4,251, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used.

[2] Previous editions of this study used insurance rates designated for Baltimore city. The rates shown above are for the Baltimore suburbs, and consequently are less than the rates presented in the previous study. If the Baltimore city rates had been used in this study, the insurance costs would have been higher. (For example, the first year would have been $232).

[3] Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column. See Appendix A for basis of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April 1974.

Table 37. Estimated Cost of Operating a *Subcompact* Size 1974 Model Automobile, Including Fuel[1] (Total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles)		Second Year (13,000 miles)		Totals and Averages for Ten Years (100,000 miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Costs Excluding Taxes:						
Depreciation	283.00	1.95	265.00	2.04	2,360.00	2.36
Repairs and Maintenance	97.69	0.67	150.55	1.16	2,119.61	2.12
Replacement Tires	13.64	0.09	12.23	0.09	302.72	0.30
Accessories	3.53	0.03	3.39	0.03	57.40	0.06
Gasoline	264.32	1.82	236.95	1.82	1,824.41	1.82
Oil	14.00	0.10	13.00	0.10	138.00	0.14
Insurance	177.00	1.22	169.00	1.30	1,466.00	1.47
Garaging, Parking, Tolls, etc.	224.80	1.55	215.20	1.65	1,960.00	1.96
Total	1,077.98	7.43	1,065.32	8.19	10,228.14	10.23
Taxes and Fees:						
State:						
Gasoline	60.84	0.42	54.54	0.42	419.14	0.42
Registration	20.00	0.14	20.00	0.15	200.00	0.20
Titling	96.40	0.66	—	—	96.40	0.09
Subtotal	177.24	1.22	74.54	0.57	716.34	0.71
Federal:						
Gasoline	27.04	0.19	24.24	0.19	186.64	0.19
Oil[2]	0.21	—	0.20	—	2.07	—
Tires	0.90	0.01	0.80	0.01	19.91	0.02
Subtotal	28.15	0.20	25.24	0.20	208.62	0.21
Total Taxes	205.39	1.42	99.78	0.77	924.96	0.92
Total of All Costs	1,283.37	8.85	1,165.10	8.96	11,153.10	11.15
Total Gasoline and Oil Costs, Including Taxes	366.41	2.53	328.93	2.53	2,570.26	2.57
Gasoline and Oil Costs as Percent of All Costs	29%	29%	28%	28%	23%	23%

[1] This estimate covers the total costs of a low priced, subcompact size, 2-door sedan, *less* the average dealer discount allowed on that car, purchased for $2,410, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used. Since cost data for American made subcompacts do not exist past the second year, only the first, second, and estimated ten-year totals are shown.

[2] Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.

See Appendix A for basis of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April 1974.

Table 39. Estimated Cost of Operating a *Compact* Size 1976 Model Automobile, Including Fuel[1]
(Total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles)		Second Year (13,000 miles)		Totals and Averages for Ten Years (100,000 miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Costs Excluding Taxes:						
Depreciation	536.00	3.70	498.00	3.83	3,830.00	3.83
Repairs and Maintenance	139.33	0.96	234.68	1.81	2,961.00	2.96
Replacement Tires	20.23	0.14	18.14	0.14	387.20	0.39
Accessories	7.59	0.05	7.07	0.05	86.00	0.09
Gasoline	330.74	2.28	296.52	2.28	2,280.94	2.28
Oil	14.84	0.10	13.78	0.10	169.60	0.17
Insurance	199.00	1.38	187.00	1.44	1,594.00	1.59
Garaging, Parking, Tolls, etc.	240.98	1.66	230.94	1.78	2,108.80	2.11
Total	1,488.71	10.27	1,486.13	11.43	13,417.54	13.42
Taxes and Fees:						
State:						
Gasoline	62.10	0.43	55.71	0.43	428.40	0.43
Registration	20.00	0.14	20.00	0.15	200.00	0.20
Titling	154.60	1.06	—	—	154.60	0.16
Sales	7.28	0.05	10.95	0.09	144.15	0.14
Subtotal	243.98	1.68	86.66	0.67	927.15	0.93
Federal:						
Gasoline	27.60	0.19	24.76	0.19	190.40	0.19
Oil[2]	0.21	—	0.20	—	2.40	—
Tires	1.25	0.01	1.12	0.01	23.97	0.02
Subtotal	29.06	0.20	26.08	0.20	216.77	0.21
Total Taxes	273.04	1.88	112.74	0.87	1,143.92	1.14
Total of All Costs	1,761.75	12.15	1,598.87	12.30	14,561.46	14.56
Total Gasoline and Oil Costs, Including Taxes	435.49	3.01	390.97	3.01	3,071.74	3.07
Gasoline and Oil Costs as Percent of All Costs	25%	25%	24%	24%	21%	21%

[1] This estimate covers the total costs of a medium priced, compact size, 2-door sedan, purchased for $3,865, operated 100,000 miles over a 10-year period, then scrapped for $35. Baltimore area prices, considered to be in the middle range, were used.

[2] Where costs per mile are less than 1/20 cent, a dash (—) appears in the column.

See Appendix A for basis of estimate.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile, 1976.*

Table 41. Estimated Cost of Operating a *Standard* Size 1979 Model Automobile, Including Fuel[1]
(Total costs in dollars, costs per mile in cents)

Item	First Year (14,500 Miles)		Second Year (13,000 Miles)		Totals & Averages for Ten Years (100,000 Miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Costs Excluding Taxes:						
Depreciation	1,760.00	12.14	421.00	7.08	6,263.00	6.26
Repairs and Maintenance	190.47	1.31	322.32	2.48	4,804.21	4.80
Replacement Tires	39.98	0.27	35.81	0.28	578.55	0.58
Accessories	12.51	0.09	11.55	0.09	128.91	0.13
Gasoline	788.44	5.44	706.88	5.44	5,437.50	5.44
Oil	8.65	0.06	15.57	0.12	129.75	0.13
Insurance	313.00	2.16	300.00	2.31	2,445.00	2.44
Garaging, Parking, Tolls, etc.	355.71	2.45	343.74	2.64	3,198.00	3.20
Total	3,468.76	23.92	2,656.87	20.44	22,484.92	22.98
Taxes and Fees:						
State:						
Gasoline	81.96	0.96	73.13	0.96	562.51	0.56
Registration	30.00	0.21	30.00	0.23	300.00	0.30
Titling	315.14	2.17	—	—	315.14	0.32
Sales	5.03	0.04	7.71	0.06	150.60	0.15
Subtotal	431.73	2.98	110.84	1.25	1,328.25	1.33
Federal:						
Gasoline	36.25	0.25	32.50	0.25	250.00	0.25
Oil[2]	0.08	—	0.14	—	1.12	—
Tires	1.23	0.01	1.11	0.01	17.85	0.02
Subtotal	37.56	0.26	33.75	0.26	268.97	0.27
Total Taxes	469.29	3.24	144.59	1.11	1,597.22	1.60
Total of All Costs	3,938.05	27.16	2,801.46	21.55	24,582.14	24.58
Total Gasoline and Oil Costs, Including Taxes	915.38	6.71	828.22	6.77	6,380.88	6.38
Gasoline and Oil Costs as Percent of All Costs	23%	25%	30%	31%	26%	26%

[1] This estimate covers the total costs of a standard size, 4 door sedan, purchased for $6,303, operated 100,000 miles over a 10-year period, then scrapped for $40. Baltimore area prices, considered to be in the middle range, were used.

[2] Where costs per miles are less than 1/20 cent, a dash (-) appears in the column.
See Appendix A for basis of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, 1979.

Table 43. Estimated Cost of Operating a *Subcompact* Size 1979 Model Automobile, Including Fuel[1] (Total costs in dollars, costs per mile in cents)

Item	First Year (14,500 Miles)		Second Year (13,000 Miles)		Totals & Averages for Ten Years (100,000 Miles)	
	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile	Total Cost	Cost Per Mile
Costs Excluding Taxes:						
Depreciation	473.00	3.26	442.00	3.40	3,814.00	3.81
Repairs and Maintenance	104.27	0.72	186.45	1.43	3,431.95	3.43
Replacement Tires	21.87	0.15	29.90	0.23	512.55	0.51
Accessories	11.05	0.07	10.25	0.08	118.87	0.12
Gasoline	573.41	3.95	514.09	3.95	3,954.55	3.96
Oil	8.65	0.06	8.65	0.07	117.64	0.12
Insurance	278.00	1.92	262.00	2.01	2,209.00	2.21
Garaging, Parking, Tolls, etc.	351.36	2.43	339.84	2.62	3,168.00	3.17
Total	1,821.61	12.96	1,793.18	13.79	17,326.56	17.33
Taxes and Fees:						
State:						
Gasoline	99.32	0.41	53.18	0.41	409.09	0.41
Registration	20.00	0.14	20.00	0.15	200.00	0.20
Titling	192.70	1.33	—	—	192.70	0.19
Sales	3.40	0.02	5.11	0.04	109.83	0.11
Subtotal	275.42	1.90	78.29	0.60	911.62	0.91
Federal:						
Gasoline	26.36	0.18	23.64	0.18	181.81	0.18
Oil[2]	0.08	—	0.08	—	1.02	—
Tires	1.26	0.01	1.73	0.02	29.58	0.03
Subtotal	27.70	0.19	25.45	0.20	212.41	0.21
Total Taxes	303.12	2.09	103.74	0.80	1,124.03	1.12
Total of All Costs	2,124.73	14.65	1,896.92	14.59	18,450.59	18.45
Total Gasoline and Oil Costs, Including Taxes	707.82	4.60	599.64	4.61	4,664.11	4.67
Gasoline and Oil Costs as Percent of All Costs	33%	31%	32%	32%	25%	25%

[1] This estimate covers the total costs of a subcompact size, 3-door (hatchback) sedan, purchased for $3,854, operated 100,000 miles over a 10-year period, then scrapped for $40. Baltimore area prices, considered to be in the middle range, were used.

[2] Where costs per miles are less than 1/20 cent, a dash (–) appears in the column. See Appendix A for basis of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, 1979.

Part 2. Energy Intensiveness

Table 45. Energy Intensiveness of Certificated All-Cargo Carriers (All Services), 1968-1979*

Year	Overall Revenue Ton-Miles (millions)			Fuel Consumed** (million gal.)			Btu/Overall Revenue Ton-Mile		
	Domestic Operations	International Operations	Total Operations	Domestic Operations	International Operations	Total Operations	Domestic Operations	International Operations	Total Operations
1968	496	674	1,170	109	156	265	29,667	31,246	30,577
1969	475	1,093	1,568	97	225	322	27,568	27,790	27,723
1970	302	1,123	1,425	60	229	289	26,821	27,529	27,739
1971	311	1,264	1,575	59	240	299	25,611	27,633	25,629
1972	379	1,333	1,712	68	249	317	24,222	25,218	24,997
1973	534	1,139	1,673	91	202	293	23,006	23,942	23,643
1974	533	1,112	1,645	85	180	265	21,529	21,852	21,748
1975	464	1,149	1,613	74	192	266	21,530	22,559	22,263
1976	463	1,183	1,646	75	186	261	21,868	21,226	21,406
1977	519	1,273	1,792	103	168	271	26,792	17,816	20,416
1978	870	1,316	2,186	164	171	335	25,448	17,542	20,688
1979	972	1,302	2,274	171	163	334	23,750	16,901	19,828

*Note: Btu/ton-mile data excludes passenger/cargo (belly freight) operations, which, if considered, would make overall air freight operations even more efficient.

**Includes aviation gasoline and jet fuel.

Note: Heat equivalent factor used in Btu conversion is 135,000 Btu/gal.

Source: Overall Revenue Ton-Miles:

1968–1972: CAB, *Handbook of Airline Statistics*, 1973, p. 116 and p. 119.
1973–1974: CAB, *Air Carrier Traffic Statistics*, December 1974, 1975, p. 12 and p. 15.
1975–1979: *Ibid.*, December 1979, 1977, 1978, p. 13 and p. 16.

Fuel Consumed:

1968–1972: CAB, *Handbook of Airline Statistics*, 1973, p. 65, Table 57.
1973–1976: CAB, *Handbook of Airline Statistics Supplement*, 1975, 1977, p. 5, Table 2.
1977–1979: CAB, *Fuel Cost and Consumption, 12 months ended Dec. '78 and '79*, Table 4 and Table 6.

Table 47. Energy Intensiveness of Automobiles and Motorcycles, 1968-1978

Year	Auto Pass.-Miles (millions)	Motorcycle Pass.-Miles (millions)	Fuel Consumed (million gal.)		Autos (Btu/pass.–miles)	Motorcycle (Btu/pass.–miles)
			Autos	Motorcycles		
1968	1,772,525	9,171	58,413	111	4,119	1,513
1969	1,869,193	10,148	62,325	123	4,168	1,515
1970	1,959,857	11,163	65,649	135	4,187	1,512
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	2,576,402	25,453	83,312	462	4,040	2,269

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:
1968-1978: FHWA, *Highway Statistics*, 1978, Table VM-1 and same table in earlier editions.

Table 49. Energy Intensiveness of Local Transit and School Buses, 1968-1978

Year	Vehicle-Miles (millions)						Fuel Consumed			Btu/Vehicle-Mile		
	Trolley Coach	Heavy Rail	Light Rail	Combined Rail & Trolley	Transit Bus	School Bus	Combined Rail & Trolley (kWh)(10^6)	Transit Bus (Diesel) (million gal.)	School Bus (Gasoline) (million gal.)	Combined Rail & Trolley†	Transit Bus	School Bus
1968	36.2	406.8	37.5	480.5	1,508	1,937	2,586	274	277	18,363	25,201	17,876
1969	35.8	416.6	36.0	488.4	1,478	2,030	2,618	274	290	18,290	25,713	17,857
1970	33.0	407.1	33.7	473.8	1,409	2,100	2,561	271	300	18,443	26,677	17,857
1971	30.8	407.4	32.7	470.9	1,376	2,212	2,556	257	316	18,520	25,905	17,857
1972	29.8	386.2	31.6	447.6	1,308	2,359	2,428	253	320	18,508	26,828	16,956
1973	25.7	407.3	31.2	464.2	1,370	2,412	2,331	283	327	17,134	28,651	16,946
1974	17.6	431.9	26.9	476.4	1,431	2,450	2,630	316	333	18,836	30,628	16,990
1975	15.3	423.1	23.8	463.7*	1,526	2,500	2,646	365	342	19,470	33,175	17,100
1976	15.3	407.0	21.1	444.9*	1,581	2,862	2,576	389	390	19,756	34,127	17,034
1977	14.8	361.3	20.4	398.0*	1,623	2,950	2,303	403	401	19,743	34,440	16,991
1978	13.3	363.5	19.5	397.8*	1,631	2,991	2,223	422	407	19,067	35,887	17,009

*Includes Cable Car and Inclined Plane.

†Does not include electric power generation and distribution losses, which, if included, would more than triple the Btu figures shown.

Note: The heat equivalent factors used for Btu conversion are:
1 kWh = 3412 Btu (Combined Rail and Trolley Coach)
Automotive gasoline = 125,000 Btu/gal. (School Bus)
Distillate oil = 138,700 Btu/gal. (Motor Bus)

Source: School Bus: FHWA, *Highway Statistics*, 1978, Table VM-1 and same table in earlier editions.
Local Transit: APTA, *Transit Fact Book*, 1978-79 edition, p. 30 and p. 40.

Table 52. Energy Intensiveness of Amtrak Service, 1972-1978

Year	Revenue Passenger-Miles (10^6)	Fuel Consumed (million gal.)				Total Fuel Consumed (10^9 Btu)*	Btu/Revenue Passenger-Mile*
		Locomotive		Rail Motor Car			
		Diesel	Electric*	Diesel	Electric*		
1972	3,038	n/a	n/a	n/a	n/a	n/a	n/a
1973	3,807	75.6	181.5	0.4	92.9	11,477	3,015
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	4,203	66.9	187.4	14.9	76.3	12,245	2,914
1978	4,154	69.6	197.4	17.7	64.7	13,002	3,130

n/a = not available

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

Note: The heat equivalent factors used in Btu conversion are:
Diesel = 138,700 Btu/gal.
Electric = 3,412 Btu = 1 kWh.

Source: Revenue Passenger-Miles:
1972-1978: AAR, *Statistics of Railroads of Class I*, 1968-1978, 63rd Edition, December 1979, p. 17.
Fuel Consumed:
1972-1978: AAR, Personal communication.

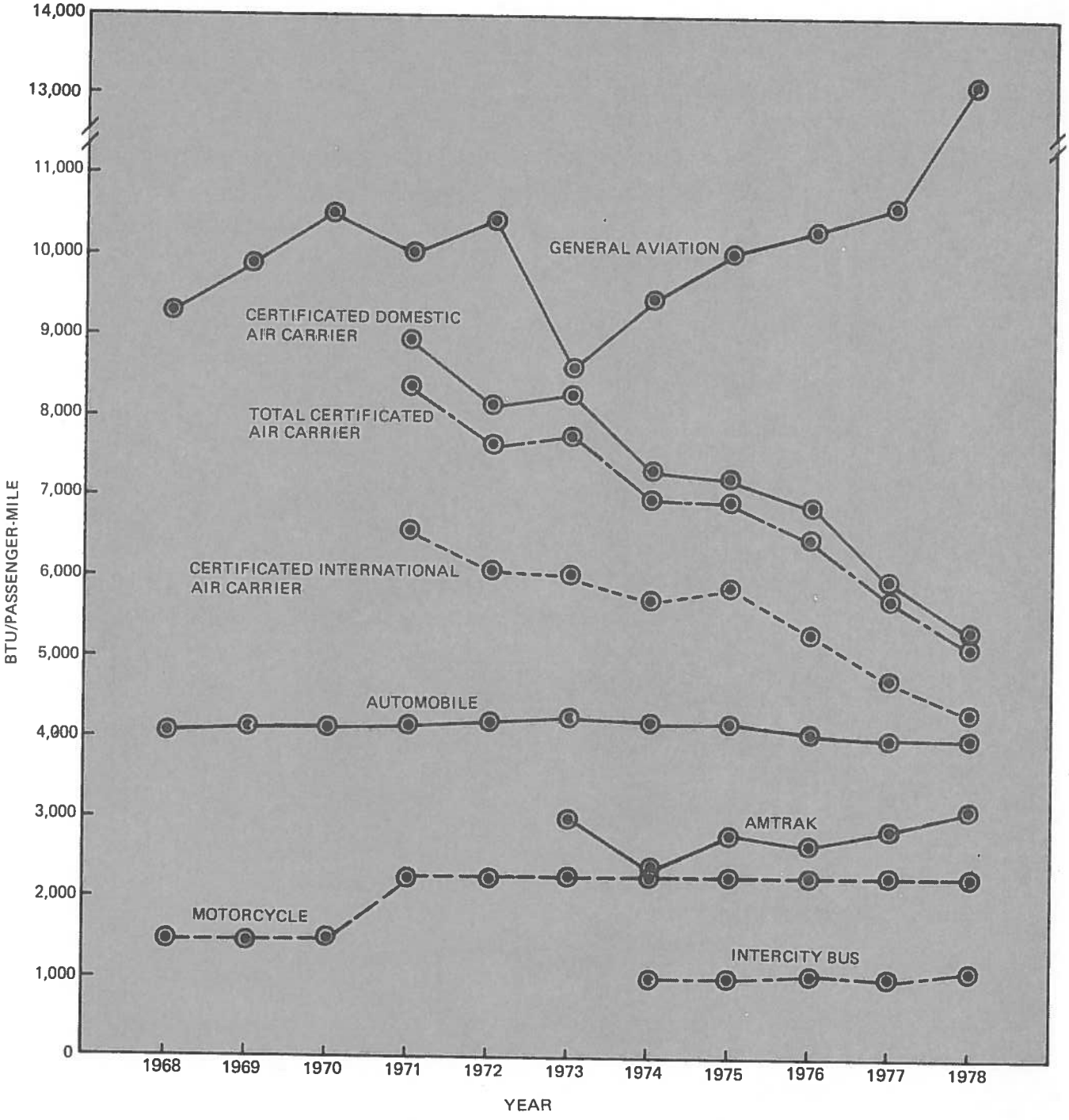
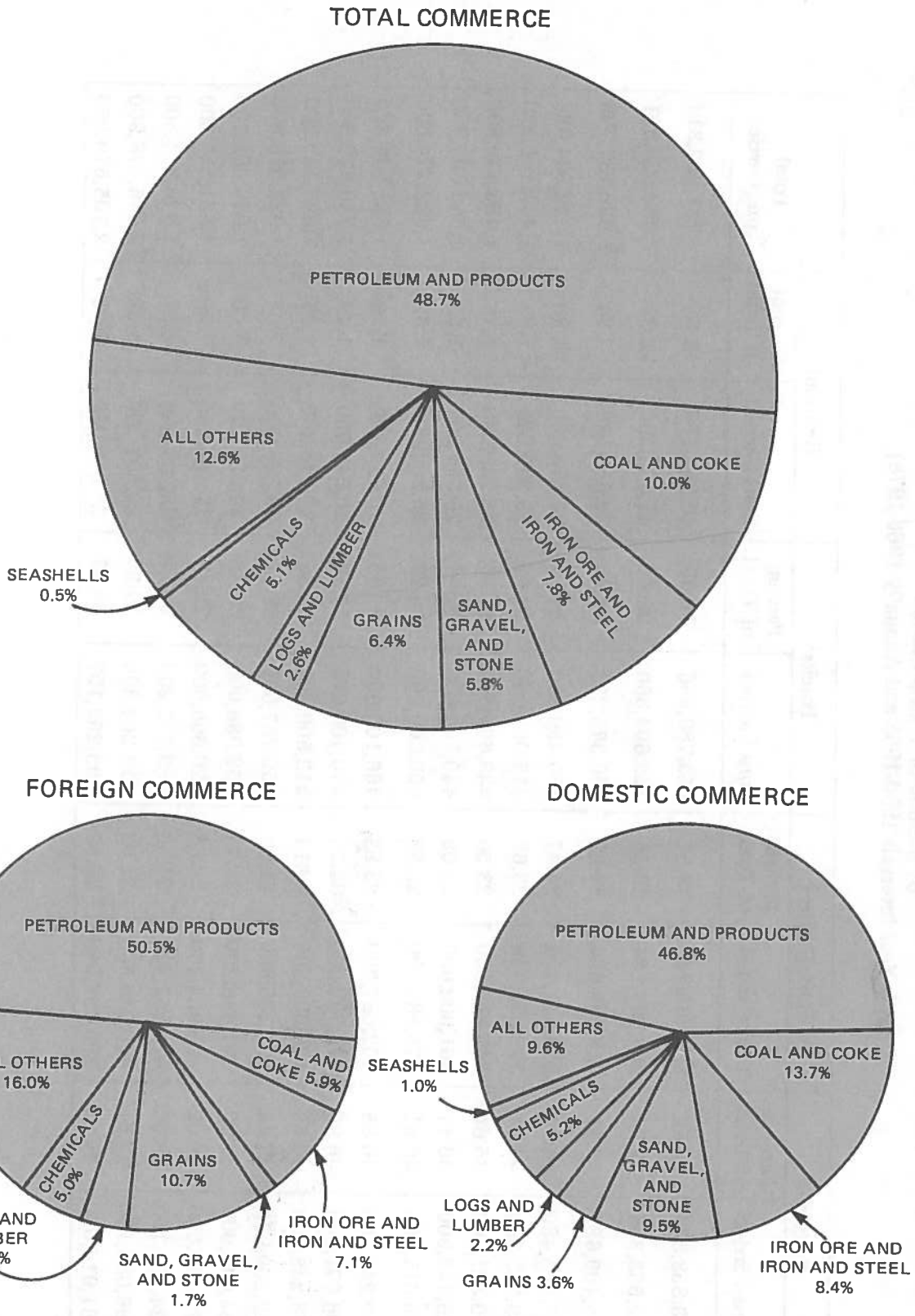


Figure 29. Energy Intensiveness by Passenger Mode, 1968-1978 (Btu/Passenger-Mile)

Part 3. Energy Transport



Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1978, p. 11.

Figure 30. Principal Commodities Carried by Water, Calendar Year 1978

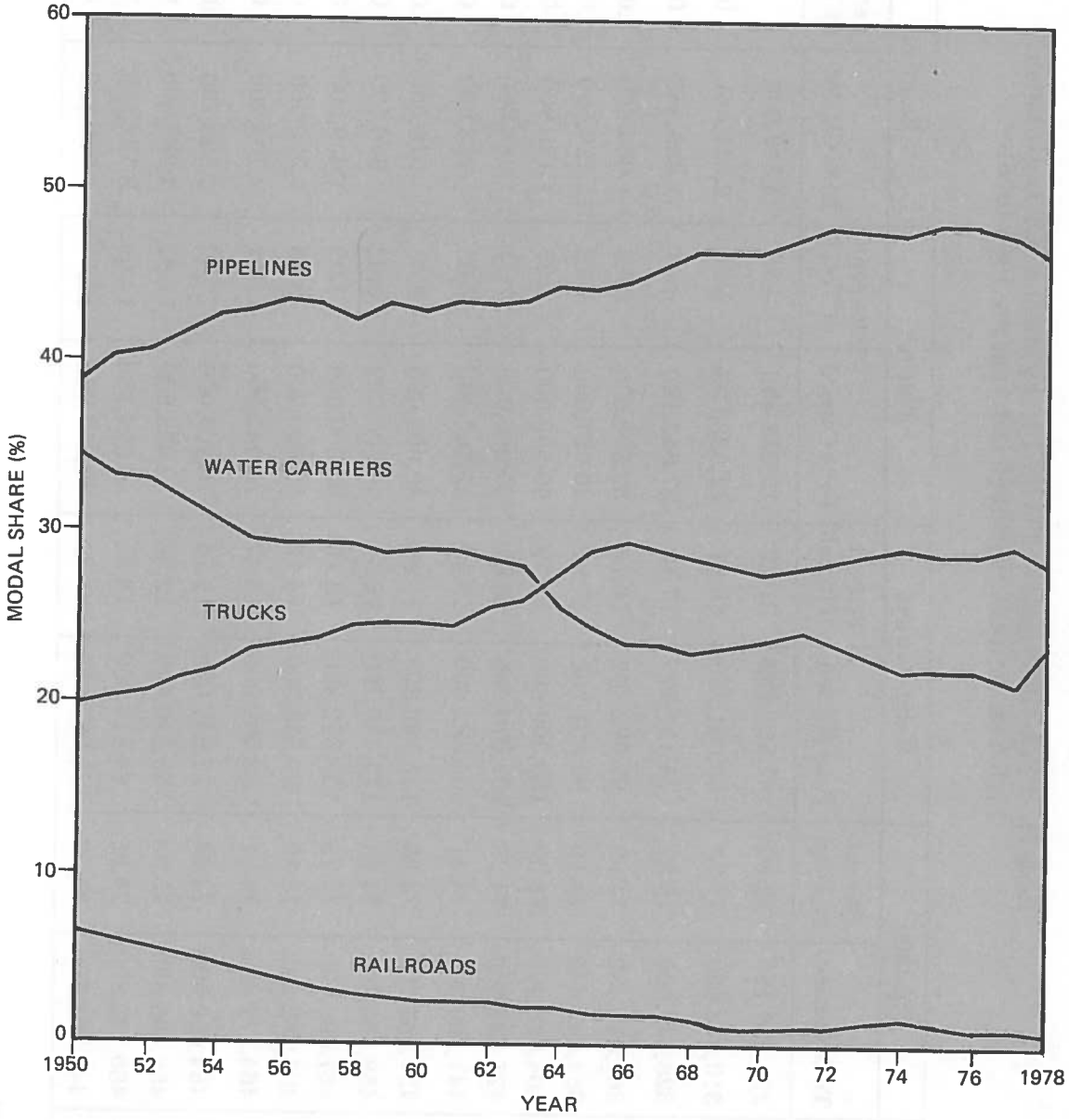


Figure 31. Crude Petroleum and Petroleum Products Transported in the U.S. by Modal Share, 1950-1978

Table 56. Refined Petroleum Products Transported in the U.S. by Method of Transportation (at 5-Year Intervals 1950-1965 and Annually 1966-1978)

Year	Pipelines[1]		Water Carriers		Trucks[2]		Railroads		Total Tons Carried
	Tons Carried	Percent of Total	Tons Carried	Percent of Total	Tons Carried	Percent of Total	Tons Carried	Percent of Total	
1950	52,655,233	12.75	185,214,617	44.85	130,768,527	31.66	44,363,662	10.74	413,002,039
1955	102,490,445	18.24	220,925,284	39.32	199,680,665	35.53	38,834,961	6.91	561,931,355
1960	139,960,682	21.31	244,157,879	37.17	242,532,133	36.93	30,168,753	4.59	656,819,447
1965	220,746,000	26.50	241,588,552	29.01	345,784,000	41.51	24,796,000	2.98	832,914,552
1966	245,211,035	27.65	240,025,811	27.07	376,904,000	42.50	24,689,000	2.78	886,829,846
1967	274,623,200	29.25	246,515,200	26.26	393,100,000	41.87	24,616,300	2.62	938,854,700
1968	300,606,600	30.41	253,992,300	25.69	408,800,000	41.35	25,184,400	2.55	988,583,300
1969	318,411,700	30.92	269,179,800	26.14	416,900,000	40.48	25,336,300	2.46	1,029,827,800
1970	333,085,000	31.12	286,367,000	26.75	425,200,000	39.72	25,816,000	2.41	1,070,468,000
1971	346,810,800	31.43	302,071,300	27.37	429,900,000	38.96	24,773,800	2.24	1,103,555,900
1972	388,641,400	32.39	322.930,400	26.92	462,500,000	38.55	25,638,700	2.14	1,199,710,500
1973	419,827,600	32.74	330,687,300	25.78	504,177,000	39.31	27,835,300	2.17	1,282,527,200
1974	420,375,600	33.54	323,868,200	25.84	481,993,000	38.45	27,225,700	2.17	1,253,462,500
1975	424,759,300	34.82	326,077,900	26.73	444,398,000	36.43	24,633,900	2.02	1,219,899,100
1976	475,600,300	35.82	349,947,400	26.18	486,615,700	36.41	24,440,600	1.83	1,336,604,000
1977	525,950,304	36.56	361,732,875	25.14	524,571,725	36.46	26,449,167	1.84	1,438,704,071
1978	534,357,700	37.61	356,809,198	25.12	505,704,145	35.60	23,627,100	1.66	1,420,498,143

[1]Products in pipelines carry light products only — gasoline, heating and fuel oils, liquid petroleum gas, kerosene and jet fuel.
[2]Estimates

Source: Association of Oil Pipelines, *Shifts in Petroleum Transportation*, 1980, Table 3, and previous issues.

Table 58. U.S. Petroleum Pipeline Mileage (As of December 31) (At 3-Year Intervals 1950-1965 and Annually 1966-1978)

	Crude-Oil Trunk Lines		Refined-Oil Trunk Lines		Total Trunk Lines		Crude-Oil Gathering Lines		Total Petroleum Pipelines	
Year	ICC Lines	All Lines[1]	ICC Lines	All Lines[1]	ICC Lines	All Lines[1]	ICC Lines	All Lines[1]	ICC Lines	All Lines
1950	64,622	71,373	16,374	20,881	80,996	92,254	47,593	60,560	128,589	152,814
1953	63,408	75,228	20,462	27,236	83,870	102,464	50,030	68,040	133,900	170,504
1956	61,885	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
1966	63,210	n/a	52,493	n/a	115,803	n/a	47,352	n/a	163,155	216,745
1967	60,893	70,825	51,475	64,529	112,368	135,354	46,855	74,124	165,478[2]	209,478
1968	61,807	n/a	53,431	n/a	115,238	n/a	46,886	n/a	169,307[2]	213,555
1969	61,887	n/a	56,096	n/a	117,983	n/a	45,993	n/a	170,824[2]	216,453
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[r]	122,354[3]	154,288[r]	41,655	69,247[r]	170,691[2]	223,535[r]
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	n/a
1978	60,799	n/a	65,114	n/a	125,913	n/a	36,539	n/a	162,452	n/a

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 a data is January 1, 1977.
ICC Lines are now Federal Energy Regulatory Commission.

Source: ICC Lines: 1950-1976: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, Pipelines, December 31, 1976, Table 2 and equivalent tables in earlier editions.
1977-1978: Penn Wells Publishing Co., *Oil and Gas Journal*, Aug. 13, 1979, p. 90.
All Lines: 1950-1978: Department of Energy, *Energy Data Reports*, Crude Oil and Product Pipelines, Triennial, January 1, 1977, Table 1.
Total Petroleum (All Lines)
1950-1978: Transportation Association of America, *Transportation Facts and Trends*, July 1978, p. 31.

Table 60. World Tanker Fleet at End of 1978[1]
(10,000 D.W. Tons and Over)

By Flag and Ownership
(In Million Long Tons Deadweight)

Flag	Ownership						Change 1978 over 1977	Share of Total 1978 %
	Oil Company	Private	Government	Other	Total 1978	Total 1977		
Liberia	33.7	69.3	—	0.4	103.4	107.5	-4.1	31.5
Norway	0.5	25.8	—	0.4	26.7	28.7	-2.0	8.1
U.K.	18.8	8.6	0.1	0.9	28.4	28.9	-0.5	8.6
Japan	4.4	20.3	—	4.6	29.3	29.4	-0.1	8.9
U.S.A.	6.8	6.5	1.1	—	14.4	13.1	+1.3	4.4
Panama	4.6	4.9	—	0.1	9.6	10.1	-0.5	2.9
France	10.5	4.5	0.1	—	15.1	14.9	+0.2	4.6
Greece	—	18.0	—	—	18.0	18.0	—	5.5
Other Western Europe	14.8	26.5	—	—	41.3	41.1	+0.2	12.6
Other Western Hemisphere	7.6	0.3	0.3	0.1	8.3	7.7	+0.6	2.5
U.S.S.R., E. Europe and China	—	—	10.4	—	10.4	10.0	+0.4	3.2
Other Eastern Hemisphere	9.9	13.5	0.1	0.1	23.6	23.1	+0.5	7.2
TOTAL	111.6	198.2	12.1	6.6	328.5	332.5	-4.0	100.0
Fleet as at end 1977	109.5	210.2	11.8	1.0	332.5			
Net increase 1978	+2.1	-12.0	+0.3	+5.6	-4.0			

[1] Excluding 47.7 million D.W.T. Combined Carriers.

Table 60. World Tanker Fleet at End of 1978 (Cont.)
By Age, Size and Propulsion
(Million Long Tons Deadweight)

Size in '000 D.W.T.	Year of Construction								Propulsion		New Building In Progress and on Order at End 1978*
	Up to end 1950	1951-1955	1956-1960	1961-1965	1966-1970	1971-1975	1976-1978	Total	Motor	Other	
10— 25	1.6[r]	1.9[r]	3.9[r]	1.8	2.4	2.2	1.0	14.8	11.9	2.9	0.5
25— 45	1.2	1.1[r]	6.0[r]	3.0[r]	1.4	7.1	4.8[r]	24.6	16.1	8.5	1.4
45— 65	—	0.4	1.9	10.0	1.7	0.6	1.5	16.1	7.9	8.2	1.0
65— 25	—	—	0.5	9.0	20.0	14.0	7.3	50.8	39.7	11.1	2.9
125—205	—	—	—	—	8.4	13.1	11.8	33.3	23.9	9.4	1.6
205—285	—	—	—	—	25.3	99.3	18.0	142.6	12.1	130.5	1.5
285 and over	—	—	—	—	1.9	18.3	26.1	46.3	—	46.3	3.5
TOTAL	2.8	3.4	12.3	23.8	61.1	154.6	70.5	328.5	111.6	216.9	12.4
Motor	0.3	1.4	5.3	14.0	23.5	42.4	24.7	111.6	*Excludes 1.8 million D.W.T. combined carriers		
Other	2.5	2.0	7.0	9.8	37.6	112.2	45.8	216.9			

r = revised

Source: John L. Jacobs & Co. Ltd.

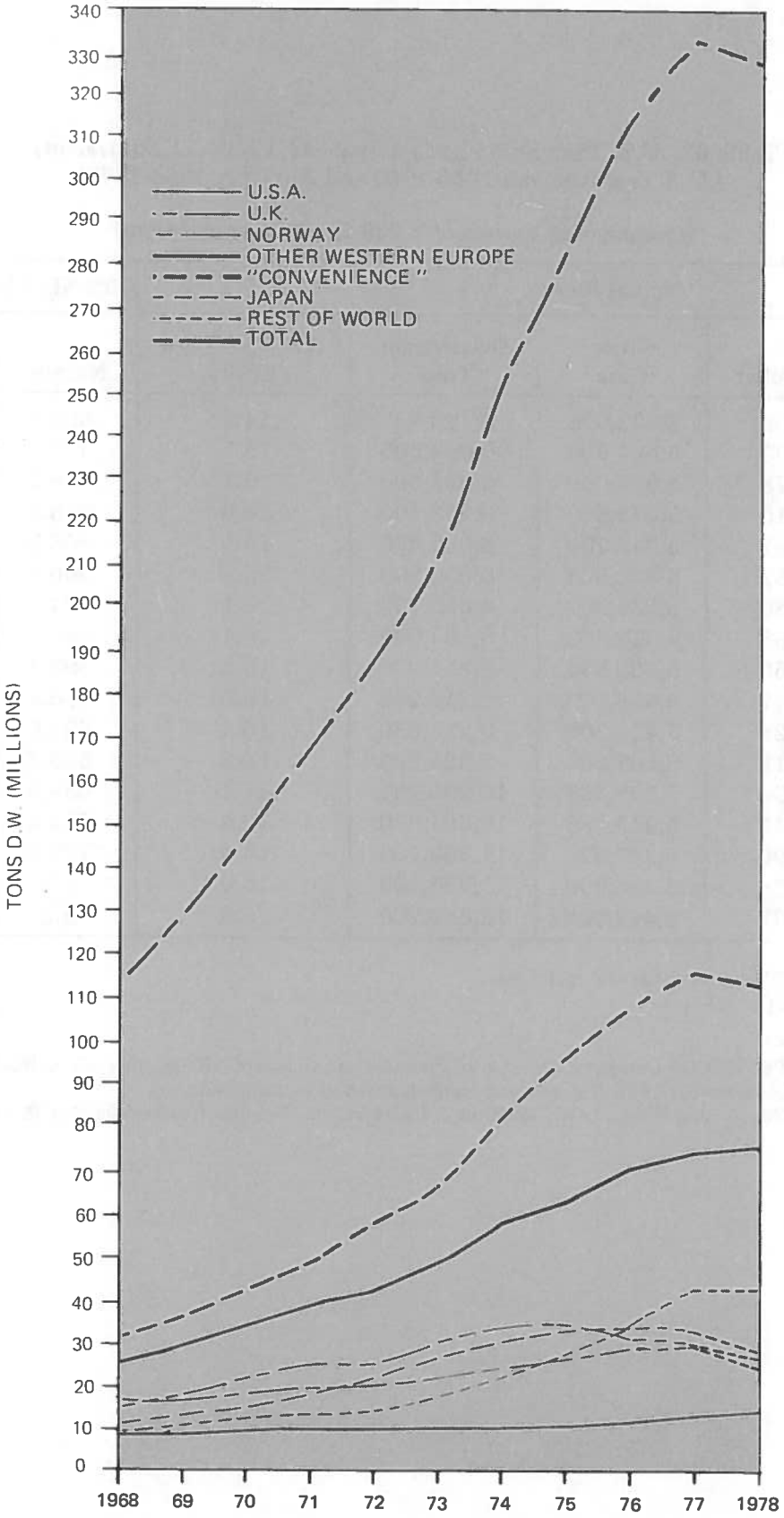


Figure 32. World Tanker Fleet by Flag, 1968-1978

Table 63. Number and Mileage of Privately Owned U.S. Railroad Tank Cars
(As of December 31)
(At 5-Year Intervals 1950-1965 and Annually 1966-1978)

Year	Number			Mileage		
	Petroleum Tank Cars	Other Tank Cars	Total	Petroleum Tank Cars	Other Tank Cars	Total
1950	115,202	19,364	134,566	1,796,767,001	292,030,588	2,088,797,589
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

[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, 1978, p. 2, and equivalent tables in earlier editions.

Part 4. Energy Supply and Demand

Table 65. Petroleum Supply and Disposition
(At 5-Year Intervals 1950-1965 and Annually 1966-1979)
(Million Barrels per Day)

Year	Supply												Disposition			
	Production				Imports			Other								
	Crude Oil	Lease Condensate	Natural Gas Plant Liquids	Total Production	Crude Oil[1]	Refined Products	Total Imports	Other Refinery Input[2]	Unaccounted for Crude Oil	Processing Gains or Losses	Change in Stocks[3]	Total Supply	Crude Oil Losses	Export	Domestic Refined Product Demand	Total Disposition
1950	5.41	—[4]	0.50	5.91	0.49	0.36	0.85	0.00	n/a	*	0.06	6.81	0.05	0.31	6.46	6.81
1955	6.81	—[4]	0.77	7.58	0.78	0.47	1.25	*	n/a	0.03	0.00	8.86	0.04	0.37	8.46	8.86
1960	7.04	—[4]	0.93	7.96	1.02	0.80	1.82	*	n/a	0.15	0.08	10.01	0.01	0.20	9.80	10.01
1965	7.80	—[4]	1.21	9.01	1.24	1.23	2.47	0.00	n/a	0.22	0.01	11.71	0.01	0.19	11.51	11.71
1966	8.30	—[4]	1.28	9.58	1.23	1.35	2.57	0.00	n/a	0.25	−0.10	12.29	0.01	0.20	12.08	12.29
1967	8.81	—[4]	1.41	10.22	1.13	1.41	2.54	0.00	n/a	0.29	−0.17	12.88	0.01	0.31	12.56	12.88
1968	8.66	0.44	1.50	10.60	1.29	1.55	2.84	0.01	0.02	0.32	−0.15	13.64	0.01	0.23	13.39	13.64
1969	8.78	0.43	1.59	10.83	1.41	1.76	3.17	0.01	−0.01	0.34	0.05	14.38	0.01	0.23	14.14	14.38
1970	9.18	0.46	1.66	11.30	1.32	2.10	3.42	0.02	−0.02	0.36	−0.10	14.97	0.01	0.26	14.70	14.97
1971	9.03	0.43	1.69	11.16	1.68	2.24	3.93	0.02	0.04	0.38	−0.07	15.45	0.01	0.22	15.21	15.45
1972	9.00	0.44	1.74	11.19	2.22	2.53	4.74	0.03	0.03	0.39	0.23	16.60	0.01	0.22	16.37	16.60
1973	8.78	0.42	1.74	10.95	3.24	3.01	6.26	0.03	*	0.45	−0.14	17.55	0.01	0.23	17.31	17.55
1974	8.38	0.40	1.69	10.46	3.48	2.64	6.11	0.04	−0.03	0.48	−0.18	16.89	0.01	0.22	16.65	16.89
1975	8.01	0.37	1.63	10.01	4.11	1.95	6.06	0.04	0.02	0.46	−0.03	16.55	0.01	0.21	16.32	16.55
1976	7.78	0.36	1.60	9.74	5.29	2.03	7.31	0.04	0.08	0.48	0.06	17.70	0.01	0.22	17.46	17.70
1977	7.88	0.37	1.62	9.86	6.62	2.19	8.81	0.05	−0.01	0.52	−0.55	18.69	0.02	0.24	18.43	18.69
1978	8.35	0.35	1.57	10.27	6.36	2.01	8.36	0.05	0.06	0.50	−0.09	19.22	0.02	0.36	18.85	19.22
1979[p]	8.51	—[4]	1.66	10.18	6.39	1.89	8.28	0.05	*	0.51	−0.16	18.86	0.02	0.47	18.38	18.86

*Less than 5,000 Barrels per Day

p = preliminary

n/a = not available

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

[1] Includes imports for the Strategic Petroleum Reserve which began in 1977.

[2] Includes benzol, other hydrocarbons, and hydrogen.

[3] Negative numbers denote a net addition to stocks or a reduction in supply. Positive numbers denote a net withdrawal from stocks or an addition to supply.

[4] Included in Crude Oil.

Source: U.S. Department of Energy, *Annual Report to Congress, 1979, Volume Two,* Table 18.

Table 67. Domestic Supply and Demand for Naphtha Type Jet Fuel, 1965-1979
(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	177	22	199	5,594	-1	200	—	200

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

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

Table 69. Bituminous Coal and Lignite Supply and Disposition
(At 5-Year Intervals 1950-1965 and Annually 1966-1979)
(Million Short Tons)

Year	Supply							Disposition		
	Production			Imports	Change in Consumer Stocks[1]	Losses and Unaccounted For[2]	Total	Exports	Consumption	Total
	Underground	Surface	Total							
1950	392.0	123.5	515.5[r]	0.3	-30.4	-6.5	479.7	25.5	454.2	479.7
1955	343.5	121.2	464.6	0.3	1.0	8.8	474.7	51.3	423.4	474.7
1960	284.9	130.6	415.5	0.3	2.8	-1.7	416.9	36.5	380.4	416.9
1965	332.7	179.4	512.1	0.2	-1.8	-1.2	509.3	50.2	459.1	509.3
1966	338.5	195.4	533.9	0.2	2.9	-1.4	535.6	49.3	486.3	535.6
1967	349.1	203.5	552.6	0.2	-18.6	-4.1	530.1	49.5	480.6	530.1
1968	344.1	201.1	545.2	0.2	7.9	-3.0	550.3	50.6	499.7	550.3
1969	347.1	213.4	560.5	0.1	5.5	-2.3	563.8	56.2	507.6	563.8
1970	338.8	264.1	602.9	*	-11.3	-5.7	585.9	70.9	515.0	585.9
1971	275.9	276.3	552.2	0.1	2.4	-3.9	550.8	56.6	494.2	550.8
1972	304.1	291.3	595.4	*	-25.8	4.7	574.3	56.0	518.3	574.3
1973	299.4	292.4	591.7	0.1	12.5	5.5	609.8	52.9	556.9	609.8
1974	277.3	326.1	603.4	2.1	7.7	-0.3	612.9	59.9	553.0	612.9
1975	292.8	355.6	648.4	0.9	-30.8	4.7	623.2	65.7	557.5	623.2
1976	294.9	383.8	678.7	1.2	-6.1	-15.6	658.2	59.4	598.8	658.2
1977	266.0	425.4	691.3	1.6	-21.2	2.4	674.2	53.7	620.5	674.2
1978	242.2	423.0	655.1	3.0	-11.3	4.4	661.2	39.8	621.3	661.2
1979	301.4	468.6	770.0	2.1	33.0	2.4	741.4	64.8	676.7	741.4

*Less than 0.05 million short tons.

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

[1] Changes of stocks at electric utility powerplants, coke 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: U.S. Department of Energy, EIA, *Coal Data — A Reference*, July 1980.

Table 71. Natural Gas Supply and Disposition
(At 5-Year Intervals 1950-1965 and Annually 1966-1979)
(Trillion Cubic Feet)

Year	Supply				Disposition						Dry Natural[3] Gas Production
	Marketed Production	Imports	Withdrawal from Storage	Total Supply	Consumption	Extraction Loss[1]	Exports	Storage Injections	Adjustments[2]	Total Disposition	
1950	6.28	0.00	0.18	6.46	5.77	0.26	0.03	0.23	0.18	6.46	6.02
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	0.28	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	0.03	1.21	0.40	18.83	16.47
1967	18.17	0.56	1.13	19.87	17.39	0.79	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	22.81	20.06	0.87	0.05	1.50	0.33	22.81	19.83
1970	21.92	0.82	1.46	24.20	21.14	0.91	0.07	1.86	0.23	24.20	21.02
1971	22.49	0.94	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	0.30	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	0.07	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[r]	0.97[r]	2.16[r]	23.10[r]	19.63[r]	0.85[r]	0.05[r]	2.28[r]	0.29[r]	23.10[r]	19.12[r]
1979	19.67[5]	1.23[e]	2.04	22.94[e]	19.49[e]	0.84[e]	0.05[5]	2.38	0.18[e]	22.94[e]	18.83[5]

e = estimated, 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 the extraction of liquids.
[4] Beginning with 1965 data, all volumes are shown on a pressure base of 14.73 psia at 60°F.
[5] Estimate based on reported data through October.

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

Source: U.S. Department of Energy, *Annual Report to Congress*, 1979, Volume Two, Table 38.

APPENDIX A
Source Information

Figure 3. Expenditures and Revenues, 1978 (Cont.)

(20) Motorbus: *Ibid.* Operating revenues.

(21) Trolley Coach: *Ibid.* Operating revenues.

(22) Light Rail: *Ibid.* Operating revenues.

(23) Heavy Rail: *Ibid.* Operating revenues.

(24) Rail: ARR, *Statistics of Railroads of Class I*, Dec. 1979, p. 3 and 17. Sum of railway operating revenues of Class I railroads, and Amtrak (NRPC).

(25) Rail, Passenger: *Ibid.*, Sum of passenger service railway operating revenues, and Amtrak (NRPC) passenger operating revenues.

(26) Rail, Commuter: ICC, *Class I Railroads, Financial and Operating Statistics Statement Number 100*, Dec. 31, 1978, p.17. Commutation passenger revenues of the Class I railroads, which includes Amtrak (NRPC).

(27) Rail, Intercity: *Ibid.*, p. 17. Sum of passenger revenues from coaches, parlor and sleeping cars, which includes Amtrak (NRPC).

(28) Rail, Cargo: ARR, *Statistics of Railroads of Class I*, December 1979, p.3 Class I, December 1979, p.3 Class I, freight service, railway operating revenues of the Class I railroads.

(29) Air: Sum of General Aviation and Air Carrier.

(30) General Aviation: TAA, *Transportation Facts and Trends*, — Quarterly Supplement, January 1980, p.5. Figure represents the sum of operating costs and total retail value of new general aviation aircraft.

(31) Air Carrier: Sum of Certified and Supplemental.

(32) Certificated: CAB, *Air Carrier Financial Statistics*, Dec. 1979, p. 2, Column 8, line 19. Total operating revenues, domestic operations.

(33) Passenger, Certificated: *Ibid.;* sum of lines 3 and 12. Total passenger revenues in scheduled and charter service.

(34) Freight, Certificated: *Ibid.;* sum of lines 4, 5, 6, 7, 8, 9, and 13. Includes revenues from scheduled domestic service of freight, air express, priority U.S. mail, foreign mail, excess baggage, and charter freight.

(35) Supplemental: *Ibid.*, p. 91. Overall operating revenues of supplemental air carriers, total domestic and international operations. No separation of international and domestic revenues is available.

(36) Passenger, Supplemental: *Ibid.* Sum of civilian (line 1) and military (line 2) passenger revenues. Total domestic and international operations.

(37) Freight, Supplemental: *Ibid.*.Sum of civilian (line 3) and military (line 4) property revenues.

(38) Water: Sum of Passenger, Cargo, and Commercial Fishing.

Figure 4. Vehicle-Miles (Cont.)

(5) Auto: Sum of Personal Passenger Car and Motorcycle.

(6) Personal Passenger Car: Federal Highway Administration, *Highway Statistics*, 1978, Table VM-1. Includes total rural and urban.

(7) Taxi: Data for taxi are included in the Personal Passenger Car category.

(8) Motorcycle: Federal Highway Administration, *Highway Statistics*, 1978, 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, *America's Most Fuel Efficient Passenger Transportation Service*, 1979, p. 29, Table 2. Includes Class I, II, and III carriers reporting to the ICC and Intrastate carriers. Preliminary figure.

(14) Class I: *Ibid.*, p. 31, Table 7. 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*, 1978, Table VM-1. Includes total rural and urban.

(21) Local Transit: APTA, *Transit Fact Book*, '78-'79 edition, Table 11. Total vehicle miles of Light Rail, Heavy Rail, Trolley Coach, and Motorbus plus vehicle miles not shown for cable car and inclined plane.

(22) Motorbus: *Ibid.*

(23) Trolley Coach: *Ibid.*

(24) Light Rail: *Ibid.*

(25) Heavy Rail: *Ibid.*

(26) Rail: Sum of Passenger and Freight.

Figure 5. Passenger-Miles, 1978

(1) Total Transportation: Sum of Domestic and International.

(2) Domestic: Sum of Highway, Local Transit, Rail, Air, and Water.

(3) International: Sum of Air Carrier and Water.

(4) Highway: Sum of Auto and Bus.

(5) Auto: Sum of Personal Passenger Car, Taxi, and Motorcycle.

(6) Personal Passenger Car: FHWA, *Highway Statistics*, 1978, Table VM-1. Passenger miles derived by multiplying passenger car, total rural and urban, travel by an average occupancy level of 2.3.

(7) Taxi: Included in Personal Passenger Car.

(8) Motorcycle: FHWA, *Highway Statistics*, 1978, Table VM-1. Passenger miles derived by multiplying motorcycle, total rural and urban, travel by an average occupancy level of 1.1.

(9) Bus: Sum of Intercity Bus and School Bus passenger-miles.

(10) Intercity Bus: American Bus Association, *America's Most Fuel Efficient Passenger Transportation Service*, 1978, p. 29, Table 2. Includes Classes I, II, and III carriers reporting to ICC plus Intrastate Carriers. Preliminary figure.

(11) Class I: *Ibid.*, Table 3.

(12) Regular-Route: *Ibid.*, p. 31, Table 7.

(13) Class II and III: Figure derived by subtraction of Class I from Intercity.

(14) School Bus: Best estimate by NHTSA, National Center for Statistics and Analysis.

(15) Local Transit: Not available.

(16) Rail: Passenger Rail only.

(17) Passenger Rail: Sum of Commutation and other than Commutation.

(18) Commutation: AAR, *Statistics of Railroads of Class I*, Dec. 1979, p. 8, line 13.

(19) Other than Commutation: *Ibid.*, line 14.

(20) Air: Sum of General Aviation and Air Carrier.

(21) General Aviation: TAA, *Transportation Facts and Trends*, — Quarterly Supplement, Jan. 1980, p. 18.

(22) Air Carrier: Sum of Certificated and Supplemental.

(23) Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1979, p. 4, column 6, line 1.

Figure 6. Cargo Ton-Miles, 1978 (Cont.)

(3) International: Sum of Air Carrier 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: ICC, Bureau of Accounts and Statistics, Personal Communication. Total Intercity ton-miles.

(8) ICC Regulated: *Ibid.*

(9) Non-Regulated: *Ibid.*

(10) Rail: *Statistics of Railroads of Class I*, Dec. 1979, p.6, line 52.

(11) Air: Air Carrier only.

(12) Air Carrier: Sum of Certificated and Supplemental.

(13) Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1979, p. 4, column 6, line 3.

(14) Scheduled: Sum of Freight, Air Express, U.S. Mail and Foreign Mail.

(15) Freight: CAB, *Air Carrier Traffic Statistics*, Dec. 1979, p. 4, column 6, line 18.

(16) Air Express: *Ibid.*, line 19.

(17) U.S. Mail: *Ibid.*, line 20.

(18) Foreign Mail: *Ibid.*, line 21.

(19) Non-Scheduled: Sum of Civilian Freight and Military Freight.

(20) Civilian Freight: CAB, *Air Carrier Traffic Statistics*, Dec. 1979, p. 4, column 6, line 44.

(21) Military Freight: *Ibid.*, line 45.

(22 Supplemental: CAB, *Air Carrier Traffic Statistics*, Dec. 1979, p. 121, line 13.

(23) Civilian: *Ibid.*, line 11.

(24) Military: *Ibid.*, line 12.

(25) Water: U.S. Department of the Army, Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 1978, Part 5*, Section 3, Table 1, total domestic ton-miles.

(26) Coastwise: *Ibid.*

(27) Lakewise: *Ibid.*

Figure 7. Number of Vehicles, 1978 (Cont.)

(4) Highway: Sum of Auto, Truck, and Bus.

(5) Auto: Sum of Personal Passenger Car and Motorcycle.

(6) Personal Passenger Car: FHWA, *Highway Statistics*, 1978, Table MV-1. This figure includes private and commercial automobiles (including taxi cabs) as well as publicly owned automobiles for the 50 states and the District of Columbia (Number of Motorized Vehicles Registered).

(7) Taxi: Data for Taxi are included in the Personal Passenger Car category.

(8) Motorcycle: FHWA, *Highway Statistics*, 1978, Table MV-1. This figure is the sum of the private, commercial, and publicly owned motorcycles (Number of Motorized Vehicles)

(9) Truck: *Ibid.* Number of Motorized Vehicles.

(10) Single-Unit: *Ibid.*

(11) Combinations: *Ibid.*

(12) Bus: Sum of Intercity Bus and School Bus.

(13) Intercity Bus: American Bus Association, *America's Most Fuel Efficient Passenger Transportation Service*, 1979, p. 29, Table 2. This figure includes operations of Class I, II, and III carriers reporting to the ICC and the Intrastate carriers. Preliminary figure.

(14) Class I: *Ibid.*, Table 3.

(15) Class II and III: Figure derived by subtracting Class I from Intercity.

(16) School: FHWA, *Highway Statistics*, 1978, Table MV-1. (Total school and other non-revenue buses).

(17) Local Transit: APTA, *Transit Fact Book*, 1978-1979, Table 14. This figure includes the total number of motorbuses, trolley coaches, and light and heavy rail vehicles plus 45 PRT transit vehicles, 39 cable cars and 4 inclined plane cars not shown. This figure does not include commuter or suburban railroads. Preliminary figure.

(18) Motorbus: *Ibid.*

(19) Trolley Coach: *Ibid.*

(20) Light Rail: *Ibid.*

(21) Heavy Rail: *Ibid.*

(22) Rail: AAR, *Statistics of Railroads of Class I*, December 1979. This figure is the sum of passenger train cars (p. 11, line 8), freight cars (p. 10), Class I locomotive (p. 9, line 5), and Amtrak (NRPC) locomotives in service at end of year (p. 18). Excludes caboose cars.

(23) Rail, Passenger: *Ibid.* Sum of passenger train cars owned by Class I railroads, and Amtrak (NRPC) (p. 11, line 8).

(24) Rail, Freight: *Ibid.* p. 10. Class I railroad total freight cars.

Figure 7. Number of Vehicles, 1978 (Cont.)

(51) Water: U.S. Department of Commerce, Maritime Administration, *Merchant Fleets of the World*, 1980, p. 7.

(52) Passenger/Cargo: *Ibid.*

(53) Freighters: *Ibid.*

(54) Bulk Carriers: *Ibid.*

(55) Tankers: *Ibid.*

Figure 8. Number of Fatalities, 1978

(1) Total Transportation: Sum of Domestic and International.

(2) Domestic: Sum of Highway, Local Transit, Rail, Air, Water, and Pipeline.

(3) International: Sum of Air Carrier and Water.

(4) Highway: U.S. Department of Transportation, NHTSA/FHWA, *Highway Safety '79*, Table A-18.

(5) Auto: Sum of Personal Passenger Car, Taxi, and Motorcycle.

(6) Personal Passenger Car: National Safety Council, *Accident Facts*, 1979, p. 56. Number of occupant fatalities.

(7) Taxi: *Ibid.* Number of occupant fatalities.

(8) Motorcycle: *Ibid.* Number of occupant fatalities.

(9) Truck: U.S. Department of Transportation, NHTSA/NRD-30, Fatal Accident Reporting System FARS, Personal Communication.

(10) Private: *Ibid.* FHWA, Bureau of Motor Carrier Safety, *Accidents of Motor Carriers of Property*, 1978, p. 2.

(11) For Hire: *Ibid.* Sum of ICC Regulated and Non-Regulated.

(12) ICC Regulated: *Ibid.* This category is called authorized by the source.

(13) Non-Regulated: *Ibid.* This category is called exempt by the source.

(14) Bus: Sum of intercity and school bus fatalities.

(15) Intercity Bus: U.S. Department of Transportation, FHWA/BMCS, *1978 Accidents of Motor Carriers of Passengers*, November 1979, p. 5.

(16) Class I: Not Available.

(17) Class II and III: Not Available.

Figure 8. Number of Fatalities, 1978 (Cont.)

(39) Passenger: NTSB, *News Release SB 79-4*, Jan. 16, 1979, Table 1, scheduled and nonscheduled domestic service. [Totals of psg (S-D)].

(40) Freight: *Ibid.* Scheduled and nonscheduled certificated air carrier domestic cargo service. [Totals of Crg (S-D)].

(41) Supplemental: NTSB, *News Release SB 80-15*, February 20, 1980, Table 9.

(42) Passenger: NTSB, *News Release SB 79-4*, January 16, 1979, Table 1, scheduled and nonscheduled domestic service. [Totals of Psg (S-D)].

(43) Freight: *Ibid.* Scheduled and nonscheduled domestic cargo service. [Totals of Crg (S-D)].

(44) Commercial Operators: *Ibid.*

(45) Water: This figure is the sum of passenger, cargo, and commercial fishing fatalities.

(46) Passenger: Sum of Private and Passenger Service.

(47) Private: U.S. Coast Guard, *Boating Statistics* (M16754.1), 1978, p. 21. This figure represents total fatalities in recreational boating.

(48) Inboard: *Ibid.* This figure is the sum of inboard gasoline and diesel powered boats.

(49) Outboard: *Ibid.*

(50) Inboard/Outboard: *Ibid.*

(51) Manual: *Ibid.* This figure includes boats propelled by oars and paddles.

(52) Other: *Ibid.* This figure includes boats propelled by jet, sail, and other methods.

(53) Unknown: *Ibid.* This figure includes all boats in which the propulsion was unknown.

(54) Passenger Service: U.S. Coast Guard, *Proceedings of Marine Safety Council*, March — April, 1979, vessels and ferries for fiscal year 1978.

(55) Cargo: *Ibid.* This figure includes vessel casualties on freight, cargo barges, tank ships, and tank barges for fiscal year 1978.

(56) Commercial Fishing: *Ibid.* This figure includes vessel casualties on uninspected fishing vessels for fiscal year 1978.

(57) Pipeline: U.S. Department of Transportation, Research and Special Programs Administration, *Transportation Safety Information Report*, Oct., Nov., and Dec. 1979 and Annual Summary, Chart 35. This figure includes gas distribution and transmission lines (including gathering lines), and liquid transmission lines.

(58) Air Carrier: Sum of Certificated and Supplemental.

(59) Certificated: NTSB, *News Release SB 80-15*, February 20, 1980, Table 7.

Figure 9. Energy Consumed in Transportation (Converted to 10^{12} Btu), 1978

(15) Motorbus: *Ibid*, figure derived by the addition of gasoline (motor gasoline) and diesel (distillate fuel oil), converted to BTU's by their respective conversion factors.

(16) Local Transit: APTA, *Transit Fact Book*, '78-'79 edition, p. 40, multiplied by the conversion factor of electricity. Preliminary figure.

(17) Rail: Sum of Passenger and Class I Freight.

(18) Passenger: Sum of Class I Passenger and Amtrak.

(19) Class I Rail Passenger: *Statistics of Railroads of Class I*, 1979, 63rd edition, p. 16, lines 3 and 10, multiplied by the conversion factor of distillate fuel oil, excludes electricity.

(20) Amtrak: *Amtrak Annual Report R1*, schedule 571, 1978, multiplied by the conversion factor of distillate fuel oil.

(21) Class I Rail Freight: *Statistics of Railroads of Class I*, 1979, 63rd edition, p. 16, line 2, multiplied by the conversion factor of distillate fuel oil.

(22) Air: Sum of Air Carrier and General Aviation.

(23) General Aviation: FAA, *1978 General Aviation Activity and Avionics Survey*, March 1980, Table 2-18, figure derived by the addition of jet fuel (kerosene type) and aviation gasoline, coverted to BTU's by their respective conversion factors.

(24) Air Carrier: Sum of Certificated and Supplemental.

(25) Certificated: CAB, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1979 and 1978*, Table 2. Total Domestic Certificated Air Carrier.

(26) Supplemental: *Ibid.*, Domestic Charter.

(27) Water: FHWA, *Highway Statistics*, 1978, Table MF-24, multiplied by the conversion factor of motor gasoline.

(28) Pipeline: DOE, Energy Information Administration, *Annual Report to Congress*, 1979 Volume Two, Table 39, p. 93.

(29) Air Carrier: Sum of International Certificated Air Carrier and Supplemental (Charter).

(30) Certificated: CAB, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1979 and 1977*, Total International Certificated Air Carrier, Table 2, multiplied by the conversion factor of jet fuel (kerosene-type).

(31) Supplemental: *Ibid.*, Total International Charter, Table 5, multiplied by the conversion factor of jet fuel (kerosene-type).

(32) Water: Not available.

Table 3. Average Passenger Fare, 1968-1978

Certificated Air Carrier, Domestic Operations, Scheduled service:

1968-1972: CAB, *Handbook of Airline Statistics*, 1973. Total passenger revenues (p. 216, line 3) divided by revenue passenger enplanements (p. 106, line 20).

1973-1978: CAB, *Air Carrier Financial Statistics*, Dec. 1974, 1976, 1978, and 1979 p. 2, line 3; Air Carrier Traffic Statistics, 1974-1979 December issues, p. 4, line 16. Total passenger revenue (*Financial Statistics*) divided by revenue passenger enplanements (*Traffic Statistics*).

Class I Bus, Intercity:

1968-1978: ABA, *America's Most Fuel Efficient Passenger Transportation Service*, 1979, p. 32.

Local Transit:

1968-1978: APTA, *Transit Fact Book*, '78-'79 edition, Table 12, p. 32.

Class I Rail:

1968-1970: *Statistics of Railroads of Class I*, January 1977, p. 7, lines 19 & 20.

1971-1977: *Ibid.*, Sept. 1978, p. 7 and p. 16.

1978, *Ibid.*, Dec. 1979, p. 8 and p. 18. As of 1978 Auto-Train no longer Class I. The average passenger fare was calculated by dividing passenger revenue by revenue passengers carried, and after 1971 subtracting Amtrak and Auto-Train passenger revenue and revenue passengers carried data. As of 1978 Auto-Train is no longer Class I.

Amtrak:

1971-1978: *Statistics of Railroads of Class I*, Dec. 1979, p. 18. The average passenger fare was calculated by dividing passenger revenue by revenue passengers carried.

Table 4. Total Operating Revenues, 1968-1978

Certificated Air Carriers:

1968-1972: 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).

1973-1978: CAB, *Air Carrier Financial Statistics*, 1974-1979 December issues, p. 1, line 19.

Supplemental Air Carriers:

1968-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 69.

1973-1978: CAB, *Air Carrier Financial Statistics*, 1974-1979 December issues, Table 3, Sheet No. 1, line 9.

Intercity Bus, Class I:

1968-1975: ABA, *America's Number 1 Passenger Transportation Service*, 1979, p. 21

1976-1978: ICC, *93rd Annual Report of the ICC*, 1979, p. 155

Local Transit:

1968-1978: APTA, *Transit Fact Book*, '78-'79 edition, Table 5.

Oil Pipeline, ICC Regulated only:

1968-1978: TAA, *Transportation Facts and Trends*, Jan. 1971, Dec. 1974, April 1977, July 1978, and Jan. 1980 Quarterly Supplement, p. 4.

Table 5. Vehicle-Miles, 1968-1978 (Cont.)

School Bus:
1968-1978: *Ibid.*

Intercity Bus:
1968-1978: ABA, *America's Most Fuel Efficient Passenger Transportation Service*, 1979, p. 29, Table 2.

Local Transit:
1968-1978: APTA, *Transit Fact Book*, '78-'79 edition, Table 11.

Class I Rail:
Passenger Train:
1968-1978: AAR, *Statistics of Railroads of Class I*, December 1979, p. 12, line 15.

Freight Train:
1968-1978: *Ibid.*, line 12.

Amtrak:
1971-1978: *Ibid.*, Dec. 1979, p. 18. Train mileage includes Auto-Train miles except in 1978.

Table 6. Passenger-Miles, 1968-1978

Air Carrier:
Certificated:
1968-1972: 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);
1973-1978: CAB, *Air Carrier Traffic Statistics*, 1974-1979 December issues, p. 4. Sum of lines 9 and 41.

Supplemental:
1968-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 197, line 4;
1973-1978: CAB, *Air Carrier Traffic Statistics*, 1974-1979 December issues, Part III, sheet 1, line 4.

General Aviation:
1968-1978: TAA, *Transportation Facts and Trends*, Jan. 1971, Dec. 1974, April 1977, July 1978, and Jan. 1980 Quarterly Supplement, p. 18.

Highway:
Passenger Car and Taxi:
1968-1978: FHWA, *Highway Statistics*, Section 3, 1978, Table VM-1 and equivalent tables in earlier editions. Vechicle-miles multiplied by a constant average occupancy of 2.2

Intercity Bus:
1968-1978: ABA, *America's Most Fuel Efficient Passenger Transportation Service*, 1979, p. 29, Table 2.

Class I Rail:
Commutation and other than Commutation:
1968-1977: AAR, *Statistics of Railroads of Class I*, p. 7 and p. 16. Amtrak and Auto-Train data (p. 16) subtracted from Class I data (p. 7).

Table 8. Basic Intercity Mileage Within the Continental United States, 1968-1978

Railroads, All Line Haul:

1968-1978: AAR, *Yearbook of Railroad Facts*, 1980 Edition, p. 46. Data represent aggregate length of roadway of all line-haul railroads, excluding mileage of yard tracks or sidings. Jointly used track is counted only once.

Oil Pipelines:

Total:

1967-1976: TAA, *Transportation Facts and Trends*, Jan. 1980, p. 31.

Crude Oil Products, and Gathering Lines:

1967-1976: DOE, *Energy Data Reports*, Crude Oil and Product Pipelines, Triennial, January 1, 1977, Table 1.

1977-1978: not available.

Gas Pipleines:

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

1968-1978: API, *Basic Petroleum Data Book*, October 1978, Section XII, Table 2.

Inland Waterways:

1968-1978: American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1977, and previous years, pp. 1, 2.

Highways:

1968-1975: FHWA, *Highway Statistics, Summary to 1975*, Table FM-210.

1976-1978: *Ibid.*, *Highway Statistics*, 1976, 1977, 1978, Table FM-1

Airways:

1968-1978: FAA, *FAA Statistical Handbook of Aviation*, 1978, Table 2.1. Mileage equals sum of low frequency, VHF low altitude direct, and VHF jet route mileages multiplied by 1.151 to convert from nautical miles.

Table 9. Number of Vehicles, 1968-1978

Air Carrier:

1968-1972: 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.

1977-1978: CAB, Bureau of Carrier Accounts and Audits: Special communication based on CAB, Form 41, Schedules B-7, B-8, and B-43.

General Aviation:

1968-1977: FAA, *FAA Statistical Handbook of Aviation*, 1978, Table 8.3 and equivalent tables in earlier editions.

1978: FAA, *1978 General Aviation Activity and Avionics Survey*, March 1980.

Motorcycle:

1968-1978: FHWA, *Highway Statistics*, 1978, Table VM-1 and same table in earlier editions.

Table 10. Number of New Vehicles Purchased, By Mode, 1968-1978

Air Carrier:
1968: FAA, *Statistical Handbook of Aviation*, Calendar Year 1976, p. 132, Table 9-2.
1968-1978: *Ibid.*, Calendar Year 1978, p. 130, Table 9-2.

General Aviation:
1968-1978: FAA, *Statistical Handbook of Aviation*, Calendar Year 1978, Table 9-2.

Passenger Car and Taxi:
1968-1978: DOC, Office of Business Economics, *Survey of Current Business*, July issues, p. 5-40.

Motorcycle:
1969-1978: Motorcycle Industry Council, Inc. *1979 Motorcycle Statistical Annual*, p. 10.

Mopeds:
1974-1978: Motorcycle Industry Council, Inc., *1979 Motorcycle Statistical Annual*, p. 10.

Bicycle:
1968-1978: Bicycle Mfg. Assoc. of America, personal communication.

Truck:
1968-1978: DOC, Office of Business Economics, *Survey of Current Business*, July issues, p.5-40, and personal communication.

Intercity Bus (Class I):
1968-1978: ABA, personal communication.

Local Transit (New Passenger Vehicles Delivered):
1968-1978: APTA, *Transit Fact Book*, '78-'79 edition, p. 37, Table 15. Total buses, light rail, heavy rail, and total.

Class I Rail:
Freight Cars:
1968-1978: AAR, *Statistics of Railroads of Class I*, 1968-1978, 63rd edition, p. 10.

Locomotives:
1968-1978: *Ibid.*, p. 9, line 19.

Passenger Cars and Pullman:
1968-1978: *Ibid.*, p. 11, line 10.

Amtrak:
1971-1978: AAR, *Statistics of Railroads of Class I*, p. 18 of annual editions.

Water: Merchant Vessels and Gross Tonnage:
1970-1977: DOC, *Merchant 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: DOC, Maritime Administration, personal communication.

TABLE 17. Employment in Transportation and Related Industries, 1969-1979

Transport Sector:

Air:
1969-1974: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, United States, 1909-75*, p. 599.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 45.

Bus
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 595.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 413.

Local Transport:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 594.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 411.

Railroad:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 600.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 40.

Oil Pipeline:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 600.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1966, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 46. Employment at ICC and Non-ICC regulated companies. ICC regulated companies employ approximately 85%of the total.

Taxi:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 595.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 412.

Trucking and Warehousing:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 596-598.
1975-1979: *Ibid*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 42.

Trucking and Terminals:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 313.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 421,3.

Public Warehousing:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 313.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 422.

Water:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 601.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 44.

Transportation Services:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1909-75*, p. 601.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, March 1979, March 1980, Section B-2, SIC 47.

Table 17. Employment in Transportation and Related Industries, 1969-1979 (Cont.

Petroleum:
1969-1974: *Ibid.*, *Employment and Earnings, United States, 1969-75*, pp. 17, 563-619.
1975-1979: *Ibid.*, *Employment and Earnings*, March 1976, March 1977, March 1978, Section B-2, SIC 13, SIC 291 and SIC 50. Sum of SIC 13, SIC 291, and 4.5% of SIC 50 (to account for petroleum bulk stations and terminals). The totals are adjusted for 56% transportation use.

Other Industries:
Truckdrivers and Deliveryman:
1969-1979: TAA, *Transportation Facts and Trends*, July issues, p. 22/23.
Shipping and Receiving Clerks:
1969-1979: *Ibid.*

Government Employees:
U.S.D.O.T.
1969-1979: *Ibid.*
State and Local Highway:
1969-1979: *Ibid.*
Post Office:
1969-1979: *Ibid.*
Other:
1969-1979: *Ibid.*

Total Civilian Labor Force:
1969-1979: *Ibid.*

Table 20. Fuel Consumption by Mode of Transport, 1968-1978

Class I Rail:
Locomotives and Motor Cars:
1968-1978: AAR, Statistics of Railroads of Class I, December 1979, p. 16, lines 2, 3, 4, 5, line 7, line 8, line 10, line 11.

Air Carriers:
Certificated Carriers:
1968-1972: CAB, *Handbook of Airline Statistics*, 1973, Table 58 and 59.
1973-1974: CAB, *Handbook of Airline Statistics, 1975 Supplement*, 1975, p. 5.
1975-1976: *Ibid.*, Dec. 1977, p. 5, Table 2.
1977-1978: CAB, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1978 and 1977*, Total of Tables 2, 3, 4, 5, and 6.
1978: *Ibid.*, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1979 and 1978*, Total of Tables 2, 3, 4, 5, 6, and 7.

General Aviation:
1968-1972: FAA, *FAA Statistical Handbook of Aviation*, 1972, Table 9.12 and same table in earlier editions.
1973-1975: FAA, Information and Statistical Division, personal communication.
1976-1978: FAA, Office of Aviation Policy, personal communication.
1978: FAA, 1978 General Aviation Activity and Avionics Survey, March 1980, Table 2-18.

Highway:
1968-1978: FHWA, *Highway Statistics*, Section III, 1978, Table VM-1 and same table in earlier editions.

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(2) American Gas Association, *Gas Facts*, 1969.

(3) *Ibid.*, 1978.

(4) American Public Transit Association, *Transit Fact Book*, 1969 edition.

(5) *Ibid.*, 1977-1978 edition.

(6) *Ibid.*, 1978-1979 edition.

(7) American Trucking Association, *Truck Taxes by States*, 28th Annual Edition, April, 1980.

(8) American Waterway Operators, *Inland Waterborne Commerce Statistics*, 1968, 1977.

(9) Association of American Railroads, *Government and Private Expenditures for Highway, Waterway, Railroad and Air Rights-of-Way*, September, 1976.

(10) *Ibid.*, *Statistics of Railroads of Class I in the U.S.*, Years 1968-1978, December 1979. *Statistics of Railroads of Class I in the U.S.*, Years 1967-1977, September 1978. September 1978 edition used when Auto-Train figures were included in Class I figures.

(11) *Ibid.*, *Yearbook of Railroad Facts*, 1968 edition.

(12) *Ibid.*, 1980 edition.

(13) Civil Aeronautics Board, *Air Carrier Financial Statistics*, December, 1978, December, 1979.

(14) *Ibid.*, *Air Carrier Traffic Statistics*, December, 1978, December, 1979.

(15) *Ibid.*, *Handbook of Airline Statistics*, 1969 edition.

(16) *Ibid.*, 1973 edition.

(17) *Ibid.*, *Supplement to the Handbook of Airline Statistics*, Calendar Years 1977 and 1978.

(18) Federal Power Commission, *Sales by Producers of Natural Gas to Interstate Pipeline Companies*, 1968.

(19) Interstate Commerce Commission, *84th Annual Report of the ICC*, 1970.

(20) *Ibid.*, *92nd Annual Report of the ICC*, 1978.

(21) *Ibid.*, *93rd Annual Report of the ICC*, 1979.

(22) *Ibid.*, Bureau of Accounts and Statistics, personal communication.

(23) National Safety Council, *Accident Facts*, 1969, 1978, 1979.

(24) National Transportation Safety Board, Information Systems Division, personal communication.

Profile References (Cont.)

(48) *Ibid.*, *1978 General Aviation Activity and Avionics Survey*, March 1980.

(49) *Ibid.*, Federal Highway Administration, *Highway Statistics*, 1968, 1969, 1977, 1978.

(50) *Ibid.*, *Highway Statistics Summary to 1975.*

(51) *Ibid.*, Federal Highway Administration, Bureau of Motor Carrier Safety, *Accidents of Motor Carriers of Property*, 1976, 1977, 1978.

(52) Federal Railroad Administration, Office of Standards and Procedures, Personal Communication.

(53) *Ibid.*, NHTSA/FHWA, *Highway Safety*, 1979.

(54) *Ibid.*, NHTSA/NRD-30, National Center for Statistics and Analysis, Mathematical Analysis Division, Fatal Accident Reporting System, FARS, (30 day deaths), Personal Communication.

(55) *Ibid.*, Office of the Secretary (P-24), *Transportation Safety Information Report*, October, November, December 1978 and Annual Summary, March 1979, October, November, December 1979 and Annual Summary, March 1980.

(56) U.S. Department of Transportation, Transportation Systems Center, *Natural Gas Pipeline Statistics*, April 1980.

Methodology for Estimating Automobile Operating Costs — Tables 34–43.

1974 Automobile Operating Costs — Basis for Estimates in Tables 35, 36 and 37

Item	Standard Size Automobile	Compact Size Automobile	Subcompact Size Automobile
Automobile Description	1974 model 4-door sedan. Equipped with: V-8 engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, clock, white-wall tires, wheel covers, and body protective molding. Purchase price — $4,251.	1974 model 2-door sedan. Equipped with: 6 cylinder engine, automatic transmission, power steering, radio, vinyl top, wheel covers, and body protective molding. Purchase price — $2,910.	1974 model 2-door sedan. Equipped with: Standard equipment plus radio, wheel covers, and body protective molding. Purchase price — $2,410.
Repairs and Maintenance	Includes routine maintenance such as lubrications, repacking wheel bearings, flushing cooling system, and aiming headlamps; replacement of minor parts such as spark plugs, fan belts, radiator hoses, distributor cap, fuel filter, and pollution control equipment; minor repairs such as brake jobs, water pump, carburetor overhaul, and universal joints; and major repairs such as a complete "valve job." Costs were calculated using 1974 parts prices and a $12 per hour labor rate.		
Replacement Tires	Purchase of 7 new regular tires and 4 new snow tires during the lives of the cars was assumed.		
Accessories	Purchase of floor mats the first year, seat covers the sixth year, and miscellaneous items totaling $2.20 per year was assumed.		
Gasoline	Consumption rate of 12.92 miles per gallon and a gasoline price of 52.1 cents per gallon including taxes were used.	Consumption rate of 15.97 miles per gallon and a gasoline price of 52.1 cents per gallon including taxes were used.	Consumption rate of 21.43 miles per gallon and a gasoline price of 52.1 cents per gallon including taxes were used.
Oil	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 159 gallons of gasoline. A price of $1.00 per quart was used.	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 150 gallons of gasoline. A price of $1.00 per quart was used.	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 135 gallons of gasoline. A price of $1.00 per quart was used.
Insurance	Coverage includes $50,000 combined public liability ($15,000/$30,000 bodily injury, and $5,000 property damage), $2,500 personal injury protection, uninsured motorist coverage, and full comprehensive coverage for the 10-year period. Deductible collision insurance was assumed for the first 5 years ($100 deductible).		
Garaging, Parking, and Tolls	Includes monthly charges of $11.00 for garage rental or indirect cost of the owner's garaging facility; plus parking fee average of $57.00 per year, and toll average of $7.00 per year, both of which were assigned in proportion to annual travel.		
Taxes	Includes Federal excise taxes on tires (10 cents per pound), lubricating oil (6 cents per gallon), and gasoline (4 cents per gallon); plus the Maryland tax on gasoline (9 cents per gallon), titling tax (4 percent of retail price), and registration fee ($20.00 for 3,700 pounds or less shipping weight, or $30.00 for vehicles over 3,700 pounds).		

Source: Federal Highway Administration, *Cost of Operating an Automobile*, April 1974.

1979 Automobile Operating Costs — Basis for Estimates in Tables 41, 42 and 43

Item	Standard Size Automobile	Compact Size Automobile	Subcompact Size Automobile	Passenger Van
Automobile Description	1979 model 4-door sedan Equipped with: V-8 engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, clock, white-wall radial tires, wheel covers, remote control left-hand mirror. Purchase price — $6,303	1979 model 2-door Equipped with: 6 cylinder engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, white-wall radial tires, remote control left-hand mirror. Purchase price — $5,215	1979 model 3-door (hatchback) Equipped with: 4 cylinder engine, standard equipment plus tinted glass. Purchase price — $3,854	1979 model extended wheel-base 12 passenger van Equipped with: 8 cylinder engine, automatic transmission, power steering and brakes, dual air conditioning, extra heater, tinted glass, insulation, radio, carpeting, spare tire cover, wheel covers, dual exterior mirrors, interior and exterior trim packages. Purchase price — $10,248
Repairs and Maintenance	Includes routine maintenance such as lubrications, repacking wheel bearings, flushing cooling system, and aiming headlamps; replacement of minor parts such as spark plugs, fan belts, radiator hoses, fuel filter, and pollution control equipment; minor repairs such as brake jobs, water pump, carburator overhaul, and universal joints; and major repairs such as a complete "valve job." Costs were calculated using updated 1978 parts prices and a per hour rate of $16.00 for service station, $17.00 for independent garage and $23.00 for dealer garage.			
Replacement Tires	3 new regular and 4 new snow tires would be purchased during the life of the vehicle.	7 new regular and 4 new snow tires would be purchased during the life of the vehicle.	11 new regular and 6 new snow tires would be purchased during the life of the vehicle.	7 new regular and 4 new snow tires would be purchased during the life of the vehicle.
Accessories	Extra wheels and floor mats would be purchased the first year, seat covers the sixth year, miscellaneous items totalling $3.35 each year.			
Gasoline	Consumption rate of 16 miles per gallon and a gasoline price of $1.00 per gallon including taxes were used.	Consumption rate of 18 miles per gallon and a price of $1.00 per gallon including taxes were used.	Consumption rate of 22 miles per gallon and a gasoline price of $1.00 per gallon including taxes were used.	Consumption rate of 12 miles per gallon and a gasoline price of $1.00 per gallon including taxes were used.
Oil	Consumption is based on manufacturer's recommended oil change intervals. Extra oil consumption is one quart every 2,500 miles between 50,000 and 75,000 miles driven and one quart every 2,000 miles between 75,000 and 100,000 miles driven.			
Insurance	Coverage for the automobiles includes $20,000/$40,000 bodily injury, $10,000 property damage, $2,500 personal injury protection, $20,000/$40,000/$5,000 uninsured motorist and $50 deductable comprehensive coverage for the 10-year period. $100 deductable collision for the first 5 years is also included. Coverage for the passenger van includes $300,000 single limit liability, $2,500 personal injury protection, $50,000 uninsured motorist and $50 deductable comprehensive coverage for the 10-year period. $100 deductable collision for the first 5 years is also included.			
Garaging, Parking, and Tolls	Includes monthly charges of $20 for garage, rental or indirect cost of the owners garaging facility, and a toll average of $7.80 per year; plus parking fee averages of $72 per year for standard-size automobile and passenger van and $69 per year for compact and subcompact automobiles.			
Taxes	Includes Federal excise taxes on tires (10 cents per pound), lubricating oil (6 cents per gallon), and gasoline (4 cents per gallon); plus the Maryland tax on gasoline (9 cents per gallon), titling tax (5 percent of retail price), sales tax (5 percent of retail items), and registration fee ($20.00 for 3,700 pounds or less shipping weight, or $30.00 for vehicles over 3,700 pounds).			

APPENDIX B
Glossary

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.

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."

DOMESTIC OPERATIONS:

Operations within and between the 50 States and the District of Columbia. Includes domestic operations of the certificated trunk carriers, Pan American, local service, helicopter, intra-Alaska, intra-Hawaii, domestic all-cargo, and other carriers; also includes transborder operations conducted on the domestic route segments of U.S. air carriers.

FIXED-WING AIRCRAFT:

Aircraft having nonrotating wings fixed to the airplane fuselage and outspread in flight.

GENERAL AVIATION:

General Aviation refers to the operation of U.S. Civil Aircraft owned and operated by persons, corporations, etc., other than those engaged in U.S. air carrier operations. (U.S. air carrier operations include the certificated route air carriers, supplemental air carriers, and commercial operators of large aircraft.)

OTHER TRANSPORT REVENUES:

Miscellaneous revenues associated with air transportation performed by the air carrier, such as airline employees, officers and directors, or other persons, except ministers of religion who travel under reduced rate transportation; reservation cancellation fees; and other items not specified in other transport revenue accounts.

OVER-ALL OPERATING EXPENSES:

See "Operating Expenses."

OVER-ALL OPERATING REVENUES:

See "Operating Revenues."

OVER-ALL REVENUE LOAD FACTOR:

The percent that total revenue ton-miles (passenger plus nonpassenger) are of available ton-miles in revenue services, representing the proportion of the over-all capacity that is actually sold and utilized.

OVER-ALL REVENUE LOAD PER AIRCRAFT:

The average over-all tonnage carried per aircraft in revenue services derived by dividing the over-all revenue ton-miles by the over-all aircraft miles flown in revenue services.

OVER-ALL TRANSPORT REVENUES:

See "Transport Revenues."

PASSENGER-MILE:

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

PASSENGER ENPLANEMENTS:

The total number of revenue passengers boarding aircraft, including originating and stopover or on-line transfer passengers.

PASSENGER REVENUES:

Revenues from the transportation of passengers by air.

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.

TURBOJET AIRCRAFT:

Aircraft propelled by jet engines incorporating a turbine-driven air compressor to take in and compress the air for the combustion of fuel, the gases of combustion (or the heated air) being used both to rotate the turbine and to create a thrust-producing jet.

TURBOPROP AIRCRAFT:

Aircraft in which the main propulsive force is supplied by a conventional propeller driven by a gas turbine. Additional propulsive force may be supplied from the discharged turbine exhaust gas.

HIGHWAY TERMINOLOGY

FEDERAL EXPENDITURES:

Intergovernmental payments to the State, District of Columbia, and local governments plus direct expenditures for capital outlay, maintenance, administration, and research.

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."

BUS TERMINOLOGY

COMMERCIAL BUS:

Any bus used to carry passengers at rates specified in tariffs; charges may be computed per passenger (as in regular route service) or per vehicle (as in charter service).

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.

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.

MOTORBUS:

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

OPERATING EXPENSES:

These expenditures include outlays for maintenance, wages, fuel, licensing, insurance, rent, safety, operating taxes, and station operations.

OPERATING REVENUE:

Includes passenger revenue and revenue from charter and contract services.

PASSENGER REVENUE:

The total of all moneys paid by passengers to ride on scheduled trips. This includes single trip fares, and charges for transfers, weekly, monthly, and other unlimited-usage tickets.

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.

TROLLEY COACH:

A vehicle with the steering capability of a motor bus, running on rubber tires, but drawing power from electric overhead wires.

WATER TRANSPORT TERMINOLOGY

BUNKER C/NUMBER 6 FUEL OIL:

A high viscosity oil used mostly by ships, industry, and large-scale heating installations. This heavy fuel requires preheating in the storage tank to permit pumping and additional preheating to permit atomizing at the burners.

CLASS A CARRIERS BY INLAND AND COASTAL WATERWAYS:

A class A carrier by water is one with an average annual operation revenue that exceeds $500,000.

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.

LAKEWISE 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.

MARITIME REVENUE:

Revenue received for operations in international or foreign shipping.

NON-SELF PROPELLED:

Vessels not containing within themselves the means for their own propulsion.

PASSENGER-MILE, INTERCITY:

Moving one passenger 1 mile on a trip between two cities generates 1 intercity passenger mile.

SELF-PROPELLED TOWBOAT:

A compact, shallow-draft boat with a squared bow and towing "knees" for pushing tows of barges on inland waterways.

SCOWS:

Large, flat-bottomed non-self-propelled vessels used to transport sand, gravel, or refuse.

TANK BARGES:

Large, flat-bottomed non-self-propelled vessels used to transport fluids such as oils.

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.

LINE MILEAGE:

The aggregate length of roadway of all line-haul railroads. It does not include the mileage of yard tracks or sidings, nor does it reflect the fact that a mile of railroad may include two or more parallel tracks. Jointly-used track is counted only once.

LOCOMOTIVE MILEAGE:

Movement of a locomotive unit 1 mile is a locomotive-mile.

LOCOMOTIVES:

Self-propelled units of equipment designed solely for moving other equipment.

MAIL REVENUE:

Revenue from the transportation of mail at established rates, and for services and facilities provided in connection with the handling of U.S. mail.

OPERATING EXPENSES:

Expenses of furnishing transportation service, including maintenance and depreciation.

OTHER REVENUE:

This is a general heading that includes revenues from miscellaneous operations (i.e., dining and bar car services), income from lease of road and equipment, miscellaneous rent income, income from non-operating property, profit from separately operated properties, dividend income, interest income, income from sinking and other reserve funds, release or premium on funded debt, contributions from other companies, and other miscellaneous income.

PASSENGER REVENUE — COMMUTATION:

Revenue from the sale of commutation tickets.

PASSENGER REVENUE — OTHER THAN COMMUTATION:

Revenue from the transportation of paying passengers not holding commutation tickets; this classification includes basic one-way and round-trip fares, discounted fares offered for the clergy and military, special excursion fares offered to travelers meeting the requirements for eligibility for those fares, (i.e., origin/destination, time of travel, length of stay at destination), revenue from the extra charges made for occupancy of space in parlor and sleeping cars, and revenue from the transportation of corpses.

PASSENGER TRAIN CARS:

Cars typically found in passenger trains include coaches, sleeping cars (formerly called Pullman cars), parlor cars, dining cars, lounge cars, baggage cars, crew-dormitory cars, and observation cars.

RAIL MOTOR CARS:

Self-propelled passenger rail cars which are driven by electric motors energized from an electrified roadway or by a generator driven by a diesel or gas turbine engine.

DISTILLATE FUEL OIL:

The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, and railroad diesel fuel.

DISTILLATE OIL:

Fuel which may be used in diesel engines (i.e., water vessels, railroads, trucks, etc.).

ICC-REGULATED PIPELINE:

A pipeline company operating in interstate commerce under a grant of authorization from the Interstate Commerce Commission and subject to economic regulation by the Commission. Such a pipeline company is required to report relevant statistics to the ICC.

MIDDLE DISTILLATES:

A category of petroleum fuel that includes the diesel fuels burned by surface transportation carriers, as well as home heating oil.

NON-REGULATED PIPELINE:

A pipeline company not operating as a common carrier in interstate commerce, hence required neither to secure a grant of operating authority from the Commission nor to report to it.

NO. 2 DISTILLATE FUEL OIL:

A petroleum distillate which meets the specifications for No. 2 heating oil and/or the specifications for diesel fuel grade No. 2.

OIL SHALE:

A finely grained sedimentary rock composed mostly of clay that contains an organic material called kerogen. When the kerogen is heated to about 482 degrees C (900 degrees F), it is converted to shale oil and gas. The shale oil that is derived from kerogen is low in sulfur; and although it varies in some respects from conventional petroleum, it can be refined into most petroleum products.

OPEC:

Organization of Petroleum Exporting Countries including Saudi Arabia, Iran, Venezuala, Libya, Indonesia, United Arab Emirates, Algeria, Nigeria, Ecuador, Gabon, Iraq, Kuwait,, and Qatar.

OPERATING EXPENSES:

Expenditures necessarily made while providing services by which operating revenue is earned.

OPERATING REVENUE:

Revenue from the transportation of oil and from services incidental to such transportation.

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.

GAS PIPELINE TERMINOLOGY

GAS TRANSMISSION COMPANY:

A company which obtains most of its gas operating revenues from the operation of a gas transmission pipeline and/or from main line sales to industrial customers.

DISTRIBUTION MAINS:

Generally, mains which carry or control the supply of gas from the point of supply to the sales meters.

FIELD AND GATHERING PIPELINES:

A network of pipelines transporting natural gas from individual wells to a compressor station, processing point, or main trunk pipeline.

LIQUID PETROLEUM GAS (LPG):

Consists of propane and butane and is usually derived from natural gas. In locations where there is no natural gas and the gasoline consumption is low, naphtha is converted to LPG by catalytic reforming.

NATURAL GAS LIQUIDS:

Those liquid hydrocarbon mixtures which are gaseous at reservoir temperatures and pressures but are recoverable by condensation or absorption. Natural gasoline and liquefied petroleum gas such as propane and butane are principal examples.

NATURAL GAS:

A naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in porous geologic formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.

TRANSMISSION PIPELINE:

Pipelines installed for the purpose of transmitting gas from a source of supply to one or more distribution centers, to one or more large-volume customers, or a pipeline installed to interconnect sources of supply.

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

SOLVENT REFINED COAL:

A coal liquefication process in which the coal is mixed with a liquid solvent, then heated and passed to a high pressure reactor where hydrogen and hydrogen sulfide are separated from the mixture. It is then filtered, the solvent is distilled for reuse, and the final product is recovered either as a liquid or solid.

TRANSPORTATION TERMINOLOGY

CONSTANT DOLLARS:

A series is said to be expressed in "constant dollars" when the effect of change in the purchasing power of the dollar has been removed. Usually the data are expressed in terms of dollars of some selected year or the average of some set of years.

CURRENT DOLLARS:

Dollars current at the time designated or at the time the transaction listed took place. In most contexts, the same meaning would be conveyed by the simple term "dollars."

DIESEL ENGINE:

An internal combustion engine in which the fuel is sprayed directly into the combustion chamber and ignited by the high temperature to which the air in the combustion chamber has been heated during the compression process. There are approximately 400 different variations in size, number of cylinders, and power output of diesel engines. The engines are relatively costly, but they operate with high efficiency combined with a long life span.

ENERGY EFFICIENCY:

In reference to transportation, the inverse of energy intensiveness: the ratio of outputs from a process to the energy inputs; for example, passenger-miles traveled (PMT) per gallon of fuel.

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.

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