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National Transportation Statistics



SEPTEMBER 1978

ANNUAL REPORT

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16. Abstract <p>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 three parts: Energy Consumption, Energy Transport, 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 1966 through 1976/1977.</p>			
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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.

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 supplements detail the role of transportation in the economy and the relation of energy to transportation.

Time series transportation statistics are presented for the period 1966-1976. 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

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 is not available or not applicable, the block is shaded and no data is shown. Dotted lines indicate alternative groupings, e.g., "LIGHT RAIL" is contained in both "LOCAL TRANSIT" and "RAIL PASSENGER".

MODAL PROFILES

The Modal Profiles present cost, inventory, and performance data comparisons for 1966, 1975, and 1976. Not all of the types of data in these profiles are available for every mode, nor are they always applicable.

The following list indicates the type of data usually included in each group.

- I. Cost
 - A. Expenditures (private modes)
 - B. Revenue (for-hire modes)
 - C. Operating expenses
 - D. Federal expenditures
 - E. State and local expenditures
- II. Inventory
 - A. Number of companies
 - B. Number of vehicles
 - C. Number of employees
 - D. Mileage

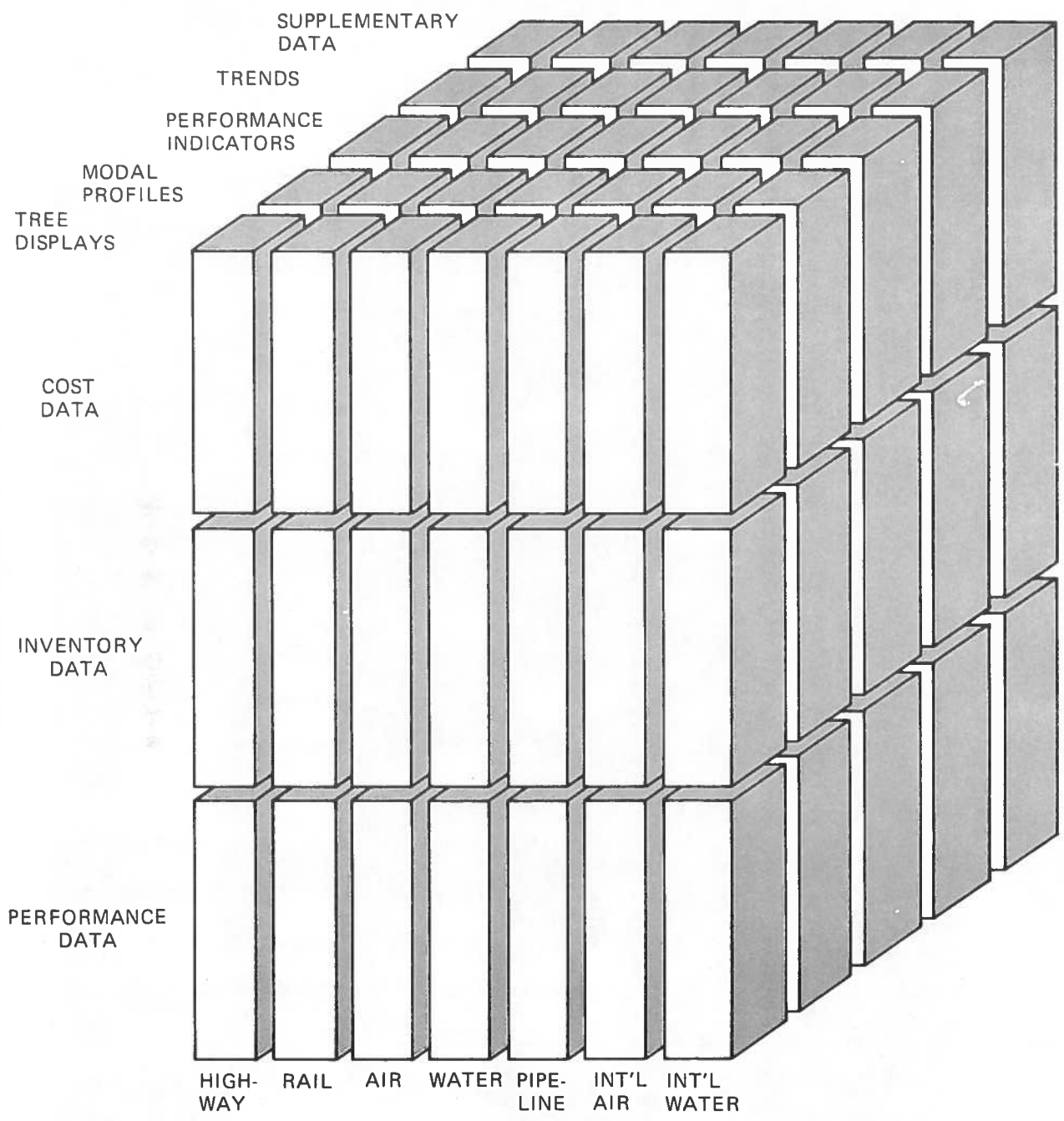
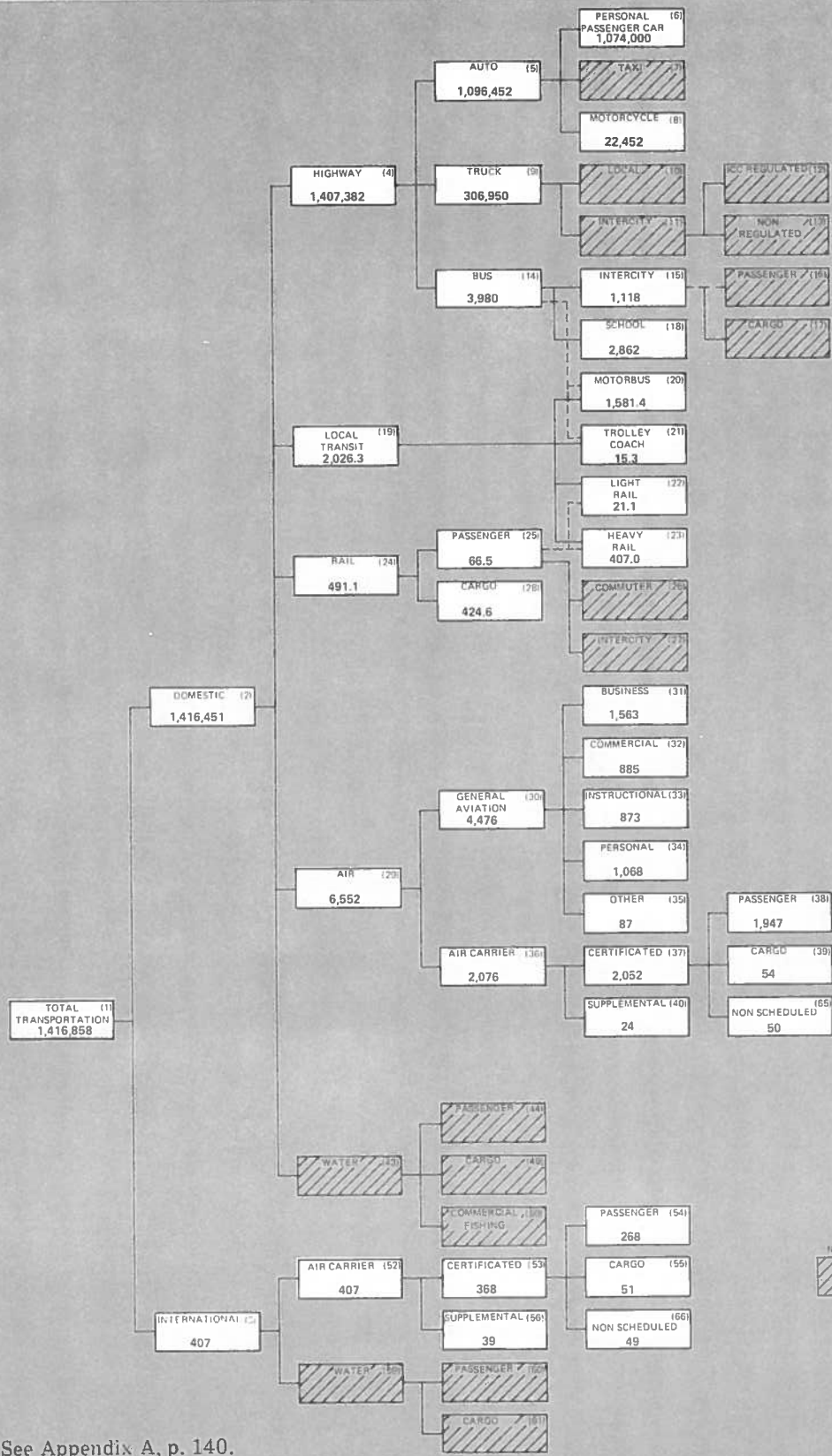


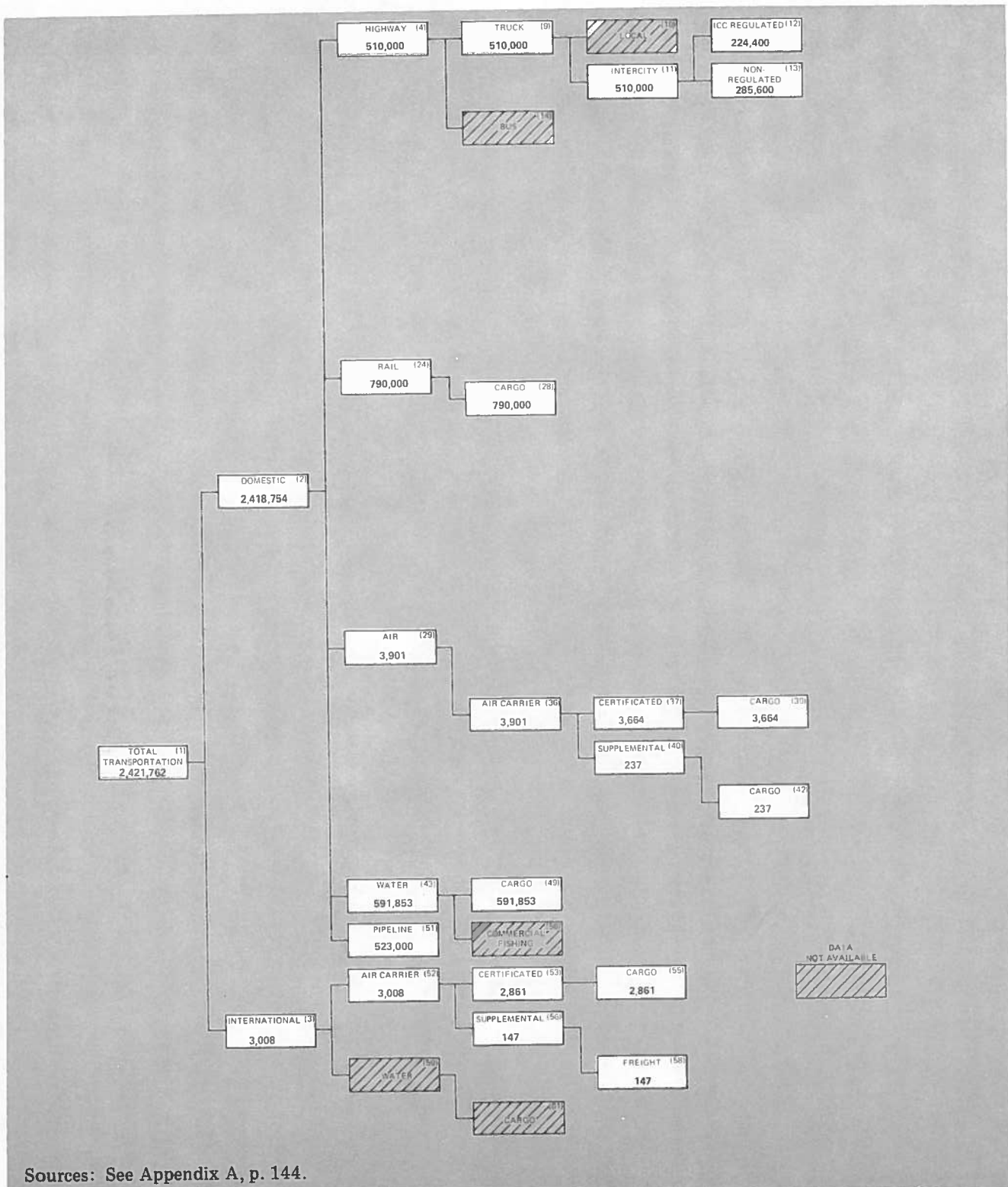
Figure 1. Organization of the Data

TREE DISPLAYS



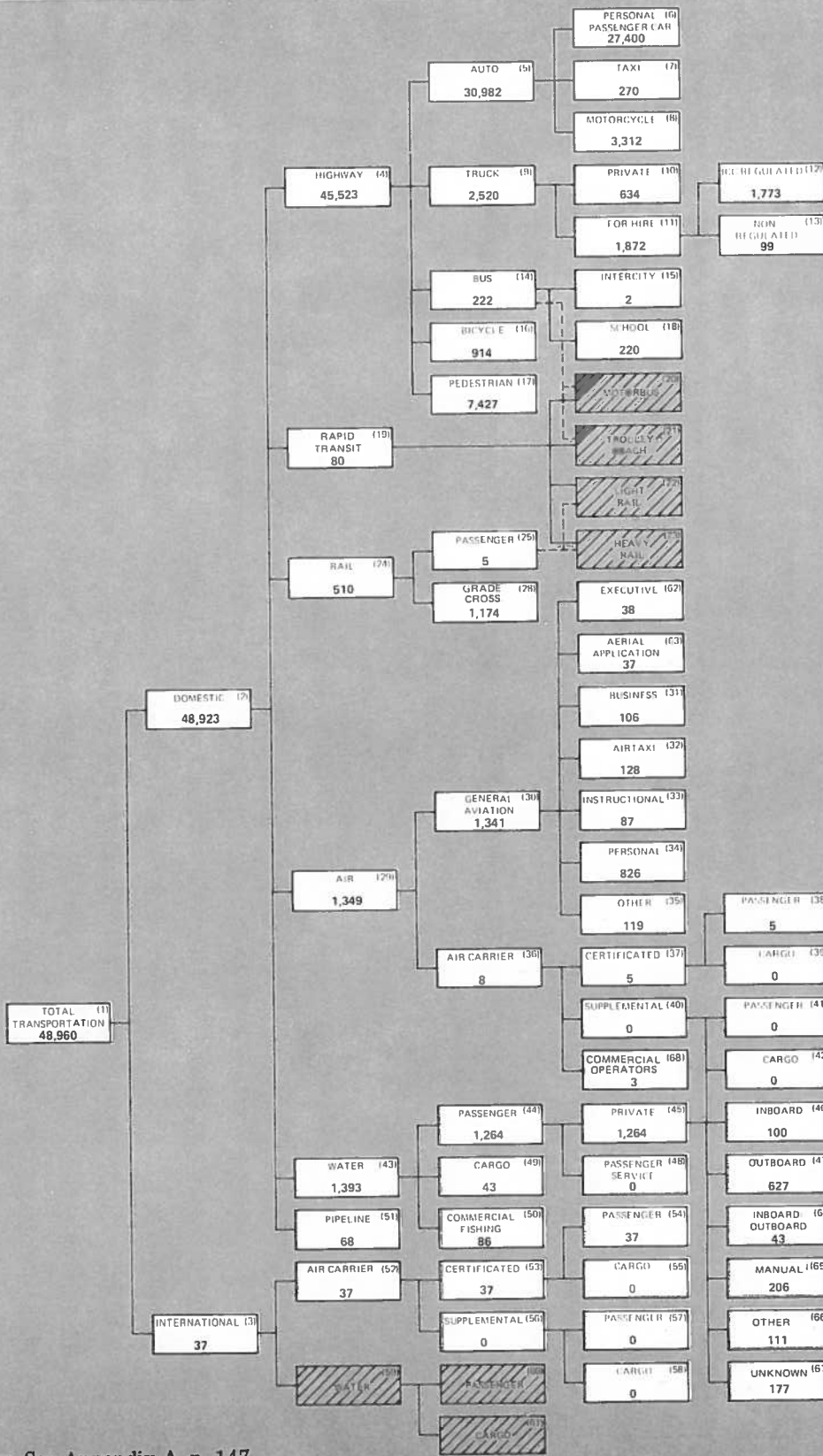
Sources: See Appendix A, p. 140.

Figure 4. Vehicle-Miles (Millions) - 1976



Sources: See Appendix A, p. 144.

Figure 6. Cargo Ton-Miles (Millions) - 1976



Sources: See Appendix A, p. 147.

Figure 8. Number of Fatalities - 1976

MODAL PROFILES

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 and are marked with an asterisk.

For example:

Air Carrier Profile	
	<u>1976</u>
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 1975-1976 column refers to the usual percent difference between 1975 data and 1976 data. Annual percent change 1966-1976 is equal to $C \times 100$, where C is obtained from the following relationship: $D_{76} = D_{66} (1 + C)^{10}$. (Note: D_{66} and D_{76} refer to 1966 and 1976 data, respectively; C is the change; and the relationship is derived from the compound interest formula.)

AIR CARRIER PROFILE (cont.)

	1966	1975	1976	1966-1976	1975-1976
				Average Annual % Change	% Change
Total Revenue Passenger-Miles (millions) . . .	n/a	182,007.0*	200,041.8*	—	9.9
Domestic					
Certificated, all services	63,084.9n	135,999.5q	151,380.0q	9.2	11.3
Scheduled service	60,590.8	131,728.5	115,271.3	9.1	10.3
Nonscheduled service	2,494.1	4,271.0	6,108.7	9.4	43.0
Supplemental	n/a	900.0s	920.3s	—	2.3
International					
Certificated, all services	25,057.8t	37,261.6u	40,462.7u	4.9	8.6
Scheduled service	19,298.4	31,018.7	33,716.7	5.7	8.7
Nonscheduled service	5,759.4	6,242.9	6,746.0	1.6	8.1
Supplemental	n/a	7,845.9s	7,278.8s	—	-7.2
Total Revenue Passenger Enplanements (millions)	n/a	209.0*	228.5*	—	9.3
Domestic					
Certificated, all services	n/a	191.0*	209.6*	—	9.7
Scheduled service	105.8n	188.7q	206.3q	6.9	9.3
Nonscheduled service	n/a	2.3	3.3	—	43.5
International					
Certificated, all services	n/a	18.0*	18.9*	—	5.0
Scheduled service	12.3t	16.3u	17.0u	3.3	4.3
Nonscheduled service	n/a	1.7	1.9	—	11.8
Total Revenue Passenger Load Factor (%) . .	58.0v	55.4 ^x w	55.9w	0.4	0.9
Domestic					
Certificated scheduled service	57.9n	54.6q	55.6q	-0.4	1.8
International					
Certificated scheduled service	58.2	50.4u	54.8u	-0.6	8.7
Total Revenue Ton-Miles of Freight ¹ (millions)	n/a	5,424.2*	5,760.9*	—	6.2
Domestic					
Certificated all services	1,593.2n	2,757.5q	2,923.8q	6.3	6.0
Scheduled service	1,204.1	2,718.1	2,887.8	9.1	6.2
Nonscheduled service	389.1	39.4	36.0	-21.2	-8.6
Supplemental	n/a	262.8s	237.1s	—	-9.8
International					
Certificated, all services	1,356.7t	2,304.9u	2,453.0u	6.1	6.4
Scheduled service	846.6	2,048.0	2,186.4	10.0	6.8
Nonscheduled service	510.1	256.9	266.6	-6.3	3.8
Supplemental	n/a	99.0s	147.0s	—	48.5
Average Overall Airborne Speed (mph)					
Domestic					
Certificated, scheduled service	330x	403y	406y	2.1	0.7
International					
Certificated, scheduled service	465	482	484	0.4	0.4
Total U.S. Air Carrier Accidents ²	75z	45z	28z	-9.4	-37.8
Certificated route and supplemental carriers	75	38	26	-10.1	-31.6
Certificated route (all operations including cargo)	69	36	25	-9.7	-30.6
Scheduled passenger service	53	28	21	-8.8	-25.0
Domestic	50	21	17	-10.2	-19.0
International	3	7	4	2.9	-42.9
Supplemental air carriers (all operations)	6	2	1	-16.4	-50.0
Passenger service (civil and military)	1	1	1	0.0	0.0

GENERAL AVIATION PROFILE

	1966	1975	1976	1966-1976	
				Average Annual % Change	1975-1976 % Change
I. FINANCIAL					
Expenditures (\$ millions)					
Total	1,803 ^a	4,735 ^a	5,048 ^{Pa}	10.8	6.6
Aircraft	493	967 ^r	1,065	8.0	10.1
Operating costs	1,310	3,768	3,983	11.8	5.7
II. INVENTORY					
Number of Active Aircraft					
Total, all aircraft	107,085 ^c	171,156 ^c	180,854 ^c	5.4	5.7
III. PERFORMANCE					
Number of Miles Flown (millions)					
Business	1,536.2 ^d	1,486.9 ^d	1,562.9 ^d	0.2	5.1
Commercial	515.7	818.1	885.0	5.6	8.2
Instructional	646.2	829.4	873.0	3.1	5.3
Personal	605.9	1,008.3	1,068.1	5.8	5.9
Other	32.2	95.8	86.9	10.4	-9.3
Total	3,336.1	4,238.4	4,476.0	3.0	5.6
Number of Hours Flown (millions)					
Business	7.0 ^e	9.5 ^e	10.1 ^e	3.7	6.3
Commercial	3.6	6.5	7.0	6.9	7.7
Instructional	5.7	8.2	8.6	4.2	4.9
Personal	4.5	9.2	9.8	8.1	6.5
Other	0.2	0.7	0.6	11.6	-14.3
Total	21.0	34.2	36.1	5.6	5.6
Number of Fatalities					
Instructional	57 ^f	60 ^j	87 ^h	4.3	45.0
Personal	712	861	826	1.5	-4.1
Business	144	121	106	-3.0	-12.4
Executive	16	44	38	9.0	-13.6
Aerial Application	44	38	37	-1.7 ²	-2.6
Air Taxi	60	85	128	7.9	50.6
Other	116	134	119	0.3	-11.2
Total	1,149	1,345	1,341	1.6	-0.3
Accidents					
Fatal	573 ^g	675 ^g	636 ^g	1.1	-5.8
Total	5,712	4,237	4,567	-2.2	7.8
Accident Rate per 100,000 Aircraft Hours					
Fatal	2.73	1.97	1.74	-4.4	-11.7
Total	27.2	12.4	12.5	-7.5	0.8
Accident Rate per Million Aircraft Miles					
Fatal	0.17	0.16	0.15	-1.2	-6.3
Total	1.71	1.00	1.06	-4.7	6.0

p = preliminary
r = revised

Sources: The following data references are listed in Appendix A, p. 160.

Source	Reference Number/Location	Source	Reference Number/Location
a	26) p. 5	e	42) Table 8.3
b	42) Table 8.2	f	50) Personal Communication
c	42) Table 8.6	g	42) Table 10.10
d	42) Table 8.5	h	48) p. 43
		j	48) p. 36

AUTOMOBILE PROFILE

	<u>1966</u>	<u>1975</u>	<u>1976</u>	<u>1966-1976</u> <u>Average</u> <u>Annual</u> <u>% Change</u>	<u>1975-1976</u> <u>% Change</u>
I. FINANCIAL					
Expenditures (\$ millions)					
New and used cars	26,636a	46,373 ^f b	63,496b	-13.4	36.9
Tires, tubes, accessories	3,434	7,556 ^f	8,423	9.4	11.5
Gasoline and oil	15,962	39,060 ^f	41,386	10.0	6.0
Tolls	495	771	811	5.1	5.2
Insurance	2,839	3,682 ^f	5,291	6.4	43.7
Auto registration fees	1,251c	2,053d	2,366d	6.6	15.2
Operator's permit fees	162	264	306	6.6	15.9
Repair, greasing, washing, parking, storage, rental	7,393a	20,142 ^r b	22,322b	11.7	10.8
Total	58,172	120,768 ^f	143,534	9.5	18.9
Revenues (\$ millions)					
Taxi	638	870	852	2.9	-2.1
II. INVENTORY					
Number of Vehicle Registrations					
Passenger cars and taxis	78,353,534e	106,712,551f	110,351,327f	3.5	3.4
Motorcycles	1,753,178*	4,966,844*	4,989,232*	11.0	0.5
Number of Employees					
Taxis	109,200g	83,400i	77,400i	-3.4	-7.2
III. PERFORMANCE					
Vehicle-Miles (millions) ¹					
Urban streets	400,368j	609,574k	631,889k	4.7	3.7
Main rural roads	247,626	329,050	386,356	4.6	17.4
Local rural roads	103,746	111,848	78,207	-2.8	-30.1
Total travel	751,740	1,050,472	1,096,452	3.9	4.4
Vehicle-Miles (millions)					
Motorcycles	6,896	22,351	22,452	12.5	0.5
Passenger car and taxis	744,844	1,028,121	1,074,000	3.7	4.5
Total	751,740	1,050,472	1,096,452	3.9	4.4
Passenger-Miles (millions)					
Total travel, passenger cars & taxis ²	1,638,657*	2,261,866*	2,362,800*	3.7	4.5
Total travel, motorcycles ³	7.586*	24,586*	24,697*	12.5	0.2
Average Speed (mph), Main Rural Roads ⁴					
Passenger cars	58.8s	56.2m	n/a	—	—
Number of Vehicles in All Accidents					
Motorcycles	260,000n	360,000n	385,000n	4.0	6.9
Passenger cars	20,800,000	22,500,000	23,100,000	1.1	2.7
Taxis	160,000	200,000	180,000	1.2	-10.0
Number of Vehicles in Fatal Accidents					
Motorcycles	1,900	2,800	3,000	4.7	7.1
Passenger cars	50,200	40,100	41,200	-2.0	2.7
Taxis	160	340	410	9.9	20.6

BUS PROFILE

	<u>1966</u>	<u>1975</u>	<u>1976</u>	<u>1966-1976 Average Annual % Change</u>	<u>1975-1976 % Change</u>	<u>1975</u>
FINANCIAL						
Expenditures (\$ millions)						
School bus	787a	2,174a	2,372a	11.7	9.1	64,6
Operating Revenues (\$ millions)						
Intercity bus, total	740.0b	1,171.6 ^{r,Pb}	1,231.9 ^{Pb}	5.2	5.1	22,0
Intercity bus, Class I	644.3c	954.7 ^{r,Pc}	997.0 ^{Pc}	4.5	4.4	25,5
Operating Expenses (\$ millions)						
Intercity bus, total	637.5b	1,103.2 ^{r,Pb}	1,179.9 ^{Pb}	6.4	7.0	14,5
Intercity bus, Class I	550.1c	893.2 ^{r,Pc}	952.1 ^{Pc}	5.6	6.6	16,5
Taxes Assignable to Operations (\$ millions)¹						
Intercity bus, total	65.4b	96.5 ^{r,Pb}	102.1 ^{Pb}	4.6	5.8	16,5
Intercity bus, Class I	45.4c	64.3 ^{r,Pc}	67.3 ^{Pc}	4.0	4.7	15,5
INVENTORY						
Number of Operating Companies						
Intercity bus, total	1,050b	950 ^{Pb}	1,000 ^{Pb}	-0.5	5.3	24,607,
Intercity bus, Class I	166	85 ^{r,P}	81 ^P	-6.9	-4.7	190,
Number of Vehicles						
Intercity bus, total	20,400	20,500 ^P	20,100 ^P	-0.2	-2.0	977,
School bus	237,714d	365,982e	379,178e	4.8	3.6	25,775,
Intercity bus, Class I	11,749b	10,030 ^{Pb}	10,000b	-1.6	-0.3	996,
Number of Employees of Operating Companies						
Intercity bus, total	46,200	46,700 ^{r,P}	46,000 ^P	-0.04	-1.5	9b
Miles of Highway Served						
Intercity, total	264,000	274,000 ^{r,P}	276,000 ^P	0.5	0.7	8d 409,
PERFORMANCE						
Vehicle-Miles (millions)						
Commercial bus²						
Urban streets	1,871f	1,640g	1,703g	-0.9	3.8	117,
Main rural roads	941	928	1,104	1.6	19.0	134,
Local roads	196	80	92	-7.3	15.0	22,
Total travel	3,008	2,648	2,899	-0.4	9.5	274,
School and nonrevenue bus						
Urban streets	334	550	874	10.1	58.9	2.6q
Main rural roads	712	930	1,349	6.6	45.1	4,
Local rural roads	798	1,020	639	-2.2	-37.4	7m 454,
Total travel	1,844	2,500	2,862	4.5	14.5	5
All buses						
Urban streets	2,205	2,190	2,577	1.6	17.7	5u 4,
Main rural roads	1,653	1,858	2,453	4.0	32.0	7 2,
Local rural roads	994	1,100	731	-3.0	-33.5	73 7,
Total travel	4,852	5,148	5,761	1.7	11.9	53v 55
Revenue Passenger-Miles (millions)						
Intercity bus, total	24,600b	25,400 ^{r,Pb}	25,100 ^{Pb}	0.2	-1.2	55
Intercity bus, Class I ³	16,521h	13,240 ^{r,Ph}	12,560 ^{Ph}	-2.7	-5.1	55
Number of Revenue Passengers (millions)						
Intercity bus, total	402b	351 ^{Pb}	340 ^{Pb}	-1.7	-3.1	55
Intercity bus, Class I	229h	152.2 ^{r,Ph}	145.9 ^{Ph}	-4.4	-4.1	55
Average Speed (mph)⁴						
Commercial bus, main rural roads	58.8i	55.4j	n/a	—	—	55

LOCAL TRANSIT PROFILE

	<u>1966</u>	<u>1975</u>	<u>1976</u>	<u>1966-1976 Average Annual % Change</u>	<u>1975-1976 % Change</u>
I. FINANCIAL					
Passenger Revenue (\$ millions)					
Motorbus	998.1a	1,310.1a	1,366.0 ^P a	3.2	4.3
Subway and elevated - heavy rail	297.0	504.3	616.5 ^P	7.6	22.2
Surface rail - light rail	51.8	28.1	25.7 ^P	-6.8	-8.5
Trolley coach	38.5	15.4	15.0 ^P	-9.0	-2.6
Total	1,385.4	1,860.5†	2,025.6^P†	3.9	8.9
Operating Revenue (\$ millions)					
Motorbus	1,074.1	1,437.7	1,485.6 ^P	3.3	3.3
Subway and elevated - heavy rail	306.5	517.1	630.7 ^P	7.5	22.0
Surface rail - light rail	58.7	28.9	26.9 ^P	-7.5	-6.9
Trolley coach	39.2	15.9	15.3 ^P	-9.0	-3.8
Total	1,478.5	2,002.4†	2,161.1^P†	3.9	7.9
II. INVENTORY					
Number of Companies					
Electric railways ¹	13b	17c	19d	3.9	11.8
Motorbus	118	928	935	23.0	0.8
Trolley coach and motorbus	3	2	1	-10.4	-50.0
Number of Vehicles					
Motorbus	50,130e	50,811e	52,382 ^P e	0.4	3.1
Subway and elevated - heavy rail	9,273	9,608	9,714 ^P	0.5	1.1
Surface rail - light rail	1,407	1,061	963 ^P	-3.7	-9.2
Trolley coach	1,326	703	685 ^P	-6.4	-2.6
Total	62,136	62,183	63,744	0.3	2.5
Number of Employees					
Motorbus, surface rail, trolley coach, subway and elevated	144,300f	159,800f	162,950 ^P f	1.2	2.0
PERFORMANCE					
Revenue Vehicle-Miles (millions)					
Motorbus	1,521.7g	1,526.0 ^r g	1,581.4 ^P g	0.4	3.6
Subway and elevated - heavy rail	378.9	423.1	407.0 ^P	0.7	-3.8
Surface rail - light rail	42.9	23.8	21.1 ^P	-6.9	-11.3
Trolley coach	40.1	14.3	15.3 ^P	-9.2	7.0
Total	1,983.6	1,989.7†	2,026.3^P	0.2	1.8
Revenue Passengers Carried (millions)					
Motorbus	4,702.0h	4,094.9 ^r h	4,168.0 ^P h	-1.2	1.8
Subway and elevated - heavy rail	1,584.0	1,387.8 ^r	1,353.2 ^P	-1.6	-2.5
Surface rail - light rail	211.0	94.0 ^r	86.0 ^P	-8.6	-8.5
Trolley coach	174.0	56.0 ^r	53.9 ^P	-11.1	-3.8
Total	6,671.0	5,643.4^r	5,673.1^P	-1.6	0.5

† includes cable car and inclined plane

n/a = not available

p = preliminary

r = revised

¹ Includes surface rail and subway and elevated.

Sources: The following data references are listed in Appendix A, p. 160.

<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	4) Tables 8, 9, 10	f	4) Table 13
b	3) p.1	g	4) Table 11
c	5) p. 23	h	4) Table 8
d	4) p. 16		
e	4) Table 14		

WATER TRANSPORT PROFILE (cont.)

	<u>1966</u>	<u>1975</u>	<u>1976</u>	<u>1966-1976 Average Annual % Change</u>	<u>1975-1976 % Change</u>
Number of Employees					
Maritime carriers	10,789b	8,546c	8,648 ^{Pc}	-2.2	1.2
Class A and B carriers by inland and coastal waterways	10,397	7,414 ^r	7,284 ^P	-3.5	-1.8
Mileage of Commercially Navigable Inland Waterways					
	25,380v	25,543v	n/a	-	-
Number of Vessels					
Total non-self-propelled	16,789	26,787	n/a	-	-
Dry cargo barges and scows	14,241	23,164	n/a	-	-
Tank barges	2,548	3,623	n/a	-	-
Self-propelled towboats and tugs	4,054	4,240	n/a	-	-
U.S. Commercial Fishing Fleet	12,677w	n/a	n/a	-	-
U.S. Passenger Liners ³	27y	6y	6y	-14.0	0.0
U.S. Merchant Marine (over 1,000 gross tons)					
Total U.S. Flag	2,278	857	842	-9.5	-1.8
Privately Owned	965	580	577	-5.0	-0.5
Government Owned	1,313	277	265	-14.8	-4.3
Number of Recreational Boats (millions)	6.5bb	11.8 ^r bb	12.8bb	7.0	8.1
III. PERFORMANCE					
Passenger-Miles, Intercity (millions)	3,400cc	4,000cc	4,000cc	1.6	0.0
Ton-Miles (millions)					
Domestic waterfreight					
Coastwise	306,766j	315,846j	322,932j	0.5	2.2
Internal	117,317	180,399	197,073	5.3	9.2
Lakewise	81,305	68,517	70,684	-1.4	3.2
Local	1,697	1,222	1,164	-3.7	-4.7
Total	507,084	565,984	591,853	1.6	4.6
Domestic Deep Sea†	225,000dd	223,000dd	218,000dd	-0.3	-2.2
Tons of Freight Hauled (millions)					
Domestic water					
Coastwise	208j	232j	236j	1.3	1.7
Internal	390	504	524	3.0	4.0
Lakewise	164	129	132	-2.2	2.3
Local	99	78	84	-1.6	7.7
Total	861	943	976	1.3	3.5
Exports					
Great Lakes ports	32i*	35i*	35i*	0.9	0.0
Coastal ports	156	237	251	4.9	5.9
Total	188	272	286	4.3	5.1
Imports					
Great Lakes	27*	21*	31*	1.4	47.6
Coastal ports	257	455	540	7.7	18.7
Total	284	477	570	7.2	19.7
Tons of Freight, Intraterritorial (millions)	1	3	3	11.6	0.0
Average Haul, Domestic System (miles-per-ton)					
Coastwise	1,472.2j	1,361.8j	1,366.7j	-0.7	0.4
Internal	300.9	358.0	376.1	2.3	5.1
Lakewise	495.6	529.8	535.0	0.8	1.0
Local	17.1	15.6	13.9	-2.1	-10.9
Total	588.6	599.9	606.3	0.3	1.1

WATER TRANSPORT PROFILE (cont.)

Source: The following data references are listed in Appendix A, p. 160.

<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	26) p. 4, 5	j	29) Sec. 3, Table 1	v	8) p. 1, 2, 3
b	20) p. 146/149	k	31) p. 10	w	51) Personal Comm.
c	18) p. 146/149	l	40) SIC 373	x	30) p. 31
d	33) p. 6	m	41) SIC 373	y	32) p. 2
e	20) p. 148	n	31) p. 61	z	31) p. 59
f	34) p. 16	q	40) SIC 44	aa	30) p. 19
g	20) p. 147	s	41) SIC 44	bb	30) p. 7
h	9) Tables 6/7/8/9	t	31) p. 9	cc	26) p. 18
i	29) Table 1a, b	u	52) Personal Comm.	dd	26) p. 8
				ee	30) p. 17
				ff	31) p. 248

RAIL PROFILE
A. CLASS I RAILROADS (cont.)

	<u>1966</u>	<u>1975</u>	<u>1976</u>	<u>1966-1976</u> <u>Average</u> <u>Annual</u> <u>% Change</u>	<u>1975-1976</u> <u>% Change</u>
Average Haul, Class I Railroads (miles)					
Freight	279.2j	309.4j	323.9j	1.5	4.7
Number of Fatalities, Railroads and Grade Crossings					
Passengers on trains	23k	9m	5l	-14.2	-44.4
Employees on duty	159	108	100	-4.5	-7.4
Employees not on duty	9	3	9	0.0	200.0
Trespassers	678	518	458	-3.9	-11.6
Non-Trespassers	1,815	903	1,112	-4.8	23.1
Total Railroad and Grade Crossing	2,684	1,541	1,684	-4.6	9.3
Grade Crossing only	1,780	966	1,174	-4.1	21.5
Railroad only	904	575	510	-5.6	-11.3

Amtrak and Auto Train figures (p. 16) subtracted from data given in source reference.
preliminary
revised

percent decrease largely due to separation of AMTRAK data, May 1971.
included in Freight Revenue

cludes loaded and empty freight cars, not cabooses.
cludes Amtrak and Auto-Train.

ource: The following data references are listed in Appendix A, p. 160.

<u>Source</u>	<u>Reference</u> <u>Number/Location</u>	<u>Source</u>	<u>Reference</u> <u>Number/Location</u>
a	10) p. 7, 16	h	11) p. 46
b	10) p. 1	i	10) p. 11
c	10) p. 9	j	10) p. 5
d	10) p. 10	k	49) Personal Comm.
e	10) p. 8	l	48) p. 31
f	10) Table of Contents	m	48) p. 28
g	10) p. 4	n	12) Preface
		q	10) p. 7

OIL PIPELINE PROFILE

	<u>1966</u>	<u>1975</u>	<u>1976</u>	<u>1966-1976 Average Annual % Change</u>	<u>1975-1976 % Change</u>
I. FINANCIAL					
Operating Revenues (\$ millions)					
ICC-regulated	941a	1,874 ^r a	2,137a	8.6	14.0
Non-regulated	155	346 ^f	395	9.8	14.2
Total	1,096	2,220 ^f	2,532	8.7	14.1
Operating Expenses (\$ millions)					
ICC-regulated	515b	1,038 ^r c	1,146 ^p c	8.3	10.4
Taxes, ICC-regulated Companies (\$ millions)					
Federal	132	247d	318e	9.2	28.7
Other	51	96	102	7.2	6.3
II. INVENTORY					
Number of ICC-regulated Companies	82	104c	111 ^p c	3.1	6.7
Number of Employees, ICC-regulated Companies	16,180	15,108 ^r	15,270 ^p	-0.6	1.1
Mileage ¹	216,745f	225,889 ^r f	227,066f	0.5	0.5
III. PERFORMANCE					
Intercity Ton-Miles (millions)					
ICC-regulated	285,900g	428,200h	442,000 ^p i	4.5	3.2
Non-regulated	47,000	79,100	81,000 ^p	5.6	2.4
Total	332,900	507,300	523,000 ^p	4.6	3.1
Tons Transported (millions) ²					
Crude petroleum ³	208n	456k*	460m*	8.3	0.9
Petroleum products (delivered from lines)	250j	425s*	476q*	6.7	12.0
Total	458	881	936	7.4	6.2

¹Figure obtained by addition/subtraction and may not appear directly in data source.

²Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

³Data has been converted from barrels to short tons per Table 2, Section XV, Basic Petroleum Data Book, American Petroleum Institute.

*Excludes crude oil imported for direct burning for fuel use by pipeline.

^rpreliminary

^prevised

Source: The following data references are listed in Appendix A, p. 160.

<u>Source</u>	<u>Reference Number/Location</u>	<u>Source</u>	<u>Reference Number/Location</u>
a	26) p. 4	g	22) p. 87
b	20) p. 153	h	18) p. 139, Table 4
c	18) p. 149, Table 15	i	21) Personal Communication
d	19) p. 142	j	38) p. 835, Table 17
e	18) p. 138, Table 2	k	37) Table 14
f	26) p. 31	m	39) Table 14
		n	38) p. 834, Table 16
		q	39) Table 33
		s	37) Table 33

**SELECTED PASSENGER
AND
CARGO PERFORMANCE INDICATORS
BY MODE**

**SELECTED PASSENGER AND CARGO PERFORMANCE
INDICATORS BY MODE, 1966, 1975 AND 1976 (cont.)**

HIGHWAY (cont.)	<u>1966</u>	<u>1975</u>	<u>1976</u>
Average number of autos per one mile of municipal highway			
Under state control	1,181.9	1,269.0	1,269.7
Under local control	176.5	192.1	196.6
Total municipal mileage	153.6	166.9	170.2
Average number of autos per one mile of rural and municipal highway	21.2	27.8	28.6
UTOMOBILE			
U.S. Population per registered vehicle			
Passenger cars and taxis	2.5	2.0	1.9
Motorcycles	111.6	42.9	43.0
Vehicle-miles of travel per capita, passenger cars, taxis, motorcycles			
Urban streets	2,047.1	2,861.4	2,943.7
Main rural roads	1,266.1	1,544.6	1,799.9
Local rural roads	530.5	525.0	364.3
Total travel	3,843.7	4,931.0	5,107.9
Passenger-miles per capita, passenger cars and taxis, total travel	8,378.6	10,617.5	11,007.2
Vehicle-miles of travel per vehicle, passenger cars and taxis			
Urban streets	5,109.8	5,712.3	5,726.1
Main rural roads	3,106.3	3,083.5	3,501.1
Local rural roads	1,324.1	1,048.1	708.7
Total travel	9,594.2	9,843.9	9,936.0
Passenger-miles per vehicle, passenger cars and taxis	20,913.6	21,195.9	21,411.6
BUS			
U.S. population per intercity bus	9,587.1	10,392.0	10,679.6
Vehicle-miles per capita			
Commercial buses	15.4	12.4	13.5
School and non-revenue buses	9.4	11.7	13.3
All buses	24.8	24.1	26.8

**SELECTED PASSENGER AND CARGO PERFORMANCE
INDICATORS BY MODE, 1966, 1975 AND 1976 (cont.)**

LOCAL TRANSIT (cont.)	<u>1966</u>	<u>1975</u>	<u>1976</u>
U.S. population per vehicle			
Motor bus	3,901.4	5,081.1	4,098.0
Subway and elevated	21,090.9	22,172.4	22,097.9
Surface rail	139,002.1	200,784.2	222,906.5
Trolley coach	147,493.2	303,032.7	313,370.8
Total transit	3,147.5	3,425.9	3,367.5
 WATER TRANSPORT			
Ton-miles per capita, domestic water			
Coastwise	1,568.5	1,482.6	1,504.4
Internal	599.9	846.8	918.1
Lakewise	415.7	321.6	329.3
Local	8.7	5.7	5.4
Total	2,592.8	2,656.8	2,757.2
Domestic deep sea ton-miles per capita	1,150.4	1,046.7	1,015.6
Tons of freight hauled per capita, domestic water			
Coastwise	1.1	1.1	1.1
Internal	2.0	2.4	2.4
Lakewise	0.8	0.6	0.6
Local	0.5	0.4	0.4
Total	4.4	4.4	4.5
 CLASS I RAILROADS			
Revenue passenger-miles per capita			
Commutation	21.4	20.5	20.2
Other	66.0	7.3	6.6
Total	87.4	27.8	26.8
Revenue passenger-miles per passenger car (millions)	0.9	1.3	1.8
Revenue ton-miles per capita	3,775.5	3,540.6	3,699.2
Revenue ton-miles per freight car (millions)	0.5	0.6	0.6
 OIL PIPELINE			
Intercity ton-miles per capita, regulated plus non-regulated pipelines	1,702.2	2,381.3	2,436.4
Intercity ton-miles per mile of line, regulated plus non-regulated lines (millions)	1.5	2.3	2.3
Tons of petroleum transported per capita	2.3	4.1	4.4
Tons of petroleum transported per mile of line	2,113.1	3,918.8	4,122.1

TRANSPORTATION TRENDS

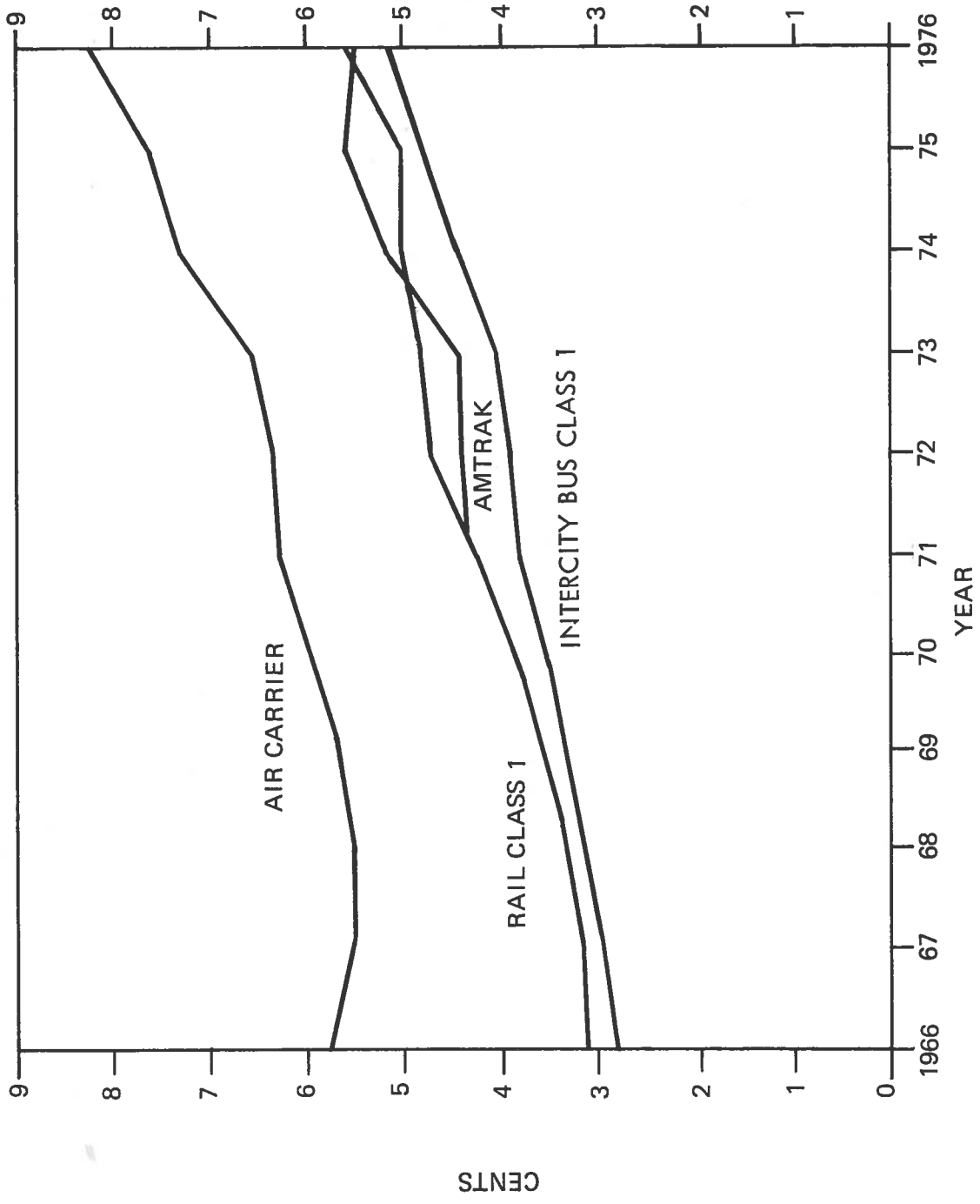


Figure 9. Average Passenger Revenue per Passenger-Mile, 1966 — 1976

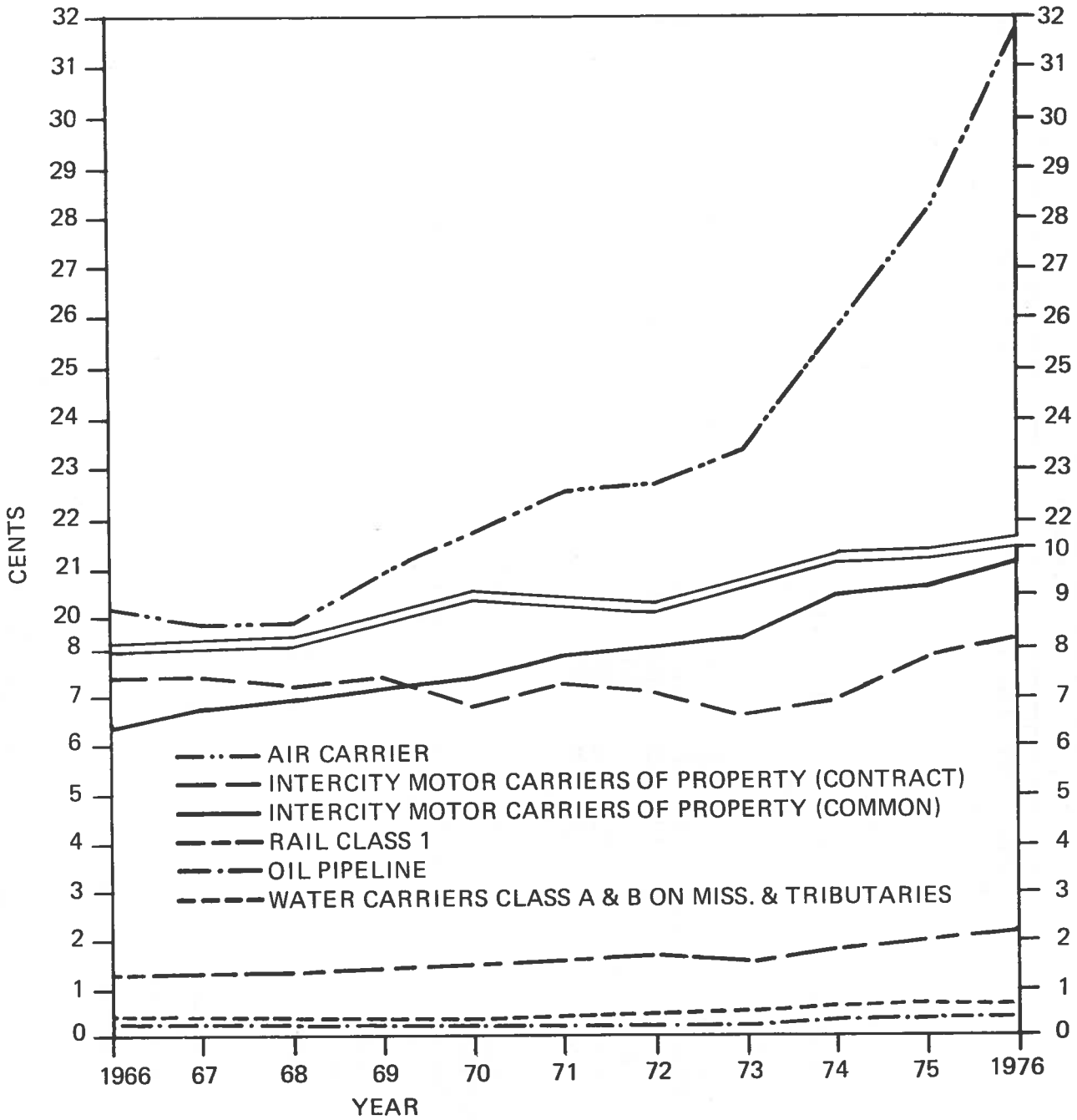


Figure 10. Average Freight Revenue per Ton-Mile, 1966 – 1976

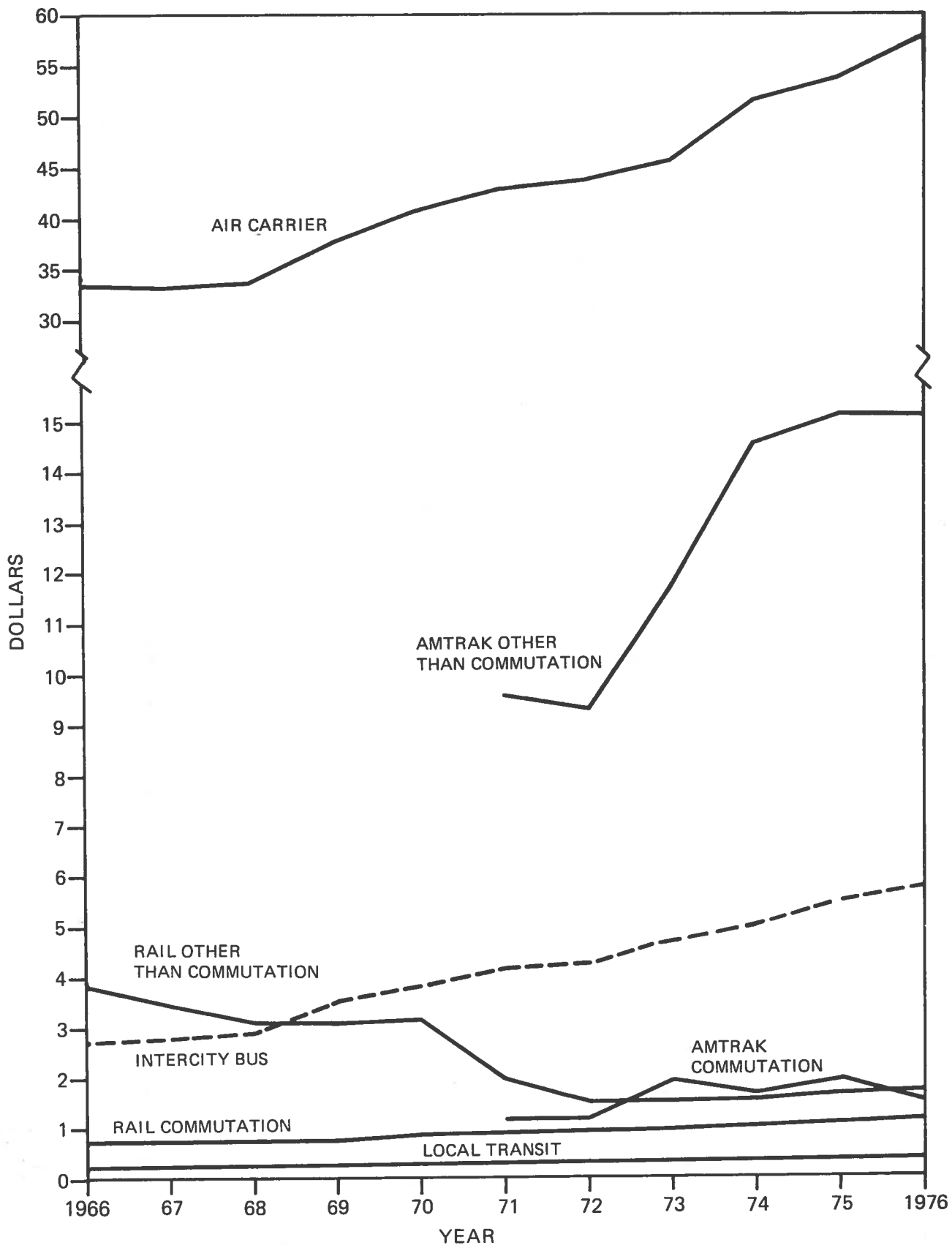


Figure 11. Average Passenger Fare, 1966 – 1976

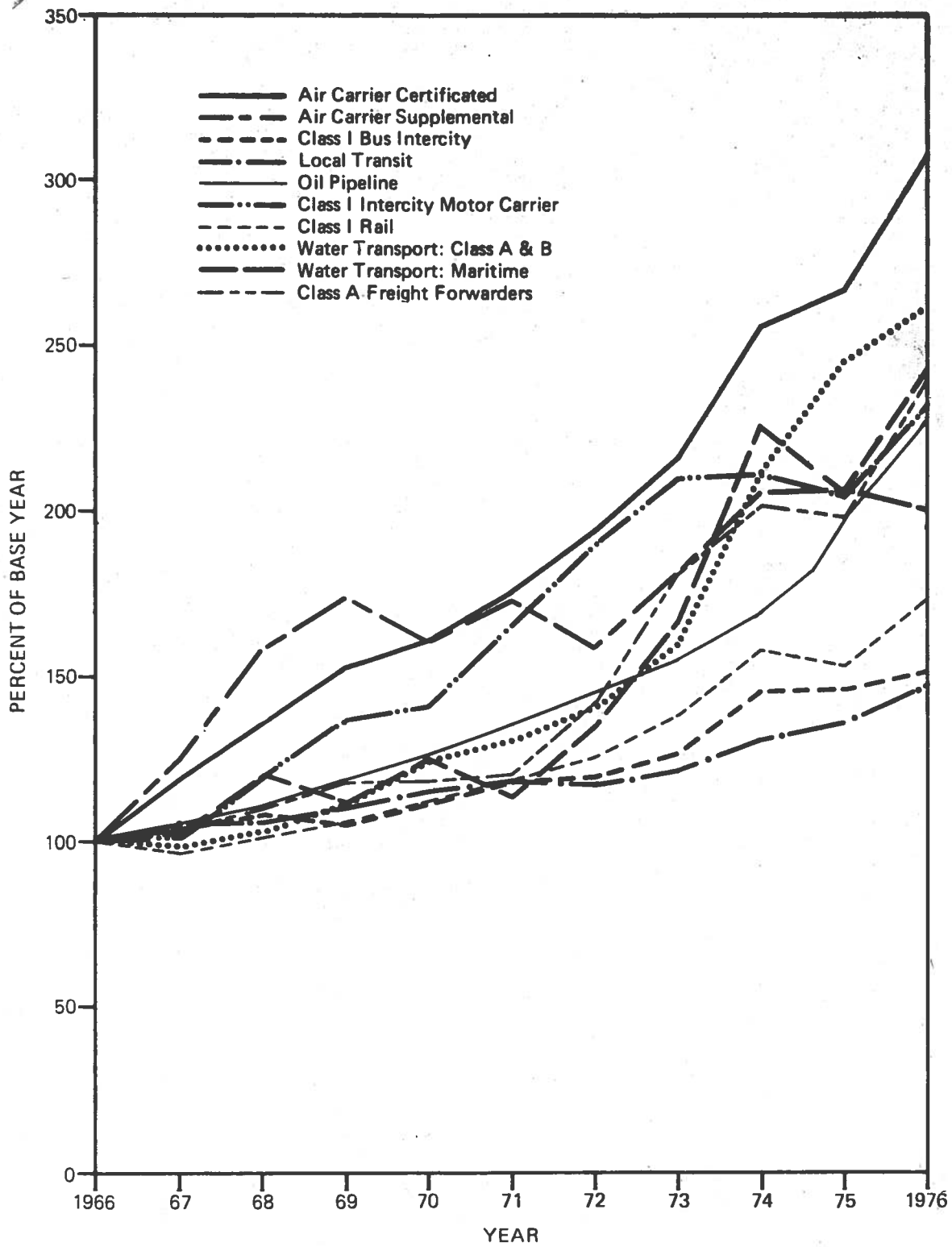


Figure 12. Total Operating Revenues, 1966—1976

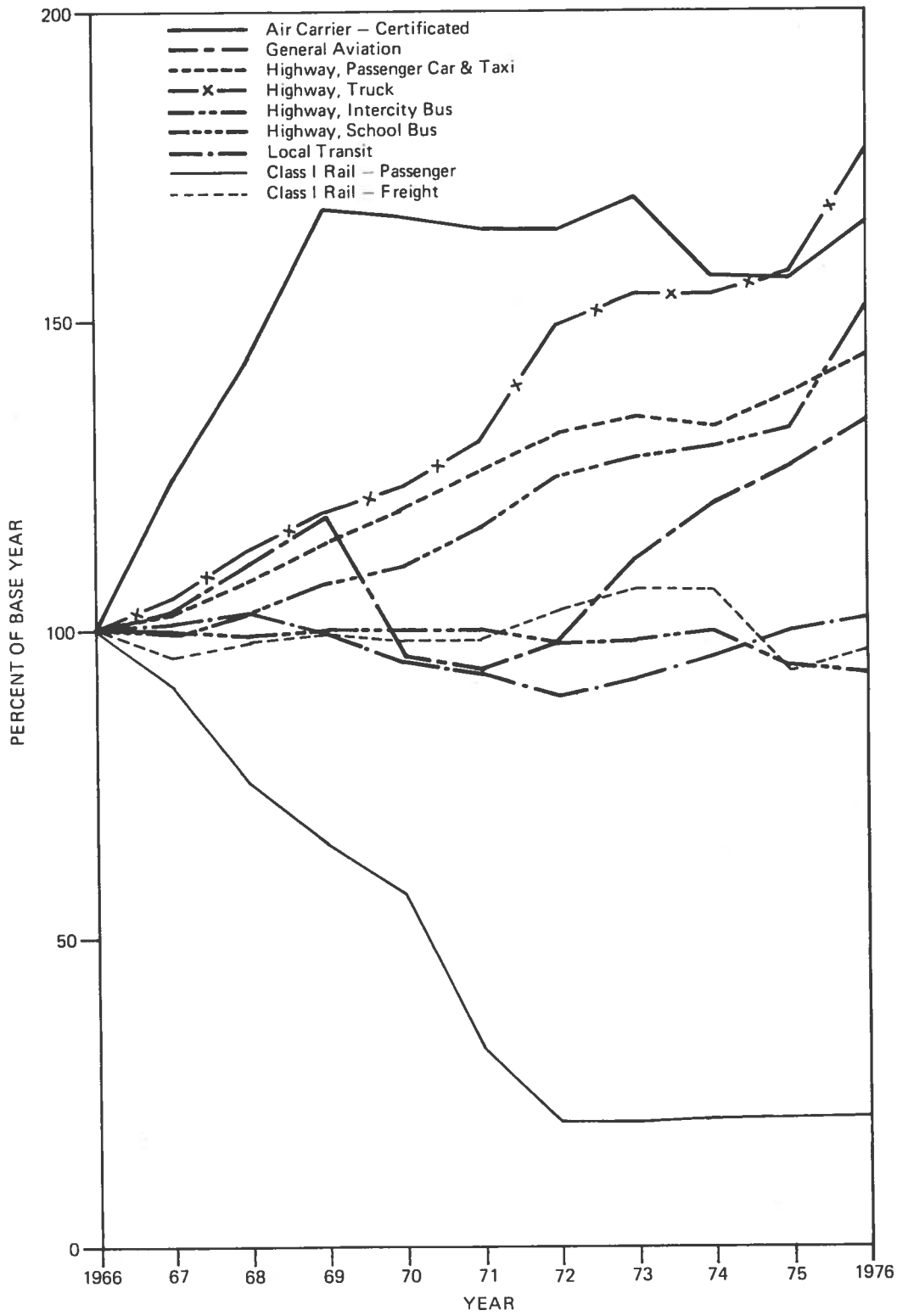


Figure 13. Vehicle-Miles, 1966 - 1976

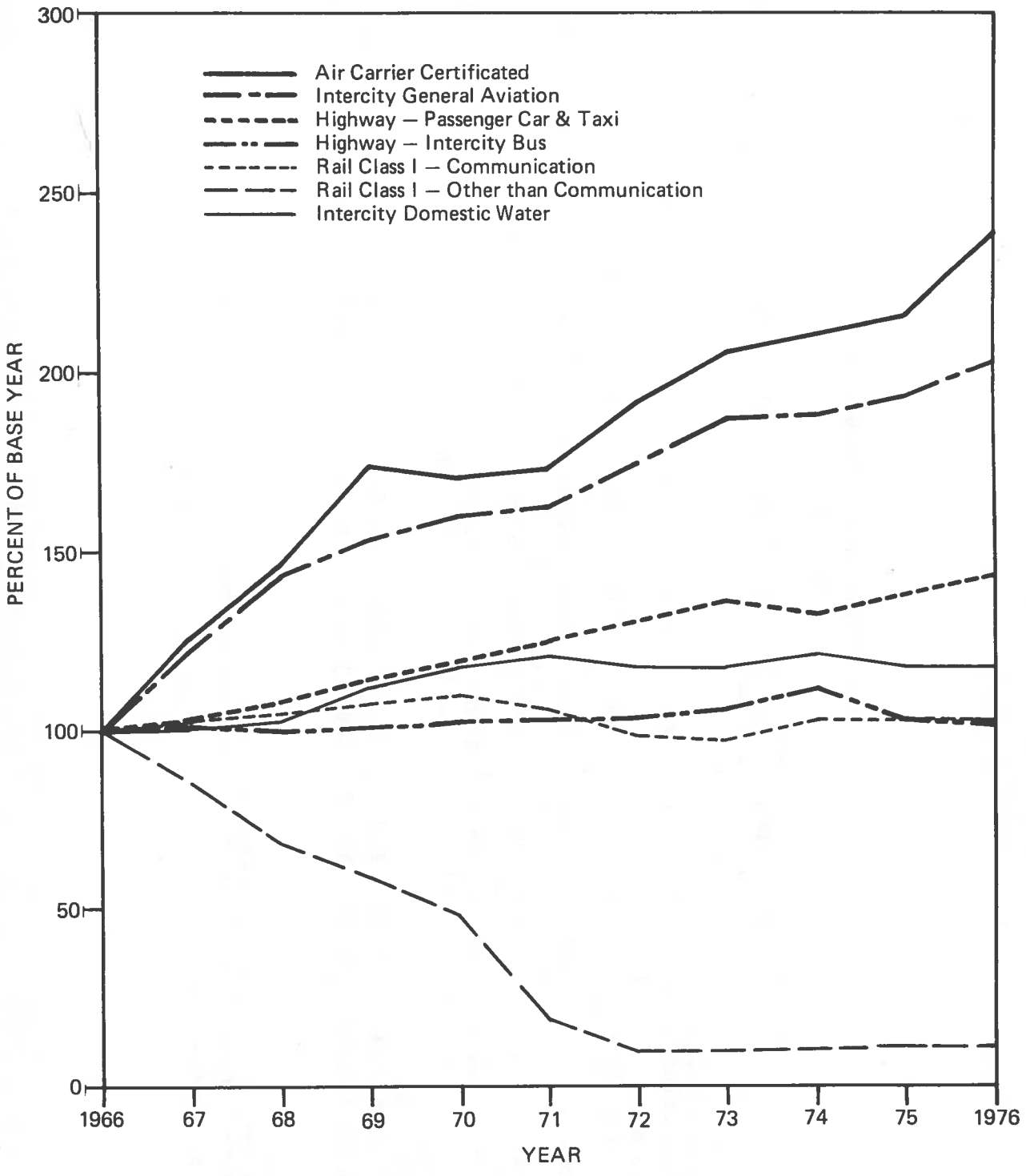


Figure 14. Passenger-Miles, 1966-1976

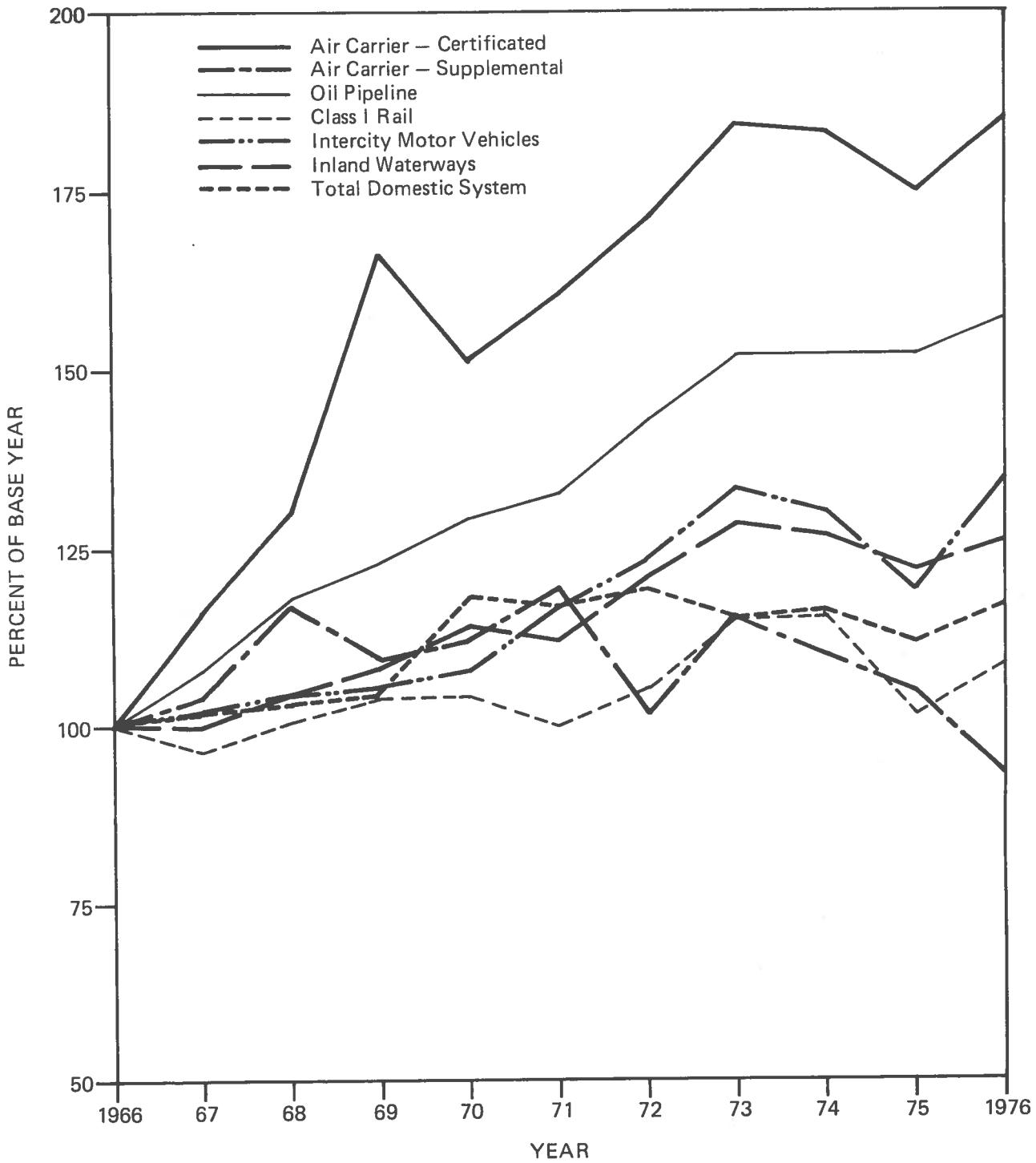


Figure 15. Cargo Ton-Miles, 1966-1976

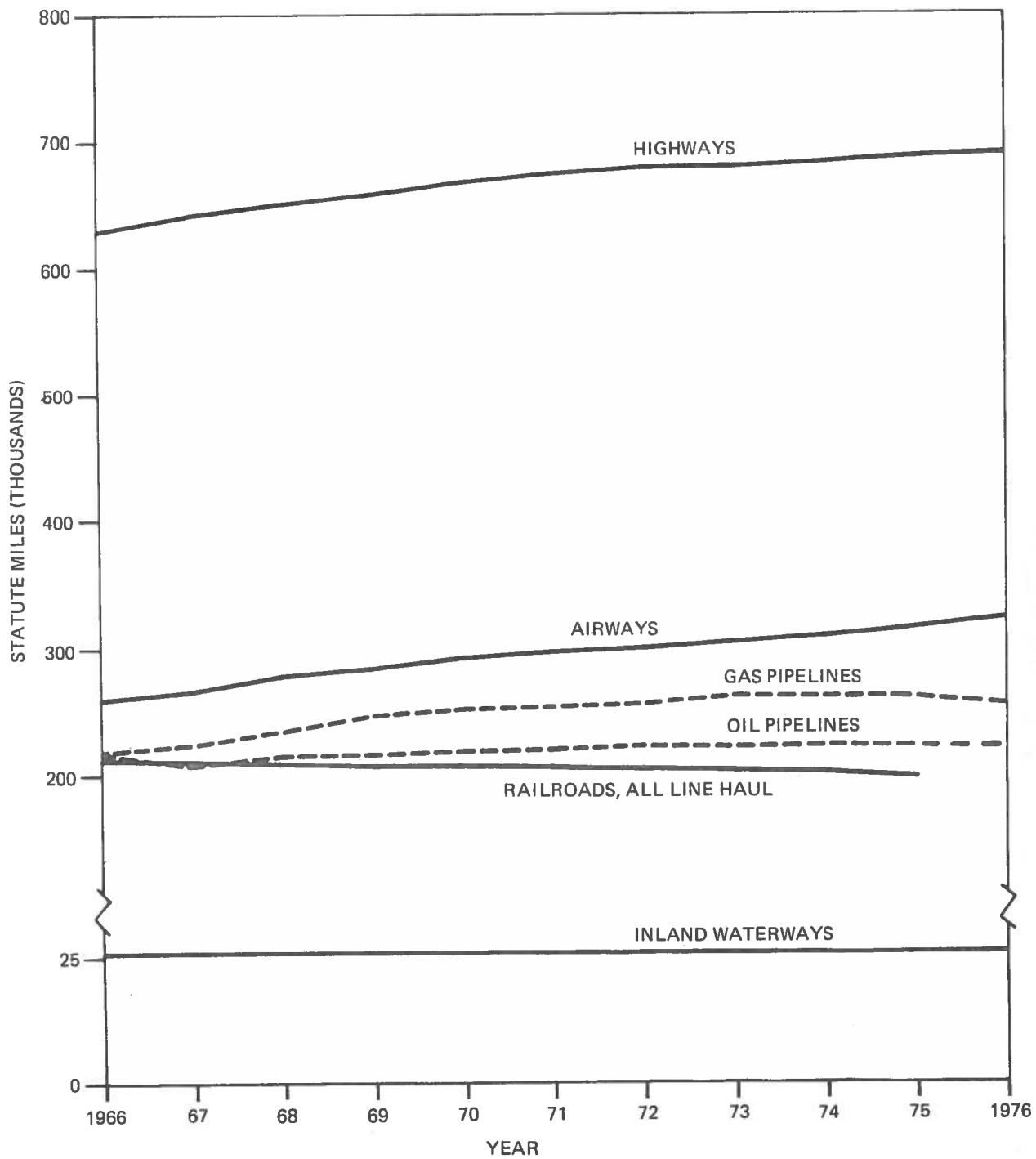


Figure 16. Basic Intercity Mileage Within the Continental United States, 1966-1976

Table 10. Passenger Fatalities Per 100,000,000 Passenger Miles, 1966-1976

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Air Carrier Scheduled Domestic	0.09	0.29	0.28	0.13	0.00	0.15	0.13	0.10	0.12	0.08	0.00
Passenger Auto and Taxis	2.50	2.40	2.40	2.30	2.10	1.90	1.90	1.70	1.30	1.40	1.50
Buses	0.23	0.18	0.21	0.19	0.19	0.19	0.19	0.14	0.21	0.15	0.01
Railroad Passenger Trains	0.16	0.09	0.20	0.07	0.09	0.24	0.53	0.07	0.07	0.08	0.05

Sources: See Appendix A, p. 157.

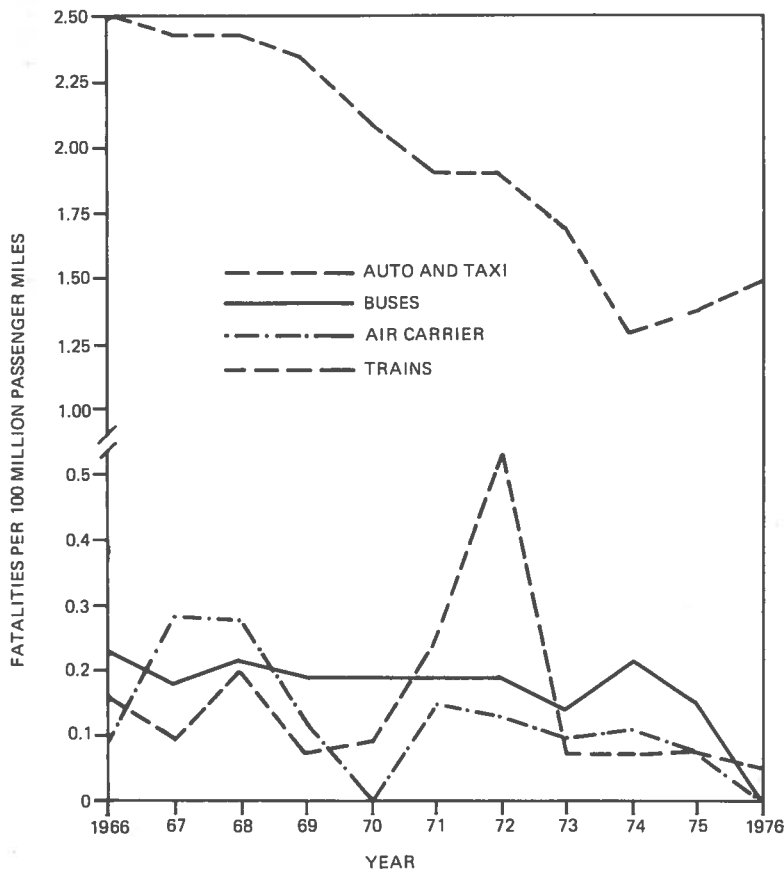


Figure 17. Passenger Fatalities per 100,000,000 Passenger Miles, 1966-1976

SUPPLEMENTARY DATA

Section I: Transportation and the Economy

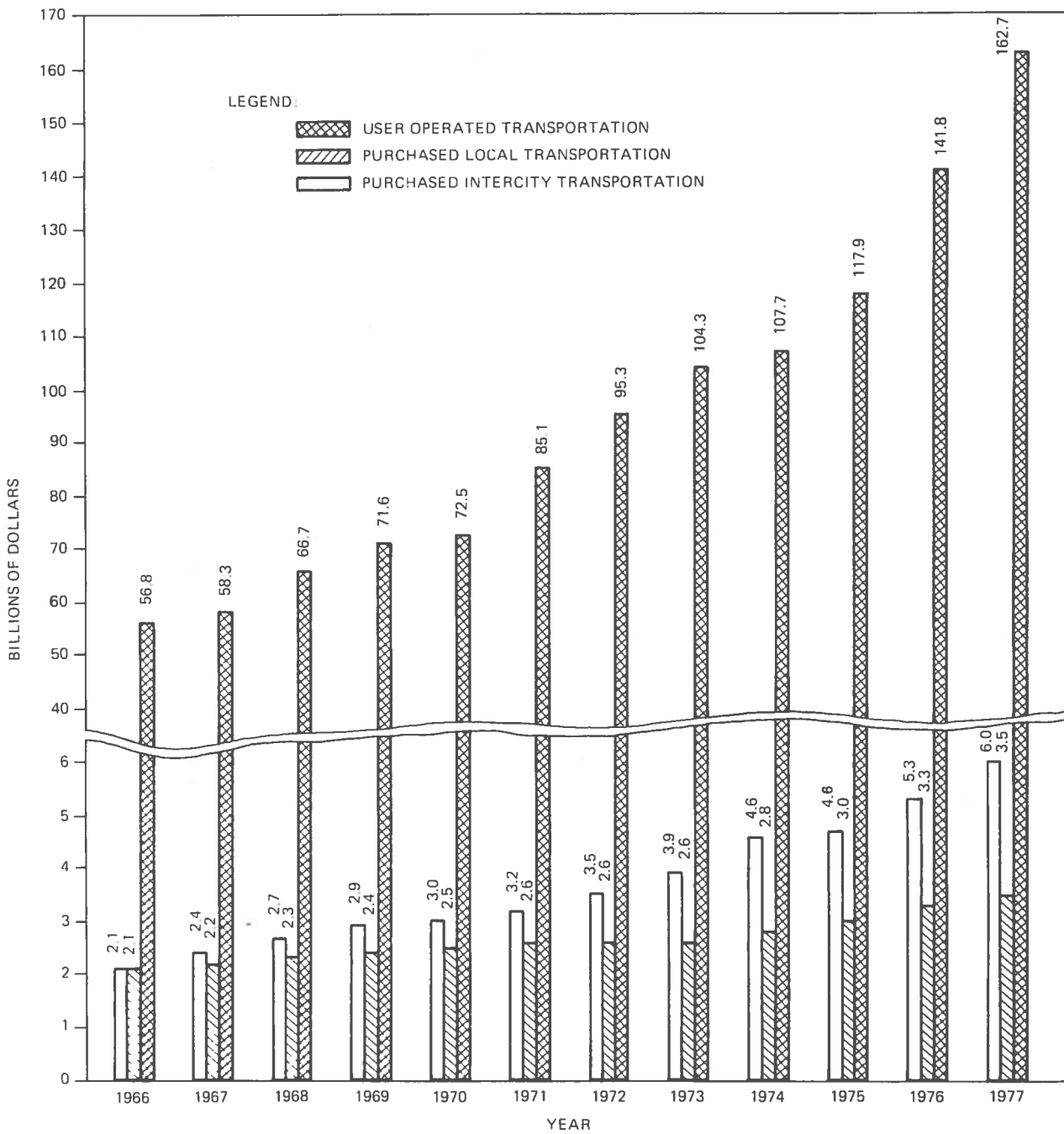


Figure 18. Personal Consumption Expenditures by Transportation Sector, 1966-1977

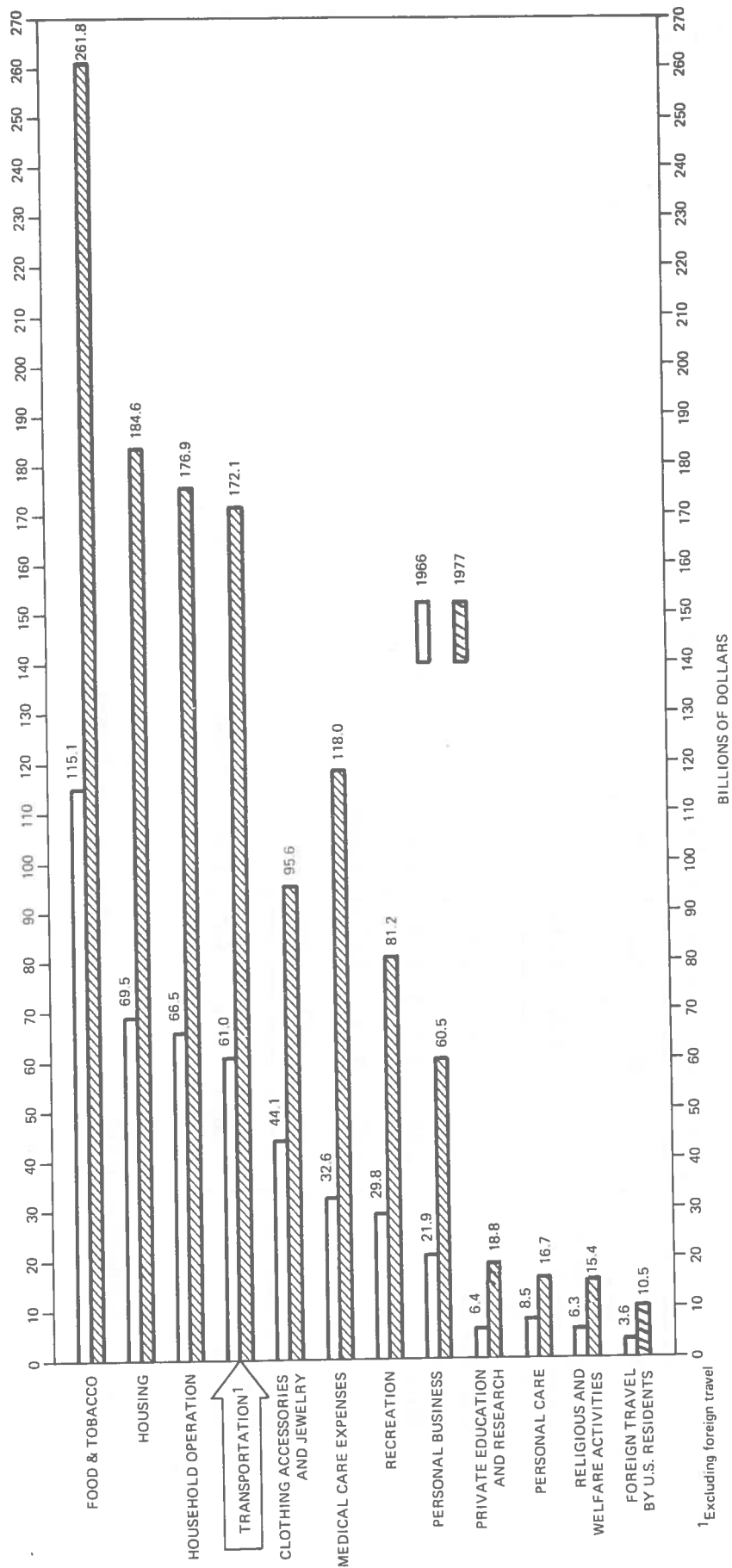


Figure 19. Personal Consumption Expenditures by Type of Product, 1966 and 1977

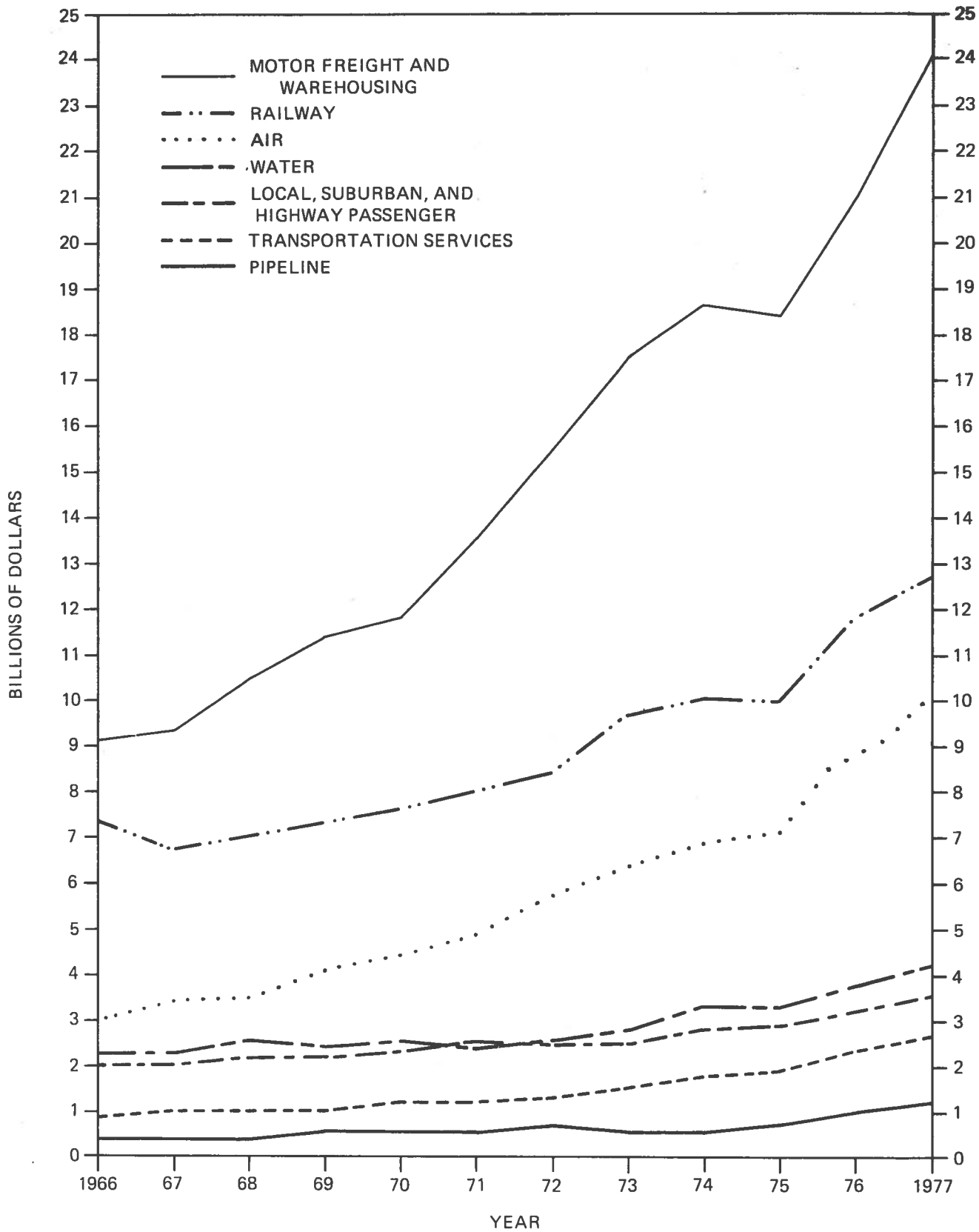


Figure 20. National Income by Transportation Sector, 1966-1977

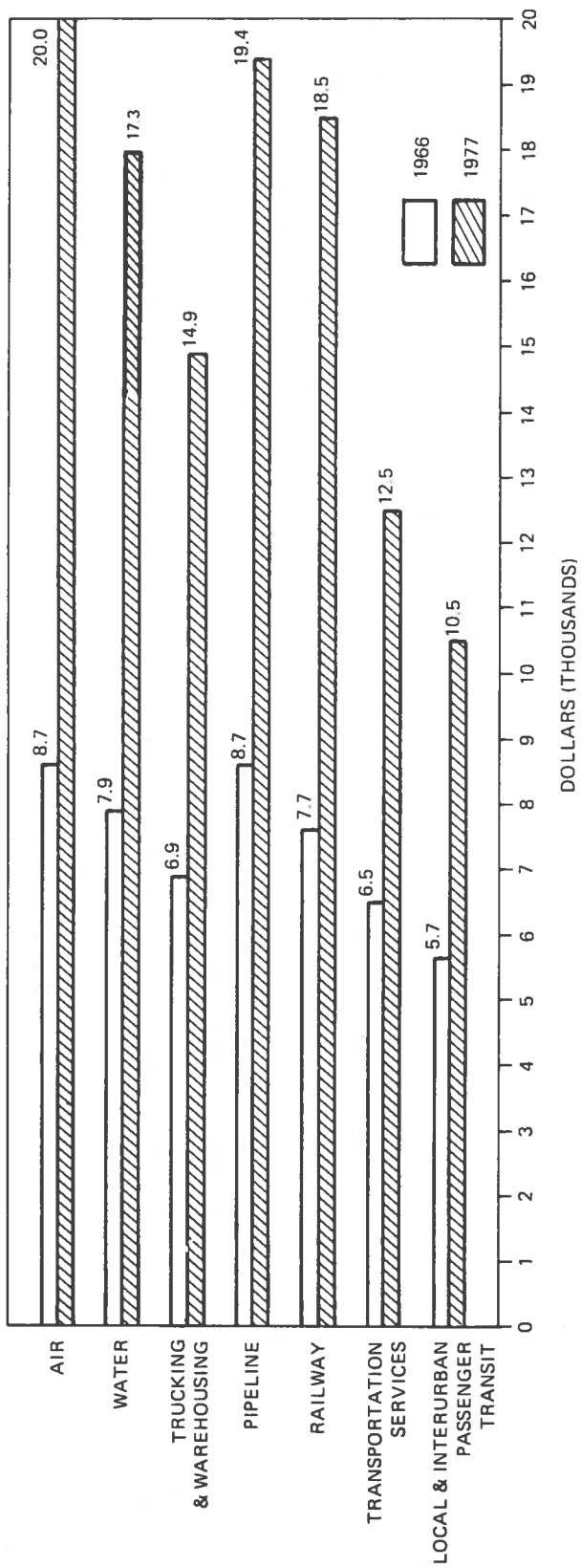


Figure 21. Average Annual Earnings per Full-Time Employees by Transportation Sector, 1966 and 1977

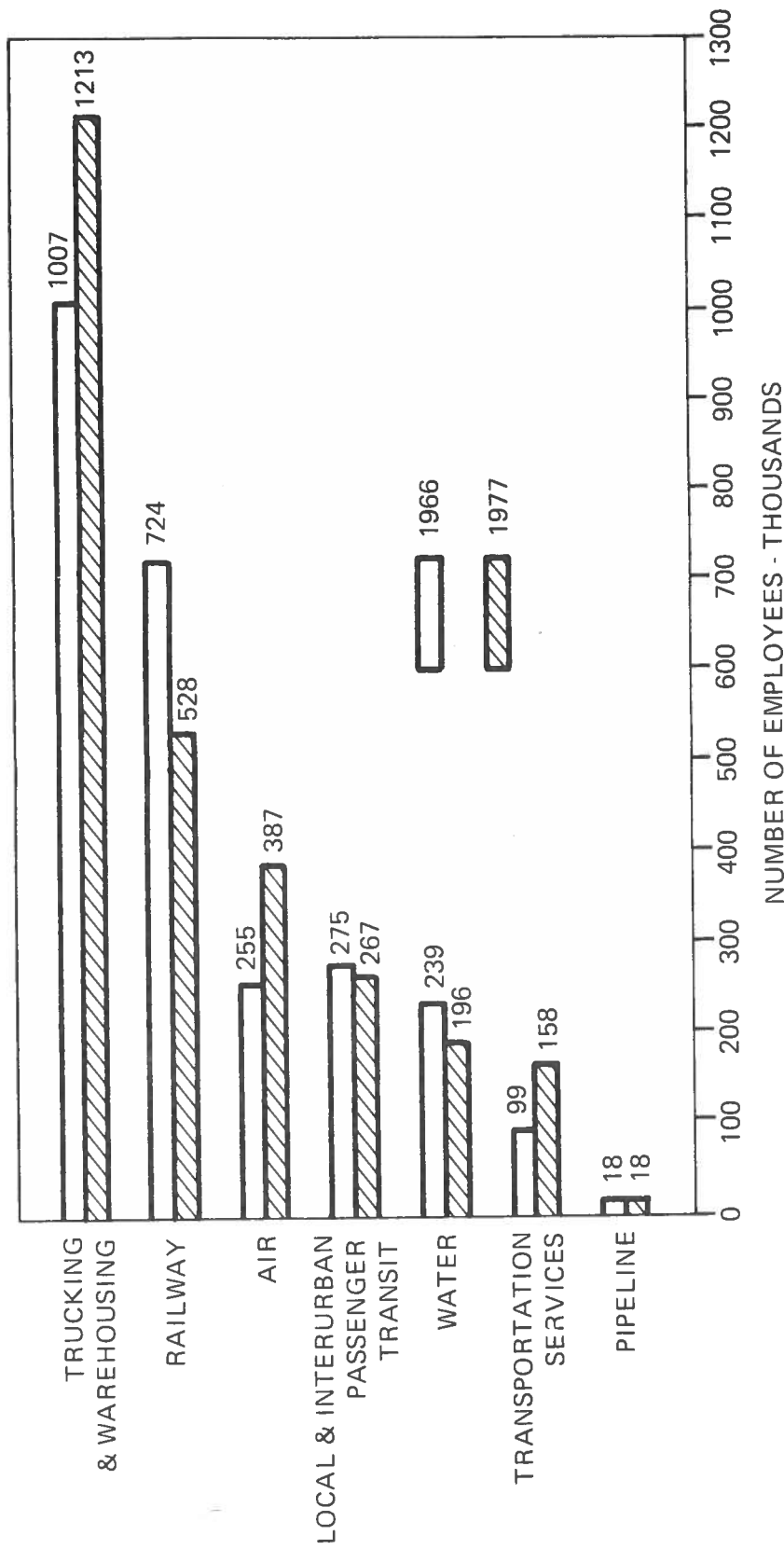


Figure 22. Average Number of Full-Time and Part-Time Employees by Transportation Sector, 1966 and 1977

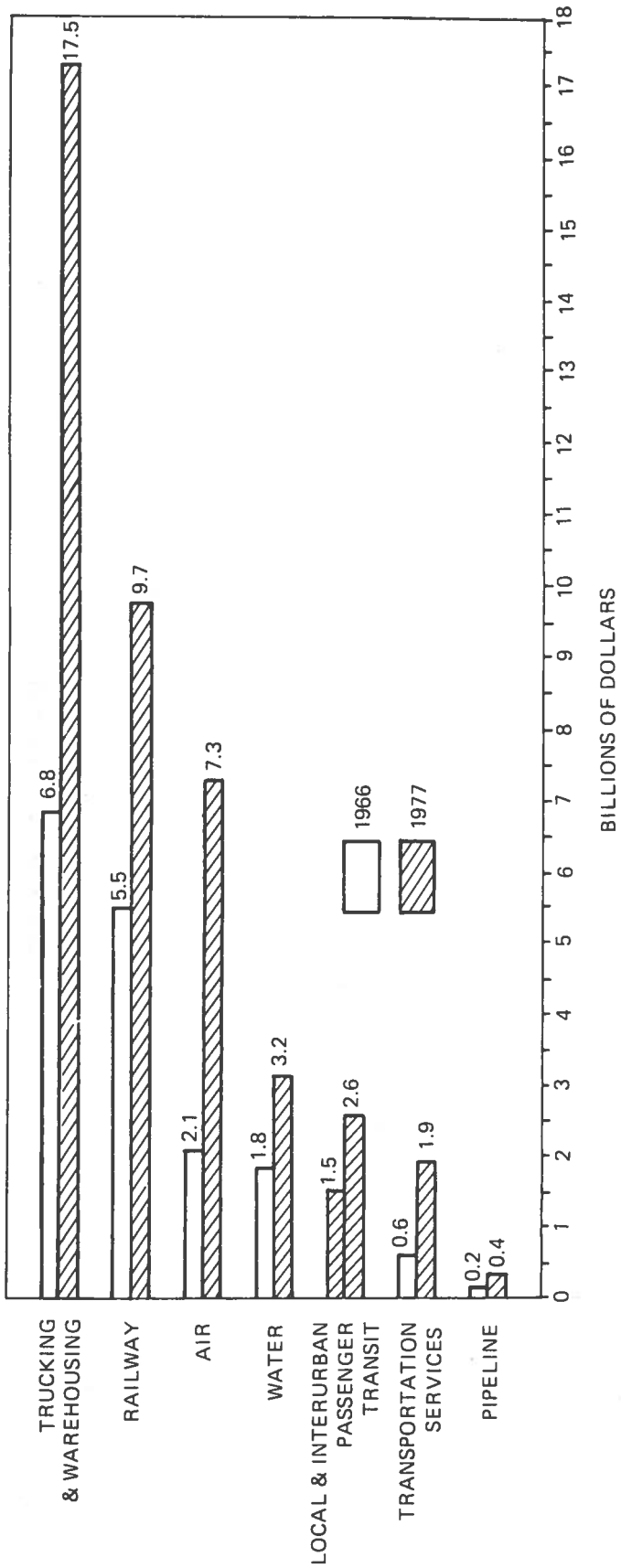


Figure 23. Wages and Salaries by Transportation Sector, 1966 and 1977

SUPPLEMENTARY DATA
Section II: Energy in Transportation

Part 1. Energy Consumption

Table 18. Net U.S. Energy Consumption* by Consuming Sector
(Trillion Btu)
(at 5-year intervals 1950-1965 and annually 1965-1976)

Year	Household and Commercial	% of Total	Industrial	% of Total	Transportation	% of Total	Miscellaneous	% of Total	Total Net Energy Consumption	Gross ¹ Energy Consumption	Conversion ² Efficiency Percentage
1950	8,139	27.0	12,884	42.7	8,640	28.7	477	1.6	30,140	33,992	88.7
1955	9,449	27.0	14,999	42.9	9,845	28.1	696	2.0	34,989	39,703	88.1
1960	11,436	29.4	15,948	41.0	10,836	27.9	672	1.7	38,892	44,569	87.3
1965	13,778	30.0	18,810	41.0	12,732	27.8	548	1.2	45,868	53,343	86.0
1966	14,489	30.0	19,816	41.1	13,361	27.7	597	1.2	48,263	56,412	85.6
1967	15,271	30.7	20,098	40.5	14,032	28.2	278	0.6	49,679	58,265	85.3
1968	15,576	29.7	21,407	40.8	15,174	29.0	243	0.5	52,400	61,763	84.8
1969	16,358	29.9	22,262	40.7	15,801	28.9	228	0.5	54,649	64,979	84.1
1970	16,988	30.3	22,434	40.0	16,489	29.4	215	0.3	56,126	67,143	83.6
1971 ^r	17,758	31.3	21,592	38.1	17,093	30.2	205	0.4	56,648	68,348	82.9
1972 ^r	18,395	31.2	22,328	37.8	18,098	30.6	233	0.4	59,054	71,609	82.5
1973 ^r	18,349	30.0	23,589	38.6	18,954	31.0	231	0.4	61,123	74,555	82.0
1974 ^r	17,641	29.9	22,759	38.5	18,437	31.2	245	0.4	59,082	72,668	81.3
1975	17,552	30.8	20,531	36.1	18,545	32.6	278	0.5	56,906	70,580	80.6
1976 ^p	18,832	31.6	21,209	35.6	19,331	32.4	227	0.4	59,600	73,999	80.5

r = revised

p = preliminary

*Net energy is the sector inputs and consists of direct fuels and purchased electricity.

¹ Gross energy is the total of inputs into the economy of primary fuels (petroleum, natural gas, and coal, including imports) or their derivatives, plus the generation of hydro and nuclear power converted to equivalent energy inputs.

² The conversion efficiency factor is the percent of total gross energy going into the sectors.

Source: 1950-1976: American Petroleum Institute, *Basic Petroleum Data Book*, Section 1, Table 11.

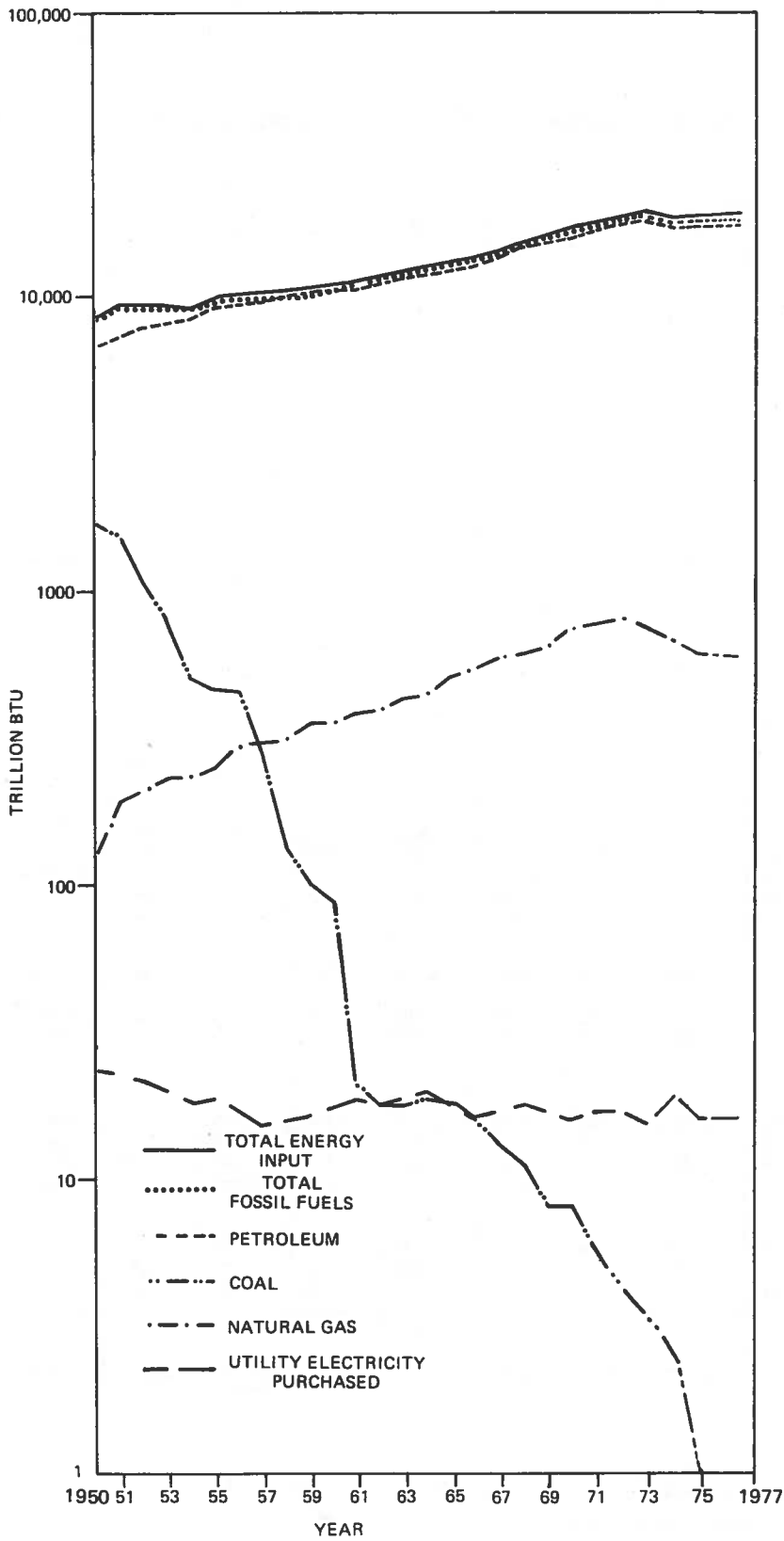


Figure 24. Energy Consumption: Transportation Sector, 1950-1976

Table 21. Total Motor Vehicle Fuel Consumption and Travel¹, 1966-1976

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 Consumed per Vehicle
1966	95,947	930,497	9,698	12.47	74,623	778
1967	98,898	961,553	9,723	12.38	77,693	786
1968	103,140	1,015,649	9,847	12.25	82,938	804
1969	107,391	1,070,575	9,969	12.15	88,122	821
1970	111,222	1,120,705	10,076	12.14	92,328	830
1971	116,344	1,186,289	10,198	12.16	97,547	838
1972	122,304	1,268,342	10,370	12.07	105,062	859
1973	129,778	1,308,562	10,083	11.85	110,473	851
1974	134,900	1,285,647	9,530	12.09	106,301	788
1975	137,917	1,330,074	9,644	12.20	108,984	790
1976	143,539	1,409,163	9,817	12.18	115,700	800

¹ For the 50 states and District of Columbia, includes personal passenger vehicles, buses, and motor trucks.

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, 1976, Table VM-1, and same table in earlier editions.

Table 23. Fuel Consumption and Travel by Buses¹, 1966-1976

Year	Number ¹ Registered (thousands)	Total ² Vehicle Miles Traveled (millions)	Average Miles Traveled			Average Miles Traveled per Gallon			Total Fuel Consumed (millions of gallons)			Average Gallons Consumed per Vehicle			
			Commercial		All Buses	Commercial		School	Commercial		School	Commercial		School	All Buses
			Commercial	School	All Buses	Commercial	School	All Buses	Commercial	School	All Buses	Commercial	School	All Buses	
1966	324	4,852	35,598	7,725	15,012	4.72	7.12	5.42	637	259	896	7.538	1,085	2,772	
1967	338	4,894	33,600	7,543	14,484	4.68	7.08	5.38	646	264	910	7,178	1,065	2,693	
1968	352	4,968	33,828	7,387	14,122	4.63	6.99	5.33	655	277	932	7,310	1,056	2,649	
1969	364	5,037	33,300	7,409	13,826	4.58	7.00	5.32	657	290	947	7,276	1,058	2,600	
1970	379	5,043	32,591	7,274	13,306	4.57	7.00	5.34	644	300	944	7,132	1,039	2,491	
1971	398	5,097	31,949	7,198	12,819	4.57	7.00	5.38	631	316	947	6,988	1,028	2,382	
1972	407	5,109	30,968	7,414	12,553	4.39	7.37	5.80	561	320	881	6,318	1,006	2,165	
1973	426	4,960	28,469	7,178	11,662	4.90	7.37	5.86	520	327	847	5,810	973	1,991	
1974	447	5,060	28,968	6,865	11,320	4.97	7.36	5.90	525	333	858	5,827	933	1,919	
1975	462	5,148	28,230	6,788	11,140	4.79	7.31	5.75	553	342	895	5,896	929	1,937	
1976	478	5,761	29,948	7,502	12,045	5.05	7.34	5.98	574	390	964	5,931	1,022	2,015	

¹ For the 50 states and District of Columbia.

² Includes commercial, school and non-revenue buses.

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

Table 25. Fuel Consumption by Certificated Air Carriers, 1960, 1965-1976
(Scheduled and Nonscheduled Service)
(Thousands of gallons)

Year	Total Certificated Route Air Carriers	Domestic Operations													International and Territorial Operations		
		Total Domestic Operations	Passenger/Cargo Carriers												All-Cargo Carriers	Passenger/ Cargo Carriers	All-Cargo Carriers
			Total	Domestic Trunk				Local Service	Other ¹	Intra- Alaska	Intra- Hawaii	All-Cargo Carriers					
				Big Four	Other Trunks	Other Trunks	Other Trunks										
1960	2,519,757	1,910,482	1,806,202	1,228,522	577,680	88,032	2,269	5,320	8,499	43,754	565,520	547,040	18,480				
1965	5,169,023	3,815,937	3,617,172	2,524,868	1,092,304	176,252	3,403	7,761	11,348	72,878	1,280,189	1,235,878	44,311				
1966	6,067,042	4,422,212	4,325,073	2,752,725	1,312,710	231,923	4,158	7,957	15,600	97,138	1,644,831	1,560,971	83,860				
1967	7,790,373	5,654,507	5,548,149	3,533,792	1,662,366	318,688	4,746	8,540	20,016	106,357	2,135,866	2,001,193	134,673				
1968	9,108,451	6,676,948	6,568,037	4,096,630	1,984,873	449,501	4,383	8,331	24,319	108,912	2,431,502	2,275,996	155,506				
1969	10,145,250	7,564,696	7,467,871	4,527,319	2,334,484	561,336	3,239	10,799	30,799	96,825	2,580,554	2,355,636	224,918				
1969 ³	10,145,250	8,009,247	7,912,423	4,692,284	2,585,431	561,336	31,879	10,694	30,799	96,825	2,136,003	1,911,084	224,918				
1970	10,099,172	7,856,593	7,796,375	4,740,548	2,366,355	618,126	30,617	10,839	29,890	60,218	2,242,579	2,013,883	228,696				
1971	10,152,195	7,798,954	7,740,388	4,452,358	2,598,198	619,151	29,295	12,364	29,022	58,566	2,353,241	2,113,200	240,041				
1972	10,180,102	7,753,262	7,685,374	4,533,082	2,639,077	649,397	1,090	38,899	33,187	67,888	2,426,839	2,178,294	248,545				
1973	10,699,779	8,354,484	8,263,964	4,576,063 ²	2,874,886	727,633	1,480 ⁴	44,661 ⁴	37,297	90,520	2,345,294	2,143,420	201,875				
1974	9,553,792	7,508,899	7,423,640	4,142,724 ²	2,469,421	720,372	1,492 ⁴	50,205 ⁴	37,307	85,260	2,044,893	1,864,685	180,208				
1975	9,506,600	7,557,700	7,483,400	4,112,900 ²	2,537,100	725,800	—	61,700	37,400	74,300	1,948,900	1,756,700	192,200				
1976	9,994,800	7,910,600	7,836,000	4,273,100 ²	2,671,500	785,500	—	56,200	41,900	74,600	1,921,200	1,734,900	186,300				

Note. Individual figures may not add up because of rounding.

¹ Includes helicopter carriers.

² Includes American, Eastern, TWA, United Airlines only.

³ Compiled on a 50-state basis after 1969.

⁴ Alaska Airline data transferred from Other to Intra-Alaska.

Source: C.A.B. Handbook of Airline Statistics 1973, Part II, Table 57, and advance information based on CAB Form 41, Schedule T-2(b), Quarterly Reports.

Major Product	Household and Commercial		Industrial		Transportation ²		Electricity Generation, Utilities		Miscellaneous and Unaccounted for		Total Domestic Product Demand	
	Million Barrels	Trillion Btu	Million Barrels	Trillion Btu	Million Barrels	Trillion Btu	Million Barrels	Trillion Btu	Million Barrels	Trillion Btu	Million Barrels	Trillion Btu
Fuel and power:	170.0	681.9	70.3	280.8	27.0	108.2	—	—	—	—	267.0	1,070.9
Liquified gases	—	—	—	—	—	—	—	—	—	—	—	—
Jet fuels:	—	—	—	—	—	—	—	—	—	—	—	—
Naphtha type	—	—	—	—	73.2	392.5	—	—	—	—	73.3	392.5
Kerosene type	—	—	—	—	284.7	1,614.2	3.0	17.0	—	—	287.7	1,631.2
Total	—	—	—	—	358.0	2,006.7	3.0	17.0	—	—	361.0	2,023.7
Gasoline	—	—	—	—	2,561.0	13,440.1	—	—	—	—	2,561.0	13,440.1
Kerosene	47.4	268.8	13.8	78.2	—	—	—	—	—	—	61.2	347.0
Distillate fuel	539.8	3,144.3	139.8	814.3	840.4	2,215.8	72.0	419.4	6.2	36.2	1,138.2	6,630.0
Residual fuel	186.0	1,169.4	196.0	1,232.3	127.0	798.4	484.0	3,042.9	5.7	35.8	998.7	6,278.8
Still gas	—	—	182.0	1,092.0	—	—	—	—	—	—	182.0	1,092.0
Petroleum coke	—	—	64.0	385.5	—	—	—	—	—	—	64.0	385.4
Total	943.2	5,264.4	665.6	3,883.1	3,453.4	18,569.2	559.0	3,479.3	11.9	72.0	5,633.1	31,268.0
Raw material ⁴ :	—	—	—	—	—	—	—	—	—	—	—	—
Plant condensate	—	—	3.5	19.0	—	—	—	—	—	—	3.5	19.0
Special naphthas	—	—	30.0	157.4	—	—	—	—	—	—	30.0	157.4
Lubes ⁵ and waxes	—	—	37.0	220.6	27.0	163.8	—	—	—	—	64.0	384.4
Petroleum coke ⁶	—	—	26.0	156.6	—	—	—	—	—	—	26.0	156.6
Asphalt and road oil	161.0	1,068.4	—	—	—	—	—	—	—	—	161.0	1,068.4
Petrochemical feedstock of/ftake:	—	—	—	—	—	—	—	—	—	—	—	—
Liquefied refinery gas ⁷	—	—	41.0	159.6	—	—	—	—	—	—	41.0	159.6
Liquefied petroleum gas ^{7,8}	—	—	210.0	719.5	—	—	—	—	—	—	210.0	719.5
Naphtha (-400 degrees)	—	—	76.5	401.5	—	—	—	—	—	—	76.5	401.5
Still gas	—	—	16.5	99.0	—	—	—	—	—	—	16.5	99.0
Miscellaneous (+400 degrees)	—	—	60.0	349.5	—	—	—	—	—	—	60.0	349.5
Total	161.0	1,068.4	500.5	2,282.7	27.0	163.8	—	—	—	—	688.5	3,514.9
Miscellaneous and unaccounted for	—	—	—	—	—	—	—	—	28.1	154.6	28.1	154.6
Grand total, domestic product demand	1,104.2	6,332.8	1,166.1	6,165.8	3,480.4	18,733.0	559.0	3,479.3	40.0	226.6	6,349.7	34,937.5

e = estimated

- ¹ Includes liquified refinery gas and natural gas liquids.
- ² Includes bunkers, military transportation, and all military use of distillate and residual fuel oils.
- ³ Includes secondary recovery of petroleum and agriculture uses.
- ⁴ Includes some fuel and power used by raw materials industries.
- ⁵ Lubricants are distributed on basis of data from Bureau of the Census.
- ⁶ Includes portions of petroleum coke estimated to be consumed in nonfuel uses.
- ⁷ Includes ethane.
- ⁸ Includes LP-gas for synthetic rubber.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Interfuels and Special Studies, News Release, March 14, 1977.

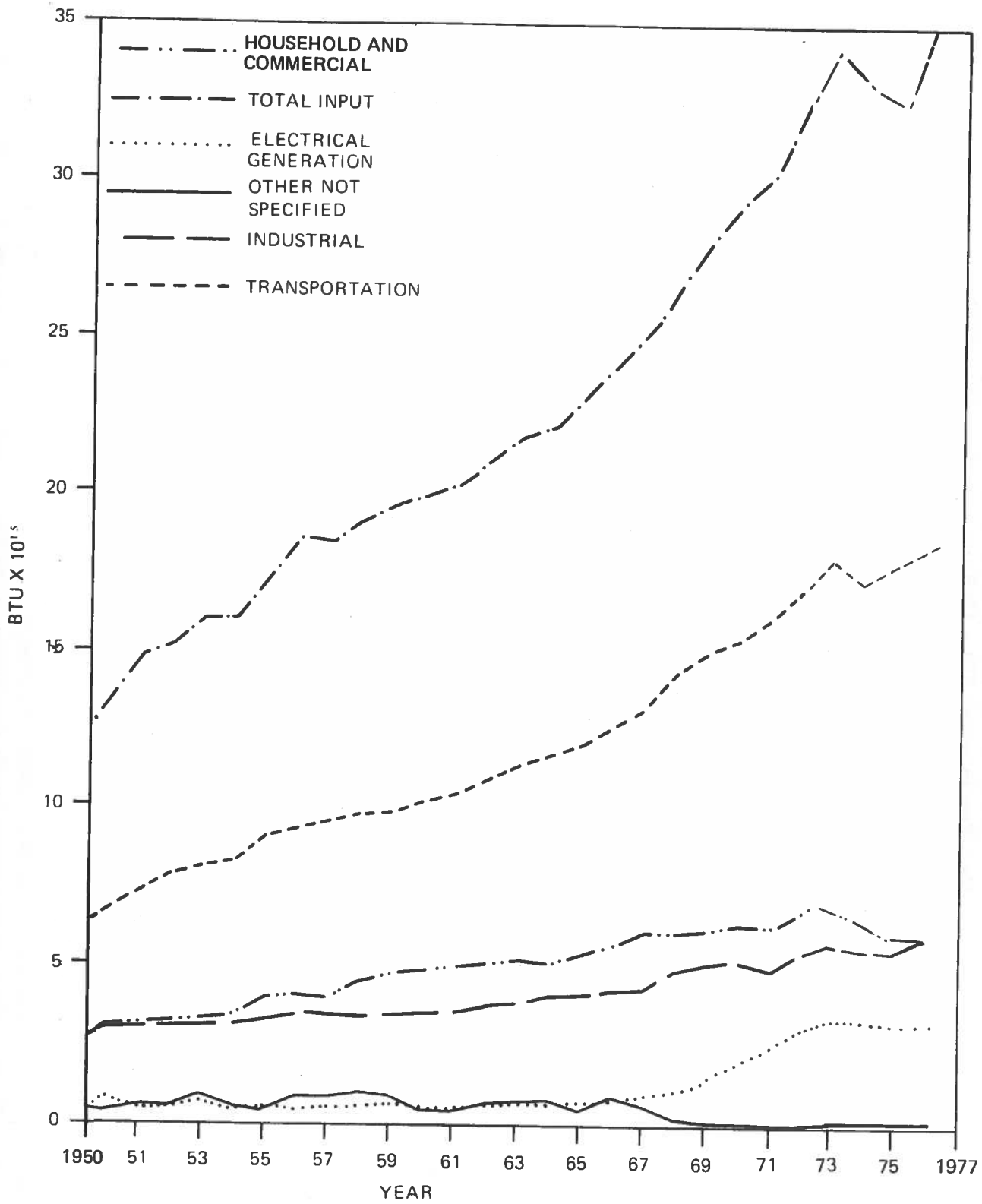


Figure 25. Petroleum Consumption by Sector, 1950-1976

Table 30. U.S. Sales of Distillate Fuel Oil by Use
(Thousand Barrels)
(at 5-Year Intervals 1950-1965 and annually 1965-1976)

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 ¹	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 ^P	544,287	79,482	13,523	60,532	99,867	27,050	17,574	242,820	54,429	297,249	11,365	1,150,929

p = preliminary
r = revised

¹ Data not available

² Includes Alaska and Hawaii

³ Includes gas turbine plants in 1968 and subsequent years

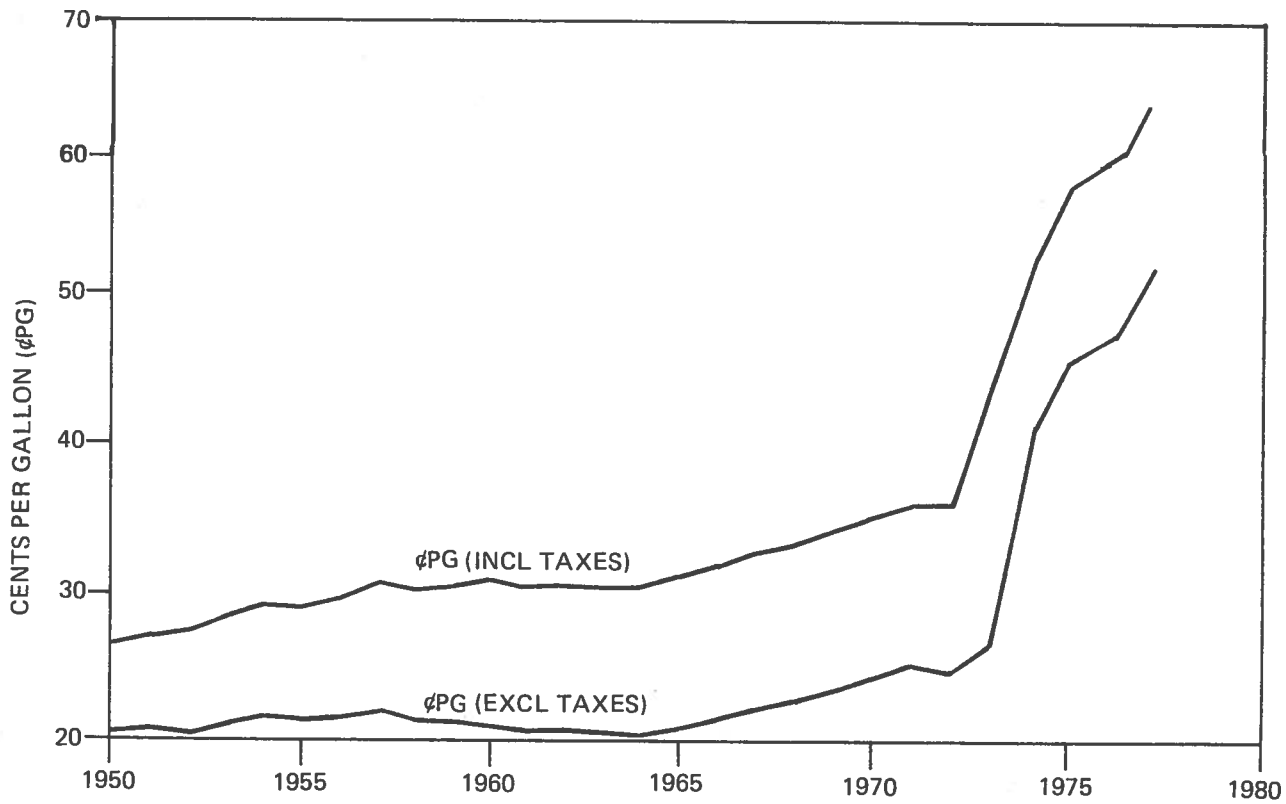
Source: U.S. Bureau of Mines, *Mineral Industry Surveys, Fuel Oil Sales, Annual*; Sept. 11, 1975. U.S. Dept. of Energy, *Energy Data Reports, Fuel Sales, Annual*, Dec. 12, 1977. American Petroleum Institute, *Basic Petroleum Data Book*, Section VII, Table II.

(at 5-Year Intervals 1950 — 1965 and Annually 1965 — 1977)

Year	Retail Price of Regular Grade Gasoline (Cents Per Gallon)			Price Indexes of Regular and Premium Gasoline and Some 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	Reading and Recreation
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	133.8
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 ^p	50.70	12.37	63.07	181.5	192.2	153.5	154.2	188.2	157.9

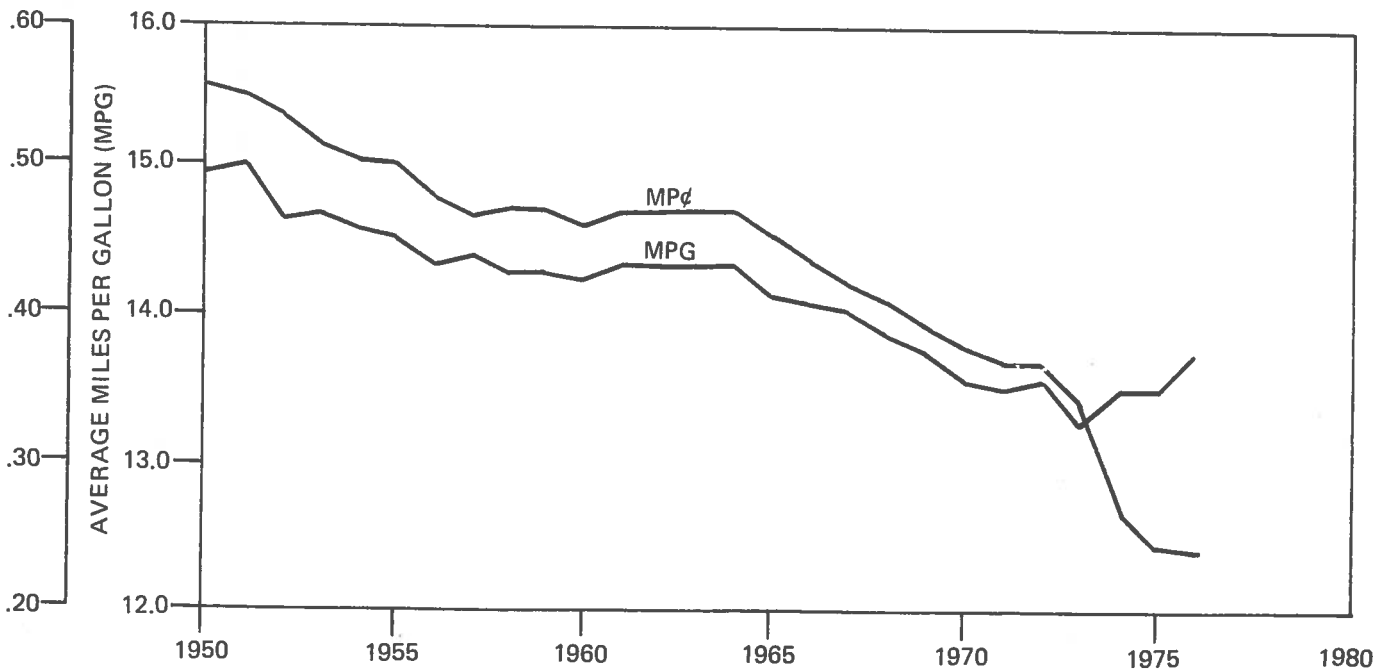
p = preliminary

Sources: American Petroleum Institute, *Basic Petroleum Data Book*, Section VI, Tables 4 and 4a;
 U.S. Department of Labor, Bureau of Labor Statistics, *Handbook of Labor Statistics*, 1976, p. 253, Table 120 and
Monthly Labor Review, September 1977, Vol. 100, No. 9, Table 23, and March 1978, Vol. 101, No. 3, Table 23.



Source: American Petroleum Institute, *Basic Petroleum Data Book*, Section VI, Table 4, 4a.

Figure 26. Price Trend of Regular Grade Gasoline Prices, 1950-1977



Sources: Federal Highway Administration, *Highway Statistics*, 1976, Table VM-1, and same table in earlier editions; Federal Highway Administration, *Highway Statistics Summary to 1965*, March 1967, Table VM-201A; U.S. Department of Transportation, Transportation Systems Center computation of Average Miles per Cent.

Figure 27. Average Fuel Efficiency of U.S. Passenger Cars, 1950-1976
(Average Miles per Gallon and Average Miles per Cent Cost of Gasoline)

Table 35. Estimated Cost of Operating a Standard Size 1972 Model Automobile, Including Fuel¹
(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	1,226.00	8.46	900.00	6.92	4,379.00	4.38
Repairs and Maintenance	81.84	.56	115.37	.89	2,146.91	2.14
Replacement Tires	17.90	.12	16.05	.12	399.85	.40
Accessories	3.21	.02	3.08	.02	52.18	.05
Gasoline	286.75	1.98	257.16	1.98	1,977.96	1.98
Oil	11.25	.08	11.25	.09	118.50	.12
Insurance ²	164.00	1.13	156.00	1.20	1,350.00	1.35
Garaging, Parking, Tolls, etc.	208.36	1.44	199.22	1.53	1,809.40	1.81
Total	1,999.31	13.79	1,658.13	12.75	12,233.80	12.23
Taxes and Fees:						
State:						
Gasoline	74.62	.51	66.92	.52	514.71	.51
Registration	30.00	.21	30.00	.23	300.00	.30
Titling	177.15	1.22	--	--	177.15	.18
Subtotal	281.77	1.94	96.92	.75	991.86	.99
Federal:						
Gasoline	42.64	.30	38.24	.30	294.12	.30
Oil ³	.22	--	.22	--	2.37	--
Tires	1.38	.01	1.24	.01	30.80	.03
Subtotal	44.24	.31	39.70	.31	327.29	.33
Total Taxes	326.01	2.25	136.62	1.06	1,319.15	1.32
Total of All Costs	2,325.32	16.04	1,794.75	13.81	13,552.95	13.55
Total Gasoline and Oil Costs, Including Taxes	415.48	2.87	373.79	2.89	2,907.66	2.91
Gasoline and Oil Costs as Percent of all Costs	18%	18%	21%	21%	21%	21%

¹ This estimate covers the total costs of a fully equipped, medium priced, standard size, 4-door sedan, purchased for \$4,379, 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 1972.

Table 37. Estimated Cost of Operating a Subcompact Size 1972 Model Automobile, Including Fuel¹
(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	310.00	2.14	285.00	2.19	2,064.00	2.07
Repairs and Maintenance	76.15	0.53	114.59	0.88	1,775.71	1.78
Replacement Tires	13.98	0.10	12.53	0.10	312.29	0.31
Accessories	3.21	0.02	3.08	0.02	52.18	0.05
Gasoline	181.84	1.25	163.02	1.25	1,255.15	1.25
Oil	10.50	0.07	9.75	0.08	103.50	0.10
Insurance	145.00	1.00	140.00	1.08	1,251.00	1.25
Garaging, Parking, Tolls, etc.	208.36	1.44	199.22	1.53	1,809.40	1.81
Total	949.04	6.55	927.19	7.13	8,623.23	8.62
Taxes and Fees:						
State:						
Gasoline	47.32	0.33	42.42	0.33	326.62	0.33
Registration	20.00	0.14	20.00	0.15	200.00	0.20
Titling	84.57	0.58	—	—	84.57	0.08
Subtotal	151.89	1.05	62.42	0.48	611.19	0.61
Federal:						
Gasoline	27.04	0.18	24.24	0.19	186.64	0.19
Oil ²	0.21	—	0.19	—	2.07	—
Tires	0.94	0.01	0.84	0.01	20.90	0.02
Subtotal	28.19	0.19	25.27	0.20	209.61	0.21
Total Taxes	180.08	1.24	87.69	0.68	820.80	0.82
Total of All Costs	1,129.12	7.79	1,014.88	7.81	9,444.03	9.44
Total Gasoline and Oil Costs, Including Taxes	266.91	1.83	239.62	1.85	1,873.98	1.87
Gasoline and Oil Costs as Percent of All Costs	24%	23%	24%	24%	20%	20%

¹This estimate covers the total costs of a low priced, subcompact size, 2-door sedan, purchased for \$2,064, 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.

²Where 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 1972.

Table 39. Estimated Cost of Operating a Compact Size 1974 Model Automobile, Including Fuel¹
(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	400.00	2.76	372.00	2.86	2,860.00	2.86
Repairs and Maintenance	108.48	0.75	186.38	1.43	2,365.53	2.36
Replacement Tires	15.42	0.10	13.83	0.11	330.77	0.33
Accessories	3.53	0.02	3.39	0.03	57.40	0.06
Gasoline	355.03	2.45	318.27	2.45	2,448.45	2.45
Oil	17.00	0.12	16.00	0.12	167.00	0.17
Insurance	190.00	1.31	180.00	1.38	1,532.00	1.53
Garaging, Parking, Tolls, etc.	224.80	1.55	215.20	1.66	1,960.00	1.96
Total	1,314.26	9.06	1,305.07	10.04	11,721.15	11.72
Taxes and Fees:						
State:						
Gasoline	81.72	0.57	73.26	0.57	563.58	0.56
Registration	20.00	0.14	20.00	0.15	200.00	0.20
Titling	116.40	0.80	—	—	116.40	0.12
Subtotal	218.12	1.51	93.26	0.72	879.98	0.88
Federal:						
Gasoline	36.32	0.25	32.56	0.25	250.48	0.25
Oil ²	0.26	—	0.24	—	2.51	—
Tires	1.18	0.01	1.06	0.01	25.41	0.03
Subtotal	37.76	0.26	33.86	0.26	278.40	0.28
Total Taxes	255.88	1.77	127.12	0.98	1,158.38	1.16
Total of All Costs	1,570.14	10.83	1,432.19	11.02	12,879.53	12.88
Total Gasoline and Oil Costs Including Taxes	490.33	3.39	440.33	3.39	3,432.02	3.43
Gasoline and Oil Costs as Percent of All Costs	31%	31%	31%	31%	27%	27%

¹ This estimate covers the total costs of a medium priced, compact size, 2-door sedan, less the average dealer discount allowed on that car, purchased for \$2,910, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used.

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 41. Estimated Cost of Operating a Standard Size 1976 Model Automobile, Including Fuel¹
(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	1,215.00	8.38	748.00	5.75	4,864.00	4.86
Repairs and Maintenance	157.05	1.08	199.95	1.54	3,664.13	3.67
Replacement Tires	30.94	0.22	27.74	0.21	448.00	0.45
Accessories	8.38	0.06	7.79	0.06	91.50	0.09
Gasoline	463.03	3.19	415.13	3.19	3,193.32	3.19
Oil	14.84	0.10	13.78	0.11	169.60	0.17
Insurance	214.00	1.48	200.00	1.54	1,678.00	1.68
Garaging, Parking, Tolls, etc.	250.98	1.73	240.94	1.86	2,208.80	2.21
Total	2,354.22	16.24	1,853.33	14.26	16,317.35	16.32
Taxes and Fees:						
State:						
Gasoline	87.00	0.60	78.00	0.60	600.00	0.60
Registration	30.00	0.20	30.00	0.23	300.00	0.30
Titling	195.76	1.35	—	—	195.76	0.20
Sales	8.45	0.06	9.97	0.07	174.93	0.17
Subtotal	321.21	2.21	117.97	0.90	1,270.69	1.27
Federal:						
Gasoline	38.67	0.27	34.67	0.27	266.68	0.27
Oil ²	0.21	—	0.20	—	2.40	—
Tires	1.51	0.01	1.35	0.01	21.84	0.02
Subtotal	40.39	0.28	36.22	0.28	290.92	0.29
Total Taxes	361.60	2.49	154.19	1.18	1,561.61	1.56
Total of All Costs	2,715.82	18.73	2,007.52	15.44	17,878.96	17.88
Total Gasoline and Oil Costs, Including Taxes	603.75	4.16	541.78	4.17	4,232.00	4.23
Gasoline and Oil Costs as Percent of All Costs	22%	22%	27%	27%	24%	24%

¹ This estimate covers the total costs of a fully equipped, medium priced, standard size, 4-door sedan, purchased for \$4,899, 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 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, 1976*.

Table 43. Estimated Cost of Operating a Subcompact Size 1976 Model Automobile, Including Fuel¹
(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	383.00	2.64	351.00	2.70	3,189.00	3.19
Repairs and Maintenance	126.12	0.87	190.82	1.47	2,659.97	2.66
Replacement Tires	24.17	0.17	21.67	0.17	350.00	0.35
Accessories	8.02	0.06	7.46	0.06	89.00	0.09
Gasoline	239.50	1.65	214.72	1.65	1,651.72	1.65
Oil	13.25	0.09	12.19	0.09	154.23	0.15
Insurance	185.00	1.28	176.00	1.35	1,511.00	1.51
Garaging, Parking, Tolls, etc.	240.98	1.66	230.94	1.78	2,108.80	2.11
Total	1,220.04	8.42	1,204.80	9.27	11,713.72	11.71
Taxes and Fees:						
State:						
Gasoline	45.00	0.31	40.32	0.31	310.32	0.31
Registration	20.00	0.14	20.00	0.15	200.00	0.20
Titling	128.96	0.89	—	—	128.96	0.13
Sales	6.86	0.04	9.29	0.07	130.13	0.13
Subtotal	200.82	1.38	69.61	0.53	769.41	0.77
Federal:						
Gasoline	20.00	0.14	17.92	0.14	137.92	0.14
Oil ²	0.19	—	0.17	—	2.18	—
Tires	1.04	0.01	0.94	0.01	15.12	0.02
Subtotal	21.23	0.15	19.03	0.15	155.22	0.16
Total Taxes	222.05	1.53	88.64	0.68	924.63	0.93
Total of All Costs	1,442.09	9.95	1,293.44	9.95	12,638.35	12.64
Total Gasoline and Oil Costs, Including Taxes	317.94	2.19	285.32	2.19	2,256.37	2.25
Gasoline and Oil Costs as Percent of All Costs	22%	22%	22%	22%	18%	18%

¹ This estimate covers the total costs of a subcompact size, 2-door sedan, purchased for \$3,224, 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 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, 1976*.

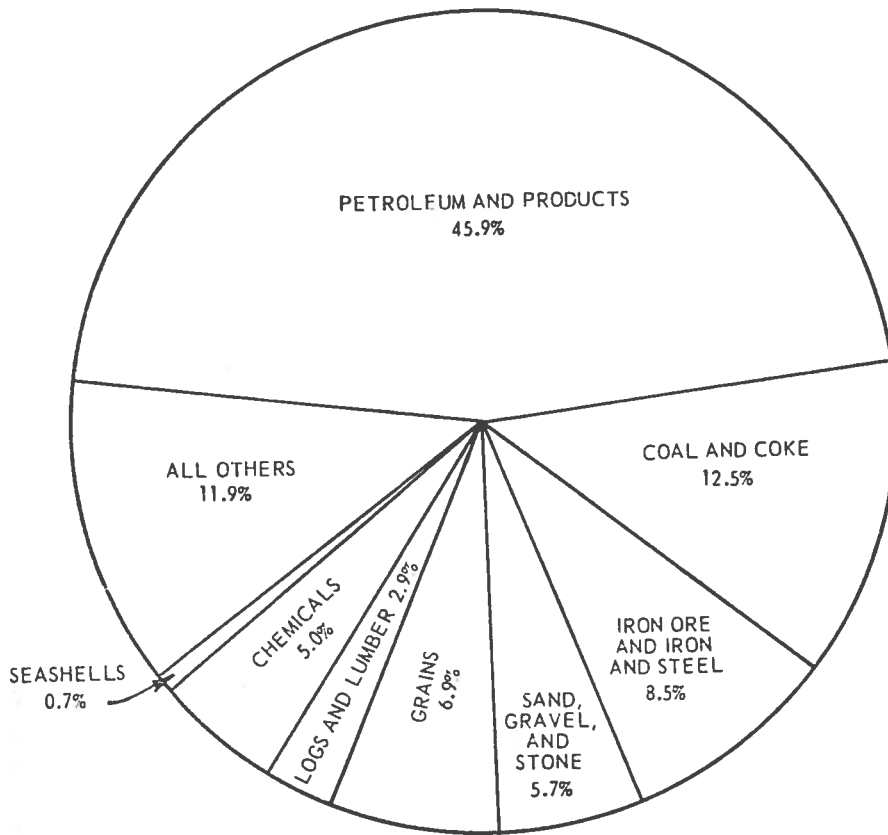
Part 2. Energy Transport

Table 45. Energy Transported by Class I Common and Contract Motor Carriers of Property, 1974

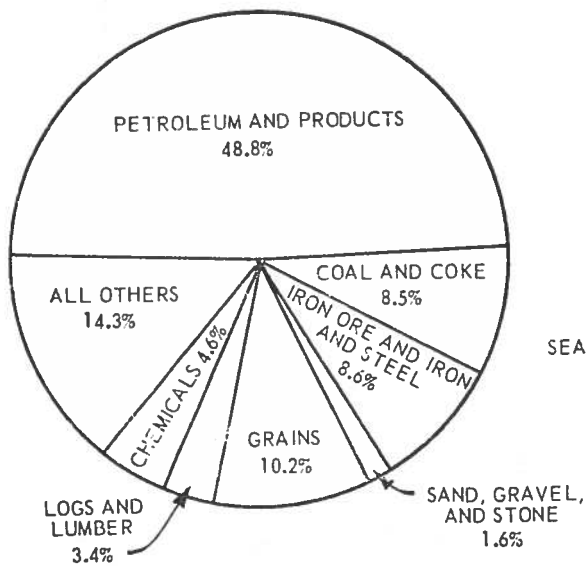
	Revenue Freight Originated		Revenue Freight Terminated		Total Freight Traffic (including duplications)		Gross Freight Revenue (dollars in thousands)
	Truckloads	Tons	Truckloads	Tons	Truckloads	Tons	
Coal							
Anthracite	18,461	373,032	18,182	369,173	20,155	395,055	3,533
Raw Anthracite	7,635	113,654	7,360	109,944	9,247	134,562	2,117
Cleaned or prepared anthra (crushed, screened, sized)	74	1,058	48	709	91	1,296	27
Bituminous coal and lignite	1,339	28,534	1,326	28,433	1,394	29,311	230
Bituminous coal	10,826	259,378	10,822	259,229	10,908	260,493	1,416
Crude petroleum, natural gas, and natural gasoline	10,603	254,684	10,592	254,454	10,658	255,444	1,350
Crude petroleum and natural gas	112,381	3,012,991	112,419	3,013,858	112,482	3,014,497	12,083
Natural gasoline	111,532	2,997,560	111,568	2,998,411	111,622	2,998,919	11,854
Natural gasoline	849	15,431	851	15,447	860	15,578	229
Petroleum and coal products	3,965,488	96,993,682	3,967,580	97,004,099	3,983,527	97,245,327	465,131
Products of petroleum refining	3,827,661	94,123,618	3,827,557	94,089,091	3,840,363	94,287,750	433,563
Gasoline, jet other high vola petro fuels except natural gasoline	1,893,921	48,500,145	1,893,891	48,499,980	1,894,288	48,505,375	164,061
Kerosene	159,775	4,073,893	159,776	4,074,214	159,875	4,075,569	15,454
Distillate fuel oil	596,355	14,864,824	596,223	14,862,299	596,404	14,865,555	55,591
Lubricating and similar oils and derivatives	206,817	4,457,212	208,367	4,455,619	215,090	4,557,972	54,467
Lubricating greases	10,727	185,407	10,234	175,764	11,378	194,608	3,978
Asphalt, tar & pitches (petro, coke oven, coal tar)	248,089	5,737,355	247,025	5,717,515	248,838	5,749,037	42,095
Residual fuel oil & other low vola petro fuels	355,448	8,483,400	355,501	8,484,186	355,616	8,485,858	38,185
Products of petroleum refining, nec	180,218	4,099,744	180,233	4,098,005	182,358	4,129,328	35,197
Liquefied petroleum gases and coal gases	176,311	3,721,638	176,307	3,721,509	176,516	3,724,448	24,536
Paving and roofing materials	56,908	1,223,248	58,128	1,240,022	59,175	1,254,812	15,376
Paving mixtures and blocks	13,514	381,561	13,454	380,096	13,756	384,382	3,883
Asphalt felt and coating	43,394	841,687	44,674	859,926	45,419	870,430	11,492
Miscellaneous petroleum and coal products	80,919	1,646,816	81,895	1,674,986	83,989	1,702,765	16,192
Coke and coal briquettes	932	13,923	1,071	16,406	1,242	18,945	467
Petroleum coke, except briquettes	12,606	270,425	13,854	299,149	13,882	299,566	1,648
Coke from coal, except briquettes	332	5,161	318	5,031	381	5,921	170
Energy commodities	4,096,330	100,379,705	4,098,181	100,387,130	4,116,164	100,654,879	480,747
All commodities	17,012,210	307,736,804	17,113,587	308,767,202	18,205,992	323,475,181	5,841,303
Energy commodities as a percent of all commodities	24%	33%	24%	33%	23%	31%	8%

Source: ICC, *Freight Commodity Statistics*, Motor Carriers, 1974, p. 3, 6 and 9.

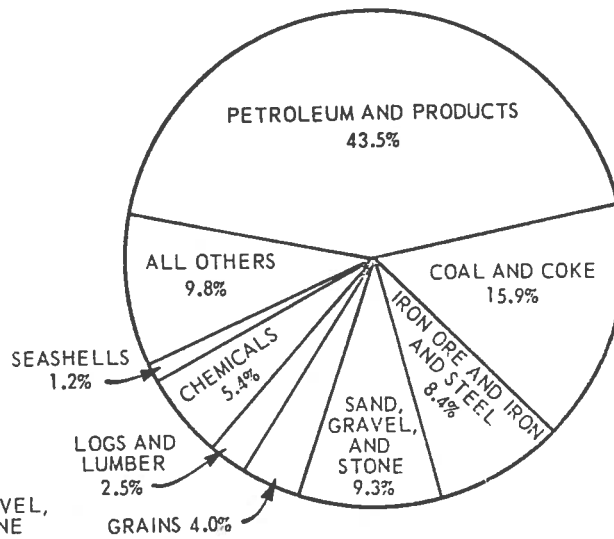
TOTAL COMMERCE



FOREIGN COMMERCE



DOMESTIC COMMERCE



Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1976, p. 11.

Figure 29. Principal Commodities Carried by Water, Calendar Year 1976

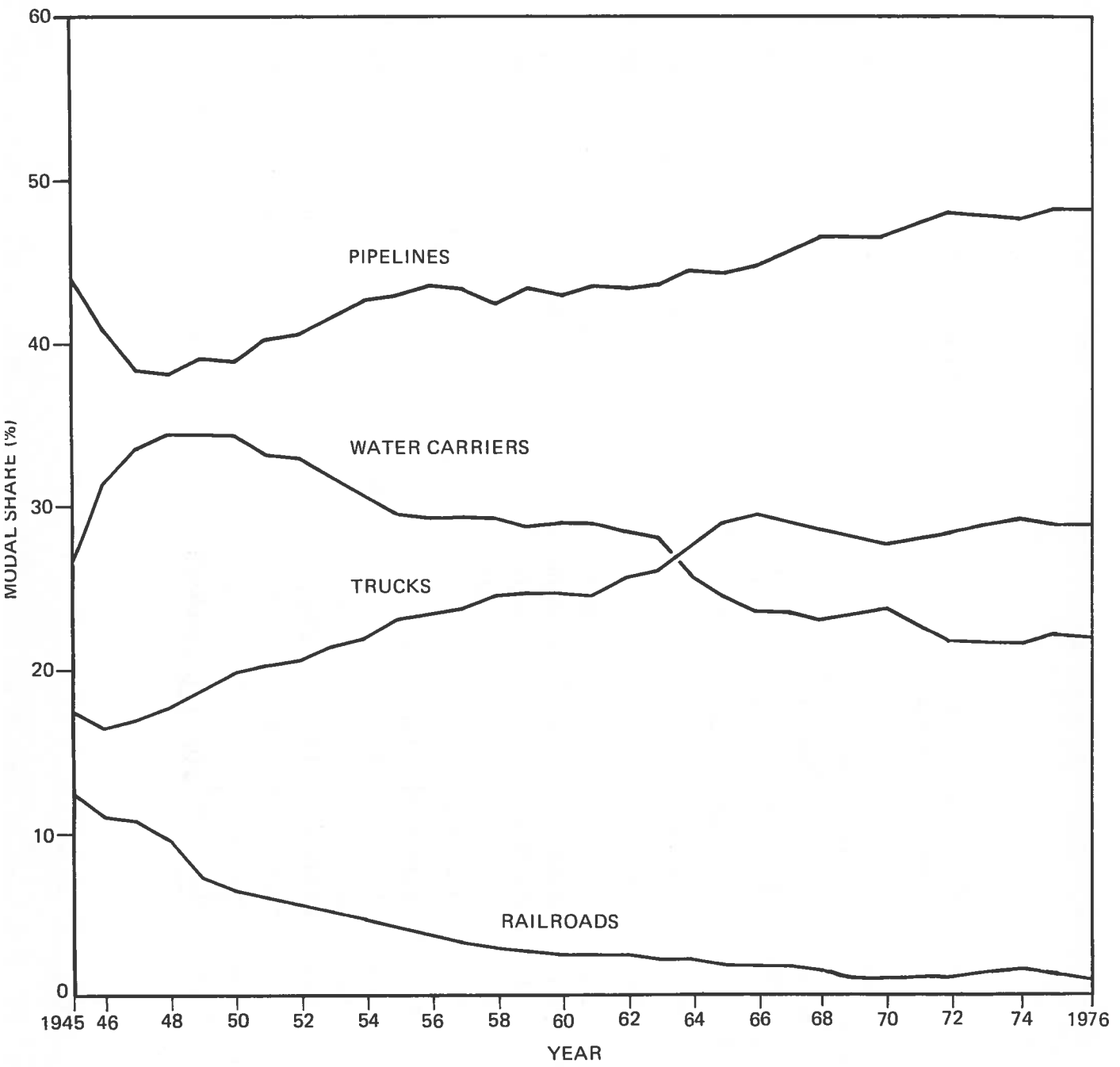


Figure 30. Crude Petroleum and Petroleum Products Transported in the U.S. by Modal Share, 1945-1976

Table 49. Refined Petroleum Products Transported in the U.S.
by Method of Transportation
(at 5-year intervals 1950-1965 and annually 1965-1976)

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 ^P	1.83	1,336,604,000

P = preliminary

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*, 1978. Table 3, and previous issues.

Table 51. U.S. Petroleum Pipeline Mileage (As of December 31)
(At 3-Year Intervals 1950-1965 and Annually 1965-1976)

Year	Crude-Oil Trunk Lines		Refined-Oil Trunk Lines		Total Trunk Lines		Crude-Oil Gathering Lines		Total Petroleum Pipelines	
	ICC Lines	All Lines ²	ICC Lines	All Lines ²	ICC Lines	All Lines ²	ICC Lines	All Lines ²	ICC Lines	All Lines ²
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	72,383	50,791	61,443	114,772	133,826	46,640	77,041	161,412	210,867
1966	63,210	n/a	52,493	n/a	115,803	n/a	47,352	n/a	163,155	n/a
1967	60,893	n/a	51,475	n/a	112,368	n/a	46,855	n/a	165,478 ¹	n/a
1968	61,807	70,825	53,431	64,529	115,238	135,354	46,886	74,124	169,307 ¹	209,478
1969	61,887	n/a	56,096	n/a	117,983	n/a	45,993	n/a	170,824 ¹	n/a
1970	63,030	n/a	59,335	n/a	122,365	n/a	46,587	n/a	175,735 ¹	n/a
1971	60,946	75,143	61,525	72,396	122,471	147,539	45,759	71,132	174,722 ¹	218,671
1972	59,757	n/a	64,701	n/a	124,458	n/a	42,893	n/a	173,532 ¹	n/a
1973	57,435	n/a	64,919 ³	n/a	122,354 ³	n/a	41,655	n/a	170,691 ¹	n/a
1974	57,602	76,250 ⁴	68,609 ³	76,839 ⁴	126,211 ³	153,089 ⁴	41,577	69,266 ⁴	173,341 ¹	222,355 ⁴
1975	54,658	n/a	66,620 ³	n/a	121,278 ³	n/a	42,582 ¹	n/a	172,680 ¹	n/a
1976	58,544	n/a	67,913 ³	n/a	126,457 ³	n/a	39,235	n/a	174,072 ¹	n/a

n/a = not available r = revised

¹Total mileage includes pipelines classified as "other" by the ICC. In 1967 "other" pipeline mileage was 6,255 miles.

²Triennial data.

³Includes 273 miles of coal slurry pipeline.

⁴Date of data is January 1, 1974.

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, Pipelines, December 31, 1976, Table 2 and equivalent tables in earlier editions; U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys, Crude-Oil and Product Pipelines*, *Triennial*, January 1, 1974, Table 1.

Table 53. World Tanker Fleet at End of 1976¹
(10,000 D.W. tons and over)
By Flag and Ownership
(In Million Long Tons Deadweight)

Flag	Ownership					Total 1976	Total 1975	Change 1976 over 1975	Share of Total 1976
	Oil Company	Private	Government	Other	Total				
Liberia	29.8	69.6	—	0.3	99.7	89.6	+10.1	31.1%	
Norway	0.9	28.5	—	0.2	29.6	26.1	+ 3.5	9.2%	
U.K.	20.4	10.2	0.1	0.1	30.8	32.7	- 1.9	9.6%	
Japan	4.7	27.7	—	—	32.4	31.8	+ 0.6	10.1%	
U.S.A.	5.3	5.1	1.2	—	11.6	10.6	+ 1.0	3.6%	
Panama	4.8	5.2	—	0.1	10.1	8.8	+ 1.3	3.2%	
France	10.6	4.0	0.1	—	14.7	12.8	+ 1.9	4.6%	
Greece	—	17.0	—	—	17.0	15.9	+ 1.1	5.3%	
Other Western Europe	13.6	25.8	0.1	—	39.5	35.6	+ 3.9	12.3%	
Other Western Hemisphere	6.3	0.2	0.1	—	6.6	6.5	+ 0.1	2.1%	
U.S.S.R., E. Europe and China	—	—	9.3	—	9.3	8.4	+ 0.9	2.9%	
Other Eastern Hemisphere	8.4	10.9	0.1	—	19.4	12.6	+ 6.8	6.0%	
TOTAL	104.8	204.2	11.0	0.7	320.7	291.4	+28.3	100.0%	
Fleet as at end 1975	95.1	185.1	10.5	0.7	291.4				
Net increase 1976	9.7	19.1	0.5	—	29.3				

¹ Excluding 43.6 million D.W.T. Combined Carriers.

Table 53. World Tanker Fleet at End of 1976 (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 1976*	
	Up to end 1950	1951-1955	1956-1960	1961-1965	1966-1970	1971-1975	1976	Total	Motor		Other
10- 25	2.2	3.2	5.3	1.8	2.4	2.2	0.4	17.5	13.2	4.3	0.5
25- 45	1.2	1.8	10.0	3.5	1.4	7.1	2.3	27.3	15.3	12.0	3.4
45- 65	—	0.6	3.9	12.5	1.8	0.6	0.5	19.9	8.2	11.7	1.0
65-125	—	—	1.8	12.4	21.7	14.1	4.4	54.4	39.7	14.7	2.6
125-205	—	—	—	0.1	10.1	13.1	5.4	28.7	19.5	9.2	7.1
205-285	—	—	—	—	25.9	99.4	13.5	138.8	10.3	128.5	7.1
285 and over	—	—	—	—	1.9	18.3	13.9	34.1	—	34.1	13.5
TOTAL	3.4	5.6	21.0	30.3	65.2	154.8	40.4	320.7	106.2	214.8	35.2
Motor	0.4	2.6	7.4	16.4	24.4	41.7	13.3	106.2	*Excludes 5.8 million D.W.T. combined carriers		
Other	3.0	3.0	13.6	13.9	40.8	113.1	27.1	214.5			

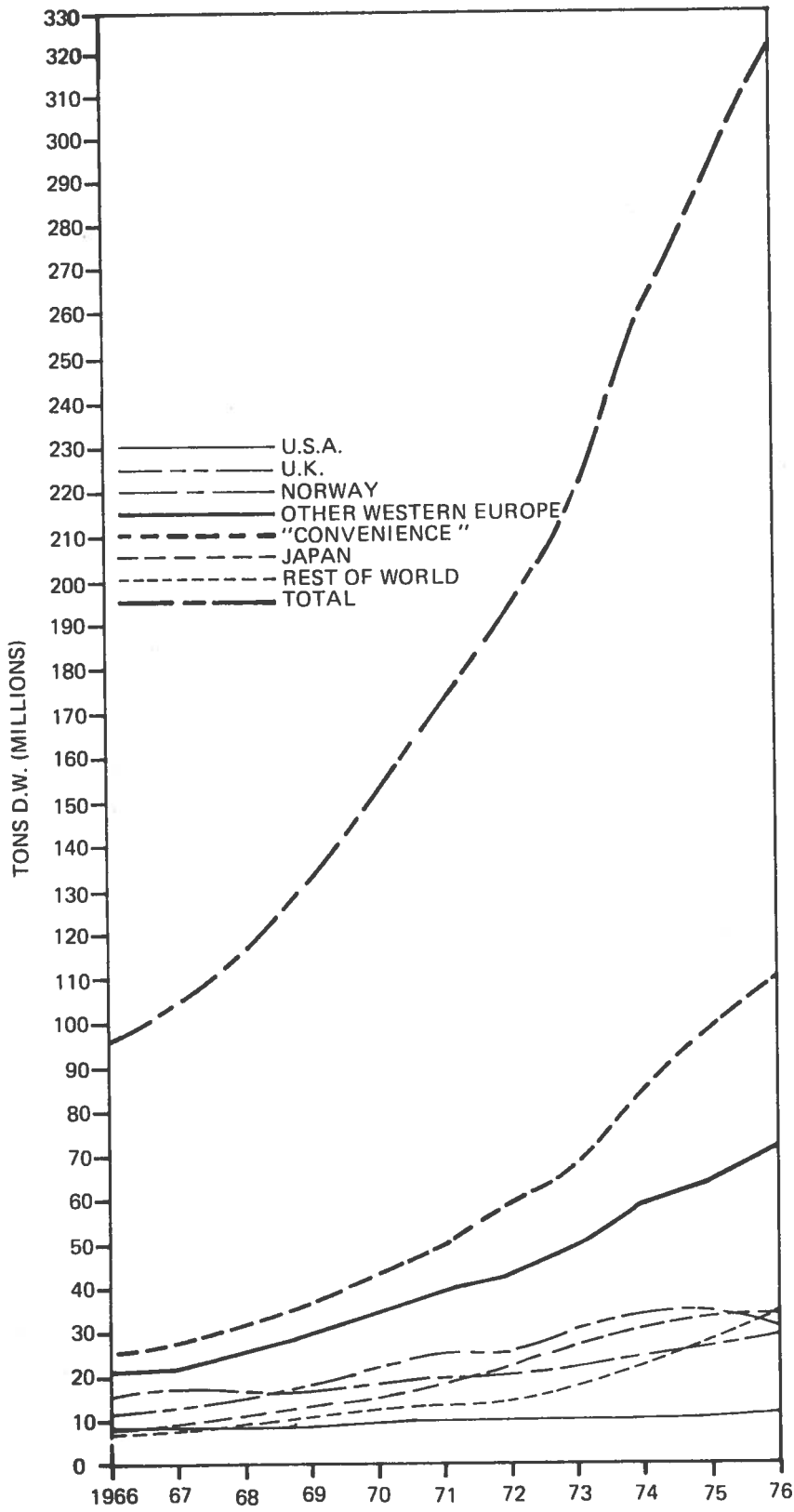


Figure 31. World Tanker Fleet by Flag 1966 - 1976

Table 56. Number and Mileage of Privately Owned U.S. Railroad Tank Cars
(As of December 31)
(at 5-year intervals 1950 - 1965 and annually 1965 - 1976)

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

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, 1976, p. 2, and equivalent tables in earlier editions.

Part 3. Energy Supply and Demand

Table 58. Domestic Supply and Demand for Petroleum,¹ 1975 and 1976

	1975		1976 (estimated)		Percentage Change From 1975
	Million Barrels	Trillion Btu	Million Barrels	Trillion Btu	
Supply, crude oil:					
Production	3,056.8	17,729.3	2,974.1	17,250.0	-2.7
Exports	-2.1	-12.1	-1.0	-5.8	
Imports	1,498.2	8,689.6	1,922.2	11,149.0	+28.3
Stock change: withdrawals(+), additions (-)	-6.3	-36.5	-18.8	-109.0	
Losses, transfers for use as fuel, and unaccounted for	-5.2	-30.1	16.4	94.6	
Total	4,541.4	26,340.1	4,892.9	28,378.8	+7.7
Refinery inputs:					
Crude oil	4,541.4	26,340.1	4,892.9	28,378.8	+7.7
Transfers in, natural gas liquids ²	259.3	1,172.2	256.1	1,157.7	-1.2
Other hydrocarbons	13.8	48.3	13.8	48.3	
Total	4,814.5	27,560.6	5,162.8	29,584.8	+7.2
Supply, refined products:					
Refinery output	4,814.5	27,560.6	5,162.8	29,584.8	+7.2
Unfinished oil reruns, net	12.7	74.0	6.9	40.2	-45.7
Processing gain, net	167.8	-	179.9	-	
Total	4,995.0	27,634.6	5,349.6	29,625.0	+7.1
Exports ³	-74.3	-424.4	-74.2	-423.8	-0.1
Imports ³	700.8	4,157.9	729.6	4,328.8	+4.1
Stock change, including natural gas liquids	-53.0	-256.5	+14.4	+69.7	
Transfers in, natural gas liquids ^{2,4}	336.7	1,209.6	332.6	1,195.3	-1.2
Losses, gains, and unaccounted for	52.3	420.4	-2.3	142.5	
Total	5,957.5	32,741.6	6,349.7	34,937.5	+6.6
Demand by major consuming sectors:					
Fuel and power:					
Household and commercial	853.6	4,733.2	943.2	5,264.4	+10.5
Industrial	614.5	3,575.6	665.6	3,883.1	+8.3
Transportation ⁵	3,310.9	17,795.6	3,453.4	18,569.2	+4.3
Electricity generation, utilities	520.1	3,239.3	559.0	3,479.3	+7.5
Other, not specified	16.4	98.3	11.9	72.0	-27.4
Total	5,315.5	29,442.0	5,633.1	31,268.0	+6.0
Raw material:⁶					
Petrochemical feedstock offtake	340.6	1,434.2	404.0	1,729.1	+18.6
Other nonfuel use	268.7	1,685.7	284.5	1,785.8	+5.9
Total	609.3	3,119.9	688.5	3,514.9	+13.0
Miscellaneous and unaccounted for	32.7	179.7	28.1	154.6	-14.1
Grand Total	5,957.5	32,741.6	6,349.7	34,937.5	+6.6

¹ Supply and demand for crude oil and petroleum products. Petroleum products include products refined and processed from crude oil, including still gas and liquefied refinery gas; also natural gas liquids transferred from natural gas.
² Btu values for natural gas liquids for each year shown are implicitly derived from weighted averages of major natural gas liquids, with natural gasoline and other products at 110,000 Btu per gallon, liquefied petroleum gases at 95,500 Btu per gallon, ethane at 73,390 Btu per gallon, and plant condensate at 129,000 Btu per gallon.
³ Btu values for imported and exported refined products for 1975 are totals of the Btu values of the respective products imported and exported. The 1975 average Btu value is applied to 1976 estimates.
⁴ Includes natural gas liquids other than those channeled into refinery input as follows: Petrochemical feedstocks, direct uses for fuel and power, and other uses.
⁵ Includes bunkers and military fuel uses.
⁶ Includes some fuel and power use by raw materials industries.

Source: U.S. Department of the Interior, Bureau of Mines, Annual U.S. Energy Use Up In 1976, March 14, 1977 (news release).

Table 60. Domestic Supply and Demand for Naphtha Type Jet Fuel, 1965-1977
(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

Source: American Petroleum Institute, *Basic Petroleum Data Book*, Section VII, Table 14.
U.S. Department of Energy, *Energy Data Reports*, Petroleum Statements, Monthly (converted to daily averages).

Table 62. Domestic Supply and Demand for Coal, 1975 and 1976

	1975		1976 (estimated)		Percentage Change From 1975
	Thousand short tons	Trillion Btu	Thousand short tons	Trillion Btu	
ANTHRACITE					
Supply:					
Production ¹	6,203	157.5	6,200	157.5	—
Exports ²	-1,095	-27.8	-1,000	-25.4	-8.7
Imports	—	—	—	—	—
Stock change: withdrawals (+), additions (-)	n/a	n/a	n/a	n/a	—
Losses, gains, and unaccounted for	—	—	—	—	—
Total	5,108	129.7	5,200	132.1	+1.8
Demand by major consuming sectors:³					
Household and commercial ⁴	2,240	56.9	2,280	57.9	+1.8
Industrial ⁵	1,386	35.2	1,410	35.8	+1.7
Electricity generation, utilities	1,482	37.6	1,510	38.4	+1.9
Total	5,108	129.7	5,200	132.1	+1.8
BITUMINOUS COAL AND LIGNITE					
Supply:					
Production ¹	648,438	15,238.3	665,000	15,627.5	+2.6
Exports	-65,669	-1,773.0	-60,000	-1,623.6	-8.6
Imports	940	21.4	1,150	26.2	+22.3
Stock change: withdrawals (+), additions (-)	-31,765	-687.1	-5,329	-246.7	—
Losses, gains, and unaccounted for	4,357	-115.9	-3,603	-166.8	—
Total	556,301	12,683.7	597,218	13,616.6	+7.4
Demand by major consuming sectors:					
Fuel and power:					
Household and commercial ⁴	7,282	188.5	6,900	181.2	-5.2
Industrial ⁵	142,072	3,677.2	140,298	3,684.2	-1.2
(coal carbonized for coke) ⁶	(83,272)	(2,155.3)	(82,532)	(2,167.3)	(-0.9)
Transportation ⁷	24	0.6	12	0.3	-50.0
Electricity generation, utilities	403,249	8,722.3	446,288	9,653.2	+10.7
Total	552,627	12,588.6	593,498	13,518.9	+7.4
Raw Material: Industrial:⁸					
Crude light oil	974	25.2	989	26.0	+1.5
Crude coal tar	2,700	69.9	2,731	71.7	+1.1
Total	3,674	95.1	3,720	97.7	+1.3
Grand Total	556,301	12,683.7	597,218	13,616.6	+7.4

n/a = not available

¹ Includes use by producers for power and heat.

² Includes shipments to U.S. Armed Forces in West Germany.

³ Except for small quantities used as raw material for coal chemicals, all anthracite is used for fuel and power.

⁴ Data represent "retail deliveries to other consumers." These are mainly household and commercial users, with some unknown portion of use by small industries.

⁵ Includes consumption by coke plants, steel and rolling mills, and other industrial uses. Adjusted to exclude coal equivalent of raw material use.

⁶ Figures in parentheses are not added into totals.

⁷ Includes bunkers and military transportation.

⁸ Coal equivalent based on British thermal unit value of raw material consumption of coal chemicals listed.

Source: U.S. Department of the Interior, Bureau of Mines, Annual U.S. Energy Use Up In 1976, March 14, 1977 (news release).

Table 64. Domestic Demand for Gasoline
(At 5-Year Intervals 1950-1965 and Annually 1965-1977)
(Thousands of barrels per day)

Year	Total Demand	% Change	Motor ¹	% Change	Aviation	% Change
1950	2,724	+8.8	2,616	+8.5	108	+16.1
1955	3,643	+8.1	3,451	+8.1	192	+7.9
1960 ²	4,130	+1.5	3,969	+2.9	161	-24.1
1965 ¹	4,713	+4.0	4,593	+4.3	120	-5.5
1966	4,913	+4.2	4,808	+4.7	105	-12.5
1967	5,048	+2.7	4,958	+3.1	90	-14.3
1968	5,344	+5.9	5,260	+6.1	84	-6.7
1969	5,596	+4.7	5,526	+5.0	70	-16.7
1970	5,839	+4.3	5,785	+4.7	54	-22.9
1971	6,063	+3.8	6,014	+4.0	49	-9.3
1972	6,423	+5.9	6,377	+6.0	46	-6.1
1973	6,718	+4.6	6,675	+4.7	45	-2.2
1974	6,582	-2.0	6,538	-2.0	44	-2.2
1975	6,713	+1.9	6,674 ^r	+2.1	38	-13.6
1976	7,014	+4.5	6,978	+4.5	36	-5.3
1977	7,214	+2.8	7,176	+2.8	38	+5.6

¹ Includes highway and nonhighway uses.

² These figures and those for subsequent years are on a 50 state basis.

³ Motor gasoline demand data were not shown separately by the U.S. Bureau of Mines until 1964; prior years were adjusted to attain separate figures.

r = revised

Source: American Petroleum Institute, *Basic Petroleum Data Book*, Section VII, Table 4, 5; U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, Petroleum Statement, Annual, 1973-1976, Table 1 (converted to daily averages).
U.S. Department of Energy, *Energy Data Reports*, Petroleum Statement, Monthly, December 1977.

Table 65. U.S. Domestic Demand for Naphtha and Kerosine-Type Jet Fuel
(Thousand barrels)
(1965-1977)

Year	Naphtha Type Total	Barrels Per Day	Kerosine Type Total	Barrels Per Day	Naphtha and Kerosine	Barrels Per Day	Annual Percentage Change
1965	97,813	268	121,819	334	219,632	602	-0.2
1966	101,635	278	142,751	391	244,386	670	+11.3
1967	111,546	306	189,224	518	300,770	824	+23.0
1968	126,601	346	222,777	609	349,378	955	+15.9
1969	108,518	297	253,213	694	361,731	991	+3.8
1970	90,927	249	262,051	718	352,978	967	-2.4
1971	94,732	260	273,991	751	368,723	1,010	+4.4
1972	88,495	242	293,995	803	382,490	1,045	+3.5
1973	79,220	217	307,407	842	386,627	1,059	+1.3
1974	81,171	222	281,429	771	362,600	993	-6.2
1975	76,543	210	288,747	791	365,290	1,001	+0.7
1976	72,713	199	288,645	789	361,358	987	-1.1
1977	75,869	208	303,819	832	379,688	1,040	+5.1

Source: 1965-1975: American Petroleum Institute, *Petroleum Data Book*, Section VII, Tables 14, 15 (converted from daily averages), U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*. Petroleum Statement, Annual, 1975, Table 1 and preceding December issues.
1976-1977: U.S. Department of Energy, *Energy Data Reports*, Petroleum Statement, Monthly, December 1977.

APPENDIX A
Source Information

Figure 3. Expenditures and Revenues, 1976 (cont.)

- (19) Local Transit: APTA, *Transit Fact Book*, 1976-77, Table 9. Total operating revenues of Light Rail, Heavy Rail, Trolley Coach, and Motorbus plus operating revenue not shown for cable car and inclined plane.
- (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: A.A.R., *Statistics of Railroads of Class I*, December 1977, pp. 3, 16. Sum of the total railway operating revenues of Class I railroads, Amtrak (NRPC) and Auto-Train.
- (25) Rail, Passenger: Sum of Commuter and Intercity.
- (26) Rail, Commuter: I.C.C., *Class I Railroads, Financial and Operating Statistics*, Dec. 31, 1976, p. 19. Commutation passenger revenues of the Class I railroads and Amtrak (NRPC).
- (27) Rail, Intercity: *Ibid.*, p. 19, Sum of Class I and Amtrak (NRPC) passenger revenues from parlor and sleeping cars and other coaches.
- (28) Rail, Cargo: A.A.R., *Statistics of Railroads of Class I*, December 1977, p. 3. Class I freight service railway operating revenues.
- (29) Air: Sum of General Aviation and Air Carrier.
- (30) General Aviation: TAA, *Transportation Facts and Trends — Quarterly Supplement*, January 1978, p. 5. Figure represents the sum of operating costs and total retail value of new general aviation aircraft.
- (36) Air Carrier: Sum of Certificated and Supplemental.
- (37) Certificated: CAB, *Air Carrier Financial Statistics*, Dec. 1976, p. 2, column 8, line 17. Total operating revenues, domestic operations.
- (38) Passenger, Certificated: *Ibid.*; column 8, sum of lines 3 and 10. Total passenger revenues in scheduled and charter service.
- (39) Cargo, Certificated: *Ibid.*, column 8, sum of lines 4, 5, 6, 7, 8, 9, and 11. Includes revenues from scheduled domestic service of freight, express, priority U.S. mail, non-priority U.S. mail, foreign mail, excess baggage, and charter freight.
- (40) Supplemental: *Ibid.*, p. 101. Overall operating revenues of supplemental air carriers, total domestic and international operations. No separation of international and domestic revenues is available.

Figure 4. Vehicle-Miles, 1976 (cont.)

- (3) International: Sum of Air Carrier and Water.
- (4) Highway: Sum of Auto, Truck, and Bus.
- (5) Auto: Sum of Personal Passenger Car, Motorcycle, and Taxi.
- (6) Personal Passenger Car: Federal Highway Administration, *Highway Statistics, 1976*, Table VM-1. Includes vehicle travel on main rural roads, local rural roads, and urban streets.
- (7) Taxi: Data for taxi are included in the Personal Passenger Car category.
- (8) Motorcycle: Federal Highway Administration, *Highway Statistics, 1976*, Table VM-1. Includes vehicle travel on main rural roads, local rural roads, and urban streets.
- (9) Truck: *Ibid.* Includes vehicle travel on main rural roads, local rural roads, and urban streets.
- (14) Bus: Sum of Intercity Bus and School Bus.
- (15) Intercity Bus: American Bus Association, *America's Number 1 Passenger Transportation Service, 1977*, p. 26. Includes class I, II, and III carriers reporting to the ICC and intrastate carriers.
- (18) School Bus: Federal Highway Administration, *Highway Statistics, 1976*, Table VM-1. Includes vehicle travel on main rural roads, local rural roads, and urban streets.
- (19) Local Transit: APTA, *Transit Fact Book, 1976-77*, 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.
- (20) Motorbus: *Ibid.*
- (21) Trolley Coach: *Ibid.*
- (22) Light Rail: *Ibid.*
- (23) Heavy Rail: *Ibid.*
- (24) Rail: Sum of Passenger and Cargo.
- (25) Passenger Rail: AAR, *Statistics of Railroads of Class I, December 1977*. This figure is the sum of the passenger train-miles of Class I railroads (p. 11, line 15) and Amtrak (NRPC) and Auto-Train (p. 16).
- (28) Rail, Cargo: *Ibid.*, p. 11, line 12. This figure is freight train-miles of the Class I railroads.
- (29) Air: Sum of General Aviation and Air Carrier.
- (30) General Aviation: FAA, *Statistical Handbook of Aviation, 1976*, Table 8.5. Includes business, commercial instructional, personal, and other flying.

Figure 5. Passenger-Miles, 1976 (cont.)

- (5) Auto: Sum of Personal Passenger Car, Taxi, and Motorcycle.
- (6) Personal Passenger Car: FHWA, *Highway Statistics, 1976*, Table VM-1. Passenger miles derived by multiplying passenger car travel by an average occupancy level of 2.2.
- (7) Taxi: Included in Personal Passenger Car.
- (8) Motorcycle: FHWA, *Highway Statistics, 1976*, Table VM-1. Passenger miles derived by multiplying motorcycle travel by an average occupancy of 1.1.
- (14) Bus: Sum of Intercity Bus and School Bus passenger-miles.
- (15) Intercity Bus: American Bus Association, *America's Number 1 Passenger Transportation Service*,
(16) 1977, p. 26. Includes classes I, II, and III carriers reporting to ICC plus intrastate carriers.
- (18) School Bus: Best estimate by NHTSA, National Center for Statistics and Analysis.
- (24) Passenger Rail: Sum of Commuter and Intercity.
(25)
- (26) Commuter Rail: A.A.R., *Statistics of Railroads of Class I*, December 1977, p. 7, line 13. Sum of the commutation passenger miles of the Class I Railroads, Amtrak (NRPC) and Auto-Train.
- (27) Intercity Rail: *Ibid.*, line 14. Sum of Class I Railroads, Amtrak (NRPC) and Auto-Train passenger miles.
- (29) Air: Sum of General Aviation and Air Carrier.
- (30) General Aviation: TAA, *Transportation Facts and Trends — Quarterly Supplement*, January 1978, p. 18.
- (36) Air Carrier: Sum of Certificated and Supplemental.
- (37) Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1977, p. 4, column 6. Sum of revenue
(38) passenger-miles in scheduled service (line 9) and nonscheduled service (line 41), total domestic operations.
- (40) Supplemental: *Ibid.*, p. 91, line 4, column 5. Total revenue passenger-miles in domestic
(41) operations.
- (43) Water: TAA, *Transportation Facts and Trends — Quarterly Supplement*, January 1978, p. 18.
(44)
- (52) Air Carrier: Sum of Certificated and Supplemental.
- (53) Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1977, p. 14, column 6. Sum of revenue
(54) passenger-miles in scheduled service (line 9) and nonscheduled service (line 41). Total international operations.

Figure 6. Cargo Ton-Miles, 1976 (cont.)

- (51) Pipeline: ICC, *91st Annual Report, 1977*, Appendix E, Table 3. Total intercity ton-miles.
- (52) Air Carrier: Sum of Supplemental and Certificated.
- (53) Certificated: CAB, *Air Carrier Traffic Statistics*, Dec. 1977, p. 14, line 3, column 6. Revenue ton-miles of freight, express, U.S. and foreign mail in total international and territorial operations, all services of the certificated carriers.
- (55) Supplemental: *Ibid.*, p. 89, line 13, column 6. Revenue ton-miles of freight and express in total international operations. Supplemental carriers are ordinarily not authorized to carry mail.
- (56) Supplemental: *Ibid.*, p. 89, line 13, column 6. Revenue ton-miles of freight and express in total international operations. Supplemental carriers are ordinarily not authorized to carry mail.
- (58) Supplemental: *Ibid.*, p. 89, line 13, column 6. Revenue ton-miles of freight and express in total international operations. Supplemental carriers are ordinarily not authorized to carry mail.

Figure 7. Number of Vehicles, 1976

- (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, Truck, and Bus.
- (5) Auto: Sum of Personal Passenger Car and Motorcycle.
- (6) Personal Passenger Car: FHWA, *Highway Statistics, 1976*, Table MV-1. This figure includes private and commercial automobiles (including taxicabs) as well as publicly owned automobiles for the 50 States and the District of Columbia.
- (7) Taxi: Data for Taxi are included in the Personal Passenger Car category.
- (8) Motorcycle: FHWA, *Highway Statistics, 1976*, Table MV-1. This figure is the sum of the private and commercial motorcycles plus the publicly owned motorcycles.
- (9) Truck: *Ibid.* This figure is the sum of private and commercial trucks and publicly owned trucks.
- (14) Bus: Sum of Intercity Bus and School Bus.
- (15) Intercity Bus: American Bus Association, *America's Number 1 Passenger Transportation Service, 1977*, p. 26. This figure includes operations of Class I, II, and III carriers reporting to the ICC and intrastate carriers.
- (18) School: FHWA, *Highway Statistics, 1976*, Table MV-10. For some States, church, industrial, and other private buses are included; in other States, privately owned school buses could not be segregated from commercial buses and are included with the latter.

Figure 7. Number of Vehicles, 1976 (cont.)

- (49) Cargo: U.S. Department of Commerce, Maritime Administration, *Merchant Fleets of the World*, December 1977, p. 2. This figure represents the sum of U.S. oceangoing steam and motor ships of 1,000 gross tons and over as of December 31, 1976.
- (52) International Air Carrier: This figure is included in the respective categories of the domestic operations.
- (59) International Water: This figure is included in the respective categories of the domestic operations.

Figure 8. Number of Fatalities, 1976

- (1) Total Transportation: Sum of Domestic and International.
- (2) Domestic: Sum of Highway, Rapid Transit, Rail, Air, Water, and Pipeline.
- (3) International: U.S. Air Carriers only. Fatalities in international water transport not available.
- (4) Highway: U.S. Department of Transportation, NHTSA/FHWA, *Traffic Safety '77*, Table A-5.
- (5) Auto: Sum of Personal Passenger Car, Taxi, and Motorcycle.
- (6) Personal Passenger Car: National Safety Council, *Accident Facts*, 1977, p. 56. Number of occupant fatalities.
- (7) Taxi: *Ibid.* Number of occupant fatalities.
- (8) Motorcycle: U.S. Department of Transportation, NHTSA/FHWA, *Traffic Safety '77*, Table A-5.
- (9) Truck: U.S. Department of Transportation, FHWA, Bureau of Motor Carrier Safety, *Accidents of Motor Carriers of Property*, 1976, p. 2. Sum of for hire, private, plus unknown.
- (10) Private: *Ibid.*
- (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: National Safety Council, *Accident Facts*, 1977, p. 75. Passenger fatalities on Class I buses.

Figure 8. Number of Fatalities, 1976 (cont.)

- (39) Cargo: *Ibid.* Scheduled and nonscheduled certificated air carrier domestic cargo service.
- (40) Supplemental: *Ibid.* Sum of domestic passenger and cargo service.
- (41) Passenger: *Ibid.* Scheduled and nonscheduled domestic passenger service.
- (42) Cargo: *Ibid.* Scheduled and nonscheduled domestic cargo service.
- (43) Water: This figure is the sum of passenger, cargo, and commercial fishing fatalities.
- (44) Passenger: Sum of Private and Passenger Service.
- (45) Private: U.S. Coast Guard, *Boating Statistics (CG-357)*, 1976, p. 17. This figure represents total fatalities in recreational boating.
- (46) Inboard: *Ibid.* This figure is the sum of inboard gasoline and diesel powered boats.
- (47) Outboard: *Ibid.*
- (48) Passenger Service: U.S. Coast Guard, *Proceedings of Marine Safety Council*, March 1977, p. 61. This figure includes vessel casualties on both large and small passenger vessels and ferries for fiscal year 1976.
- (49) Cargo: *Ibid.* This figure includes vessel casualties on cargo barges, freight, tank ships, and tank barges for fiscal year 1976.
- (50) Commercial Fishing: *Ibid.* This figure includes vessel casualties on commercial fishing vessels for fiscal year 1976.
- (51) Pipeline: U.S. Department of Transportation, Office of the Secretary (P-20), *Transportation Safety Information Report*, Oct., Nov., and Dec. 1977 and Annual Summary, p. 75. This figure includes gas distribution and transmission lines (including gathering lines), and liquid transmission lines.
- (52) Air-Carrier: Sum of Certificated and Supplemental. Includes passengers, crew, and others on U.S. Air Carrier International operations, scheduled and nonscheduled.
- (53) Certificated: This figure is the sum of U.S. Certificated Route Air Carriers, scheduled and nonscheduled international passenger and cargo service.
- (54) Passenger: Personal Communication, National Transportation Safety Board, Information System Division (TE-50). Scheduled and nonscheduled Certificated Air Carrier international service.
- (55) Cargo: *Ibid.* Scheduled and nonscheduled Certificated Air Carrier international service.
- (56) Supplemental: *Ibid.* Scheduled and nonscheduled international passenger and cargo service.

TABLE REFERENCES

Table 1. Average Passenger Revenue Per Passenger Mile 1966-1976

Certificated Air Carrier, Domestic Operations, Scheduled Service:

1966-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 81, 85, and 88.

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

Class I Rail:

1966-1970: AAR, *Statistics of Railroads of Class I*, July 1975, p. 7, lines 23, 24, and 25.

1971-1976: Ibid., Oct. 1972, Nov. 1973, Aug. 1974, July 1975 and December 1977, p. 7 and p. 16. All Class I average passenger revenue per passenger mile data was calculated by dividing passenger revenue by passenger miles after subtracting Amtrak and Auto-Train passenger revenue and revenue passenger mile data.

Amtrak:

1971-1976: AAR, *Statistics of Railroads of Class I*, Oct. 1972, Nov. 1973, Aug. 1974, July 1975 and December 1977, p. 16.

Class I Intercity Bus:

1966-1976: ABA, *America's Number 1 Passenger Transportation Service*, 1977, p. 29.

Table 2. Average Freight Revenue Per Ton-Mile, 1966-1976

Certificated Air Carrier, Domestic Operations, Scheduled Service:

1966-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 93.

1973-1976: CAB, *Air Carrier Financial Statistics*, Dec. 1974 and 1976, p. 2, line 4; *Air Carrier Traffic Statistics*, Dec. 1974 and 1976, p. 4, line 19. Freight revenue (*Financial Statistics*) divided by revenue ton-miles of freight (*Traffic Statistics*).

Class I Rail:

1966-1974: ICC, *Transport Economics*, Vol. III, No. 2, 1976, p. 4.

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

Class I Intercity Motor Carriers, Common and Contract:

1966-1974: ICC, *Transport Economics*, Vol. III, No. 2, 1976, p. 4.

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

Oil Pipelines:

1966-1974: ICC, *Transport Economics*, Vol. III, No. 2, 1976, p. 4.

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

Classes A and B Water Carriers, Barge Lines Operating on Mississippi River and Tributaries:

1966-1974: ICC, *Transport Economics*, Vol. III, No. 2, 1976, p. 4.

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

Table 4. Total Operating Revenues, 1966-1976 (cont.)

Oil Pipeline:

- 1966-1967: Transportation Association of America, Personal Communication.
- 1968-1969: TAA, *Transportation Facts and Trends*, Jan. 1971, Quarterly Supplement, p. 6.
- 1970-1971: Ibid., Dec. 1974, Quarterly Supplement, p. 6.
- 1972-1973: Ibid., April 1977, Quarterly Supplement, p. 6.
- 1974-1976: Ibid., April 1978, Quarterly Supplement, p. 6.

Class I Intercity Motor Carriers of Property:

- 1966-1976: ICC, *91st Annual Report of the ICC*, 1977, p. 144 and equivalent tables in earlier editions.

Class I Rail:

- 1966-1976: AAR, *Statistics of Railroads of Class I*, December 1977, p. 1.

Amtrak:

- 1971-1976: Ibid., Oct. 1972, Nov. 1973, Aug. 1974, July 1975, and December 1977, p. 16.

Water Transport:

Classes A and B Carriers, Inland and Coastal Waterways:

- 1966-1976: ICC, *91st Annual Report of the ICC*, 1977, p. 146 and equivalent tables in earlier editions.

Maritime Carriers:

- 1966-1976: Ibid., p. 147, and equivalent tables in earlier editions.

Class A Freight Forwarders:

- 1966-1976: Ibid., p. 148, and equivalent tables in earlier editions.

Table 5. Vehicle-Miles, 1966-1976

Air Carriers:

Certificated Domestic Operations, All Services:

- 1966-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 106. Aircraft revenue miles in scheduled service (line 35) plus nonscheduled service (line 56).
- 1973-1976: CAB, *Air Carrier Traffic Statistics*, Dec. 1974 and 1976, p. 4. Aircraft revenue miles in scheduled service (line 31) plus nonscheduled service (line 50).

Supplemental:

- 1967-1972: CAB, *Handbook of Airline Statistics*, Dec. 1973, p. 197 (line 21).
- 1973-1976: CAB, *Air Carrier Traffic Statistics*, Dec. 1974 and 1976, Part III, sheet 1, line 21.

General Aviation:

- 1966-1976: FAA, *FAA Statistical Handbook of Aviation*, 1976, Table 8.5.

Highway:

Passenger Car and Taxi:

- 1966-1976: FHWA, *Highway Statistics*, Section 3, 1976, Table VM-1 and equivalent tables in earlier editions.

Truck:

- 1966-1976: Ibid.

Table 6. Passenger-Miles, 1966-1976 (cont.)

Amtrak:

Commutation and other than Commutation:

1971-1976: AAR, *Statistics of Railroads of Class I*, Oct. 1972, Nov. 1973, Aug. 1974, July 1975 and December 1977, p. 16. Data includes Auto-Train passenger-miles.

Domestic Water:

1966-1976: TAA, *Transportation Facts and Trends*, July 1977, p. 18.

Table 7. Cargo Ton-Miles, 1966-1976

Air Carrier:

Certificated:

1966-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 106. Sum of revenue ton-miles of freight, express, U.S. and foreign mail (lines 2, 3 and 4).

1973-1976: CAB, *Air Carrier Traffic Statistics*, Dec. 1974 and Dec. 1976, p. 4. Sum of lines 2, 3 and 4.

Supplemental:

1966-1972: CAB, *Handbook of Airline Statistics*, 1973, p. 35, domestic operations.

1973-1976: CAB, *Air Carrier Traffic Statistics*, Dec. 1974 and Dec. 1976, Part III, sheet 1, line 13.

Oil Pipeline:

1966-1976: ICC, *91st Annual Report of the ICC*, 1977, p. 139, Table 3 and equivalent tables in earlier editions.

Class I Rail:

1966-1976: AAR, *Statistics of Railroads of Class I*, December 1977, p. 5, line 50.

Motor Vehicles:

1966-1976: ICC, *91st Annual Report of the ICC*, 1977, p. 139, Table 3 and equivalent tables in earlier editions.

Water Transport:

Inland Waterways, including Great Lakes:

1966-1976: *Ibid.*, p. 139, Table 3, and equivalent tables in earlier editions.

Total Domestic Waterways:

1966-1976: U.S. Army Corps of Engineers. *Waterborne Commerce of the U.S.*, 1976, Part 5, Section 3, p. 93, Table 4, and equivalent tables in earlier editions.

Table 8. Basic Intercity Mileage Within the Continental United States, 1966-1976

Railroads, All Line Haul:

1966-1975: AAR, *Yearbook of Railroad Facts*, 1977 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.

Table 9. Number of Vehicles, 1966-1976 (cont.)

Class I Rail:

Freight Cars:

1966-1976: AAR, *Statistics of Railroads of Class I*, December 1977, p. 9, line 14.

Locomotives:

1966-1976: AAR, *Statistics of Railroads of Class I*, December 1977, p. 8, line 3.

Passenger Cars and Pullman:

1966-1976: AAR, *Statistics of Railroads of Class I*, December 1977, p. 10, line 13. Excludes Amtrak and Auto-Train data.

Amtrak:

Passenger Cars and Pullman and Locomotives:

1971-1976: AAR, *Statistics of Railroads of Class I*, Oct. 1972, Nov. 1973, Aug. 1974, July 1975, January 1977 and December 1977, p. 16. Data does not include Auto-Train passenger cars or locomotives.

Truck:

1966-1976: FHWA, *Highway Statistics*, 1976, Section 3, Table VM-1, and same table in earlier editions.

Water Transport:

Non-self-propelled Vessels and Towboats and Tugs:

1966-1975: American Waterways Operators, *Inland Waterborne Commerce Statistics*, 1969, 1975, p. 2, 3.

Steam and Motor Ships:

1966-1971: U.S. Department of Commerce, Maritime Administration, *Merchant Fleets of the World*, 1966-1972, p. 6.

1972-1974: Ibid., *Commerce News, Merchant Marine Data Sheet*, 1972-1974.

1975: Ibid., *Merchant Fleets of the World*, Dec. 1976, p. 6.

1976: Ibid., *Merchant Fleets of the World*, Dec. 1977, p. 2.

Table 10. Passenger Fatalities Per 100,000,000 Passenger Miles, 1966-1976

1966-1976: FAA, *FAA Statistical Handbook of Aviation*, 1975, 1976, Table 10.11.

Table 11. Personal Consumption Expenditures by Transportation Sector, 1966-1977

1965-1971: U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Revision of National Income and Product Accounts*, 1976, Table 2.6, lines 63-81.

1972: U.S. Department of Commerce, BEA, *Survey of Current Business*, July 1976, Vol. 56, No. 7, Table 2.6, lines 63-81.

1973-1974: Ibid., July 1977, Vol. 57, No. 7, Table 2.6.

1975-1977: Ibid., July 1978, Vol. 58, No. 7, Table 2.6.

Table 20. Fuel Consumption by Mode of Transport, 1966-1976 (cont.)

Air Carriers:

Certificated Carriers:

1965-1972: 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.

General Aviation:

1966-1972: 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: FAA, Office of Aviation Policy, personal communication.

Highway:

1966-1976: FHWA, *Highway Statistics*, Section III, 1976, Table VM-1 and same table in earlier editions.

Water Transport:

Residual and Distillate Fuel Oil:

1966-1975: Bureau of Mines, *Mineral Industry Surveys, Fuel Oil Sales-Annual*, Sept. 17, 1976, Table 2 and 3 and equivalent tables in earlier editions.

1976: U.S. Department of Energy, *Energy Data Reports, Fuel Oil Sales, Annual*, Dec. 12, 1977, Tables 2, 3.

Gasoline:

1966-1976: FHWA, *Highway Statistics*, Section I, 1976, Table MF-24 and same table in earlier editions.

Transit:

1965-1976: APTA, *Transit Fact Book*, 1976-1977 edition, Table 17.

Pipelines:

1965-1974: American Gas Association, *Gas Facts*, 1975, Table 53.

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

1976: U.S. Dept. of Energy, *Natural Gas, Annual*, 1976, Table 6.

**Automobile Operating Costs —
Basis for Estimates in Tables**

34-43

1972 Automobile Operating Costs — Basis for Estimates in Tables 35, 36 and 37

Item	Standard Size Automobile	Compact Size Automobile	Subcompact Size Automobile
Automobile Description	1972 model 4-door sedan Equipped with: V-8 engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, clock, whitewall tires, and body protective molding. Purchase price \$4,379.	1972 model 2-door sedan Equipped with: 6-cylinder engine, automatic transmission, power steering, radio, and body protective molding. Purchase price \$2,696.	1972 model 2-door sedan Equipped with: standard equipment plus radio and body protective molding. Purchase price \$2,064.
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 filters; minor repairs such as brake jobs, water pump, carburetor overhaul and universal joints; and major repairs such as a complete "valve job".		
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 \$2.00 per year was assumed.		
Gasoline	Consumption rate of 13.60 miles per gallon was used.	Consumption rate of 15.97 miles per gallon was used.	Consumption rate of 21.43 miles per gallon was used.
Oil	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 186 gallons of gasoline.	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 166 gallons of gasoline.	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 135 gallons of gasoline.
Insurance	Coverage includes \$50,000 combined public liability (\$15,000/\$30,000 bodily injury, and \$5,000 property damage), \$1,000 medical payments, 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 \$10.00 for garage rental or indirect cost of the owners garaging facility; plus parking fee average of \$54.00 per year, and toll average of \$6.94 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 (7 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 1972.

1976 Automobile Operating Costs — Basis for Estimates in Tables 41, 42 and 43

Item	Standard Size Automobile	Compact Size Automobile	Subcompact Size Automobile
Automobile Description	1976 model 4-door sedan Equipped with: V-8 engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, clock, white stripe radial tires, wheel covers, remote control left-hand mirror, and body protective moulding. Purchase price — \$4,899.	1976 model 2-door sedan Equipped with: 6 cylinder engine, automatic transmission, power steering and brakes, radio, vinyl top, wheel covers, tinted glass, remote control left-hand mirror and body protective moulding. Purchase price — \$3,865.	1976 model 2-door sedan Equipped with: standard equipment plus radio, wheel covers, and body protective moulding. Purchase price — \$3,224.
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 1976 parts prices and a \$13.50 per hour labor rate.		
Replacement Tires	It was assumed that 3 new regular tires and 4 new snow tires would be purchased during the lives of the standard and subcompact size cars, and 7 new regular tires and 4 new snow tires would be purchased during the life of the compact car.		
Accessories	It was assumed that extra wheels and floor mats would be purchased the first year, seat covers the sixth year, and miscellaneous items totalling \$2.65 each year.		
Gasoline	Consumption rate of 15 miles per gallon and a gasoline price of 60.9 cents per gallon including taxes were used.	Consumption rate of 21 miles per gallon and a gasoline price of 60.9 cents per gallon including taxes were used.	Consumption rate of 29 miles per gallon and a gasoline price of 60.9 cents per gallon including taxes were used.
Oil	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 167 gallons of gasoline. A price of \$1.06 per quart was used.	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 119 gallons of gasoline. A price of \$1.06 per quart was used.	Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 95 gallons of gasoline. A price of \$1.06 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 \$12.00 for garage rental or indirect cost of the owner's garaging facility, and a toll average of \$6.88 per year; plus parking fee averages of \$70.00 per year for standard size cars, and \$60.00 per year for compact and subcompact size cars. Parking fee and toll fee averages 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), sales tax (4 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

INTERNATIONAL OPERATIONS:

Operations outside the territory of the United States, including operations between the United States and foreign countries and between the United States and its territories and possessions. Includes both the combination passenger/cargo carriers and the all-cargo carriers engaged in international and territorial operations.

NONOPERATING INCOME AND EXPENSES:

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

NONREVENUE FLIGHTS:

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

NONSCHEDULED FREIGHT:

Property carried in charter operations.

NONSCHEDULED SERVICE:

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

OPERATING EXPENSES:

Expenses incurred in the performance of air transportation. Includes direct aircraft operating expenses and ground and indirect operating expenses.

OPERATING REVENUES:

Includes revenues from the performance of air transportation and transport related activities. See "Transport Related Revenues."

OTHER TRANSPORT REVENUES:

Miscellaneous revenues associated with the 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.

SUPPLEMENTAL AIR CARRIER:

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

TRANSPORT RELATED EXPENSES:

Expenses from services related to air transportation such as in-flight sales of liquor, food and other items: ground, restaurant and food services, rental expense as lessor, interchange sales, general service sales, mutual aid, substitute service and air cargo service (other than actual air movement).

TRANSPORT RELATED REVENUES:

Revenues from services related to air transportation such as enumerated above "Transportation Related Expenses."

TRANSPORT REVENUES:

Revenues from transportation by air of all classes of traffic in scheduled and nonscheduled service, including the performance of charters.

HIGHWAY TERMINOLOGY

FEDERAL EXPENDITURES:

Intergovernmental payments to the States, 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 a secondary system.

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.

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. Total vehicle-miles, thus, gives 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.

ICC-REGULATED CARRIER:

A motor common carrier operating in interstate commerce under a grant of authority from the Interstate Commerce Commission and subject to its economic regulation.

NON-ICC-REGULATED CARRIER:

A motor carrier not subject to the economic regulation of the ICC. The category includes intrastate carriers, private carriers hauling only the goods of their owners, and carriers of commodities, the transportation of which is exempt from ICC economic regulation.

OPERATING EXPENSES:

This includes expenditures for equipment maintenance, supervision, wages, fuel, equipment rental, terminal operations, insurance, safety, and administrative and general functions.

OPERATING REVENUES OF CLASS I INTERCITY MOTOR CARRIERS:

This term is defined by the ICC to include the five categories of revenue listed in the text.

REVENUE:

The total amounts received by carriers for transportation and other services.

WATER TRANSPORT TERMINOLOGY

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.

CLASS B CARRIERS BY INLAND AND COASTAL WATERWAYS:

A class B carrier by water is one with an average annual operating revenue greater than \$100,000 but less than \$500,000.

COASTWISE TRAFFIC:

Domestic traffic is coastwise when it moves over the ocean, or the Gulf of Mexico; e.g., between New Orleans and Baltimore, New York and Puerto Rico, San Francisco and Hawaii, Puerto Rico and Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also deemed to be coastwise. The Chesapeake Bay and Puget Sound are considered internal bodies of water rather than arms of the ocean; traffic confined to these areas is deemed to be "internal" rather than coastwise.

DOMESTIC FREIGHT:

All waterborne commercial movements between points in the United States, Puerto Rico and the Virgin Islands, excluding traffic with the Panama Canal Zone. Cargo moved for the military in commercial vessels is reported as ordinary commercial cargo; military cargo moved in military vessels is omitted.

DOMESTIC PASSENGER:

Any person traveling on a public conveyance by water between points in the United States, Puerto Rico, and the Virgin Islands.

DRY CARGO BARGES:

Large flat-bottomed, non-self-propelled vessels used to transport dry bulk materials such as coal and ore.

EXPORTS:

Outbound international freight including re-export of foreign merchandise.

IMPORTS:

Inbound international freight.

INLAND AND COASTAL WATERWAYS

INLAND AND COASTAL CHANNELS:

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

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.

TON-MILE:

Moving 1 ton 1 mile generates 1 ton-mile.

TON-MILE, DOMESTIC DEEP SEA:

Moving 1 ton 1 mile by a domestic water carrier over open ocean generates 1 domestic deep-sea ton-mile.

TONS OF FREIGHT HAULED:

The figures for tons of freight hauled on domestic waterways include exports and imports.

TUG:

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

RAILROAD TERMINOLOGY

AVERAGE HAUL:

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

AVERAGE PASSENGER TRIP LENGTH:

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

CAR MILEAGE:

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

CLASS I RAILROAD:

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

COMMUTATION TICKET:

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

EXPRESS REVENUE:

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

REVENUE PASSENGERS CARRIED — OTHER THAN COMMUTATION:

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

REVENUE PASSENGER-MILE:

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

REVENUE TON-MILES:

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

TOTAL OPERATING REVENUES:

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

OIL PIPELINE TERMINOLOGY

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.

NON-REGULATED PIPELINE:

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

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.

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.

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