Section 22

Transportation—Air and Water

This section presents data on civil air transportation, both passenger and cargo, and on water transportation, including inland waterways, oceanborne commerce, the merchant marine, cargo and vessel tonnages, and shipbuilding. Comparative data on various types of transportation carriers are presented in Section 21, Land Transportation.

Principal sources of these data are the annual National Transportation Statistics, issued by the U.S. Bureau of Transportation Statistics; the Annual Report issued by the Air Transport Association of America, Washington, DC; and the annual Waterborne Commerce of the United States issued by the Corps of Engineers of the Department of the Army. In addition, the U.S. Census Bureau in its commodity transportation survey (part of the census of transportation, taken every 5 years through 1992, for years ending in "2" and "7") provides data on the type, weight, and value of commodities shipped by manufacturing establishments in the United States, by means of transportation, origin, and destination. See text. Section 17. Business, for a discussion of the 1997 Economic Census. See also Section 32.

Additional sources of data on water transportation include *Merchant Fleets of the World*, issued periodically by the U.S. Maritime Administration; *The Bulletin*, issued monthly by the American Bureau of Shipping, New York, NY; and the annual *World Fleet Statistics* and the *Register Book*, published by Lloyd's Register of Shipping, London, England.

Civil aviation—Federal promotion and regulation of civil aviation have been carried out by the FAA and the Civil Aeronautics Board (CAB). The CAB promoted and regulated the civil air transportation industry within the United States and between the United States and foreign countries.

The Board granted licenses to provide air transportation service, approved or disapproved proposed rates and fares, and approved or disapproved proposed agreements and corporate relationships involving air carriers. In December 1984, the CAB ceased to exist as an agency. Some of its functions were transferred to the Department of Transportation (DOT), as outlined below. The responsibility for investigation of aviation accidents resides with the National Transportation Safety Board.

The Office of the Secretary, DOT aviation activities include: negotiation of international air transportation rights, selection of U.S. air carriers to serve capacity controlled international markets, oversight of international rates and fares, maintenance of essential air service to small communities, and consumer affairs. DOT's Bureau of Transportation Statistics (BTS) handles aviation information functions formerly assigned to CAB. Prior to BTS, the Research and Special Programs Administration handled these functions.

The principal activities of the FAA include: the promotion of air safety; controlling the use of navigable airspace; prescribing regulations dealing with the competency of airmen, airworthiness of aircraft and air traffic control; operation of air route traffic control centers, airport traffic control towers, and flight service stations; the design, construction, maintenance, and inspection of navigation, traffic control, and communications equipment; and the development of general aviation.

The CAB published monthly and quarterly financial and traffic statistical data for the certificated route air carriers. BTS continues these publications, including both certificated and noncertificated (commuter) air carriers. The FAA publishes annually data on the use of airway facilities; data related to the location of airmen, aircraft, and

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airports; the volume of activity in the field of nonair carrier (general aviation) flying; and aircraft production and registration.

General aviation comprises all civil flying (including such commercial operations as small demand air taxis, agriculture application, powerline patrol, etc.) but excludes certificated route air carriers, supplemental operators, large-aircraft commercial operators, and commuter airlines.

Air carriers and service—The CAB previously issued "certificates of public convenience and necessity" under Section 401 of the Federal Aviation Act of 1958 for scheduled and nonscheduled (charter) passenger services and cargo services. It also issued certificates under Section 418 of the Act to cargo air carriers for domestic all-cargo service only. The DOT Office of the Secretary now issues the certificates under a "fit, willing, and able" test of air carrier operations. Carriers operating only a 60-seat-orless aircraft are given exemption authority to carry passengers, cargo, and mail in scheduled and nonscheduled service under Part 298 of the DOT (formerly CAB) regulations. Exemption authority carriers who offer scheduled passenger service to an essential air service point must meet the "fit, willing, and able" test.

Vessel shipments, entrances, and clearances—Shipments by dry cargo vessels comprise shipments on all types of watercraft, except tanker vessels; shipments by tanker vessels comprise all types of cargo, liquid and dry, carried by tanker vessels.

A vessel is reported as entered only at the first port which it enters in the United States, whether or not cargo is unloaded at that port. A vessel is reported as cleared only at the last port at which clearance is made to a foreign port, whether or not it takes on cargo. Army and Navy vessels entering or clearing without commercial cargo are not included in the figures.

Units of measurement—Cargo (or freight) tonnage and shipping weight both represent the gross weight of the cargo including the weight of containers, wrappings, crates, etc. However, shipping weight excludes lift and cargo vans and similar substantial outer containers. Other tonnage figures generally refer to stowing capacity of vessels, 100 cubic feet being called 1 ton. Gross tonnage comprises the space within the frames and the ceiling of the hull, together with those closed-in spaces above deck available for cargo, stores, passengers, or crew, with certain minor exceptions. Net or registered tonnage is the gross tonnage less the spaces occupied by the propelling machinery, fuel, crew quarters, master's cabin, and navigation spaces. Substantially, it represents space available for cargo and passengers. The net tonnage capacity of a ship may bear little relation to weight of cargo. Deadweight tonnage is the weight in long tons required to depress a vessel from light water line (that is, with only the machinery and equipment on board) to load line. It is, therefore, the weight of the cargo, fuel, etc., which a vessel is designed to carry with safety.

No. 1066. Air and Water Transportation Industries—Summary: 1992 and 1997

[For establishments with payroll. (10,405 represents \$10,405,000,000). See Table 865 in Section 17, Business, for more comparative economic census data]

Industry	1987 SIC code 1	Establish- ments	Revenue (mil. dol.)	Annual payroll (mil. dol.)	Paid employees ² (1,000)
1997 ECONOMIC CENSUS DATA					
Air transportation: ³	45	11,445	47,387	10,405	362
Water transportation: 1997		9,214 8,147	35,179 29,207	6,330 5,170	179 171
Air transportation ⁴	45	(NA)	82,670	24,530	707
courier services ⁴ . Scheduled and air courier services ⁴ . Scheduled ⁴ Air courier services. Nonscheduled. Airport terminal services.	4512 4513 452	(NA) (NA) (NA) 2,639 1,791 3,252	76,503 73,070 62,057 11,013 3,433 6,168	22,734 22,026 19,090 2,935 708 1,796	627 604 505 99 23 80
Water transportation. Water transportation of freight Deep sea foreign and domestic freight Other water transportation of freight Great Lakes-St. Lawrence Seaway freight Water transportation of freight, n.e.c. 5 Water transportation of passengers Ferries. Water transportation of passengers except by	441,2,3,4 441, 2 443,4 4432 4449 448	8,147 836 615 221 26 195 1,033 118	29,207 14,704 11,948 2,756 559 2,197 4,133 155	5,170 1,523 1,148 375 81 293 508 51	171 37 27 10 1 9 23
Water transportation of passengers, except by ferry. Services incidental to water transportation. Marinas. Other services incidental to water transportation	449 4493	915 6,278 3,348 2,930	3,978 10,370 1,651 8,719	457 3,140 346 2,794	22 111 18 93

NA Not available. 1 1987 Standard Industrial Classification code; see text, Section 17, Business. 2 For the pay period including March 12. 3 Excludes large certificated air passenger carriers which are out of scope for the 1997 Economic Census. Comparable data for 1992 are not available. 4 Revenue for scheduled air transportation includes revenues for large certificated passenger carriers that was reported to the Office of Airline Statistics, U.S. Dept. of Transportation, as published in Air Carrier Financial Statistics Quarterly. 5 N.e.c. means not elsewhere classified.

Source: U.S. Census Bureau, Census of Transportation, Communications, and Utilities: 1992, UC92-A-1 and 1997 Economic Census, Core Business Statistics, Comparative Statistics Series, EC97X-CS2.

No. 1067. U.S. Scheduled Airline Industry—Summary: 1990 to 1998

[For calendar years or Dec. 31 (465.6 represents 465,600,000). For domestic and international operations. Covers carriers certificated under Section 401 of the Federal Aviation Act. Minus sign (-) indicates loss]

Item	Unit	1990	1992	1993	1994	1995	1996	1997	1998
SCHEDULED SERVICE									
Revenue passengers enplaned .	Mil	465.6	475.1	488.5	528.8	547.8	581.2	599.1	614.2
Revenue passenger miles	Bil	457.9	478.6	489.7	519.4	540.7	578.7	605.6	619.5
Available seat miles	Bil	733.4	752.8	771.6	784.3	807.1	835.1	860.8	874.2
Revenue passenger load factor .	Percent .	62.4	63.6	63.5	66.2	67.0	69.3	70.3	70.9
Mean passenger trip length ¹	Miles	984	1,007	1,002	982	987	996	1,011	1,009
Freight and express ton miles	Mil	10,546	11,130	11,944	13,792	14,578	15,301	17,959	18,116
Aircraft departures	1,000	6,924	7,051	7,245	7,531	8,062	8,230	8,192	8,309
Total operating revenue ²	Mil. dol	76,142	78,140	84,559	88,313	94,578	101,938	109,568	113,346
Passenger revenue Freight and express revenue	Mil. dol	58,453	59,828	63,945	65,422	69,594	75,286	79,471	80,986
	Mil. dol	5,432	5,916	6,662	7,284	8,616	9,679	10,477	10,651
	Mil. dol	970	1,184	1,212	1,183	1,266	1,279	1,362	1,690
	Mil. dol	2,877	2,801	3,082	3,548	3,485	3,447	3,575	3,811
Total operating expense Operating profit	Mil. dol	78,054	80,585	83,121	85,600	88,718	95,729	100,982	104,034
	Mil. dol	-1,912	-2,444	1,438	2,713	5,860	6,209	8,586	9,312
	Mil. dol	1,978	1,743	2,027	2,347	2,424	1,981	1,733	1,826
	Mil. dol	-3,921	-4,791	-2,136	-344	2,314	2,804	5,170	4,894
Revenue per passenger mile Rate of return on investment Operating profit margin	Cents	12.8	12.5	13.1	12.6	12.9	13.0	13.1	13.1
	Percent .	-6.0	-9.3	-0.4	5.2	11.9	11.5	14.7	12.0
	Percent .	-2.5	-3.1	1.7	3.1	6.2	6.1	7.8	8.2
	Percent .	-5.1	-6.1	-2.5	-0.4	2.4	2.8	4.7	4.3
Total Pilots and copilots. Other flight personnel. Flight attendants Mechanics Aircraft and traffic	1,000	545.8	540.4	537.1	539.8	547.0	564.4	586.5	621.1
	1,000	47.1	51.1	52.1	52.9	55.4	57.6	60.4	64.1
	1,000	8.9	8.2	8.1	7.7	8.6	8.9	10.7	11.1
	1,000	83.4	86.3	85.0	86.5	86.7	89.1	96.2	97.6
	1,000	61.0	58.6	57.5	55.8	50.5	50.8	65.5	69.9
servicing personnel	1,000	251.2	243.1	242.8	247.2	251.1	266.5	269.6	290.1
	1,000	94.2	93.2	91.7	89.7	94.8	91.6	84.1	88.3

¹ For definition of mean, see Guide to Tabular Presentation. ² Includes other types of revenues, not shown separately. ³ Average number of full time equivalents.

Source: Air Transport Association of America, Washington, DC, Air Transport, annual, and Air Transport, Facts and Figures, annual

No. 1068. Airline Cost Indexes: 1980 to 1998

[Covers U.S. major and national service carriers. Major carriers have operating revenues of \$1 billion or more; nationals have operating revenues from \$75 million to \$1 billion]

Index	Index (1982=100)									Percent distribution of total operating expenses 1			
	1980	1985	1990	1994	1995	1996	1997	1998	1980	1990	1995	1998	
Composite index Labor costs:	86.8	102.8	122.6	129.9	131.3	136.6	137.4	134.8	100.0	100.0	100.0	100.0	
Passenger carriers	85.8	110.5	121.7	148.7	155.7	159.4	163.0	164.5	35.2	31.6	35.5	35.5	
Cargo carriers	78.3	116.0	148.8	145.4	151.7	159.6	156.0	159.1	27.3	30.0	40.0	31.1	
Fuel	89.7	79.6	77.2	54.4	55.3	64.6	62.5	49.4	30.0	17.3	12.0	9.9	
Aircraft fleet 2 3	88.1	123.7	177.0	217.5	222.8	230.3	223.4	228.2	5.2	7.9	9.7	9.2	
Interest ^{2 4}	88.1	98.0	96.0	87.6	93.5	86.9	72.1	67.4	3.2	2.6	3.1	1.8	
Insurance	80.4	155.3	68.2	110.8	111.6	111.5	96.0	64.5	0.3	0.3	0.8	0.4	
Maintenance material	104.9	119.9	190.5	157.2	153.4	169.4	191.0	201.2	2.5	3.4	2.8	3.4	
Landing fee	87.2	99.9	139.0	171.6	176.6	181.5	184.0	177.4	1.7	1.8	2.2	1.9	
Traffic commissions 2	75.4	112.9	169.2	163.3	139.4	130.7	126.9	113.0	4.9	9.4	8.6	6.9	
Communication 2	65.8	96.6	111.2	118.2	116.0	114.8	110.4	119.0	1.1	1.4	1.6	1.5	
Advertising and promotion 2	67.1	96.2	97.8	69.7	63.6	58.4	54.7	59.2	1.6	2.0	1.5	1.4	
Passenger food 2	90.6	98.9	128.4	120.6	110.9	104.0	102.8	105.2	2.9	3.5	3.4	3.2	
All other	86.3	111.3	130.6	144.5	147.6	150.4	152.9	154.7	11.8	19.1	22.7	25.8	

¹ Total operating expenses plus interest on long term debt, less depreciation and amortization. ² Passenger airlines only. Total operating expenses plus interest on long term door, not occurred.

Includes lease, aircraft and engine rentals, depreciation and amortization.

Interest on debt.

Source: Air Transport Association of America, Washington, DC, Air Transport, annual; and unpublished data.

No. 1069. Top 40 Airports in 1998—Passengers Enplaned: 1988 and 1998

[In thousands (421,683 represents 421,683,000), except rank. For calendar year. Airports ranked by total passengers enplaned by large certificated air carriers, 1998]

A imp a ut	198	В	199	8	A i ma a mt	198	8	199	8
Airport	Total	Rank	Total	Rank	Airport	Total	Total Rank		Rank
All airports, total	421,683	(X)	571,834	(X)	Philadelphia, PA	6,637	23	10,279	19
Top 40 airports		(X)	456,887	(X)	Charlotte (Douglas Munici-				
Atlanta (Hartsfield Intl), GA.		2	34,945	1	pal), NC <u>.</u>	6,620	24	10,238	20
Chicago (O'Hare), IL		1	32,565	2	New York (John F.		_		
Dallas/Ft. Worth, TX	21,014	3	27,718	3	Kennedy), NY	10,660	9	9,927	21
Los Angeles, CA	18,643	4	22,747	4	Salt Lake City, UT	4,730	26	9,088	22
Denver, CO	14,442	5 6	16,837	5	Pittsburgh, PA	8,379	16	8,957	23
San Francisco, CA	13,348	ь	16,657	6	Honolulu, HI	8,396 3,543	15 35	8,598	24 25
Detroit (Wayne County),	9.214	14	15,110	7	Cincinnati, OH	7,259	19	7,770 7,041	25 26
MI	9,214	14	15,110	'	Washington (National), DC.	5,181	25	6,959	27
AZ	9.455	13	15.034	8	San Diego, CA	4.370	30	6.828	28
Newark, NJ	10,838	8	14,552	9	Tampa, FL	4,495	28	6.241	29
St. Louis (Lambert-St	10,030	0	14,552	9	Portland, OR	2.823	39	6.180	30
Louis), MO	9.554	11	14.212	10	Cleveland, OH	3.547	34	5.686	31
Las Vegas (McCarran Intl),	3,554		17,212	10	Ft. Lauderdale, FL	3.899	32	5,474	32
NV	6.865	21	14.017	11	Washington (Dulles Intl),	0,000	02	0,474	02
Minneapolis/St. Paul, MN	8,171	17	13,901	12	DC	4.327	31	5,357	33
Houston (Intercontinental),	0,	• • •	.0,00.		Kansas City, MO	4.470	29	5.279	34
TX	6.872	20	13.783	13	Chicago (Midway), IL	3,174	38	5.024	35
Miami, FL		12	12,469	14	San Jose, CA	2,774	40	4,992	36
Seattle-Tacoma, WA		22	12,228	15	San Juan PR	3,264	36	4,411	37
Orlando, FL	7,473	18	11,862	16	Oakland, CA	1,826	41	4,410	38
Boston (Logan Intl), MA	10,141	10	10,637	17	New Orleans, LA	3,200	37	4,353	39
New York (La Guardia),	l '		'		Houston (William P.	,		''''	
NY	11,322	7	10,338	18	Hobby), TX	3,840	33	4,183	40

X Not applicable.

No. 1070. Domestic Airline Markets: 1998

[In thousands. (3,625 represents 3,625,000). For calendar year. Data are for the 30 top markets and include all commercial airports in each metro area. Data do not include connecting passengers]

Market	Passengers	Market	Passengers
New York to—from Los Angeles New York to—from Chicago New York to—from Miami New York to—from San Francisco New York to—from Boston	2,834 2,683 2,651	New York to—from West Palm Beach	1,637 1,560 1,467 1,467 1,459
Honolulu to—from Kahului, Maui New York to—from Orlando New York to—from Atlanta New York to—from Washington Dallas/Ft. Worth to—from Houston Los Angeles to—from Las Vegas Los Angeles to—from Ft. Lauderdale New York to—from Ft. Lauderdale	2,541 2,521 2,377 2,372 2,213 2,055 2,020 1,808		1,458 1,457 1,344 1,340 1,335 1,329 1,278 1,246
New York to—from San Juan Chicago to—from Los Angeles	1,798 1,680	New York to—from Detroit Chicago to—from San Francisco	1,229 1,193

Source: Air Transport Association of America, Washington, DC, Air Transport 1999.

A Not applicable.

Source: U.S. Bureau of Transportation Statistics, Office of Airline Information, Airport Activity Statistics of Certificates Route Air Carriers, Calendar Year 1998 and the Federal Aviation Administration, Airport Activity Statistics, 1988.

No. 1071. Worldwide Airline Fatalities: 1987 to 1999

[For scheduled air transport operations]

Year	Fatal accidents	Passenger deaths	Death rate 1	Death rate ²	Year	Fatal accidents	Passenger deaths	Death rate 1	Death rate 2
1987	25 29 29 27 29 28 33	900 742 879 544 638 1,076 864	0.09 0.07 0.08 0.05 0.06 0.09	0.06 0.04 0.05 0.03 0.03 0.06	1994 1995 1996 1997 1998	27 25 24 26 20 20	1,171 711 1,146 929 904 489	0.09 0.05 0.07 0.06 0.05 0.03	0.06 0.03 0.05 0.04 0.03 0.02

¹ Rate per 100 million passenger miles flown. ² Rate per 100 million passenger kilometers flown. Source: International Civil Aviation Organization, Montreal, Canada, Civil Aviation Statistics of the World, annual.

No. 1072. Airline Passenger Screening Results: 1980 to 1998

[Calendar year data (585 represents 585,000,000)]

Item	1980	1985	1990	1995	1996	1997	1998
Persons screened (mil.)	585	993	1,145	1,263	1,497	1,660	1,903
WEAPONS DETECTED							
Firearms, total Handguns Long guns Other/other dangerous articles Explosive/incendiary devices Persons arrested:	1,914	2,913	2,549	2,390	2,155	2,067	1,515
	1,878	2,823	2,490	2,230	1,999	1,905	1,401
	36	90	59	160	156	162	114
	108	74	304	(X)	(X)	(X)	(X)
	8	12	15	(X)	(X)	(X)	(X)
Carrying firearms/explosives	1,031	1,310	1,336	1,194	999	924	660
	32	42	18	68	131	72	86
Against airports	1,179	477	448	346	(X)	(NA)	(NA)
	268	153	338	327	(X)	(NA)	(NA)

NA Not available. X Not applicable.

No. 1073. Aircraft Accidents: 1982 to 1999

[For years ending December 31]

Item	Unit	1982	1985	1990	1995	1997	1998	1999, prel.
Air carrier accidents, all services 1	Number	18	21	24	36	49	50	52
Fatal accidents	Number	5	7	6	3	4	1	2
Fatalities	Number	235	526	39	168	8	1	12
Aboard	Number	223	525	12	162	6	-	11
Rates per 100,000 flight hours:								
Accidents	Rate	0.241	0.241	0.198	0.267	0.309	0.297	0.298
Fatal accidents	Rate	0.057	0.080	0.049	0.022	0.025	0.006	0.011
Fatal accidents	Number	26	18	15	12	16	8	13
Fatal accidents	Number	5	7	4	2	5	-	5
Fatalities	Number	14	37	7	9	46	-	12
Aboard	Number	14	36	5	9	46	-	12
Rates per 100,000 flight hours:								
Accidents	Rate	2.000	1.036	0.641	0.457	1.628	2.261	4.833
Fatal accidents	Rate	0.385	0.403	0.171	0.076	0.509	-	1.859
Fatal accidents On-demand air taxi accidents ³	Number	132	157	107	75	82	77	76
Fatal accidents	Number	31	35	29	24	15	18	12
Fatalities	Number	72	76	51	52	39	48	38
Aboard	Number	72	75	49	52	39	44	38
Rates per 100,000 flight hours:								
Accidents	Rate	4.39	6.11	4.76	4.39	3.64	3.03	2.71
Fatal accidents	Rate	1.03	1.36	1.29	1.41	0.67	0.71	0.43
Fatal accidents	Number	3,233	2,739	2,215	2,053	1,853	1,909	1,908
Fatal accidents	Number	591	498	443	412	353	365	342
Fatalities	Number	1,187	956	767	734	643	623	628
Aboard	Number	1,170	945	762	727	637	617	622
Rates per 100,000 flight hours:								
Accidents		10.90	9.66	7.77	8.23	7.28	7.12	7.05
Fatal accidents	Rate	1.99	1.75	1.55	1.64	1.39	1.36	1.26

⁻ Represents zero. ¹ U.S. air carriers operating under 14 CFR 121. Beginning 1997, includes aircraft with 10 or more seats, previously operating under 14 CFR 135. All scheduled set 1997, only aircraft with fewer than 10 seats. All scheduled service of U.S. air carriers operating under 14 CFR 135. Beginning ³ All nonscheduled service of U.S. air carriers operating under 14 CFR 135. ⁴ U.S.

Source: U.S. Bureau of Transportation Statistics, National Transportation Statistics, 1999, Internet site http://www.bts.gov/ntda/nts/NTS99/ch3index.html (accessed 14 August 2000).

Source: U.S. National Transportation Safety Board, Internet site http://www.ntsb.gov/aviation/stats.htm (accessed 14 August 2000).

No. 1074. On-Time Flight Arrivals and Departures at Major U.S. Airports: 1999

[In percent. Quarterly, based on gate arrival and departure times for domestic scheduled operations of U.S. major airlines. All U.S. airlines with 1 percent or more of total U.S. domestic scheduled airline passenger revenues are required to report on-time data. A flight is considered on time if it operated less than 15 minutes after the scheduled time shown in the carrier's computerized reservation system. Cancelled and diverted flights are considered late. See source for data on individual airlines]

A import		On-time	arrivals		On-time departures				
Airport	1st. qtr.	2d. qtr.	3d. qtr.	4th. qtr.	1st. qtr.	2d. qtr.	3d. qtr.	4th. qtr.	
Total, all airports	74.81	74.26	75.47	79.81	78.41	79.62	79.80	83.08	
Total 29 major airports	74.09	73.71	74.91	79.59	76.94	78.35	78.15	82.40	
Atlanta, Hartsfield International	74.29	73.30	73.89	74.29	77.79	77.48	77.73	80.38	
	75.67	74.58	72.83	78.03	77.07	77.48	75.40	79.07	
	64.83	70.39	67.58	75.68	72.83	80.14	75.30	82.11	
	75.78	79.11	75.09	83.58	75.28	78.33	73.42	83.19	
Chicago, O'Hare Cincinnati International Dallas/Ft. Worth Regional Denver International	67.86	65.05	73.36	76.44	70.89	71.99	76.84	80.33	
	79.16	78.68	82.57	86.67	82.68	84.02	85.95	89.57	
	78.35	72.20	82.66	86.48	76.52	73.44	82.03	86.53	
	80.88	77.10	78.26	84.94	83.28	81.57	82.10	87.60	
Detroit, Metro Wayne	74.81	80.59	81.62	85.78	72.51	80.30	79.75	83.61	
Houston George Bush.	82.79	75.36	78.81	83.60	84.59	79.49	81.95	86.49	
Las Vegas, McCarran International	76.58	76.49	75.03	76.97	77.99	77.91	73.78	75.89	
Los Angeles International.	74.30	72.04	72.22	78.39	79.30	79.13	77.15	80.06	
Miami International . Minneapolis/St. Paul International	74.64 78.95 67.75 75.34	69.17 80.22 66.81 73.72	68.24 81.39 65.35 74.93	77.32 86.22 69.78 79.18	77.56 79.15 73.82 79.02	76.69 82.42 77.60 84.04	74.70 81.78 73.60 83.15	82.34 85.73 78.68 86.44	
New York, LaGuardia	67.94	68.04	65.75	72.61	75.04	79.12	75.32	80.75	
Orlando International	76.84	76.03	74.99	79.73	81.38	82.36	82.31	86.06	
Philadelphia International	66.82	67.96	65.11	73.77	66.30	72.93	68.82	77.65	
Phoenix, Sky Harbor International	76.65	76.21	73.38	80.28	77.40	76.39	72.80	77.22	
Pittsburgh, Greater International	72.31	77.21	73.74	81.61	73.13	78.62	72.92	82.22	
	76.87	77.80	78.69	79.44	84.91	84.48	85.04	84.42	
	73.37	75.03	72.78	81.85	78.29	82.80	80.54	87.49	
	75.51	77.85	84.39	85.50	75.73	77.20	82.49	85.64	
	79.77	81.72	83.09	85.27	84.70	85.96	85.55	86.93	
San Diego International, Lindbergh	73.34	74.49	77.46	80.56	79.64	81.38	81.80	81.95	
	66.04	70.17	66.09	76.70	75.45	79.94	76.08	81.96	
	71.35	71.34	71.20	69.17	79.64	78.13	76.27	75.94	
	74.12	73.13	72.10	76.87	79.21	80.59	80.92	84.97	

Source: U.S. Department of Transportation, Office of Consumer Affairs, Air Travel Consumer Report, monthly.

No. 1075. Consumer Complaints Against U.S. Airlines: 1990 to 1999

[Calendar year data. See source for data on individual airlines]

Complaint category	1990	1992	1993	1994	1995	1996	1997	1998	1999
Total	7,703	5,639	4,438	5,179	4,629	5,782	6,394	7,980	17,381
Flight problems ¹ Customer service ² Ticketing/boarding ³ Disability ⁴ Baggage Refunds Oversales ⁵	3,034 758 624 (NA) 1,329 701 399	1,624 695 680 (NA) 752 721 265	1,211 599 577 (NA) 627 482 257	1,586 805 598 (NA) 761 393 301	1,133 667 666 (NA) 628 576 263	1,628 999 857 (NA) 882 521 353	1,699 1,418 904 (NA) 826 531 414	2,270 1,716 805 331 1,105 601 387	6,469 3,664 1,328 526 2,353 940 673
Fares ⁶	312 96 29 74 5 342	573 54 12 25 10 228	398 51 16 30 4 186	267 94 127 20 2 225	185 66 18 15 4 408	180 61 16 13 3 269	195 57 13 5 1 331	276 39 23 (⁷) (⁷) 427	584 57 28 (⁷) (⁷) 759

NA Not available.

1 Cancellations, delays, etc. from schedule.
2 Unhelpful employees, inadequate meals or cabin service, treatment of delayed passengers.
3 Errors in reservations and ticketing; problems in making reservations and obtaining tickets.
4 Prior to 1998, included in ticketing/boarding
4 All bumping problems, whether or not airline complied with DOT regulations.
5 Incorrect or incomplete information about fares, discount fare conditions, and availability, etc.
7 Included in "Other" beginning 1998.

Source: U.S. Dept. of Transportation, Office of Consumer Affairs, Air Travel Consumer Report, monthly.

No. 1076. Commuter/Regional Airline Operations—Summary: 1980 to 1998

[Calendar year data (14.8 represents 14,800,000). Commuter/regional airlines operate primarily aircraft of predominately 75 passengers or less and 18,000 pounds of payload capacity serving short haul and small community markets. Represents operations within all North America by U.S. Regional Carriers. Averages are means. For definition of mean, see Guide to Tabular Presentation]

Item	Unit	1980	1985	1990	1994	1995	1996	1997	1998
Passenger carriers operating		214 14.8	179 126.0	150 42.1	125 57.1	124 57.2	109 61.9	104 66.3	97 71.1
Average passengers enplaned per carrier	1,000	69.2	152.4	277.5	457.0	461.4	568.3	637.5	733.0
Revenue passenger miles (RPM)		1.92	¹ 4.41	7.61	12.02	12.75	14.22	15.30	17.42
Average RPMs per carrier	Millions .	8.97	¹ 24.64	50.75	96.15	102.80	130.49	147.09	179.64
Airports served		732	854	811	806	780	782	766	773
Average trip length	Miles	129	173	183	210	223	230	231	245
Passenger aircraft operated		1,339	1,745	1,917	2,172	2,138	2,127	2,104	2,150
Average seating capacity (seats)	Number.	13.9	19.2	22.1	23.7	24.6	25.1	25.9	27.7
Fleet flying hours 2	1,000	1,740	2,854	3,447	4,565	4,659	4,568	4,695	4,631
Average annual utilization per aircraft	Hours	1,299	1,635	1,798	2,102	2,179	2,148	2,231	2,154

¹ Adjusted to exclude a merger in 1986. ² Prior to 1994, utilization results reflected airborne rather than block hours. Data inclusive of carriers which may have operated during only part of calendar year 1996.

No. 1077. Civil Flying—Summary: 1970 to 1997

[As of Dec. 31 or for years ending Dec. 31, except as noted (50.5 represents \$50,500,000)]

Item	Unit	1970	1980	1985	1990	1995	1996	1997
Airports in operation ¹	Number	11.261	15.161	16.318	17.490	18.224	18.292	18.345
Heliports	Number	790	2.336	3,120	4.085	4.559	4.596	4,626
Private	Number	7.001	10,347	10,457	12,412	13.092	13,163	13,211
Airports with runway lights	Number	3,554	4.738	4,941	4.822	4.838	4.847	4.832
Airports with paved runways		3.805	5.833	6.721	7.694	8.195	8,218	8,248
Airport Improvement Program 2	Mil. dol	50.5	639.0	842.1	1,244.7	1.418.1	1,379.9	1,475.9
Total civil aircraft	1.000	154.5	259.4	274.9	275.9	(NA)	(NA)	(NA)
Active aircraft ³	1,000	134.5	214.8	215.4	218.9	195.5	198.6	200.0
Active aircraft ³	1.000	2.8	3.8	4.7	6.7	7.4	7.5	7.6
General aviation aircraft 5	1.000	131.7	211.0	210.7	212.2	188.1	191.1	192.4
Fixed-wing aircraft: Multi-engine		18.4	31.7	33.6	32.7	24.6	25.6	26.2
Single-engine		109.5	168.4	164.4	165.1	137.7	138.1	140.7
Rotorcraft 6	1.000	2.2	6.0	6.4	7.4	5.8	6.6	6.8
Balloons, blimps, gliders, etc		1.6	5.0	6.3	7.0	4.7	4.2	4.1
Airman certificates held		1.002	1.195	1.105	1,195	1.290	1.157	1.157
Pilot 7		733	827	710	703	639	622	616
Held by women		4.0	6.4	6.1	5.8	6.0	5.9	5.8
Airline transport	1 000	34	70	83	108	124	127	131
Commercial		187	183	152	149	134	129	125
Private		304	357	311	299	261	254	248
Student		196	200	147	128	101	95	96
		269	368	395	492	651	534	541
Nonpilot ⁸	1.000	241	321	341	421	574	459	464
FAA employees: Total	Number	53.125	55.340	47.245	51.269	48.324	48.618	49.531
FAA employees: Total Air traffic control specialists 10	Number	(NA)	27,190	23,580	24,339	23,208	22,823	22,985
Full performance 11	Number	(NA)	16.317	11.672	12,985	14,845	15.799	14,630
Developmental 11	Number	(NA)	4.387	4.304	5.042	2.272	1.999	2.312
Assistants 11	Number	(X)	(X)	1,465	1,153	355	335	319
Assistants ¹¹	Number	(X)	ίχί	(X)	370	561	542	584
Electronic technicians/ATSS 13	Number	(NA)	8.871	6.856	6,458	6.749	6.927	7.021
Aviation safety inspectors		(NA)	2.038	1.897	2.984	2,991	3.265	3,577
Engineers		(NA)	2,436	2.457	2,745	2.810	2.860	2.860
Other	Number	(NA)	14,805	12,455	14,743	12,566	12,743	13,088
General aviation: 5								
Hours flown	Million	26.0	41.0	34.1	34.8	26.6	26.9	27.7
	Mil. gal	362	520	420	353	287	289	292
Jet fuel 15	Mil. gal	415	766	691	663	560	608	642

NA Not available. X Not applicable. ¹ Existing airports, heliports, seaplane bases, etc. recorded with FAA. Includes military airports with joint civil and military use. Includes U.S. outlying areas. Airport-type definitions: Public—publicly owned and under control of a public agency, private—owned by a private individual or corporation. May or may not be open for public use. Fiscal year data. Does not include System Planning Grants. Includes U.S. outlying areas. 1970-1980 data are obligated Federal funds for the Airport Development Aid Program. Thereafter, data are appropriated Federal funds under the Airport and Airway Improvement Act of 1982. ³ Registered aircraft that flew 1 or more hours during the year. ⁴ Includes helicopters. ⁵ See text, this Section. Beginning 1995, excludes commuters and includes experimental aircraft, not shown separately. Prior to 1995, experimental aircraft were included in the appropriate type. Data beginning 1995 may not be comparable to data for earlier years due to revisions in survey procedures. ⁶ Includes autogyros; excludes air carrier helicopters. ㆍ Încludes all active pilots. An active pilot is one with a pilot certificate and a valid medical certificate. Also includes pilots who hold a recreational certificate or only enachute riggers, ground instructors, and dispatchers are limited to those ages 70 years and less. ⁶ No medical examinations are required, therefore, data represent all certificates on record and include retired or otherwise inactive technicians. See footnote 8. ¹¹ Includes all air traffic control specialists (staff positions, managers, supervisors, and for 1970-1985 traffic management coordinators, not shown separately) and air traffic assistants. ¹¹ Serving in-flight service stations, towers, and centers. ¹² Prior to 1990, included in total air traffic control specialists. ¹³ Airway Transportation Systems Specialists Source: 1970, U.S. Bureau of Mines; thereafter, FAA General Aviation Activity and Avionics Survey, Data for 1996 are estimated using new infor

Source: Regional Airline Association and AvStat Associates, Washington, DC, Annual Report of the Regional Airline Industry (copyright).

Source: Except as noted, U.S. Federal Aviation Administration, FAA Statistical Handbook of Aviation, annual, last published in 1993. Internet site http://www.api.faa.gov/handbook96/toc96.htm; and unpublished data.

No. 1078. Net Orders for U.S. Civil Jet Transport Aircraft: 1985 to 1999

[1985 and 1990 are net new firm orders; beginning beginning 1994, net announced orders. Minus sign (-) indicates net cancellations. In 1997 Boeing acquired McDonnell Douglas]

Type of aircraft and customer	1985	1990	1994	1995	1996	1997	1998	1999
Total number ¹	468	670	79	421	595	501	601	346
U.S. customers	242	259	12	138	408	258	392	192
Foreign customers	226	411	67	283	187	243	209	70
McDonnell Douglas MD-11, total	-	52	2	-6	9	11	12	-
U.S. customers	-	16	2	3	1	-	3	-
Foreign customers	-	36	-	-9	8	11	9	-
McDonnell Douglas MD-80/90, total .	114	116	1	51	29	-14	26	-20
U.S. customers	37	91	-8	-	18	-11	24	-
Foreign customers	77	25	9	51	11	-3	2	-20
McDonnell Douglas MD-95, total	-	-	-	50	-	-	65	15
U.S. customers	-	-	-	50	-	-	50	-
Foreign customers	-	-	-	-	-	-	15	15
Boeing 737, total	253	189	49	189	349	280	350	258
U.S. customers	146	38	9	85	284	120	207	155
Foreign customers	107	151	40	104	65	160	143	45
Boeing 747, total	37	153	-5	35	66	37	-4	22
U.S. customers	13	24	-1	2	22	15	1	1
Foreign customers	24	129	-4	33	44	22	-5	19
Boeing 757, total	51	66	5	-7	44	45	47	18
U.S. customers	39	33	-1	-6	35	25	34	7
Foreign customers	12	33	6	-1	9	20	13	2
Boeing 767, total	10	60	27	26	10	96	40	32
U.S. customers	4	23	11	4	11	85	31	21
Foreign customers	6	37	16	22	-1	11	9	1
Boeing 777, total	-	34	-	83	88	46	65	21
U.S. customers	-	34	-	-	37	24	42	8
Foreign customers	-	-	-	83	51	22	23	8

⁻ Represents zero.
¹ Includes types of aircraft not shown separately. Beginning 1999, includes unidentified customers.

No. 1079. U.S. Aircraft Shipments: 1980 to 1999

[Value in millions of dollars (18,929 represents \$18,929,000,000)]

	Tota	al			Civi	I			Military		
Year			Large tra	nsports	General av	/iation 1	Helicopters				
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value	
1980	14,677 3,610 3,321 2,309 2,436 2,235 2,777 3,554 3,976	18,929 27,269 38,585 36,568 33,658 36,247 45,883 55,398 60,895	387 278 521 309 256 269 374 559 620	9,895 8,448 22,215 18,124 15,263 17,564 25,810 35,890 39,000	11,877 2,029 1,144 928 1,077 1,130 1,569 2,213 2,496	2,486 1,431 2,007 2,357 2,842 3,127 4,674 5,646 6,895	1,366 384 603 308 292 278 346 363 345	656 506 254 185 194 193 231 252 200	1,047 919 1,053 764 811 558 488 419 515	5,892 16,884 14,109 15,902 15,359 15,363 15,168 13,610 14,800	

¹ Excludes off-the-shelf military aircraft.

No. 1080. Employment and Earnings in Aircraft Industries: 1985 to 1999

[Annual averages of monthly figures (794 represents 794,000). See headnote, Table 682]

Item	1987 SIC ¹ code	Unit	1985	1990	1995	1998	1999
Employment:							
Total	(X)	1,000	794	898	549	616	576
Aircraft	3721	1,000	326	381	244	270	248
Aircraft engines and engine parts	3724	1,000	148	152	93	103	100
Aircraft equipment, n.e.c. 2	3728	1,000	143	180	114	151	141
Guided missiles, space yehicles, and parts	376	1,000	177	185	98	92	87
Average weekly earnings: 3	(X)						
Aircraft engines and parts.	3724	Dollars	542	637	770	840	871
Aircrait equipment, n.e.c	3/20	Dollars	506	570	677	752	739
Guided missiles, space vehicles, and parts	376	Dollars	515	612	765	840	836
Average hourly earnings: 3	(X)						
Aircraft, excluding lump sum benefits		Dollars	13.18	15.66	19.97	21.08	21.78
Aircraft with lump sum benefits		Dollars	13.40	16.32	20.02	21.14	21.84
Aircraft engines and parts	3724	Dollars	12.85	14.84	17.34	18.93	19.67
Aircraft equipment, n.e.c. 2	3728	Dollars	11.66	13.37	15.93	17.06	17.47
Guided missiles, space vehicles, and parts	376	Dollars	12.14	14.39	17.74	19.96	20.24

X Not applicable. 1987 Standard Industrial Classification; see text, Section 17, Business. 2 N.e.c. means not elsewhere classified. 3 For production workers.

Source: Aerospace Industries Association of America, Washington, DC, Research Center, Statistical Series 23, Internet site http://www.aia-aerospace.org.

Source: U.S. Department of Commerce, International Trade Administration, Internet site http://www.ita.doc.gov/td/aerospace/inform/information.htm.

Source: U.S. Bureau of Labor Statistics, *Employment and Earnings*, monthly, June issues and Internet site http://stats.bls.gov/ceshome.htm.

No. 1081. Aerospace—Sales, New Orders, and Backlog: 1990 to 1998

[In billions of dollars (136.6 represents \$136,600,000,000), except as indicated. Reported by establishments in which the principal business is the development and/or production of aerospace products]

Item	1990	1993	1994	1995	1996	1997	1998
Net sales	136.6	109.9	104.3	102.8	103.1	114.9	120.7
Percent U.S. Government	53.8	49.9	54.8	49.5	49.8	44.7	36.9
Complete aircraft and parts 1	49.9	48.9	43.3	42.5	41.8	54.5	62.9
Aircraft engines and parts	16.4	12.2	11.3	12.5	15.7	12.1	12.8
Missiles and space vehicles, parts	22.0	18.1	18.4	18.4	18.5	21.4	20.7
Other products, services	48.3	30.7	31.3	29.4	27.1	27.1	24.3
Net, new orders	146.0	79.7	88.7	109.1	126.3	119.0	111.2
Backlog, Dec. 31	250.1	211.8	192.6	202.6	229.9	219.0	206.7

No. 1082. Aerospace Industry Sales by Product Group and Customer: 1985 to 2000

[In billions of dollars (96.6 represents \$96,600,000,000). Due to reporting practices and tabulating methods, figures may differ from those in Table 1081]

Hom		Cur	rent dolla	ars			Constan	t (1987)	dollars 3	
Item	1985	1990	1995	1999 ¹	2000 ²	1985	1990	1995	1999 ¹	2000 ²
Total sales	96.6	134.4	107.8	155.3	149.4	97.8	121.6	85.7	118.3	111.2
PRODUCT GROUP										
Aircraft, total Civil Military Missiles Space Related products and services ⁵	50.5 13.7 36.8 11.4 18.6 16.1	71.4 31.3 40.1 14.2 26.4 22.4	55.0 24.0 31.1 7.4 27.4 18.0	90.3 54.5 35.8 8.0 31.1 25.9	83.2 45.7 37.5 8.7 32.6 24.9	51.1 13.9 37.2 11.6 18.8 16.3	64.6 28.3 36.3 12.8 23.9 20.3	43.8 19.1 24.7 5.9 21.8 14.3	68.8 41.5 27.3 6.1 23.7 19.7	62.0 34.1 27.9 6.5 24.3 18.5
CUSTOMER GROUP										
Aerospace, total	80.5 53.2 6.3 21.0 16.1	112.0 60.5 11.1 40.4 22.4	89.8 42.4 11.4 36.0 18.0	129.5 44.2 11.4 73.9 25.9	124.5 46.5 11.6 66.4 24.9	81.5 53.9 6.3 21.3 16.3	101.3 54.8 10.0 36.5 20.3	71.5 33.7 9.1 28.6 14.3	98.6 33.6 8.7 56.3 19.7	92.7 34.6 8.6 49.4 18.5

¹ Preliminary. ² Estimate. ³ Based on AIA's aerospace composite price deflator. ⁴ All civil sales of aircraft (domestic and export sales of jet transports, commuters, business, and personal aircraft and helicopters). ⁵ Electronics, software, and ground support equipment, plus sales of nonaerospace products which are produced yeerospace-manufacturing use technology, processes, and materials derived from aerospace products. ⁶ Department of Defense. ⁷ National Aeronautics and Space processes, and materials derived from aerospace products.

⁶ Department of Defense.

⁷ National Aeronautics and Space Administration.

⁸ Includes civil aircraft sales (see footnote 4), commercial space sales, all exports of military aircraft and missiles and related propulsion and parts.

Source: Aerospace Industries Association of America, Inc., Washington, DC, 1999 Year-end Review and Forecast, Internet site http://www.aia-aerospace.org

No. 1083. Aerospace Industry—Net Profits After Taxes: 1980 to 1999

[For calendar year (2,588 represents \$2,588,000,000). Minus sign (-) indicates loss]

Year	A	erospace indus	stry profits	All manufacturing corporations profits as a percent of—			
Year	Total —	As	percent of—				
	(mil. dol.)	Sales	Assets	Equity	Sales	Assets	Equity
1980	2,588	4.3	5.2	16.0	4.8	6.9	13.9
	3,274	3.1	3.6	11.1	3.8	4.6	10.1
	3,093	2.8	3.1	9.4	3.7	4.2	9.5
	4,582	4.1	4.4	14.6	4.9	5.6	12.8
	4,883	4.3	4.4	14.9	6.0	6.9	16.2
	3,866	3.3	3.3	10.7	5.0	5.6	13.7
1990	4,487	3.4	3.4	11.5	4.0	4.3	10.7
	¹ 2,484	1.8	1.9	6.1	2.5	2.6	6.4
	¹ -1,836	-1.4	-1.2	-5.2	1.0	1.0	2.6
	4,621	3.6	3.5	13.2	2.8	2.9	8.1
	5,655	4.7	4.3	14.8	5.4	5.8	15.6
1995	4,633	3.8	3.5	11.1	5.7	6.2	16.2
	7,150	5.6	5.1	17.1	6.0	6.5	16.8
	7,221	5.2	4.8	17.3	6.2	6.6	16.6
	7,701	5.0	4.8	18.0	6.0	6.1	15.7
	² 10,800	6.7	6.7	23.8	6.3	6.2	16.8

¹ Reflects unusually large nonoperating expenses totalling \$3.4 billion in 1991 and \$8.7 billion in 1992 due to the initial implementation of a change in accounting for future retirement benefit costs and defense-downsizing restructuring charges. Many large aerospace corporations chose to write off against first quarter earnings amounts required to comply with FASB 106.
2 Includes nonoperating income totaling an estimated \$5.7 billion.

Source: Aerospace Industries Association of America, Washington, DC, 1999 Year-end Review and Forecast, Internet site http://www.aia-aerospace.orgs.

Except engines sold separately.
 Source: U.S. Census Bureau, Current Industrial Reports, Aerospace Industries, Internet site http://www.census.gov/cir/www/alpha.html (accessed 15 August 2000).

No. 1084. United States Total and Aerospace Foreign Trade: 1970 to 1998

[In millions of dollars (3,225 represents \$3,225,000,000), except percent. Data are reported as exports of domestic merchandise, including Department of Defense shipments and undocumented exports to Canada, f.a.s. (free alongside ship) basis, and imports for consumption, customs value basis. Minus sign (-) indicates deficit]

-	Merc	chandise tr	ade			Aeı	rospace tra	de		
								Exports		
Year					_		Percent -	Civ	ril	
	Trade balance	Imports	Exports	Trade balance	Imports	Total	of U.S. exports	Total	Trans- ports	Military
1970	3,225	39,952	43,176	3,097	308	3,405	7.9	2,516	1,283	889
	-1,476	45,563	44,087	3,830	373	4,203	9.5	3,080	1,567	1,123
	-5,729	55,583	49,854	3,230	565	3,795	7.6	2,954	1,119	841
	2,390	69,476	71,865	4,360	782	5,142	7.2	3,788	1,664	1,354
	-3,884	103,321	99,437	6,350	745	7,095	7.1	5,273	2,655	1,822
1975	9,551	99,305	108,856	7,045	747	7,792	7.2	5,324	2,397	2,468
1976	-7,820	124,614	116,794	7,267	576	7,843	6.7	5,677	2,468	2,166
1977	-28,353	151,534	123,182	6,850	731	7,581	6.2	5,049	1,936	2,532
1978	-30,205	176,052	145,847	9,058	943	10,001	6.9	6,018	2,558	3,983
1979	-23,922	210,285	186,363	10,123	1,624	11,747	6.3	9,772	4,998	1,975
1980	-19,696	245,262	225,566	11,952	3,554	15,506	6.9	13,248	6,727	2,258
	-22,267	260,982	238,715	13,134	4,500	17,634	7.4	13,312	7,180	4,322
	-27,510	243,952	216,442	11,035	4,568	15,603	7.2	9,608	3,834	5,995
	-52,409	258,048	205,639	12,619	3,446	16,065	7.8	10,595	4,683	5,470
	-106,703	330,678	223,976	10,082	4,926	15,008	6.7	9,659	3,195	5,350
1985	-117,712	336,526	218,815	12,593	6,132	18,725	8.6	12,942	5,518	5,783
	-138,279	365,438	227,159	11,826	7,902	19,728	8.7	14,851	6,276	4,875
	-152,119	406,241	254,122	14,575	7,905	22,480	8.8	15,768	6,377	6,714
	-118,526	440,952	322,426	17,860	9,087	26,947	8.4	20,298	8,766	6,651
	-109,399	473,211	363,812	22,083	10,028	32,111	8.8	25,619	12,313	6,492
1990	-101,718	495,311	393,592	27,282	11,801	39,083	9.9	31,517	16,691	7,566
	-66,723	488,453	421,730	30,785	13,003	43,788	10.4	35,548	20,881	8,239
	-84,501	532,665	448,164	31,356	13,662	45,018	10.0	36,906	22,379	8,111
	-115,568	580,659	465,091	27,235	12,183	39,418	8.5	31,823	18,146	7,596
	-150,630	663,256	512,626	25,010	12,363	37,373	7.3	30,050	15,931	7,322
1995	-158,801	743,543	584,742	21,561	11,509	33,071	5.7	25,079	10,606	7,991
	-170,214	795,289	625,075	26,602	13,668	40,270	6.4	29,477	13,624	10,792
	-181,488	870,671	689,182	32,239	18,134	50,374	7.3	40,075	21,028	10,299
	-231,100	913,597	682,497	40,960	23,110	64,071	9.4	51,999	29,168	12,072

Source: Aerospace Industries Association of America, Washington, DC, Air Transport Facts and Figures, annual.

No. 1085. International Transportation Transactions of the United States: 1990 to 1999

[In millions of dollars (37,339 represents \$37,339,000,000). Data are international transportation transactions recorded for balance of payment purposes (see Table 1307). Receipts include freight on exports carried by U.S.-operated carriers and foreign carrier expenditures in U.S. ports. Payments include freight on imports carried by foreign carriers and U.S. carrier port expenditures abroad. Freight on exports carried by foreign carriers is excluded since such payments are directly or indirectly for foreign account. Similarly, freight on U.S. imports carried by U.S. carriers is a domestic rather than an international transaction. Minus sign (-) indicates excess of payments over receipts]

Item	1990	1992	1993	1994	1995	1996	1997	1998	1999
Total receipts	37,339	38,147	38,486	40,751	44,990	46,496	47,874	45,702	46,809
Ocean passenger fares Other ocean transportation Freight	154	176	237	287	285	338	296	394	360
	12,141	11,328	11,533	12,404	13,581	12,502	12,230	10,930	11,735
	4,326	4,136	4,056	4,506	5,282	4,703	4,571	3,786	3,929
	7,815	7,192	7,477	7,898	8,299	7,799	7,659	7,144	7,806
Air passenger fares ¹ . Other air transportation Freight. Port expenditures Miscellaneous receipts.	15,144	16,442	16,291	16,710	18,624	20,084	20,572	19,704	19,416
	8,174	8,374	8,568	9,311	10,016	10,928	12,013	12,010	12,439
	2,432	2,589	2,815	3,175	3,654	3,958	4,610	4,757	5,046
	5,742	5,785	5,753	6,136	6,362	6,970	7,403	7,253	7,393
	1,726	1,827	1,857	2,039	2,484	2,644	2,763	2,664	2,859
Total payments	35,497	34,372	35,934	39,081	41,697	43,212	47,097	50,334	55,542
Ocean passenger fares Other ocean transportation Import freight Port expenditures	248	301	341	353	353	444	358	399	369
	13,078	11,781	12,473	13,694	14,068	13,492	14,094	15,582	17,701
	10,904	9,752	10,462	11,369	11,514	11,259	11,907	13,652	15,727
	2,174	2,029	2,011	2,325	2,554	2,233	2,187	1,930	1,974
Air passenger fares ¹ . Other air transportation Import freight Port expenditures Miscellaneous payments	10,283	10,302	11,069	12,709	14,310	15,365	17,780	19,572	21,036
	9,881	10,468	10,497	10,525	11,061	11,751	12,575	12,559	13,990
	2,207	2,376	2,580	2,914	3,113	3,201	3,541	3,624	4,138
	7,674	8,092	7,917	7,611	7,948	8,550	9,034	8,935	9,852
	2,007	1,520	1,554	1,800	1,905	2,160	2,290	2,222	2,446
Balance	1,842	3,775	2,552	1,670	3,293	3,284	777	-4,632	-8,733

¹ Includes interairline settlements.

Source: U.S. Bureau of Economic Analysis, Survey of Current Business, July 2000; and unpublished data.

No. 1086. Federal Expenditures for Civil Functions of the Corps of Engineers, United States Army: 1970 to 1998

[In millions of dollars (1,128 represents \$1,128,000,000). For fiscal years ending in year shown, see text, Section 9, State and Local Government. These expenditures represent the work of the Corps of Engineers to plan, design, construct, operate, and maintain civil works projects and activities, particularly in the management and improvement of rivers, harbors, and waterways for navigation, flood control, and multiple purposes. The amounts listed below do not include the expenditure of funds contributed, advanced, or reimbursed by other government agencies or local interests. Includes Puerto Rico and outlying areas]

Fiscal year	Total program ¹	Navigation	Flood control	Multiple purpose	Fiscal year	Total program ¹	Navigation	Flood control	Multiple purpose
1970	1,128	398	379	331	1991	3,511	1,473	1,447	443
1980	3,061	1,225	1,228	551	1992	3,675	1,562	1,469	469
1985	2,956	1,234	1,187	419	1993	3,335	1,461	1,243	464
1986	3,163	1,345	1,300	402	1994	3,727	1,607	1,436	521
1987	2,937	1,135	1,272	411	1995	3,796	1,620	1,399	598
1988	3,086	1,271	1,271	423	1996	3,627	1,566	1,349	557
1989	3,252	1,395	1,253	462	1997	3,745	1,620	1,430	545
1990	3,297	1,391	1,397	375	1998	4,091	1,660	1,523	618

¹ Includes expenditures which are not associated with a specific purpose (e.g., headquarters staff supervision, management, and administration activities, and some research and development activities).

Source: U.S. Army Corps of Engineers, Report of Civil Works Expenditures by State and Fiscal Year, annual.

No. 1087. Freight Carried on Major U.S. Waterways: 1980 to 1998

[In millions of tons (4.0 represents 4,000,000)]

Item	1980	1985	1990	1993	1994	1995	1996	1997	1998
Atlantic intracoastal waterway Great Lakes	183.5	3.1 148.1	4.2 167.1	3.8 159.6	3.7 175.3	3.5 177.7	4.3 181.8	3.6 188.6	3.8 192.2
Gulf intracoastal waterway	94.5	102.5	115.5	114.9 660.4	117.6	117.9	118.0	118.1	113.6 707.4
Mississippi River system 1 Mississippi River mainstem		527.8 384.0	659.6 475.6	475.1	693.3 496.8	710.1 520.2	701.8 505.6	707.1 504.7	503.9
Ohio River system ²	179.3 49.2	203.9 42.4	260.0 51.4	257.2 51.2	270.5 50.9	267.6 57.1	270.9 51.2	274.9 52.7	277.9 49.1
Snake River	5.1	3.5	4.8	5.3	5.9	6.8	5.7	6.1	5.8

¹ Main channels and all tributaries of the Mississippi, Illinois, Missouri and Ohio Rivers. ² Main channels and all navigable tributaries and embayments of the Ohio, Tennessee, and Cumberland Rivers.

Source: U.S. Army Corps of Engineers, Waterborne Commerce of the United States, annual.

No. 1088. Waterborne Commerce, by Type of Commodity: 1990 to 1998

[In millions of short tons (2,163.9 represents 2,163,900,000). Domestic trade includes all commercial movements between United States ports and on inland rivers, Great Lakes, canals, and connecting channels of the United States, Puerto Rico, and Virgin Islands]

					199	98	
Commodity	1990	1995	1997	Total	Domestic	Foreign imports	Foreign exports
Total ¹	2,163.9	2,240.4	2,333.1	2,339.5	1,094.1	840.7	404.7
Coal Petroleum and petroleum products Crude petroleum Petroleum products Gasoline Distillate fuel oil Residual fuel oil Chemicals and related products	339.9 923.2 485.7 437.5 116.9 77.4 145.2 123.8	324.5 907.1 504.6 402.5 114.4 76.7 111.9 153.7	326.0 988.2 553.3 434.9 114.7 88.2 114.4 156.7	316.1 987.5 539.7 447.7 109.0 94.2 127.2 156.4	229.4 382.5 103.2 279.3 86.8 66.3 82.6 77.7	12.0 552.1 433.4 118.7 17.4 23.3 35.3 27.4	74.7 52.9 3.1 49.7 4.8 4.6 9.3 51.3
Crude material, inedible ¹	374.7 55.7 11.8 144.2	381.7 47.2 14.9 152.5	400.9 44.0 11.9 167.8	394.3 39.1 11.3 173.1	245.6 17.7 0.2 139.8	95.1 4.4 1.2 27.2	53.6 16.9 10.0 6.0
Primary manufactured goods ¹	76.0 10.7 28.3 25.1	106.3 13.1 33.9 44.1	117.0 14.3 38.4 48.0	141.0 13.3 46.1 63.5	41.2 0.9 16.5 16.8	86.7 4.5 28.0 45.3	13.1 7.9 1.5 1.5
Food and farm products ¹ Fish Grain ¹ Corn Wheat Oilseeds Soybeans Vegetables products Processed grain and animal feed	267.5 3.2 157.3 96.1 44.5 36.0 32.2 6.7 28.2	303.2 3.6 167.9 105.0 48.5 46.1 42.0 9.0 33.0	271.7 2.1 131.0 77.1 40.6 53.4 48.4 8.9 30.8	265.7 2.0 132.3 78.1 41.3 45.6 38.6 10.4 30.4	91.5 0.1 49.6 34.4 11.3 23.7 18.1 1.9 8.1	28.8 1.2 1.8 0.1 0.3 (Z) 2.9 0.9	145.4 0.7 80.9 43.7 29.7 21.6 20.5 5.5 21.4

¹ Includes categories not shown separately. Z Rounds to zero.

Source: U.S. Army Corps of Engineers. Waterborne Commerce of the United States, annual,

No. 1089. Cargo-Carrying U.S. Flag Fleet by Area of Operation: 1999

[As of July 1. Tons in thousands of metric tons. (68,941 represents 68,941,000). One ton equals 100 cubic feet of space. Represents active vessels]

	Total	fleet	Liquid o	arriers	Dry bulk	carriers	Containe	erships	Other fre	ighters 1
Area of operation	Num- ber	Tons	Num- ber	Tons	Num- ber	Tons	Num- ber	Tons	Num- ber	Tons
Total	29,077	68,941	3,496	19,470	21,419	37,908	118	3,265	4,044	8,298
Total commercial fleet	28,891 395 159	65,256 7,240 6,393	3,468 85 39	18,586 2,624 2,353	21,419 201 11	37,908 1,086 510	113 64 64	3,179 2,461 2,461	3,891 45 45 -	5,583 1,069 1,069
1,000 gross tons	159 236 197	6,393 847 577	39 46 7	2,353 271 1	11 190 190	510 576 576	64 - -	2,461	45 - -	1,069
1,000 gross tons	39 28,496	270 58,016	39 3,383	270 15,962	21,218	36,822	49	718	3,846	4,514
noncontiguous)	2,596 182	13,291 6,454	574 97	9,368 5,759	537 -	1,530	49 23	718 557	1,436 62	1,675 138
tons	73	31	18	12	-	-	-	-	55	19
1,000 gross tons Non-self-propelled Less than 1,000 gross	109 2,414	6,423 6,837	79 477	5,747 3,609	537	1,530	23 26	557 161	7 1,374	119 1,537
tons	1,701	1,457	86	100	389	675	-	-	1,226	682
1,000 gross tons Internal waterways Self-propelled	713 25,709 26	5,380 42,405 18	391 2,788	3,509 6,500	148 20,600 -	855 33,214 -	26 - -	161 - -	148 2,321 26	855 2,691 18
tons	26	18	-	-	-	-	-	-	26	18
1,000 gross tons Non-self-propelled Less than 1,000 gross	25,683	42,387	2,788	6,500	20,600	33,214	:	-	2,295	2,673
tons	24,122	37,013	1,527	2,344	20,374	32,269	-	-	2,221	2,400
1,000 gross tons	1,561 191 62	5,374 2,320 1,913	1,261 21 4	4,156 94 20	226 81 54	945 2,078 1,873	-	-	74 89 4	273 148 20
tons	9	3	2	1	4	2	-	-	3	-
1,000 gross tons Non-self-propelled Less than 1,000 gross	53 129	1,910 407	2 17	19 74	50 27	1,871 205	-	-	1 85	20 128
tons	101	144	3	4	18	26	-	-	80	114
1,000 gross tons	28	263	14	70	9	179	-	-	5	14
National Defense Reserve Fleet Ready Reserve Force(RRF) Other Reserve	179 90 89	3,427 1,892 1,535	28 10 18	884 303 581	- - -	- -	5 3 2	86 50 36	146 77 69	2,457 1,539 918
Other government: Sealift vessels .	7	258	-	-	-	-	-	-	7	258

⁻ Represents or rounds to zero.

¹ Includes general cargo, Ro-Ro, multi-purpose, LASH (Lighter Aboard Ship) vessels, and deck barges; excludes offshore supply vessels.

Source: U.S. Maritime Administration, Office of Statistical & Economic Analysis.

No. 1090. Private Shipyards—Summary: 1980 to 2000

[For calendar year, unless noted. (178.0 represents 178,000)]

Item	Unit	1980	1985	1990	1995	1996	1997	1998	1999	2000 ¹
Employment ²	1,000 1,000	178.0 138.8	138.3 101.2	130.8 93.6	105.0 77.8	100.4 73.5	98.6 70.8	104.4 74.9	99.1 67.7	98.1 67.6
Building activity: Merchant vessels: 3 Under construction 4	Nicostron	00	40		0	40	44	40	-	0
	Number .	69	10	-	3	10 5	14	12	5	9
Ordered		/	-	3	8	5	6	1	6	-
Delivered		23	3	-	1	1	4	5 3 5	2	-
Cancelled	Number .	4	-				4	3	-	-
Under contract 3	Number .	49	7	3	10	14	12	5	9	9
Naval vessels: 3			400			40	40	40		
	Number .	99	100	95	57	46	46	42	50	44
Ordered	Number .	11	11	. 7	6	11	4	20	-	2
Delivered	Number .	19	26	15	17	11	8	12	6	-
Under contract 5	Number .	91	85	87	46	46	42	50	44	46
Unfinished work: 4										
Commercial ships		2,070	450	-	93.4	365.4	572.1	746.5	594.6	1917.0
Naval ships	Mil. dol	7,107	12,091	24,495	20,768	17,734	20,116	19,097	22,385.6	21,589.5

 ⁻ Represents zero.
 As of June 1.
 As of Dec. 31.
 Source: 1980 and 1985, Shipbuilders Council of America, Arlington, VA., unpublished data; beginning 1990, U.S. Maritime

Source: 1980 and 1985, Shipbuilders Council of America, Arlington, VA., unpublished data; beginning 1990, U.S. Maritime Administration, unpublished data.

No. 1091. Employees in Government and Private Shipyards: 1960 to 1999

[In thousands (208 represents 208,000). Annual average employment in establishments primarily engaged in building and repairing of ships, barges, and lighters, whether self-propelled or towed by other craft. Includes all full- and part-time employees]

Year	Total	Pri- vate yards	Fed- eral yards	Year	Total	Pri- vate yards	Fed- eral yards	Year	Total	Pri- vate yards	Fed- eral yards
1960	216	112 134 154 178 138	96 83 66 72 80	1990	198 193 183 163 148	130 131 125 113 107	68 62 58 50 41	1995 1996 1997 1998	139 127 124 128 121	106 103 102 106 100	33 24 22 22 21

Source: U.S. Bureau of Labor Statistics, Employment and Earnings, monthly, March and June issues; and Internet site http://stats.bls.gov/ceshome.htm>.

No. 1092. Employment on U.S. Flag Merchant Vessels and Basic Monthly Wage Scale for Able-Bodied Seamen: 1975 to 1999

[Employment in thousands (20.5 represents 20,500)]

Year	Employ- ment ¹	Year	Employ- ment ¹	Year	East coast wage rate ²	West coast wage rate ²	Year	East coast wage rate ²	West coast wage rate ²
1975 1980 1985 1990 1992	19.6 13.1 11.1 9.2	1996 1997	7.9 7.5 8.6 7.9	1975	612 967 1,419 1,505 1,655 1,721	1,414 2,029 2,218 2,438	1994	1,790 1,918 2,014 2,094 2,178 2,265	2,536 2,637 2,769 2,879 2,994 3,114

¹ As of June 30, except beginning 1980, as of Sept. 30. Estimates of personnel employed on merchant ships, 1,000 gross tons and over. Excludes vessels on inland waterways, Great Lakes, and those owned by, or operated for, U.S. Army and Navy, and special types such as cable ships, tugs, etc. ² As of January. Basic monthly wage, over and above subsistence (board and room); excludes overtime and fringe pay benefits. West coast incorporates extra pay for Saturdays and Sundays at sea into base wages but east coast does not.

Source: U.S. Maritime Administration, U.S. Merchant Marine Data Sheet, monthly; and unpublished data.

No. 1093. Worldwide Tanker Casualties: 1980 to 1999

136 represents 136,000. Data for 1980 covers tankers, ore/oil carriers and bulk/oil vessels of 6,000 deadweight tons and over; beginning 1985, 10,000 deadweight tons and over; excludes liquid gas carriers. Incident is counted in the year it is reported. Based on data from "Lloyd's List" published by Lloyd's of London. "Casualties" include weather damage, strandings, collisions and other contact, fires and explosions, machinery damage, and other mishaps]

Item	Unit	1980	1985	1990	1993	1994	1995	1996	1997	1998	1999
Total losses 1	Number		340 12 53	541 10 119	314 9 26	270 11 88	280 6 8	241 2 15	270 9 (NA)	201 2 (NA)	231 2 (NA)
Oil spills	Number	32 136 42	9 80 25	31 61 19	24 120 37	29 110 33	18 4 1	24 72 22	22 50 15	22 9 3	14 36 11

¹ Excludes losses due to hostilities. NA Not available

Source: Tanker Advisory Center, Inc., New York, NY, "Worldwide Tanker Casualty Returns," quarterly.

No. 1094. Merchant Vessels-World and United States: 1970 to 1996

[20,980 represents 20,980,000. Through 1992, as of mid-year; thereafter for year-end. For propelled sea-going merchant ships of not less than 100 gross tonnage]

	World con	npleted	World o	wned	U.S. con	pleted	U.S. registered		
Year	Number	Gross tonnage (1,000)	Number	Gross tonnage (1,000)	Number	Gross tonnage (1,000)	Number	Gross tonnage (1,000)	
1970	2,814	20,980	52,444	227,490	156	375	2,983	18,463	
	2,412	13,101	73,832	419,911	205	555	5,579	18,464	
	1,964	18,157	76,395	416,269	66	180	6,447	19,518	
	1,672	15,885	78,336	423,627	16	15	6,348	21,328	
1992	1,506	18,633	79,845	444,305	27	54	5,737	18,228	
	1,505	20,025	80,655	457,915	30	14	5,646	14,087	
	1,789	19,612	80,676	475,859	28	29	5,270	13,655	
	1,856	22,565	82,890	490,662	30	14	5,292	12,760	
	1,745	25,881	84,264	507,873	29	24	5,289	12,024	

Source: Through 1992, Lloyd's Register of Shipping, London, England, Statistical Tables, annual; and Annual Summary of Merchant Ships Completed in the World; thereafter, World Fleet Statistics, annual.

No. 1095. Merchant Vessels—Ships and Tonnage Lost Worldwide: 1980 to 1996

[For merchant vessels of 100 gross tonnage and above (1,791 represents 1,791,000). Excludes ships which have been declared constructive losses but have undergone repair during the year. Loss counted in the year the casualty occurred, providing that information was available at time of relevant publication]

Type of ship		S	hips lost			Gross tonnage lost (1,000)					
Type of Strip	1980	1990	1994	1995	1996	1980	1990	1994	1995	1996	
Total. Tankers Ore/bulk carriers ¹ General cargo Container ships Passenger ² Fishing.	363 24 21 211 2 9 96	160 8 15 87 - - 50	171 16 19 76 - 2 58	190 12 19 88 - 1	151 12 18 77 6	1,791 707 458 478 6 112 30	1,047 138 687 202 - - 20	1,532 638 590 237 - 26 41	1,055 172 447 218 - 185 33	836 179 303 240 94 - 20	

¹ Includes ore/bulk/oil carriers. ² Includes passenger cargo/ships.

Source: Lloyd's Register of Shipping, London, England, Casualty Return, annual.

No. 1096. Merchant Fleets of the World: 1999

[Vessels of 1,000 gross tons and over. As of Oct. 1. Specified countries have 100 or more ships]

Country of registry, 1999	Total	Tanker	Dry bulk ¹	Container- ship	Roll-on/ roll-off	Cruise/ passenger	Other ²
World total, 1999	28,202	6,953	5,709	2,442	1,478	284	11,336
United States	469	158	14	92	58	11	136
Privately-owned	283	130	14	87	26	1	25
Government-owned	186	28	-	5	32	10	111
Foreign total	27,733	6,795	5,695	2,350	1,420	273	11,200
Panama	4,616	1,033	1,361	489	264	46	1,423
Liberia	1,657	682	438	209	58	37	233
Russia	1,496	274	104	24	9	8	1,077
China	1,449	251	336	91	15	4	752
Malta	1,425	382	401	.50	62	3	527
Cyprus	1,385	173	469	125	29	_9	580
Bahamas	1,031	245	159	.52	64	59	452
Singapore	880	399	139	161	38		143
Saint Vincent	813	97	144	31	35	4	502
Greece	693	272	266	41	20	15	79
Japan	661	273	162	26	118	6	76
INDIWay (INIO)	657	305	102	5	72	11	162
Turkey	537	84	167	20	19 41	3 1	244
Philippines	501	67	189 25	10 14	13	ı	193
Indonesia	488 464	120 11	25 16	125	20	-	316 292
Antigua & Barbuda	450	62	5	44	14	7	318
Netherlands	447	17	-	245	15	2	168
Germany	438	71	25	243 6	3	-	333
Korea (South)	432	110	96	47	8	3	168
Italy	375	203	37	19	68	6	42
	356	111	59	49	9	2	126
Malaysia	311	68	11	62	10	_	160
India	295	99	125	6	10	_	65
Thailand	294	97	35	12	_	1	149
Ukraine	247	16	8	5	10	6	202
Honduras	241	32	15	5	.5	ĭ	183
Hong Kong	218	19	117	44	š		35
Cambodia	201	-	19	1	5	-	176
Taiwan	179	17	53	73	1	-	35
Sweden	177	64	8	-	62	-	43
Brazil	159	75	41	6	9	-	28
Isle of Man	148	73	20	18	16	-	21
United Kingdom	147	52	4	32	21	9	29
Romania	145	6	16	2	6	-	115
Syria	128	-	4	-	1	-	123
Norway	126	41	7	-	11	-	67
Marshall Islands	124	47	46	21	3	-	7
Iran	123	24	44	3	2	-	50
Vietnam	118	13	9	1	1	-	94
Egypt	111	15	22	1	.9	1	63
Portugal (MAR)	109	25	9	.1	10	-	64
	103	10	-	15	.3	1	74
Bermuda	101	_30	23	19	11	-	18
All other	2,677	730	359	140	227	28	1,193

Represents zero.
 ¹ Includes bulk/oil, ore/oil, and ore/bulk/oil carriers.
 ² Breakbulk ships, par refrigerated cargo ships, barge and specialized cargo ships.
 ³ International Shipping Registry which is an which the ship flies the flag of the specified nation but is exempt from certain taxation and other regulations. /bulk/oil carriers. ² Breakbulk ships, partial containerships, International Shipping Registry which is an open registry under

Source: U.S. Maritime Administration, Merchant Fleets of the World, summary report, annual; and unpublished data.