

## 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 *Air Transport Facts and Figures* 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, 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.

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 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-or-less 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. 1069. Air and Water Transportation Industries—Summary: 1992 and 1997

[For establishments with payroll. (10,409 represents \$10,409,000,000). See Tables 872 and 873 in Section 17, Business, for more 1997 economic census data]

Industry	1987 SIC <sup>1</sup> code	Establishments	Revenue (mil. dol.)	Annual payroll (mil. dol.)	Paid employees <sup>2</sup> (1,000)
<b>1997 ECONOMIC CENSUS PRELIMINARY DATA</b>					
Air transportation <sup>3</sup> :	45				
1997.....		11,364	48,623	10,409	360
1992.....		9,363	32,973	7,402	273
Water transportation:	44				
1997.....		9,245	36,304	6,345	180
1992.....		8,147	29,207	5,170	171
<b>1992 ECONOMIC CENSUS DATA</b>					
Air transportation <sup>4</sup> .....	45	(NA)	82,670	24,530	707
Air transportation, including air courier services <sup>4</sup> .....	451,2	(NA)	76,503	22,734	627
Scheduled and air courier services <sup>4</sup> .....	451	(NA)	73,070	22,026	604
Scheduled <sup>4</sup> .....	451,2	(NA)	62,057	19,090	505
Air courier services.....	451,3	2,639	11,013	2,935	99
Nonscheduled.....	452	1,791	3,433	708	23
Airport terminal services.....	458	3,252	6,168	1,796	80
Water transportation.....	44	8,147	29,207	5,170	171
Water transportation of freight.....	441,2,3,4	836	14,704	1,523	37
Deep sea foreign and domestic freight.....	441, 2	615	11,948	1,148	27
Other water transportation of freight.....	443,4	221	2,756	375	10
Great Lakes-St. Lawrence Seaway freight.....	443,2	26	559	81	1
Water transportation of freight, n.e.c. <sup>5</sup> .....	444,9	195	2,197	293	9
Water transportation of passengers.....	448	1,033	4,133	508	23
Ferries.....	448,2	118	155	51	2
Water transportation of passengers, except by ferry.....	448,1,9	915	3,978	457	22
Services incidental to water transportation.....	449	6,278	10,370	3,140	111
Marinas.....	449,3	3,348	1,651	346	18
Other services incidental to water transportation.....	449,1,2,9	2,930	8,719	2,794	93

NA Not available. <sup>1</sup> 1987 Standard Industrial Classification code; see text, Section 17, Business. <sup>2</sup> For the pay period including March 12. <sup>3</sup> Excludes large certificated air passenger carriers which are out of scope for the 1997 Economic Census. <sup>4</sup> 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*. <sup>5</sup> 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 Series, Advance Report, EC97X-CS1*.

## No. 1070. U. S. Scheduled Airline Industry—Summary: 1990 to 1997

[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	1991	1992	1993	1994	1995	1996	1997
<b>SCHEDULED SERVICE</b>									
Revenue passengers enplaned.....	Mil. ....	465.6	452.3	475.1	488.5	528.8	547.8	581.2	598.9
Revenue passenger miles.....	Bil.....	457.9	448.0	478.6	489.7	519.4	540.7	578.7	605.4
Available seat miles.....	Bil.....	733.4	715.2	752.8	771.6	784.3	807.1	835.1	860.6
Revenue passenger load factor.....	Percent	62.4	62.6	63.6	63.5	66.2	67.0	69.3	70.4
Mean passenger trip length.....	Miles.....	984	990	1,007	1,002	982	987	996	1,011
Freight and express ton miles.....	Mil. ....	10,546	10,225	11,130	11,944	13,792	14,578	15,301	17,959
Aircraft departures.....	1,000...	6,924	6,783	7,051	7,245	7,531	8,062	8,230	8,157
<b>FINANCES</b>									
Total operating revenue <sup>2</sup> .....	Mil. dol. .	76,142	75,158	78,140	84,559	88,313	94,578	101,938	109,535
Passenger revenue.....	Mil. dol. .	58,453	57,092	59,828	63,945	65,422	69,594	75,286	79,469
Freight and express revenue.....	Mil. dol. .	5,432	5,509	5,916	6,662	7,284	8,616	9,679	10,464
Mail revenue.....	Mil. dol. .	970	957	1,184	1,212	1,183	1,266	1,279	1,360
Charter revenue.....	Mil. dol. .	2,877	3,717	2,801	3,082	3,548	3,485	3,447	3,553
Total operating expense.....	Mil. dol. .	78,054	76,943	80,585	83,121	85,600	88,718	95,729	100,924
Operating profit.....	Mil. dol. .	-1,912	-1,785	-2,444	-1,438	-2,713	-5,860	-6,209	-8,611
Interest expense.....	Mil. dol. .	1,978	1,777	1,743	2,027	2,347	2,424	1,981	1,749
Net profit.....	Mil. dol. .	-3,921	-1,940	-4,791	-2,136	-344	2,314	2,804	5,195
Revenue per passenger mile.....	Cents.....	12.8	12.7	12.5	13.1	12.6	12.9	13.0	13.1
Rate of return on investment.....	Percent	-6.0	-0.5	-9.3	-0.4	5.2	11.9	11.5	14.9
Operating profit margin.....	Percent	-2.5	-2.4	-3.1	1.7	3.1	6.2	6.1	7.9
Net profit margin.....	Percent	-5.1	-2.6	-6.1	-2.5	-0.4	2.4	2.8	4.7
<b>EMPLOYEES<sup>3</sup></b>									
Total.....	1,000...	545.8	533.6	540.4	537.1	539.8	547.0	564.4	586.5
Pilots and copilots.....	1,000...	47.1	49.2	51.1	52.1	52.9	55.4	57.6	60.4
Other flight personnel.....	1,000...	8.9	8.0	8.2	8.1	7.7	8.6	8.9	10.7
Flight attendants.....	1,000...	83.4	81.8	86.3	85.0	86.5	86.7	89.1	96.2
Mechanics.....	1,000...	61.0	58.8	58.6	57.5	55.8	50.5	50.8	65.5
Aircraft and traffic servicing personnel.....	1,000...	251.2	237.3	243.1	242.8	247.2	251.1	266.5	269.6
All other.....	1,000...	94.2	98.4	93.2	91.7	89.7	94.8	91.6	84.1

<sup>1</sup> For definition of mean, see Guide to Tabular Presentation. <sup>2</sup> Includes other types of revenues, not shown separately. <sup>3</sup> 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. 1071. 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. Minus sign (-) indicates decrease]

Index	Index (1982=100)								Percent distribution of cash operating expenses <sup>1</sup>			
	1980	1985	1990	1994	1995	1996	1997	1998	1980	1990	1995	1998
Composite index . . . . .	86.8	102.8	122.6	129.9	131.3	136.6	136.6	134.1	100.0	100.0	100.0	100.0
Labor costs:												
Passenger carriers . . . . .	85.8	110.5	121.7	148.7	155.7	159.4	163.0	164.5	35.2	31.6	34.8	35.5
Cargo carriers . . . . .	78.3	116.0	148.8	145.4	151.7	159.6	156.0	157.2	27.3	30.0	31.0	30.5
Fuel . . . . .	89.7	79.6	77.2	54.4	55.3	64.6	62.5	49.6	30.0	17.3	11.5	9.9
Aircraft fleet <sup>2,3</sup> . . . . .	88.1	123.7	177.0	217.5	222.8	230.3	222.9	227.3	5.2	7.9	9.5	9.2
Interest <sup>2,4</sup> . . . . .	88.1	98.0	96.0	87.6	93.5	86.9	72.1	66.5	3.2	2.6	3.0	1.8
Insurance . . . . .	80.4	155.3	68.2	110.8	111.6	111.5	96.0	64.4	0.3	0.3	0.7	0.4
Maintenance material . . . . .	104.9	119.9	190.5	157.2	153.4	169.4	191.0	201.6	2.5	3.4	2.7	3.4
Landing fee . . . . .	87.2	99.9	139.0	171.6	176.6	181.5	177.8	172.6	1.7	1.8	2.2	1.9
Traffic commissions <sup>2</sup> . . . . .	75.4	112.9	169.2	163.3	139.4	130.7	117.2	106.1	4.9	9.4	8.5	6.5
Communication . . . . .	65.8	96.6	111.2	118.2	116.0	114.8	110.4	118.6	1.1	1.4	1.5	1.5
Advertising and promotion <sup>2</sup> . . . . .	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 <sup>2</sup> . . . . .	90.6	98.9	128.4	120.6	110.9	104.0	102.8	105.1	2.9	3.5	3.3	3.2
All other . . . . .	86.1	111.9	133.4	149.9	153.3	156.2	159.1	160.7	11.8	19.1	21.8	26.3

<sup>1</sup> Total operating expenses plus interest on long term debt, less depreciation and amortization. <sup>2</sup> Passenger airlines only.

<sup>3</sup> Includes lease, aircraft and engine rentals, depreciation and amortization. <sup>4</sup> Interest on debt.

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

## No. 1072. Top 40 Airports in 1997—Passengers Enplaned: 1987 and 1997

[In thousands (448,914 represents 448,914,000), except rank. For calendar year. Airports ranked by total passengers enplaned 1997]

Airport	1987		1997		Airport	1987		1997	
	Total	rank	Total	rank		Total	rank	Total	rank
<b>All airports, total . . . . .</b>	<b>448,914</b>	<b>(X)</b>	<b>574,612</b>	<b>(X)</b>	New York (La Guardia), NY	11,326	7	9,868	19
Top 40 airports . . . . .	327,563	(X)	445,113	(X)	New York (John F. Kennedy), NY	10,140	10	9,731	20
Atlanta (Hartsfield Intl), GA	22,649	2	32,677	1	Philadelphia, PA	6,603	23	9,714	21
Chicago (O'Hare), IL	26,122	1	31,123	2	Salt Lake City, UT	4,729	28	9,427	22
Dallas/Ft. Worth, TX	19,905	3	27,256	3	Pittsburgh, PA	8,156	16	9,224	23
Los Angeles, CA	18,970	4	22,596	4	Honolulu, HI	7,773	17	8,939	24
San Francisco, CA	13,117	6	16,858	5	Cincinnati, OH	3,265	35	7,638	25
Denver, CO	15,594	5	16,006	6	Washington (National), DC	7,113	18	7,010	26
Detroit (Wayne County), MI	9,254	13	14,773	7	San Diego, CA	4,901	27	6,719	27
Phoenix (Sky Harbor Intl), AZ	8,785	14	14,650	8	Baltimore, MD	4,010	31	6,311	28
Las Vegas (McCarran Intl), NV	6,836	21	14,011	9	Portland, OR	2,834	39	6,233	29
St. Louis (Lambert-St Louis), MO	9,727	11	13,956	10	Tampa, FL	4,682	29	5,901	30
Newark, NJ	11,289	8	13,783	11	Cleveland, OH	3,103	36	5,580	31
Minneapolis/St. Paul, MN	8,310	15	13,775	12	Ft. Lauderdale, FL	3,929	33	5,426	32
Houston (Intercontinental), TX	6,929	20	12,708	13	Kansas City, MO	4,481	30	5,143	33
Miami, FL	9,342	12	12,073	14	Washington (Dulles Intl), DC	4,917	26	4,970	34
Seattle-Tacoma, WA	6,826	22	11,758	15	San Jose, CA	2,807	40	4,874	35
Orlando, FL	7,075	19	11,745	16	San Juan PR	2,995	37	4,721	36
Boston (Logan Intl), MA	10,255	9	10,453	17	Chicago (Midway), IL	2,541	41	4,392	37
Charlotte (Douglas Municipal), NC	6,021	24	10,358	18	Oakland, CA	1,918	54	4,378	38
					New Orleans, LA	3,311	34	4,199	39
					Memphis, TN	5,023	25	4,156	40

X Not applicable.

Source: U.S. Bureau of Transportation Statistics, Office of Airline Information, *Airport Activity Statistics of Certificates Route Air Carriers, Calendar Year 1997 and the Federal Aviation Administration, Airport Activity Statistics, 1987*.

## No. 1073. Domestic Airline Markets: 1997

[For calendar year (3,725 represents 3,725,000). Data are for the 30 top markets and include 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 . . . . .	3,725	Chicago to—from Los Angeles . . . . .	1,581
New York to—from Miami . . . . .	3,093	New York to—from West Palm Beach . . . . .	1,530
New York to—from Chicago . . . . .	2,980	Honolulu to—from Kona, Hawaii . . . . .	1,493
New York to—from Boston . . . . .	2,689	Los Angeles to—from Oakland . . . . .	1,462
Honolulu to—from Kahului, Maui . . . . .	2,620	Chicago to—from Detroit . . . . .	1,433
New York to—from San Francisco . . . . .	2,609	New York to—from Dallas/Ft. Worth . . . . .	1,429
New York to—from Orlando . . . . .	2,454	Los Angeles to—from Honolulu . . . . .	1,423
New York to—from Washington . . . . .	2,398	Chicago to—from Atlanta . . . . .	1,359
Dallas/Ft. Worth to—from Houston . . . . .	2,219	Los Angeles to—from Phoenix . . . . .	1,340
Los Angeles to—from Las Vegas . . . . .	2,111	Chicago to—from Minneapolis . . . . .	1,303
Los Angeles to—from San Francisco . . . . .	2,021	Honolulu to—from Hilo, Hawaii . . . . .	1,250
New York to—from Atlanta . . . . .	2,016	Chicago to—from Dallas/Ft. Worth . . . . .	1,206
New York to—from San Juan . . . . .	1,834	Chicago to—from San Francisco . . . . .	1,194
New York to—from Ft. Lauderdale . . . . .	1,823	Boston to—from Washington . . . . .	1,182
Honolulu to—from Lihue, Kauai . . . . .	1,696	Chicago to—from Orlando . . . . .	1,153

Source: Air Transport Association of America, Washington, DC, *Air Transport 1998*.

## No. 1074. Worldwide Airline Fatalities: 1980 to 1998

[For scheduled air transport operations]

Year	Fatal accidents	Passenger deaths	Death rate <sup>1</sup>	Death rate <sup>2</sup>	Year	Fatal accidents	Passenger deaths	Death rate <sup>1</sup>	Death rate <sup>2</sup>
1980 . . . .	22	814	0.14	0.09	1992 . . . .	29	1,097	0.09	0.06
1985 . . . .	22	1,066	0.14	0.09	1993 . . . .	35	940	0.08	0.05
1987 . . . .	26	901	0.09	0.06	1994 . . . .	28	941	0.07	0.04
1988 . . . .	29	737	0.07	0.04	1995 . . . .	26	710	0.05	0.03
1989 . . . .	27	817	0.07	0.05	1996 . . . .	23	1,135	0.07	0.05
1990 . . . .	25	495	0.04	0.03	1997 . . . .	27	930	0.06	0.04
1991 <sup>3</sup> . . . .	30	653	0.06	0.04	1998 . . . .	22	909	0.05	0.03

<sup>1</sup> Rate per 100 million passenger miles flown. <sup>2</sup> Rate per 100 million passenger kilometers flown. <sup>3</sup> Includes one ground collision counted as two accidents.

Source: International Civil Aviation Organization, Montreal, Canada, *Civil Aviation Statistics of the World*, annual.

## No. 1075. Airline Passenger Screening Results: 1980 to 1997

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

Item	1980	1985	1990	1994	1995	1996	1997
Persons screened (mil.) . . . . .	585	993	1,145	1,261	1,263	1,497	1,660
WEAPONS DETECTED							
Firearms, total . . . . .	2,022	2,987	2,853	2,994	2,390	2,155	2,067
Handguns . . . . .	1,878	2,823	2,490	2,860	2,230	1,999	1,905
Long guns . . . . .	36	90	59	134	160	156	162
Other guns . . . . .	108	74	304	(X)	(X)	(NA)	(NA)
Other dangerous articles . . . . .	(X)	(X)	(X)	6,051	4,414	(NA)	(NA)
Explosive/incendiary devices . . . . .	8	12	15	505	631	(NA)	(NA)
Persons arrested:							
Carrying firearms/explosives . . . . .	1,031	1,310	1,337	1,433	1,194	999	924
Giving false information . . . . .	32	42	18	35	68	131	72
Bomb threats received:							
Against airports . . . . .	1,179	477	448	250	346	284	(NA)
Against aircraft . . . . .	268	153	338	218	327	594	(NA)

NA Not available. X Not applicable. <sup>1</sup> For 1980-1990 data included firearms; beginning 1994 includes stunning devices, chemical agents, knives and other designated items.

Source: U.S. Bureau of Transportation Statistics, *National Transportation Statistics*, 1998, Internet site <<http://www.bts.gov/btsprod/nts/>> (accessed 5 August 1998); and unpublished data.

## No. 1076. Aircraft Accidents: 1982 to 1998

[For years ending December 31]

Item	Unit	1982	1985	1990	1995	1996	1997	1998
Air carrier accidents, all services <sup>1</sup> . . . . .	Number . . . . .	18	21	24	36	38	49	48
Fatal accidents . . . . .	Number . . . . .	5	7	6	3	5	4	1
Fatalities . . . . .	Number . . . . .	235	526	39	168	380	8	1
Aboard . . . . .	Number . . . . .	223	525	12	162	350	6	-
Rates per 100,000 flight hours:								
Accidents . . . . .	Rate . . . . .	0.241	0.241	0.198	0.267	0.276	0.310	0.291
Fatal accidents . . . . .	Rate . . . . .	0.057	0.080	0.049	0.022	0.036	0.025	0.006
Commuter air carrier accidents <sup>2</sup> . . . . .	Number . . . . .	26	18	15	12	11	17	8
Fatal accidents . . . . .	Number . . . . .	5	7	4	2	1	5	-
Fatalities . . . . .	Number . . . . .	14	37	7	9	14	46	-
Aboard . . . . .	Number . . . . .	14	36	5	9	12	46	-
Rates per 100,000 flight hours:								
Accidents . . . . .	Rate . . . . .	2.000	1.036	0.641	0.457	0.399	1.730	1.559
Fatal accidents . . . . .	Rate . . . . .	0.385	0.403	0.171	0.076	0.036	0.509	-
On-demand air taxi accidents <sup>3</sup> . . . . .	Number . . . . .	132	157	107	75	90	82	79
Fatal accidents . . . . .	Number . . . . .	31	35	29	24	29	15	17
Fatalities . . . . .	Number . . . . .	72	76	51	52	63	39	45
Aboard . . . . .	Number . . . . .	72	75	49	52	63	39	41
Rates per 100,000 flight hours:								
Accidents . . . . .	Rate . . . . .	4.39	6.11	4.76	4.39	4.44	3.64	3.11
Fatal accidents . . . . .	Rate . . . . .	1.03	1.36	1.29	1.41	1.43	0.67	0.67
General aviation accidents <sup>4</sup> . . . . .	Number . . . . .	3,233	2,739	2,215	2,053	1,907	1,858	1,907
Fatal accidents . . . . .	Number . . . . .	591	498	443	412	360	356	361
Fatalities . . . . .	Number . . . . .	1,187	956	767	734	632	660	621
Aboard . . . . .	Number . . . . .	1,170	945	762	727	615	654	615
Rates per 100,000 flight hours:								
Accidents . . . . .	Rate . . . . .	10.90	9.66	7.77	8.23	7.66	7.29	7.12
Fatal accidents . . . . .	Rate . . . . .	1.99	1.75	1.55	1.64	1.45	1.40	1.35

- Represents zero. <sup>1</sup> U.S. air carriers operating under 14 CFR 121. Beginning 1997, includes aircraft with 10 or more seats, previously operating under 14 CFR 135. <sup>2</sup> All scheduled service of U.S. air carriers operating under 14 CFR 135. <sup>3</sup> All nonscheduled service of U.S. air carriers operating under 14 CFR 135. <sup>4</sup> U.S. civil registered aircraft not operated under 14 CFR 121 or 135.

Source: U.S. National Transportation Safety Board, Internet site <<http://www.nts.gov/aviation/stats.htm>> (Accessed 21 June 1999).

## No. 1077. On-Time Flight Arrivals and Departures at Major U.S. Airports: 1998

[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]

Airport	On-time arrivals				On-time departures			
	1st. qtr.	2d. qtr.	3d. qtr.	4th. qtr.	1st. qtr.	2d. qtr.	3d. qtr.	4th. qtr.
<b>Total, all airports</b> . . . . .	<b>75.4</b>	<b>75.7</b>	<b>78.3</b>	<b>79.4</b>	<b>80.3</b>	<b>80.2</b>	<b>81.3</b>	<b>82.8</b>
<b>Total major airports</b> . . . . .	<b>74.8</b>	<b>74.9</b>	<b>78.1</b>	<b>79.2</b>	<b>79.0</b>	<b>78.4</b>	<b>80.0</b>	<b>82.0</b>
Atlanta, Hartsfield International . . . . .	70.3	74.6	80.6	80.3	78.4	79.3	83.8	85.3
Baltimore/Washington International . . . . .	78.8	76.2	82.0	83.9	85.0	80.0	85.5	85.8
Boston, Logan International . . . . .	69.9	65.2	74.8	75.4	81.3	77.2	81.4	82.4
Charlotte Douglas . . . . .	84.4	81.3	84.7	80.8	84.8	79.7	82.9	80.4
Chicago, O'Hare . . . . .	75.3	75.0	76.8	80.1	77.8	74.3	77.5	81.5
Cincinnati International . . . . .	78.8	80.2	84.3	86.2	85.1	84.7	88.8	90.3
Dallas/Ft. Worth Regional . . . . .	82.7	84.9	84.9	81.8	82.5	83.5	82.5	80.6
Denver International . . . . .	80.9	77.7	80.6	79.4	81.4	80.5	81.9	82.0
Detroit, Metro Wayne . . . . .	78.6	70.6	64.2	84.4	75.3	64.3	60.2	81.4
Houston George Bush . . . . .	77.8	81.1	82.5	81.4	82.8	84.8	85.5	84.2
Las Vegas, McCarran International . . . . .	74.7	75.8	77.3	73.2	75.9	78.9	76.3	75.2
Los Angeles International . . . . .	71.4	70.5	79.1	74.6	75.5	79.4	82.1	80.5
Miami International . . . . .	74.7	79.7	73.8	86.3	81.2	83.8	78.5	86.0
Minneapolis/St. Paul International . . . . .	76.6	72.6	63.6	81.1	77.2	68.5	64.3	85.3
Newark International . . . . .	66.4	65.0	76.6	80.3	76.9	72.9	80.0	83.7
New York, Kennedy International . . . . .	67.6	71.4	80.0	85.6	80.9	81.5	84.3	88.0
New York, LaGuardia . . . . .	72.9	69.8	76.2	78.3	83.0	80.1	82.8	83.7
Orlando International . . . . .	77.9	80.1	80.2	84.1	85.4	86.5	86.2	89.4
Philadelphia International . . . . .	71.5	71.5	77.4	78.0	77.6	75.3	78.8	77.2
Phoenix, Sky Harbor International . . . . .	70.8	75.1	77.9	73.5	72.0	76.5	75.4	74.8
Pittsburgh, Greater International . . . . .	84.3	78.7	83.1	81.1	86.1	79.7	83.0	80.9
Portland International . . . . .	72.9	78.5	80.9	73.9	79.4	86.2	85.7	81.7
Ronald Reagan International . . . . .	78.4	74.9	79.8	82.9	85.7	81.7	85.1	87.1
St. Louis, Lambert . . . . .	72.2	74.3	81.1	82.5	74.6	74.2	81.6	83.6
Salt Lake City International . . . . .	77.2	80.6	84.4	81.0	81.7	87.1	86.7	85.8
San Diego International, Lindbergh . . . . .	73.2	72.0	79.3	74.0	77.6	80.6	83.1	80.4
San Francisco International . . . . .	58.0	61.7	69.3	67.5	65.6	73.0	76.9	74.7
Seattle-Tacoma International . . . . .	72.8	73.6	75.8	67.1	80.9	82.7	78.9	76.4
Tampa International . . . . .	75.0	77.8	78.1	80.6	83.5	85.4	84.8	86.6

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

## No. 1078. Consumer Complaints Against U.S. Airlines: 1990 to 1998

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

Complaint category	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Total</b> . . . . .	<b>7,703</b>	<b>6,106</b>	<b>5,639</b>	<b>4,438</b>	<b>5,179</b>	<b>4,629</b>	<b>5,782</b>	<b>6,394</b>	<b>7,994</b>
Flight problems <sup>1</sup> . . . . .	3,034	1,877	1,624	1,211	1,586	1,133	1,628	1,699	2,277
Customer service <sup>2</sup> . . . . .	758	714	695	599	805	667	999	1,418	1,715
Ticketing/boarding <sup>3</sup> . . . . .	624	659	680	577	598	666	857	904	1,137
Baggage . . . . .	1,329	883	752	627	761	628	882	826	1,108
Refunds . . . . .	701	783	721	482	393	576	521	531	602
Oversales <sup>4</sup> . . . . .	399	301	265	257	301	263	353	414	388
Fares <sup>5</sup> . . . . .	312	388	573	398	267	185	180	195	277
Advertising . . . . .	96	96	54	51	94	66	61	57	40
Tours . . . . .	29	23	12	16	127	18	16	13	23
Smoking . . . . .	74	30	25	30	20	15	13	5	4
Credit . . . . .	5	10	10	4	2	4	3	1	1
Other . . . . .	342	342	228	186	225	408	269	331	422

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

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

## No. 1079. Commuter/Regional Airline Operations—Summary: 1980 to 1997

[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	1993	1994	1995	1996	1997
Passenger carriers operating	Number	214	179	150	130	125	124	109	104
Passengers enplaned	Millions	14.8	126.0	42.1	52.7	57.1	57.2	61.9	66.3
Average passengers enplaned per carrier	1,000	69.2	152.4	277.5	405.2	457.0	461.4	568.3	637.5
Revenue passenger miles (RPM)	Billions	1.92	4.41	7.61	10.61	12.02	12.75	14.22	15.30
Average RPMs per carrier	Millions	8.97	24.64	50.75	81.59	96.15	102.80	130.49	147.09
Airports served	Number	732	854	811	829	806	780	782	766
Average trip length	Miles	129	173	183	201	210	223	230	231
Passenger aircraft operated	Number	1,339	1,745	1,917	2,208	2,172	2,138	2,127	2,104
Average seating capacity (seats)	Number	13.9	19.2	22.1	23.0	23.7	24.6	25.1	25.9
Fleet flying hours	1,000	1,740	2,854	3,447	4,490	4,565	4,659	4,568	4,695
Average annual utilization per aircraft	Hours	1,299	1,635	1,798	2,033	2,102	2,179	2,148	2,231

<sup>1</sup> Adjusted to exclude a merger in 1986. <sup>2</sup> Prior to 1993, utilization results reflected airborne rather than block hours. Data inclusive of carriers which may have operated during only part of calendar year 1996.

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

## No. 1080. 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 <sup>1</sup>	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 <sup>2</sup>	Number	3,805	5,833	6,721	7,694	8,195	8,218	8,248
Airport Improvement Program <sup>3</sup>	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 <sup>4</sup>	1,000	134.5	214.8	215.4	218.9	195.5	198.6	200.0
Air carriers, total <sup>4</sup>	1,000	2.8	3.8	4.7	6.7	7.4	7.5	7.6
General aviation aircraft <sup>5</sup>	1,000	131.7	211.0	210.7	212.2	188.1	191.1	192.4
Fixed-wing aircraft: Multi-engine	1,000	18.4	31.7	33.6	32.7	24.6	25.6	26.2
Single-engine	1,000	109.5	168.4	164.4	165.1	137.7	138.1	140.7
Rotorcraft <sup>6</sup>	1,000	2.2	6.0	6.4	7.4	5.8	6.6	6.8
Balloons, blimps, gliders, etc	1,000	1.6	5.0	6.3	7.0	4.7	4.2	4.1
Airman certificates held <sup>7</sup>	1,000	1,002	1,195	1,105	1,195	1,290	1,157	1,157
Pilot	1,000	733	827	710	703	639	622	616
Held by women	Percent	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	1,000	187	183	152	149	134	129	125
Private	1,000	304	357	311	299	261	254	248
Student	1,000	196	200	147	128	101	95	96
Nonpilot <sup>8</sup>	1,000	269	368	395	492	651	534	541
Ground technicians <sup>9</sup>	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
Air traffic control specialists <sup>10</sup>	Number	(NA)	27,190	23,580	24,339	23,208	22,823	22,985
Full performance <sup>11</sup>	Number	(NA)	16,317	11,672	12,985	14,845	15,799	14,630
Developmental <sup>11</sup>	Number	(NA)	4,387	4,304	5,042	2,272	1,999	2,312
Assistants <sup>11</sup>	Number	(X)	(X)	1,465	1,153	355	335	319
Traffic management coordinators <sup>12</sup>	Number	(X)	(X)	(X)	370	561	542	584
Electronic technicians/ATSS <sup>13</sup>	Number	(NA)	8,871	6,856	6,458	6,749	6,927	7,021
Aviation safety inspectors	Number	(NA)	2,038	1,897	2,984	2,991	3,265	3,577
Engineers	Number	(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: <sup>5</sup>								
Hours flown	Million	26.0	41.0	34.1	34.8	26.6	26.9	27.7
Fuel consumed: <sup>14</sup> Gasoline	Mil. gal.	362	520	420	353	287	289	292
Jet fuel <sup>15</sup>	Mil. gal.	415	766	691	663	560	608	642

NA Not available. X Not applicable. <sup>1</sup> 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. <sup>2</sup> 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. <sup>3</sup> Registered aircraft that flew 1 or more hours during the year. <sup>4</sup> Includes helicopters. <sup>5</sup> 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. <sup>6</sup> Includes autogyros; excludes air carrier helicopters. <sup>7</sup> Includes 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 a helicopter, glider, or lighter than air certificate, not shown separately. <sup>8</sup> Includes dispatchers, flight navigators and engineers, and ground technicians—mechanics, parachute riggers, and ground and ground instructors. Data for 1996 on mechanics, repairmen, parachute riggers, ground instructors, and dispatchers are limited to those ages 70 years and less. <sup>9</sup> No medical examinations are required, therefore, data represent all certificates on record and include retired or otherwise inactive technicians. See footnote 8. <sup>10</sup> Includes all air traffic control specialists (staff positions, managers, supervisors, and for 1970-85 traffic management coordinators, not shown separately) and air traffic assistants. <sup>11</sup> Serving in-flight service stations, towers, and centers. <sup>12</sup> Prior to 1990, included in total air traffic control specialists. <sup>13</sup> Airway Transportation Systems Specialists <sup>14</sup> Source: 1970, U.S. Bureau of Mines; thereafter, FAA General Aviation Activity and Avionics Survey. Data for 1996 are estimated using new information on survey nonresponse and so are not strictly comparable to earlier years. <sup>15</sup> Includes kerosene-type and naphtha-type jet fuels.

Source: Except as noted, U.S. Federal Aviation Administration, *FAA Statistical Handbook of Aviation*, annual, last published in 1993. Internet site <<http://api.hq.faa.gov/apohome.htm>> and unpublished data.

## No. 1081. Net Orders for U.S. Civil Jet Transport Aircraft: 1985 to 1998

[1985 and 1990 are net new firm orders; beginning beginning 1993, net announced orders. Minus sign (-) indicates net cancellations. In 1997 Boeing acquired McDonnell Douglas]

Type of aircraft and customer	1985	1990	1993	1994	1995	1996	1997	1998
<b>Total number</b> <sup>1</sup>	<b>468</b>	<b>670</b>	<b>31</b>	<b>79</b>	<b>421</b>	<b>595</b>	<b>501</b>	<b>601</b>
U.S. customers	242	259	44	12	138	408	258	392
Foreign customers	226	411	-13	67	283	187	243	209
McDonnell Douglas MD-11, total	-	52	-1	2	-6	9	11	12
U.S. customers	-	16	-	2	3	1	-	3
Foreign customers	-	36	-1	-	-9	8	11	9
McDonnell Douglas MD-80/90, total	114	116	-1	1	51	29	-14	26
U.S. customers	37	91	6	-8	-	18	-11	24
Foreign customers	77	25	-7	9	51	11	-3	2
McDonnell Douglas MD-95, total	-	-	-	-	50	-	-	65
U.S. customers	-	-	-	-	50	-	-	50
Foreign customers	-	-	-	-	-	-	-	15
Boeing 737, total	253	189	-34	49	189	349	280	350
U.S. customers	146	38	-29	9	85	284	120	207
Foreign customers	107	151	-5	40	104	65	160	143
Boeing 747, total	37	153	-25	-5	35	66	37	-4
U.S. customers	13	24	-25	-1	2	22	15	1
Foreign customers	24	129	-	-4	33	44	22	-5
Boeing 757, total	51	66	20	5	-7	44	45	47
U.S. customers	39	33	46	-1	-6	35	25	34
Foreign customers	12	33	-26	6	-1	9	20	13
Boeing 767, total	10	60	43	27	26	10	96	40
U.S. customers	4	23	41	11	4	11	85	31
Foreign customers	6	37	2	16	22	-1	11	9
Boeing 777, total	-	34	29	-	83	88	46	65
U.S. customers	-	34	5	-	-	37	24	42
Foreign customers	-	-	24	-	83	51	22	23

- Represents zero. <sup>1</sup> Includes types of aircraft not shown separately.

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

## No. 1082. U.S. Aircraft Shipments: 1980 to 1998

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

Year	Total		Civil						Military	
			Large transports		General aviation <sup>1</sup>		Helicopters			
	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value
1980	14,677	18,929	387	9,895	11,877	2,486	1,366	656	1,047	5,892
1985	3,610	27,269	278	8,448	2,029	1,431	384	506	919	16,884
1990	3,321	38,585	521	22,215	1,144	2,007	603	254	1,053	14,109
1993	2,585	41,166	408	24,133	964	2,144	258	113	955	14,776
1994	2,309	36,568	309	18,124	928	2,357	308	185	764	15,902
1995	2,436	33,658	256	15,263	1,077	2,842	292	194	811	15,359
1996	2,232	36,247	269	17,564	1,130	3,127	278	193	555	15,363
1997, est.	2,814	45,315	374	25,810	1,569	4,674	346	231	525	14,600
1998, est.	3,400	56,150	530	37,000	2,030	5,300	340	240	500	13,610

<sup>1</sup> Excludes off-the-shelf military aircraft.

Source: U.S. Department of Commerce, International Trade Administration, Internet site <<http://www.ita.doc.gov/industry/tai/green/trends.htm>>.

## No. 1083. Employment and Earnings in Aircraft Industries: 1985 to 1998

[Annual averages of monthly figures (794 represents 794,000). See headnote, Table 688]

Item	1987 SIC <sup>1</sup> code	Unit	1985	1990	1995	1996	1998
			Employment: Total	(X)	1,000 . . .	794	898
Aircraft	3721	1,000 . . .	326	381	244	263	273
Aircraft engines and engine parts	3724	1,000 . . .	148	152	93	100	104
Aircraft equipment, n.e.c. <sup>2</sup>	3728	1,000 . . .	143	180	114	137	146
Guided missiles, space vehicles, and parts	376	1,000 . . .	177	185	98	91	89
Average weekly earnings: <sup>3</sup>	(X)						
Aircraft engines and parts	3724	Dollars . .	542	637	770	838	840
Aircraft equipment, n.e.c. <sup>2</sup>	3728	Dollars . .	506	570	677	752	741
Guided missiles, space vehicles, and parts	376	Dollars . .	515	612	765	842	841
Average hourly earnings: <sup>3</sup>	(X)						
Aircraft, excluding lump sum benefits	3721	Dollars . .	13.18	15.66	19.97	20.76	21.08
Aircraft with lump sum benefits	3721	Dollars . .	13.40	16.32	20.02	21.09	21.14
Aircraft engines and parts	3724	Dollars . .	12.85	14.84	17.34	18.58	18.93
Aircraft equipment, n.e.c. <sup>2</sup>	3728	Dollars . .	11.66	13.37	15.93	16.67	16.80
Guided missiles, space vehicles, and parts	376	Dollars . .	12.14	14.39	17.74	19.54	19.98

X Not applicable. <sup>1</sup> 1987 Standard Industrial Classification; see text, Section 17, Business. <sup>2</sup> N.e.c. means not elsewhere classified. <sup>3</sup> For production workers.

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



## No. 1084. Aerospace—Sales, New Orders, and Backlog: 1990 to 1997

[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	1992	1993	1994	1995	1996	1997
Net sales . . . . .	136.6	118.7	109.9	104.3	102.8	103.1	114.2
Percent U.S. Government . . . . .	53.8	50.0	49.9	54.8	49.5	49.8	43.1
Complete aircraft and parts . . . . .	49.9	54.0	48.9	43.3	42.5	41.8	54.5
Aircraft engines and parts . . . . .	16.4	13.7	12.2	11.3	12.5	15.7	12.4
Missiles and space vehicles, parts . . . . .	22.0	21.3	18.1	18.4	18.4	16.5	17.4
Other products, services . . . . .	48.3	29.7	30.7	31.3	29.4	29.1	29.9
Net, new orders . . . . .	146.0	100.3	79.7	88.7	109.1	126.3	119.9
Backlog, Dec. 31 . . . . .	250.1	236.1	211.8	192.6	202.6	229.9	234.5

<sup>1</sup> Except engines sold separately.

Source: U.S. Census Bureau, *Current Industrial Reports*, Series MA-37D, Internet site <<http://www.census.gov/econ/www/manumenu.htm>>.

## No. 1085. Aerospace Industry Sales, by Product Group and Customer: 1985 to 1999

[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 1084]

Item	Current dollars					Constant (1987) dollars <sup>3</sup>				
	1985	1990	1995	1998 <sup>1</sup>	1999 <sup>2</sup>	1985	1990	1995	1998 <sup>1</sup>	1999 <sup>2</sup>
<b>Total sales . . . . .</b>	<b>96.6</b>	<b>134.4</b>	<b>107.8</b>	<b>140.5</b>	<b>145.0</b>	<b>97.8</b>	<b>121.6</b>	<b>85.7</b>	<b>107.7</b>	<b>109.0</b>
<b>PRODUCT GROUP</b>										
Aircraft, total . . . . .	50.5	71.4	55.0	77.8	80.9	51.1	64.6	43.8	59.6	60.8
Civil <sup>4</sup> . . . . .	13.7	31.3	24.0	47.2	49.4	13.9	28.3	19.1	36.2	37.1
Military . . . . .	36.8	40.1	31.1	30.6	31.5	37.2	36.3	24.7	23.4	23.7
Missiles . . . . .	11.4	14.2	7.4	7.5	7.9	11.6	12.8	5.9	5.8	5.9
Space . . . . .	18.6	26.4	27.4	31.8	32.0	18.8	23.9	21.8	24.4	24.1
Related products and services <sup>5</sup> . . . . .	16.1	22.4	18.0	23.4	24.2	16.3	20.3	14.3	17.9	18.2
<b>CUSTOMER GROUP</b>										
Aerospace, total . . . . .	80.5	112.0	89.8	117.1	120.9	81.5	101.3	71.5	89.7	90.8
DOD <sup>6</sup> . . . . .	53.2	60.5	42.4	40.2	41.5	53.9	54.8	33.7	30.8	31.2
NASA <sup>7</sup> and other agencies . . . . .	6.3	11.1	11.4	10.8	10.9	6.3	10.0	9.1	8.3	8.2
Other customers <sup>8</sup> . . . . .	21.0	40.4	36.0	66.1	68.5	21.3	36.5	28.6	50.6	51.5
Related products and services <sup>5</sup> . . . . .	16.1	22.4	18.0	23.4	24.2	16.3	20.3	14.3	17.9	18.2

<sup>1</sup> Preliminary. <sup>2</sup> Estimate. <sup>3</sup> Based on AIAs aerospace composite price deflator. <sup>4</sup> All civil sales of aircraft (domestic and export sales of jet transports, commuters, business, and personal aircraft and helicopters). <sup>5</sup> Electronics, software, and ground support equipment, plus sales of non-aerospace products which are produced by aerospace-manufacturing use technology, processes, and materials derived from aerospace products. <sup>6</sup> Department of Defense. <sup>7</sup> National Aeronautics and Space Administration. <sup>8</sup> 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, *1998 Year-End Review and Forecast*, Internet site <<http://www.aia-aerospace.org>> (accessed 13 April 1999).

## No. 1086. Aerospace Industry—Net Profits After Taxes: 1980 to 1998

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

Year	Aerospace industry profits				All manufacturing corporations profits as a percent of—		
	Total (mil. dol.)	As percent of—			Sales	Assets	Equity
		Sales	Assets	Equity			
1980 . . . . .	2,588	4.3	5.2	16.0	4.8	6.9	13.9
1983 . . . . .	2,829	3.5	4.1	12.1	4.1	5.1	10.5
1984 . . . . .	3,639	4.1	4.7	14.1	4.6	6.0	12.5
1985 . . . . .	3,274	3.1	3.6	11.1	3.8	4.6	10.1
1986 . . . . .	3,093	2.8	3.1	9.4	3.7	4.2	9.5
1987 . . . . .	4,582	4.1	4.4	14.6	4.9	5.6	12.8
1988 . . . . .	4,883	4.3	4.4	14.9	6.0	6.9	16.2
1989 . . . . .	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
1991 . . . . .	<sup>1</sup> 2,484	1.8	1.9	6.1	2.5	2.6	6.4
1992 . . . . .	<sup>1</sup> -1,836	-1.4	-1.2	-5.2	1.0	1.0	2.6
1993 . . . . .	4,621	3.6	3.5	13.2	2.8	2.9	8.1
1994 . . . . .	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
1996 . . . . .	7,150	5.6	5.1	17.1	6.0	6.5	16.8
1997 . . . . .	7,221	5.2	4.8	17.3	6.2	6.6	16.6
1998 . . . . .	7,442	5.0	4.7	17.5	6.9	6.9	17.8

<sup>1</sup> 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.

Source: Aerospace Industries Association of America, Washington, DC, *1998 Year-end Review and Forecast*.

## No. 1087. 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]

Year	Merchandise trade			Aerospace trade						
	Trade balance	Imports	Exports	Trade balance	Imports	Total	Percent of U.S. exports	Civil		
								Total	Trans-ports	Military
1970	3,225	39,952	43,176	3,097	308	3,405	7.9	2,516	1,283	889
1971	-1,476	45,563	44,087	3,830	373	4,203	9.5	3,080	1,567	1,123
1972	-5,729	55,583	49,854	3,230	565	3,795	7.6	2,954	1,119	841
1973	2,390	69,476	71,865	4,360	782	5,142	7.2	3,788	1,664	1,354
1974	-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	4,968	1,975
1980	-19,696	245,262	225,566	11,952	3,554	15,506	6.9	13,248	6,727	2,258
1981	-22,267	260,982	238,715	13,134	4,500	17,634	7.4	13,312	7,180	4,322
1982	-27,510	243,652	216,442	11,035	4,568	15,603	7.2	9,608	3,834	5,995
1983	-52,409	258,048	205,639	12,619	3,446	16,065	7.8	10,595	4,683	5,470
1984	-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
1986	-138,279	365,438	227,159	11,826	7,902	19,728	8.7	14,851	6,276	4,875
1987	-152,119	406,241	254,122	14,575	7,905	22,480	8.8	15,768	6,377	6,714
1988	-118,526	440,952	322,426	17,860	9,087	26,947	8.4	20,298	8,766	6,651
1989	-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
1991	-66,723	488,453	421,730	30,785	13,003	43,788	10.4	35,548	20,881	8,239
1992	-84,501	532,665	448,164	31,356	13,662	45,018	11.0	36,906	22,379	8,111
1993	-115,568	580,659	465,091	27,235	12,183	39,418	8.5	31,823	18,146	7,596
1994	-150,630	663,256	512,626	25,010	12,363	37,373	7.3	30,055	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
1996	-170,214	795,289	625,075	26,602	13,668	40,270	6.4	29,477	13,624	10,792
1997	-181,488	870,671	689,182	32,239	18,134	50,374	7.3	40,075	21,028	10,299
1998	-231,100	913,597	682,497	40,960	23,110	64,071	9.4	51,999	31,427	12,072

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

## No. 1088. International Transportation Transactions of the United States: 1985 to 1998

[In millions of dollars (19,085 represents \$19,085,000,000). 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	1985	1990	1992	1993	1994	1995	1996	1997	1998
<b>Total receipts</b>	<b>19,085</b>	<b>37,339</b>	<b>38,147</b>	<b>38,486</b>	<b>40,751</b>	<b>44,990</b>	<b>46,487</b>	<b>47,795</b>	<b>45,516</b>
Ocean passenger fares	60	154	176	237	287	285	329	217	306
Other ocean transportation	8,846	12,141	11,328	11,533	12,404	13,581	12,502	12,230	10,860
Freight	3,440	4,326	4,136	4,056	4,506	5,282	4,703	4,571	3,786
Port expenditures	5,274	7,815	7,192	7,477	7,898	8,299	7,799	7,659	7,074
Charter hire	132	-	-	-	-	-	-	-	-
Air passenger fares <sup>1</sup>	4,351	15,144	16,442	16,291	16,710	18,624	20,084	20,572	19,690
Other air transportation	5,347	8,174	8,374	8,567	9,311	10,016	10,928	12,013	11,864
Freight	706	2,432	2,589	2,814	3,175	3,654	3,958	4,610	4,757
Port expenditures	4,641	5,742	5,785	5,753	6,136	6,362	6,970	7,403	7,107
Miscellaneous receipts	481	1,726	1,827	1,858	2,039	2,484	2,644	2,763	2,796
<b>Total payments</b>	<b>22,087</b>	<b>35,497</b>	<b>34,372</b>	<b>35,933</b>	<b>39,081</b>	<b>41,698</b>	<b>43,222</b>	<b>47,100</b>	<b>50,256</b>
Ocean passenger fares	154	248	301	341	353	353	453	358	399
Other ocean transportation	10,698	13,078	11,781	12,473	13,694	14,068	13,492	14,095	15,677
Import freight	8,114	10,904	9,752	10,462	11,369	11,514	11,259	11,908	13,652
Port expenditures	2,048	2,174	2,029	2,011	2,325	2,554	2,233	2,187	2,025
Charter hire	536	-	-	-	-	-	-	-	-
Air passenger fares <sup>1</sup>	6,290	10,283	10,302	11,069	12,709	14,310	15,365	17,780	19,398
Other air transportation	4,719	9,881	10,468	10,497	10,525	11,061	11,751	12,575	12,559
Import freight	1,666	2,207	2,376	2,580	2,914	3,113	3,201	3,541	3,624
Port expenditures	3,053	7,674	8,092	7,917	7,611	7,948	8,550	9,034	8,935
Miscellaneous payments	226	2,007	1,520	1,553	1,800	1,906	2,161	2,292	2,223
<b>Balance</b>	<b>-3,002</b>	<b>1,842</b>	<b>3,775</b>	<b>2,553</b>	<b>1,670</b>	<b>3,292</b>	<b>3,265</b>	<b>695</b>	<b>-4,750</b>

- Represents zero. <sup>1</sup> Beginning 1990, includes interairline settlements.

Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*, July 1999; and unpublished data.

## No. 1089. Federal Expenditures for Civil Functions of the Corps of Engineers, United States Army: 1970 to 1997

[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 <sup>1</sup>	Navigation	Flood control	Multiple purpose	Fiscal year	Total program <sup>1</sup>	Navigation	Flood control	Multiple purpose
1970 . . . . .	1,128	398	379	331	1990 . . . . .	3,297	1,391	1,397	375
1980 . . . . .	3,061	1,225	1,228	551	1991 . . . . .	3,511	1,473	1,447	443
1984 . . . . .	3,085	1,383	1,154	445	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

<sup>1</sup> 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. 1090. Freight Carried on Major U.S. Waterways: 1975 to 1997

[In millions of tons (3.2 represents 3,200,000)]

Item	1975	1980	1985	1990	1993	1994	1995	1996	1997
Atlantic intracoastal waterway . . . . .	3.2	4.0	3.1	4.2	3.8	3.7	3.5	4.3	3.6
Great Lakes . . . . .	193.8	183.5	148.1	167.1	159.6	175.3	177.7	181.8	188.6
Gulf intracoastal waterway . . . . .	97.0	94.5	102.5	115.5	114.9	117.6	117.9	118.0	118.1
Mississippi River system . . . . .	453.4	584.2	527.8	659.6	660.4	693.3	710.1	701.8	707.1
Mississippi River mainstream . . . . .	311.2	441.5	384.0	475.6	475.1	496.8	520.2	505.6	504.7
Ohio River system <sup>2</sup> . . . . .	171.4	179.3	203.9	260.0	257.2	270.5	267.6	270.9	274.9
Columbia River . . . . .	38.1	49.2	42.4	51.4	51.2	50.9	57.1	51.2	52.7
Snake River . . . . .	2.0	5.1	3.5	4.8	5.3	5.9	6.8	5.7	6.1

<sup>1</sup> Main channels and all tributaries of the Mississippi, Illinois, Missouri and Ohio Rivers. <sup>2</sup> 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. 1091. Waterborne Commerce, by Type of Commodity: 1990 to 1997

[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]

Commodity	1997						
	1990	1995	1996	Total	Domestic	Foreign imports	Foreign exports
<b>Total<sup>1</sup> . . . . .</b>	<b>2,163.9</b>	<b>2,240.4</b>	<b>2,284.1</b>	<b>2,333.1</b>	<b>1,112.5</b>	<b>788.3</b>	<b>432.3</b>
Coal . . . . .	339.9	324.5	328.7	326.0	232.3	10.3	83.4
Petroleum and petroleum products . . . . .	923.2	907.1	954.4	988.2	396.7	533.5	58.0
Crude petroleum . . . . .	485.7	504.6	531.8	553.3	120.4	429.3	3.6
Petroleum products <sup>1</sup> . . . . .	437.5	402.5	422.7	434.9	276.3	104.2	54.4
Gasoline . . . . .	116.9	114.4	119.1	114.7	89.5	19.4	5.8
Distillate fuel oil . . . . .	77.4	76.7	84.5	88.2	65.7	16.6	5.9
Residual fuel oil . . . . .	145.2	111.9	112.3	114.4	76.7	29.2	8.5
Chemicals and related products . . . . .	123.8	153.7	152.3	156.7	81.1	25.1	50.5
Crude material, inedible <sup>1</sup> . . . . .	374.7	381.7	388.7	400.9	246.5	93.2	61.2
Forest products, wood and chips . . . . .	55.7	47.2	45.4	44.0	19.7	3.8	20.5
Pulp and waste paper . . . . .	11.8	14.9	12.6	11.9	0.2	1.1	10.6
Soil, sand, gravel, rock, and stone . . . . .	144.2	152.5	159.2	167.8	135.4	26.7	5.7
Primary manufactured goods <sup>1</sup> . . . . .	76.0	106.3	108.9	117.0	37.2	63.9	15.9
Papers products . . . . .	10.7	13.1	13.7	14.3	1.4	3.8	9.1
Lime, cement and glass . . . . .	28.3	33.9	33.7	38.4	15.7	20.6	2.1
Primary iron and steel products . . . . .	25.1	44.1	45.7	48.0	14.4	31.9	1.7
Food and farm products <sup>1</sup> . . . . .	267.5	303.2	284.9	271.7	93.7	29.0	149.0
Fish . . . . .	3.2	3.6	2.0	2.1	0.1	1.1	0.9
Grain . . . . .	157.3	167.9	152.4	131.0	49.1	1.7	80.2
Corn . . . . .	96.1	105.0	94.0	77.1	33.1	0.1	43.9
Wheat . . . . .	44.5	48.5	46.6	40.6	12.4	0.3	27.9
Oilseeds . . . . .	36.0	46.1	50.1	53.4	25.8	0.5	27.1
Soybeans . . . . .	32.2	42.0	46.2	48.4	21.5	0.2	26.7
Vegetables products . . . . .	6.7	9.0	7.5	8.9	1.6	2.7	4.6
Processed grain and animal feed . . . . .	28.2	33.0	28.2	30.8	8.7	1.0	21.1

<sup>1</sup> Includes categories not shown separately.

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

## No. 1092. Flag Merchant Vessels—Private Shipyards: 1998

[As of October 1 (16,853 represents 16,853,000). Covers ocean going vessels of 1,000 gross tons and over engaged in foreign and domestic trade, and inactive vessels. Excludes vessels operating exclusively on Great Lakes, inland waterways, and those owned by the United States Army and Navy, and special types such as cable ships, tugs, etc.]

Vessel type	Number						Deadweight tons (1,000)					
	Total	Tank- er <sup>1</sup>	Dry bulk <sup>2</sup>	Con- tain- er- ship	Cruise/ Pas- sen- ger <sup>3</sup>	Other <sup>4</sup>	Total	Tank- er <sup>1</sup>	Dry bulk <sup>2</sup>	Con- tain- er- ship	Cruise/ Pas- sen- ger <sup>3</sup>	Other <sup>4</sup>
<b>Total . . . . .</b>	<b>473</b>	<b>156</b>	<b>15</b>	<b>91</b>	<b>12</b>	<b>199</b>	<b>16,853</b>	<b>9,415</b>	<b>579</b>	<b>3,096</b>	<b>116</b>	<b>3,647</b>
Active vessels . . . . .	265	113	11	84	4	53	12,094	7,414	497	2,964	37	1,182
Privately owned . . . . .	255	112	11	83	1	48	11,978	7,397	497	2,948	7	1,129
U.S. foreign trade . . . . .	81	5	5	55	-	16	3,082	185	279	2,243	-	375
Foreign-to-foreign . . . . .	14	13	1	-	-	-	1,123	1,059	64	-	-	-
Domestic trade . . . . .	124	86	4	25	1	8	6,826	5,922	113	639	7	145
Coastal . . . . .	64	57	4	1	-	2	2,585	2,390	113	39	-	43
Noncontiguous . . . . .	60	29	-	24	1	6	4,241	3,532	-	600	7	102
Military Sea Lift Command . . . . .	36	8	1	3	-	24	947	231	41	66	-	609
Government owned . . . . .	10	1	-	1	3	5	116	17	-	16	30	53
Ready reserve force . . . . .	2	-	-	-	1	1	24	-	-	-	9	15
Other custody . . . . .	4	1	-	1	-	2	55	17	-	16	-	22
Other reserve . . . . .	4	-	-	-	2	2	37	-	-	-	21	16
Inactive vessels . . . . .	208	43	4	7	8	146	4,759	2,001	82	132	79	2,465
Privately owned . . . . .	28	16	4	4	-	4	1,336	1,132	82	78	-	44
Laid-up (Not trading) <sup>5</sup> . . . . .	27	15	4	4	-	4	1,302	1,098	82	78	-	44
Laid-up (Marad Custody) <sup>6</sup> . . . . .	1	1	-	-	-	-	34	34	-	-	-	-
Government owned: National Defense reserve fleet . . . . .	180	27	-	3	8	142	3,423	869	-	54	79	2,421
Ready reserve fleet . . . . .	89	10	-	2	1	76	1,882	304	-	34	17	1,527
Other reserve . . . . .	46	9	-	1	-	36	907	342	-	20	-	545
Non-retention <sup>6</sup> . . . . .	45	8	-	-	7	30	634	223	-	-	62	349

- Represents zero. <sup>1</sup> Includes liquified natural gas and intergrated tug barge vessels. <sup>2</sup> Includes bulk/oil, ore/oil, ore/bulk/oil carriers and intergrated tug barges. <sup>3</sup> Includes combination passenger and cargo vessels. <sup>4</sup> Breakbulk ships, partial containerhips, refrigerated cargo ships, barge, specialized cargo, and roll-on roll-off ships. <sup>5</sup> Vessels idle 30 days or more. <sup>6</sup> Vessels not actively maintained.

Source: Maritime Administration, Office of Statistical and Economic Analysis.

## No. 1093. Private Shipyards—Summary: 1980 to 1999

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

Item	Unit	1980	1985	1990	1994	1995	1996	1997	1998	1999 <sup>1</sup>
Employment <sup>2</sup> . . . . .	1,000 . . .	178.0	138.3	130.8	107.2	105.0	100.4	98.6	99.6	99.9
Production workers . . . . .	1,000 . . .	138.8	101.2	93.6	79.7	77.8	73.5	70.8	71.6	70.3
Building activity:										
Merchant vessels: <sup>3</sup>										
Under construction <sup>4</sup> . . . . .	Number . . .	69	10	-	1	3	10	14	12	5
Ordered . . . . .	Number . . .	7	-	3	3	8	5	6	1	2
Delivered . . . . .	Number . . .	23	3	-	1	1	1	4	5	1
Cancelled . . . . .	Number . . .	4	-	-	-	-	-	4	3	-
Under contract <sup>5</sup> . . . . .	Number . . .	49	7	3	3	10	14	12	5	6
Naval vessels: <sup>3</sup>										
Under construction <sup>4</sup> . . . . .	Number . . .	99	100	95	60	57	46	46	42	46
Ordered . . . . .	Number . . .	11	11	7	12	6	11	4	17	-
Delivered . . . . .	Number . . .	19	26	15	15	17	11	8	13	4
Under contract <sup>5</sup> . . . . .	Number . . .	91	85	87	57	46	46	42	46	42
Unfinished work: <sup>4</sup>										
Commercial ships . . . . .	Mil. dol. . .	2,070	450	-	58.3	93.4	365.4	572.1	746.5	596.6
Naval ships . . . . .	Mil. dol. . .	7,107	12,091	24,495	19,679	20,768	17,734	20,116	19,097	18,079

- Represents zero. <sup>1</sup> As of June 1. <sup>2</sup> Annual average of monthly data. <sup>3</sup> Vessels of 1,000 tons or larger. <sup>4</sup> As of Jan. 1. <sup>5</sup> As of Dec. 31.

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

## No. 1094. Employees in Government and Private Shipyards: 1960 to 1998

[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	Private yards			Year	Private yards			Year	Private yards		
	Total	Private yards	Federal yards		Total	Private yards	Federal yards		Total	Private yards	Federal yards
1960	208	112	96	1989	196	126	71	1994	148	107	41
1970	216	134	83	1990	198	130	68	1995	139	106	33
1975	220	154	66	1991	193	131	62	1996	127	103	24
1980	250	178	72	1992	183	125	58	1997	122	100	22
1985	219	138	80	1993	163	113	50	1998	122	100	22

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. 1095. Employment on U.S. Flag Merchant Vessels and Basic Monthly Wage Scale for Able-Bodied Seamen: 1975 to 1997

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

Year	Employment <sup>1</sup>	Year	Employment <sup>1</sup>	Year	East coast wage rate <sup>2</sup>	West coast wage rate <sup>2</sup>	Year	East coast wage rate <sup>2</sup>	West coast wage rate <sup>2</sup>
1980	19.6	1993	9.3	1980	967	1,414	1993	1,721	2,438
1985	13.1	1994	9.1	1985	1,419	2,029	1994	1,790	2,536
1989	9.9	1995	7.9	1989	1,448	2,218	1995	1,918	2,637
1990	11.1	1996	7.5	1990	1,505	2,218	1996	2,014	2,769
1991	11.7	1997	8.6	1991	1,518	2,329	1997	2,094	2,879

<sup>1</sup>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. <sup>2</sup>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. 1096. Worldwide Tanker Casualties: 1975 to 1998

[(188 represents 188,000). Data for 1975 and 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	1975	1980	1985	1990	1993	1994	1995	1996	1997	1998
Casualties	Number	906	(NA)	340	541	314	270	280	241	270	201
Total losses <sup>1</sup>	Number	22	15	12	10	9	11	6	2	9	2
Deaths	Number	90	132	53	119	26	88	8	15	(NA)	(NA)
Oil spills	Number	45	32	9	31	24	29	18	24	22	22
Amount	1,000 tons	188	136	80	61	120	110	4	72	50	9
Amount	Mil. gallons	58	42	25	19	37	33	1	22	15	3

NA Not available. <sup>1</sup> Excludes losses due to hostilities.

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

## No. 1097. 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]

Year	World completed		World owned		U.S. completed		U.S. registered	
	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
1980	2,412	13,101	73,832	419,911	205	555	5,579	18,464
1985	1,964	18,157	76,395	416,269	66	180	6,447	19,518
1990	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
1993	1,505	20,025	80,655	457,915	30	14	5,646	14,087
1994	1,789	19,612	80,676	475,859	28	29	5,270	13,655
1995	1,856	22,565	82,890	490,662	30	14	5,292	12,760
1996	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. 1098. 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	Ships lost					Gross tonnage lost (1,000)				
	1980	1990	1994	1995	1996	1980	1990	1994	1995	1996
<b>Total</b> . . . . .	<b>363</b>	<b>160</b>	<b>171</b>	<b>190</b>	<b>151</b>	<b>1,791</b>	<b>1,047</b>	<b>1,532</b>	<b>1,055</b>	<b>836</b>
Tankers . . . . .	24	8	16	12	12	707	138	638	172	179
Ore/bulk carriers <sup>1</sup> . . . . .	21	15	19	19	18	458	687	590	447	303
General cargo . . . . .	211	87	76	88	77	478	202	237	218	240
Container ships . . . . .	2	-	-	-	6	6	-	-	-	94
Passenger <sup>2</sup> . . . . .	9	-	2	1	-	112	-	26	185	-
Fishing . . . . .	96	50	58	70	38	30	20	41	33	20

- Represents zero. <sup>1</sup> Includes ore/bulk/oil carriers. <sup>2</sup> Includes passenger cargo/ships.

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

## No. 1099. Merchant Fleets of the World: 1998

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

Country of registry	Total	Tanker	Dry bulk <sup>1</sup>	Container-ship	Roll-on/roll-off	Cruise/passenger	Other <sup>2</sup>
<b>World total</b> . . . . .	<b>27,730</b>	<b>6,739</b>	<b>5,744</b>	<b>2,341</b>	<b>864</b>	<b>449</b>	<b>11,593</b>
United States . . . . .	473	156	15	91	58	12	141
Privately-owned . . . . .	283	128	15	87	26	1	26
Government-owned . . . . .	190	28	-	4	32	11	115
Foreign total . . . . .	27,257	6,583	5,729	2,250	806	437	11,452
Panama . . . . .	4,456	971	1,293	469	68	51	1,604
Liberia . . . . .	1,632	691	456	170	12	40	263
Russia . . . . .	1,472	273	113	25	11	7	1,043
China . . . . .	1,465	244	332	96	14	34	745
Cyprus . . . . .	1,436	173	488	121	20	15	619
Malta . . . . .	1,305	349	371	45	39	7	494
Bahamas . . . . .	1,029	241	151	53	37	60	487
Singapore . . . . .	877	386	129	162	5	1	194
Saint Vincent . . . . .	782	96	135	30	38	5	478
Greece . . . . .	741	257	318	44	16	19	87
Japan . . . . .	708	284	177	32	49	15	151
Norway (NIS) <sup>3</sup> . . . . .	652	288	105	4	40	12	203
Philippines . . . . .	533	68	211	11	18	8	217
Turkey . . . . .	521	74	169	12	15	8	243
Netherlands . . . . .	504	71	6	46	15	9	357
Germany . . . . .	499	20	-	278	10	6	185
Indonesia . . . . .	484	121	24	12	11	8	308
Korea (South) . . . . .	435	107	112	45	1	3	167
Antigua & Barbuda . . . . .	405	11	17	85	16	-	276
Malaysia . . . . .	372	110	58	50	8	2	144
Belize . . . . .	367	51	20	5	3	-	288
Italy . . . . .	345	192	30	14	41	21	47
Denmark (DIS) <sup>3</sup> . . . . .	305	66	13	59	9	-	158
India . . . . .	292	96	128	6	-	2	60
Thailand . . . . .	289	89	39	12	-	1	148
Ukraine . . . . .	267	21	10	3	12	9	212
Honduras . . . . .	232	27	13	4	5	3	180
Romania . . . . .	197	8	39	2	9	-	139
Hong Kong . . . . .	190	10	107	41	-	-	32
Taiwan . . . . .	183	17	52	75	1	-	38
Sweden . . . . .	173	64	8	-	41	5	55
Brazil . . . . .	172	79	45	6	9	1	32
Isle of Man . . . . .	149	71	22	21	11	1	23
United Kingdom . . . . .	142	63	4	23	5	21	26
Marshall Islands . . . . .	130	43	59	20	2	-	6
Cambodia . . . . .	128	-	12	3	3	-	110
Syria . . . . .	124	-	3	-	1	-	120
Norway . . . . .	124	41	6	-	7	2	68
Iran . . . . .	120	25	45	3	2	-	45
Spain . . . . .	119	36	9	19	32	-	23
Vietnam . . . . .	113	12	9	-	1	-	91
Portugal . . . . .	112	28	13	4	3	-	64
Egypt . . . . .	112	16	22	-	9	1	64
All other . . . . .	2,564	693	356	140	157	60	1,158

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

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