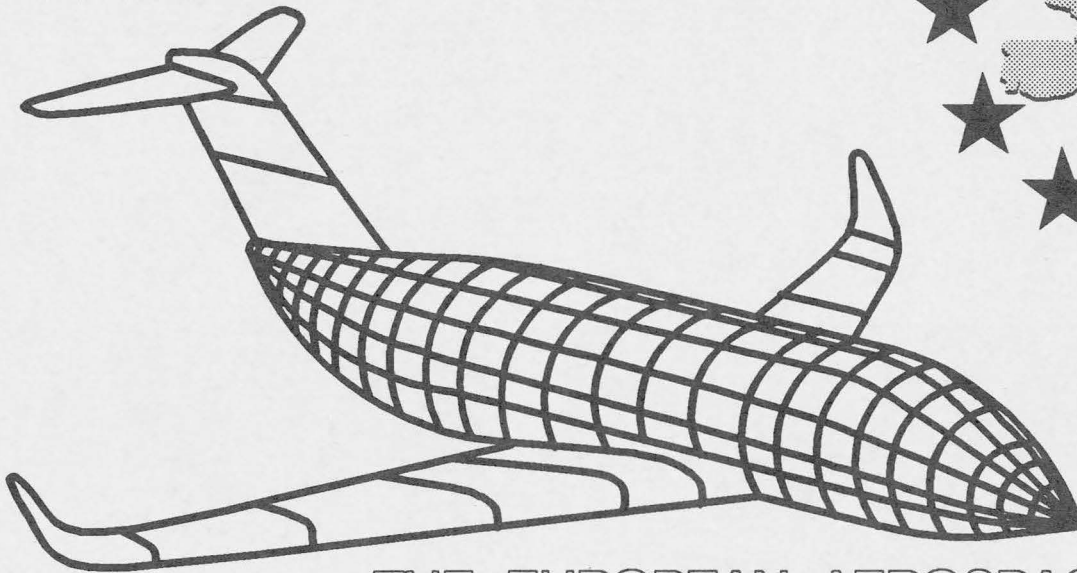


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THE EUROPEAN AEROSPACE INDUSTRY

Trading Position and Figures

1992

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Directorate-General
Internal Market and Industrial Affairs

III/6813/92-EN

Brussels, 1st March 1992.

**The European Aerospace Industry
Trading Position and Figures**

(Commission Staff Working Paper)

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PREFACE

We have the pleasure to present you with the 1992 edition of the document

The European aerospace industry - Trading position and figures

This document is based on the most relevant statistics available to the Commission of the European Communities on the world aerospace industry.

The Directorate-General for the *Internal Market and Industrial Affairs* has been compiling and collating these statistics since 1972.

This edition covers two **new subjects**: civil turbine engine fleets (to be found at the end of Chapter 2) and financial situation of the aerospace industry (to be found at the end of Chapter 6).

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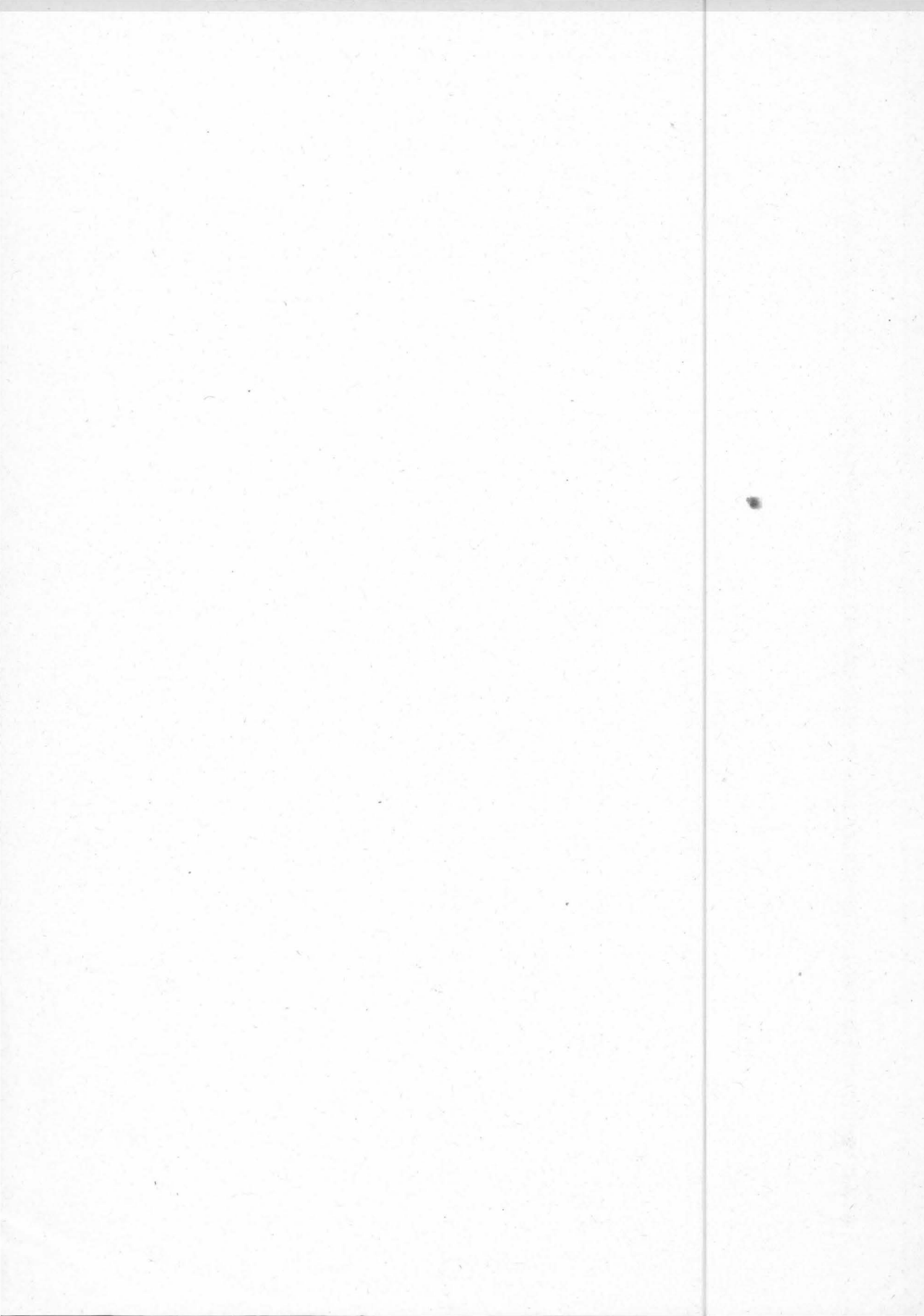
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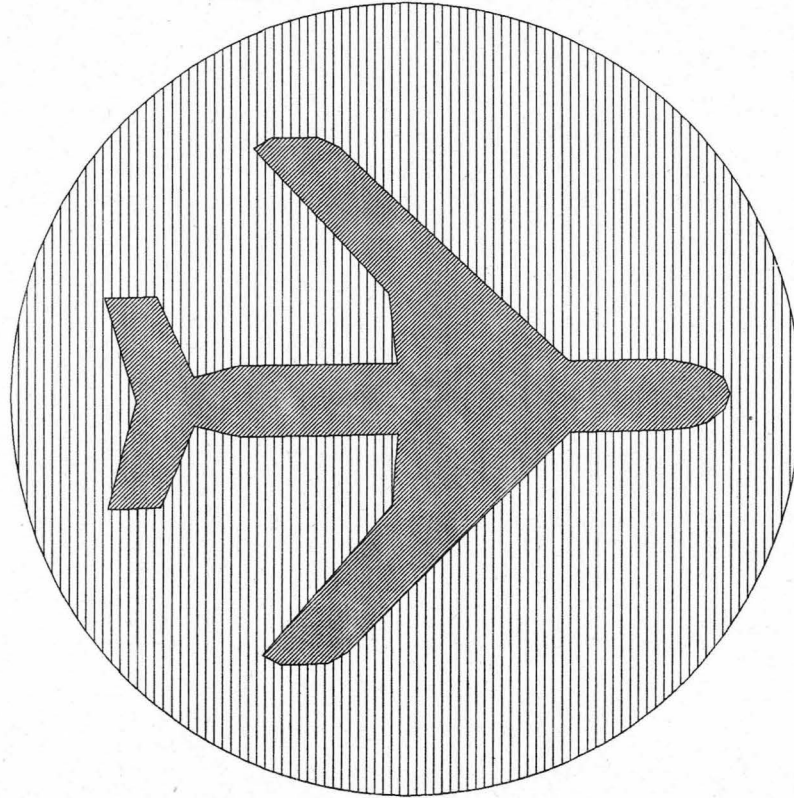
* Additional information: Dominique Bé (tel: 32-2-235.80.57) or Erwin Melaerts (tel: 32-2-235.40.51) - FAX: 32-2-235.68.51

Table of Contents

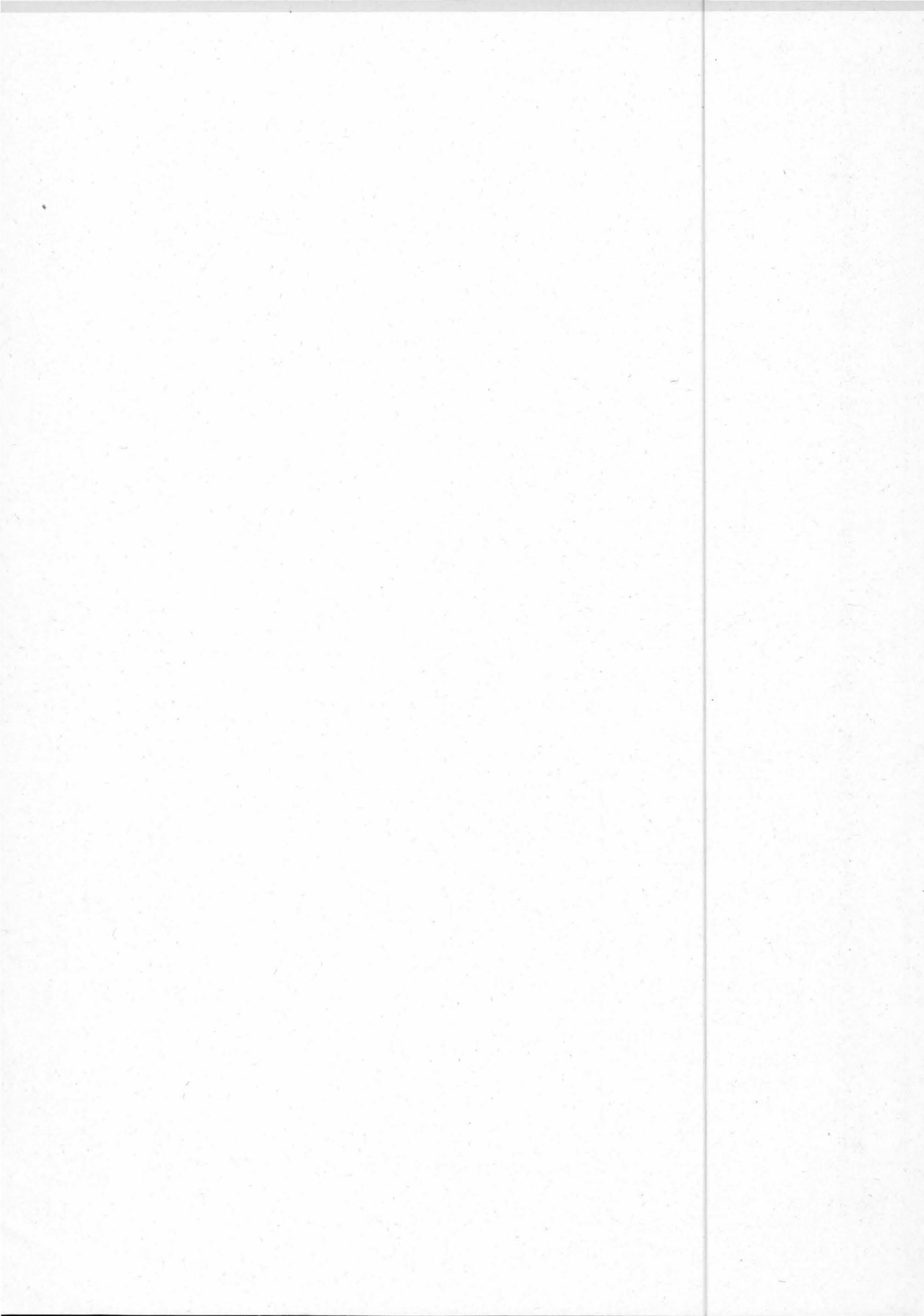
<p>1. CIVIL AIR TRAFFIC 7</p> <p style="padding-left: 20px;">World Scheduled Air Traffic 11</p> <p style="padding-left: 20px;">AEA Airlines Scheduled Air Traffic 13</p> <p>2. CIVIL TRANSPORT AIRCRAFT 15</p> <p style="padding-left: 20px;">Orders (units) 23</p> <p style="padding-left: 20px;">Deliveries (units) 26</p> <p style="padding-left: 20px;">Backlog (units) 29</p> <p style="padding-left: 20px;">Fleet Age 32</p> <p style="padding-left: 20px;">Fleet (units, seats, value) 34</p> <p style="padding-left: 20px;">Deliveries (units, seats, value) 47</p> <p style="padding-left: 20px;">Orders In Backlog (units, seats, value) 60</p> <p style="padding-left: 20px;">Civil Turbine Engines Deliveries 73</p> <p>3. HELICOPTER AND LIGHT AIRCRAFT 83</p> <p style="padding-left: 20px;">Light Aircraft 92</p> <p style="padding-left: 20px;">Business Aircraft 95</p> <p style="padding-left: 20px;">Civil Helicopters 111</p> <p>4. MILITARY AIRCRAFT 123</p> <p style="padding-left: 20px;">Military Aircraft 125</p> <p style="padding-left: 20px;">Unit Value of EC Military Aircraft 143</p> <p style="padding-left: 20px;">Military Helicopter 144</p> <p style="padding-left: 20px;">Military Turbine Engines 147</p> <p>5. CIVIL AEROSPACE TRADE 163</p>	<p>6. TURNOVER 173</p> <p style="padding-left: 20px;">Overall Turnover 180</p> <p style="padding-left: 20px;">Consolidated at National Level 182</p> <p style="padding-left: 20px;">Consolidated at EC Level 184</p> <p style="padding-left: 20px;">Breakdown by Subsector 187</p> <p style="padding-left: 20px;">Detailed Breakdown of EC Turnover 189</p> <p style="padding-left: 20px;">Public Support to Aerospace Industry 210</p> <p style="padding-left: 20px;">Intra-EC Cooperation 214</p> <p style="padding-left: 20px;">Finance 215</p> <p>7. EMPLOYMENT 223</p> <p style="padding-left: 20px;">Total Aerospace Employment 227</p> <p style="padding-left: 20px;">Breakdown of EC Workforce 229</p> <p>8. AEROSPACE MANUFACTURERS 235</p> <p style="padding-left: 20px;">Turnover 239</p> <p style="padding-left: 20px;">Workforce 240</p> <p>9. PUBLIC FINANCING OF R&D 241</p> <p>. ANNEXES 247</p> <p style="padding-left: 20px;">Ecu Exchange Rates 249</p> <p style="padding-left: 20px;">Gross Domestic Product (GDP) 250</p> <p style="padding-left: 20px;">GDP Deflator at Market Prices 252</p> <p style="padding-left: 20px;">Index of Abbreviations 253</p>
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CIVIL AIR TRAFFIC



C H A P T E R 1



CIVIL AIR TRAFFIC

The data referring to the world civil air traffic correspond to scheduled operations of airlines of *ICAO* States and are published in the *ICAO* Bulletin.

The data referring to the scheduled operations of *AEA* member airlines, according to the *AEA* Annual Report, are broken down between the following groups of routes:

- **domestic routes**

routes commencing and ending within the national frontiers of the *AEA* reporting carrier's country of registration

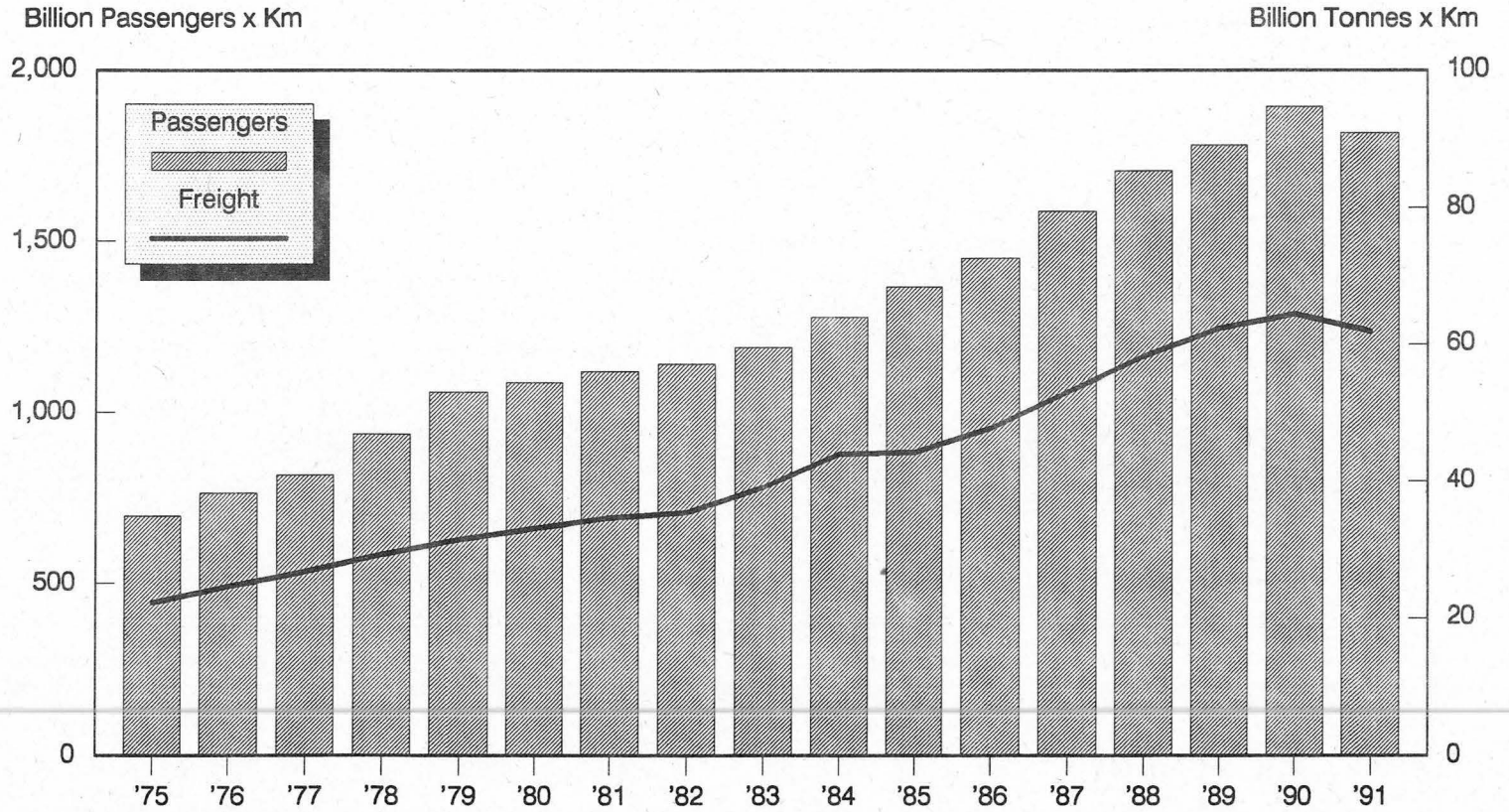
- **International Short/medium Haul**

international routes originating and ending within Europe (including Turkey and ex-USSR up to 55°E), Azores, Canary Islands, Madeira, Cyprus, North Africa (Algeria, Egypt, Libya, Morocco, Sudan and Tunisia) and the Middle East (Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen).

- **Long-Haul**

other international routes

World Scheduled Air Traffic



Source: ICAO

WORLD SCHEDULED AIR TRAFFIC (INCLUDING USSR)

	PASSENGERS (BILLION)				FREIGHT			
	CARRIED PASSENGERS	PASSENGERS /KM	AVAILABLE SEATS-KM	LOAD FACTOR	MIO TONS CARRIED	TOTAL (MIO T/KM)	FREIGHT	MAIL
1975	0.534	697	1,179	59%	8.7	22,270	87.0%	13.0%
1980	0.748	1,089	1,724	63%	11.1	33,060	88.9%	11.1%
1981	0.752	1,119	1,757	64%	10.9	34,670	89.1%	10.9%
1982	0.766	1,142	1,795	64%	11.6	35,410	89.1%	10.9%
1983	0.798	1,190	1,852	64%	12.3	39,110	89.8%	10.2%
1984	0.848	1,278	1,972	65%	13.4	43,980	90.2%	9.8%
1985	0.899	1,367	2,081	66%	13.7	44,240	90.1%	9.9%
1986	0.960	1,452	2,235	65%	14.7	47,740	90.5%	9.5%
1987	1.027	1,589	2,367	67%	16.1	53,050	91.2%	8.8%
1988	1.082	1,706	2,525	68%	17.3	58,190	91.7%	8.3%
1989	1.118	1,782	2,629	68%	18.1	62,310	91.9%	8.1%
1990	1.159	1,894	2,766	68%	18.2	64,320	91.8%	8.2%
1991	1.125	1,818	2,711	67%	17.3	61,750	-	-

ANNUAL GROWTH RATE (AS %)

	PASSENGERS				FREIGHT			
	CARRIED PASSENGERS	PASSENGERS /KM	AVAILABLE SEATS-KM		TOTAL (TONS)	TOTAL (TONS/KM)	FREIGHT (TONS/KM)	MAIL (TONS/KM)
1975	3.7	6.3	6.4	-	0.0	1.7	1.8	0.7
1980	-0.8	2.7	7.3	-	0.9	5.2	4.9	7.6
1981	0.5	2.8	1.9	-	-1.8	4.9	5.1	3.0
1982	1.9	2.1	2.2	-	6.4	2.1	2.1	2.1
1983	4.2	4.2	3.2	-	6.0	10.4	11.3	3.4
1984	6.3	7.4	6.5	-	8.9	12.5	13.0	7.7
1985	6.0	7.0	5.5	-	2.2	0.6	0.4	2.1
1986	6.8	6.2	7.4	-	7.3	7.9	8.4	3.4
1987	7.0	9.4	5.9	-	9.5	11.1	12.0	2.9
1988	5.4	7.4	6.7	-	7.5	9.7	10.3	3.2
1989	3.3	4.5	4.1	-	4.6	7.1	7.3	4.6
1990	3.7	6.3	5.2	-	0.6	3.2	3.1	4.6
1991	-2.9	-4.0	-2.0	-	-4.9	-4.0	-	-

■ SOURCE: ICAO

BREAKDOWN OF WORLD SCHEDULED AIR TRAFFIC

REVENUE PASSENGERS/KM (BILLION)

	TOTAL	AEA	USA	USSR	REST OF THE WORLD
1975	697	16%	38%	18%	29%
1980	1,089	15%	38%	15%	33%
1981	1,119	15%	35%	15%	34%
1982	1,142	15%	36%	15%	34%
1983	1,190	14%	37%	15%	34%
1984	1,278	14%	38%	14%	34%
1985	1,367	14%	39%	14%	33%
1986	1,452	13%	40%	13%	33%
1987	1,589	14%	40%	13%	33%
1988	1,706	14%	40%	12%	34%
1989	1,782	14%	39%	13%	34%
1990	1,894	14%	39%	13%	34%

REVENUE PASSENGERS/KM (ANNUAL GROWTH RATE - AS %)

	TOTAL	AEA	USA	USSR	REST OF THE WORLD
1975	6.3	5.3	-0.1	12.7	12.2
1980	2.7	1.9	-0.6	6.4	5.6
1981	2.8	4.2	-3.2	6.9	7.1
1982	2.1	0.4	3.4	0.5	2.1
1983	4.2	-0.3	8.5	2.4	2.4
1984	7.4	6.6	7.9	4.0	8.6
1985	7.0	6.8	10.9	2.3	4.7
1986	6.2	0.8	9.7	3.6	5.5
1987	9.4	13.0	10.0	3.0	9.8
1988	7.4	6.8	5.7	6.5	9.9
1989	4.5	7.1	2.2	6.4	5.3
1990	6.3	7.9	5.4	7.7	6.1

■ SOURCE: ICAO AND AEA

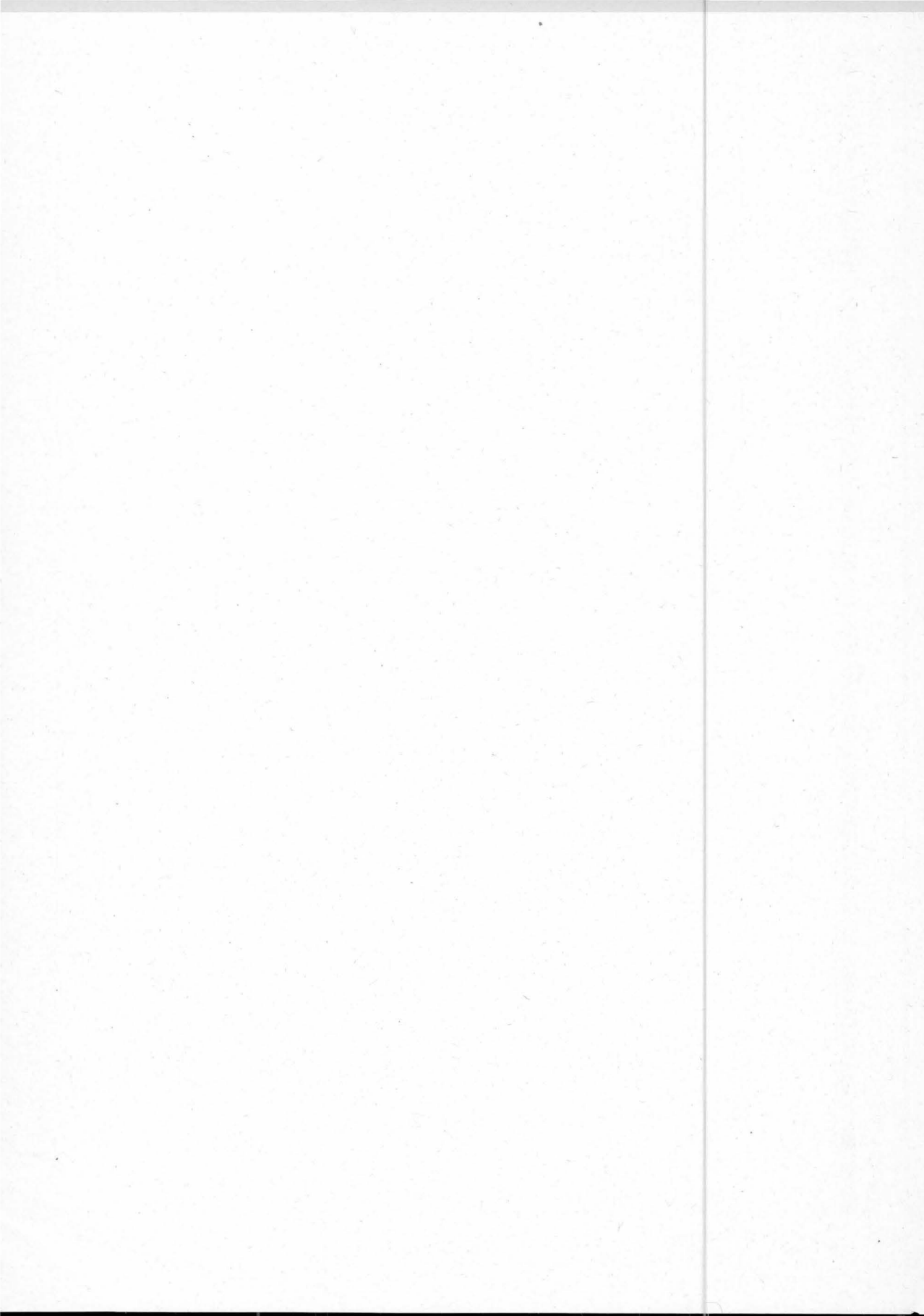
AEA AIRLINES AIR TRAFFIC

	REVENUE PASSENGERS/KM (BILLION)			AVAILABLE SEATS-KM (BILLION)			LOAD FACTOR (AS %)		
	DOMESTIC	S-M HAUL	LONG-HAUL	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL
1970	-	22.0	44.6	-	41.3	84.5	-	53.3	52.8
1975	-	34.4	78.7	-	62.6	138.7	-	55.0	56.7
1980	19.3	48.1	114.2	30.2	86.3	185.1	63.9	55.8	61.7
1981	19.8	49.4	119.7	29.9	84.9	185.3	66.2	58.2	64.6
1982	20.7	49.2	120.6	31.3	85.7	185.6	66.3	57.4	64.9
1983	21.7	49.1	120.1	33.0	85.6	184.2	65.9	57.4	65.2
1984	22.3	53.4	127.1	32.8	89.5	187.2	67.8	59.6	67.9
1985	22.9	57.2	135.5	34.0	93.7	199.2	67.2	61.1	68.0
1986	23.8	57.0	137.3	35.3	96.8	208.3	67.5	58.8	65.9
1987	26.5	63.9	155.7	37.4	101.6	221.9	70.9	62.9	70.1
1988	28.4	69.2	165.3	41.2	111.2	235.9	68.8	62.2	70.1
1989	29.3	74.5	176.7	43.6	119.5	248.9	67.2	62.3	71.0
1990	30.8	79.6	191.4	45.7	128.2	272.1	67.5	62.1	70.4

ANNUAL GROWTH RATE (AS %)

	REVENUE PASSENGERS/KM			AVAILABLE SEATS-KM		
	DOMESTIC	S-M HAUL	LONG HAUL	DOMESTIC	S-M HAUL	LONG HAUL
1975	-	8.4	4.0	-	5.6	3.7
1980	-2.3	-3.3	4.3	1.9	2.6	9.4
1981	2.6	2.7	4.8	-1.0	-1.7	0.1
1982	4.5	-0.5	0.7	4.4	1.0	0.2
1983	4.9	-0.2	-0.4	5.5	-0.1	-0.8
1984	2.4	8.6	5.8	-0.6	4.5	1.7
1985	2.8	7.3	6.6	3.8	4.8	6.4
1986	4.2	-0.5	1.3	3.6	3.3	4.5
1987	11.1	12.2	13.4	5.9	4.9	6.6
1988	7.1	8.3	6.2	10.3	9.5	6.3
1989	3.3	7.6	6.9	5.7	7.4	5.5
1990	5.2	6.9	8.3	4.8	7.3	9.3

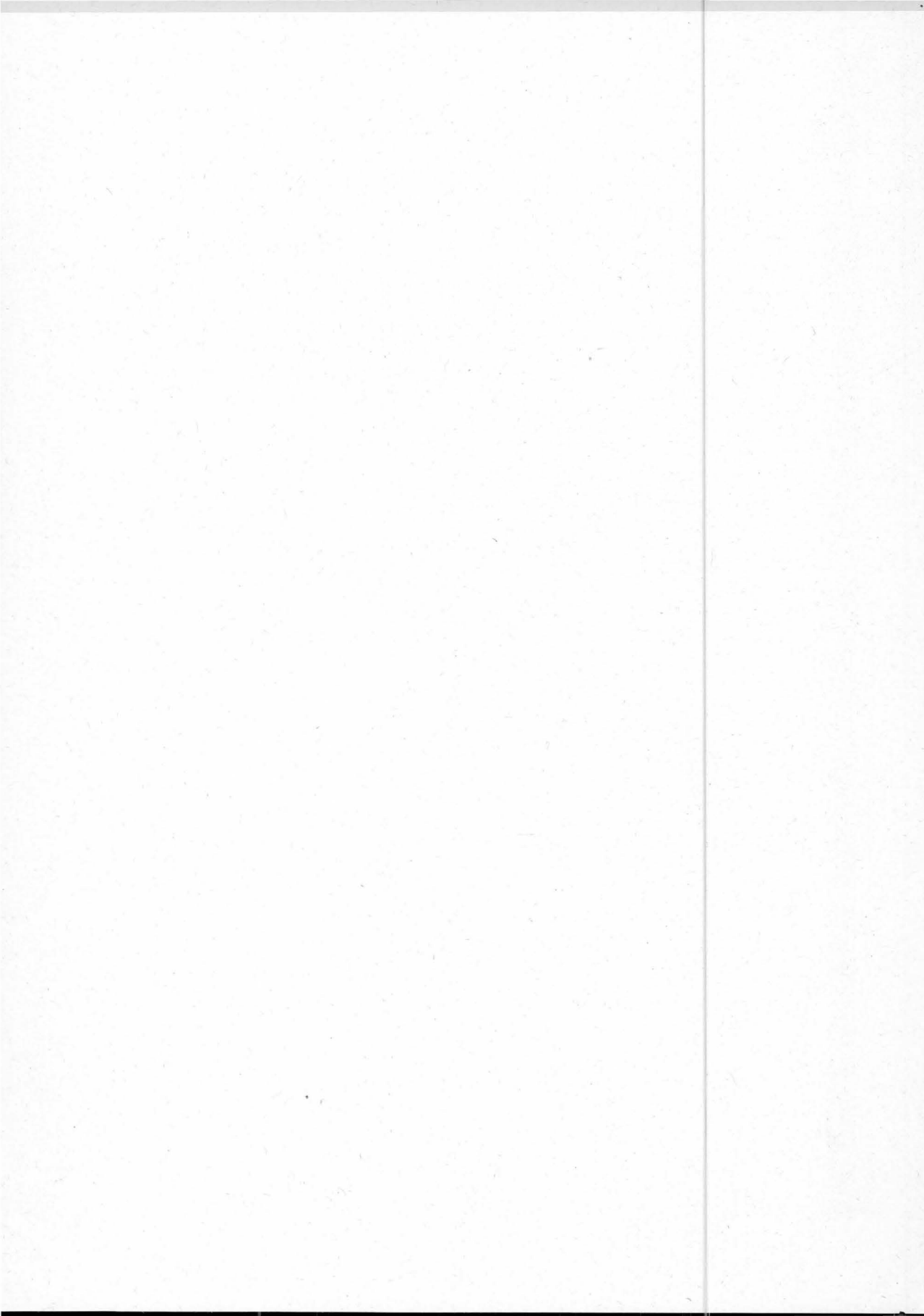
■ SOURCE: AEA



CIVIL TRANSPORT AIRCRAFT



C H A P T E R 2



CIVIL TRANSPORT AIRCRAFT

The figures relating to the *civil jet aircraft* orders, deliveries and backlogs [aircraft ordered but not yet delivered] (in units) are provided by the manufacturers.

The figures relating to the *civil transport aircraft* fleet, deliveries and orders are provided by *AÉROSPATIALE*, and cover almost all the civil transport aircraft produced in the western world. The origin of these statistics is the "*Etat des flottes commerciales*", database on civil transport aircraft of more than 18 seats.

The statistics relate to *civil transport aircraft*. Therefore, civil transport aircraft used by public authorities are included, while such aircraft may also be included in the statistics relating to military aircraft, which are given in Chapter 4.

The *civil transport aircraft* breakdown is carried out using the following criteria:

- **aircraft category**
 - ✕ short-haul turboprop
 - ✕ short- and medium-haul jet
 - ✕ long-haul jet
- **design origin:** *Europe, USA* and *rest of the world*

The *geographical areas* are defined as follows:

- *EC*
- *Other Europe:* Austria, Czechoslovakia, Finland, Gibraltar, Hungary, Iceland, Liechtenstein, Malta, Monaco, Norway, Poland, Romania, Sweden, Switzerland, ex-USSR and Yugoslavia
- *USA*
- *Rest of the world*

For each category of *civil transport aircraft*, the tables show *aircraft in service* at year-end and *aircraft deliveries* as follows:

- the *number of aircraft*,
- the *number of seats* (aircraft x capacity),
- the *present value*, which is estimated using a linear depreciation on 20 years and the following value per seat (in 1990\$):
 - ✕ \$215,000 for the short-haul turboprops,
 - ✕ \$260,000 for the short- and medium-haul jets,
 - ✕ \$300,000 for the long-haul jets.

For each category of *civil transport aircraft*, the following tables are given:

- *absolute value*,
- *geographical breakdown of total aircraft*,
- *market share of EC-built aircraft*,
- *geographical breakdown of EC-built aircraft*.

A list of *civil transport aircraft* and their categories is given hereunder.

Short-haul Civil Transport Aircraft

<i>Model</i>	<i>Design</i>	<i>Seats</i>
Argosy	Europe	80
ATR 42	Europe	46
ATR 72	Europe	66
BAe Jetstream 31	Europe	19
BAe Jetstream 41	Europe	28
HS 748	Europe	46
BAe ATP	Europe	64
Beech 1900	USA	19
CASA 212	Europe	19
CASA CN235	Europe	38
CV 580/600/640	USA	51
DHC-6	Other	18
DHC-7	Other	50
DHC-8	Other	36
Dornier DO 228	Europe	19
Dornier DO 328	Europe	30
Embraer 110 Bandeirante	Other	17
Embraer 120 Brasilia	Other	30
Fokker F 27/FH 27-227	Europe	46
Fokker 50	Europe	50
Herald	Europe	50
Fairchild Metro II/III	USA	19
Nord 262	Europe	27
Shorts SD 330	Europe	30

Shorts SD 360	Europe	36
Saab SF 340	Europe	35
Saab 2000	Europe	50
VFW 614	Europe	36
Viscount	Europe	69
YS 11A	Other	61

Short/medium-haul Civil Transport Aircraft

<i>Model</i>	<i>Design</i>	<i>Seats</i>
A 300	Europe	260
A 310	Europe	216
A 320	Europe	150
A 321	Europe	175
A 330	Europe	328
BAC 111	Europe	92
BAe 146	Europe	95
Belfast	Europe	200
Britannia	Europe	200
B 720	USA	150
B 727	USA	151
B 737-100/200	USA	115
B 737-300	USA	125
B 737-400	USA	135
B 747-SR	USA	530
B 757	USA	189
B 767	USA	211
B 777	USA	300
Caravelle	Europe	100
CL 44	Europe	160

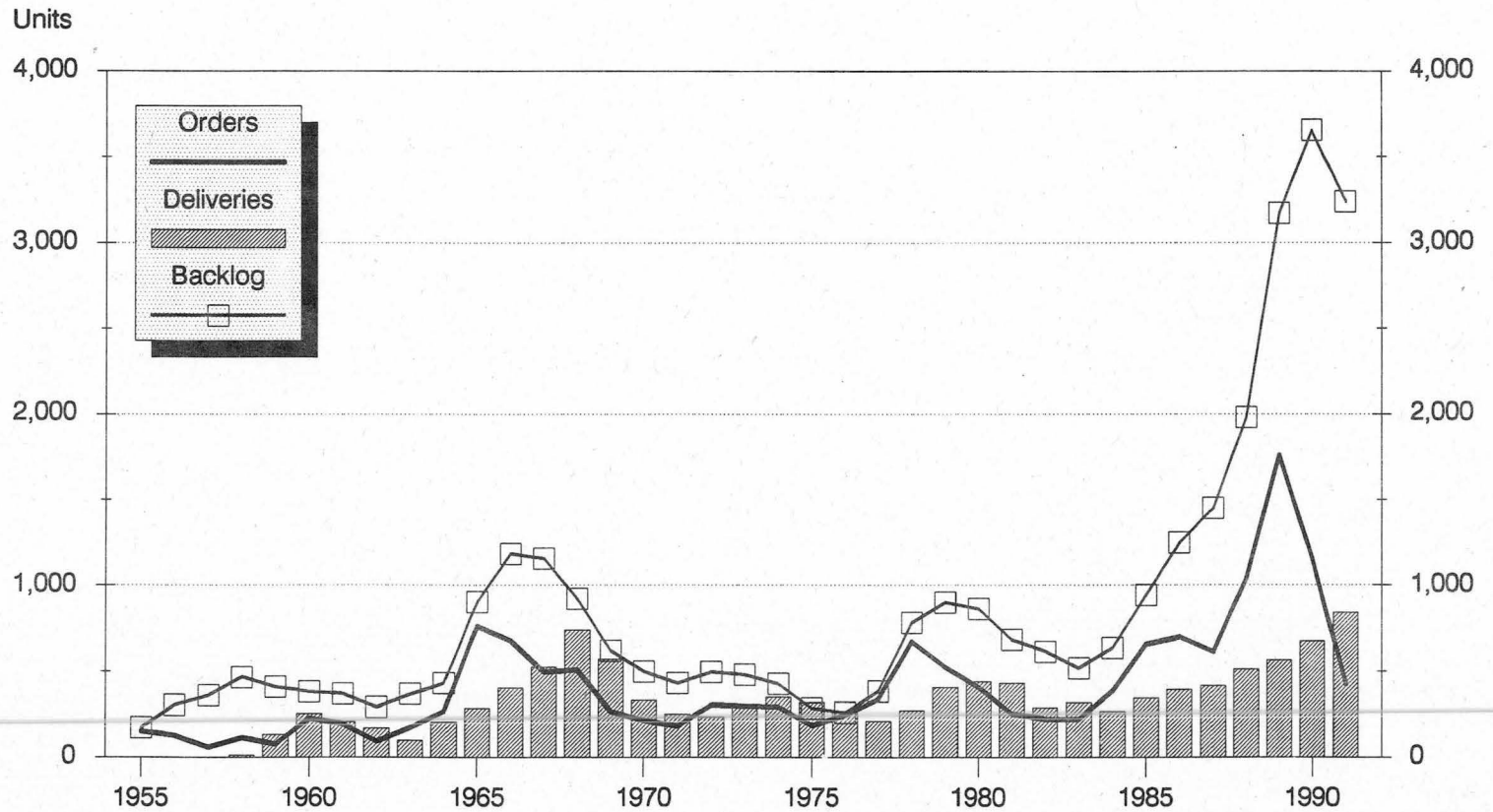
Short/medium-haul Civil Transport Aircraft (continued)

<i>Model</i>	<i>Design</i>	<i>Seats</i>
CV 880/990	USA	120
DC 10-10/15	USA	259
DC 9	USA	110
MD 80	USA	144
MD 92	USA	150
Electra	USA	78
Fokker F 28	Europe	76
Fokker 100	Europe	100
Gulfstream	USA	37
Hercules	USA	120
Mercure	Europe	150
Transall	Europe	120
Trident	Europe	118
Tristar L1011-1/100	USA	288
Vanguard	Europe	140

Long-haul Civil Transport Aircraft

<i>Model</i>	<i>Design</i>	<i>Seats</i>
A 340	Europe	295
B 707	USA	155
B 747 SP	USA	267
B 747	USA	407
B 747 300	USA	440
Comet	Europe	80
Concorde	Europe	100
DC 8	USA	190
DC 10-30/40	USA	259
MD 11	USA	287
Tristar L1011-50/200/500	USA	250
VC 10	Europe	120

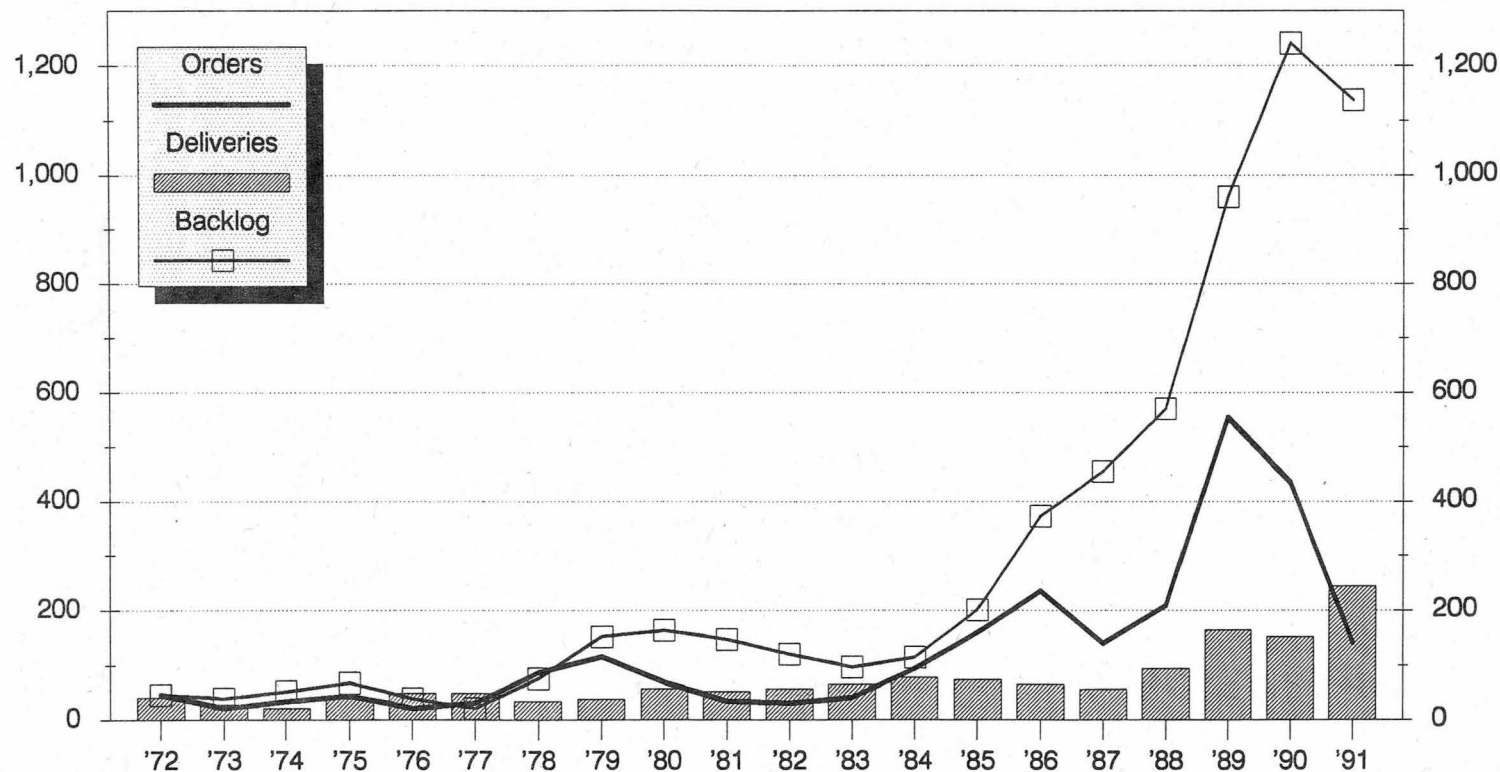
Civil Jet Aircraft World Market



Source: manufacturers

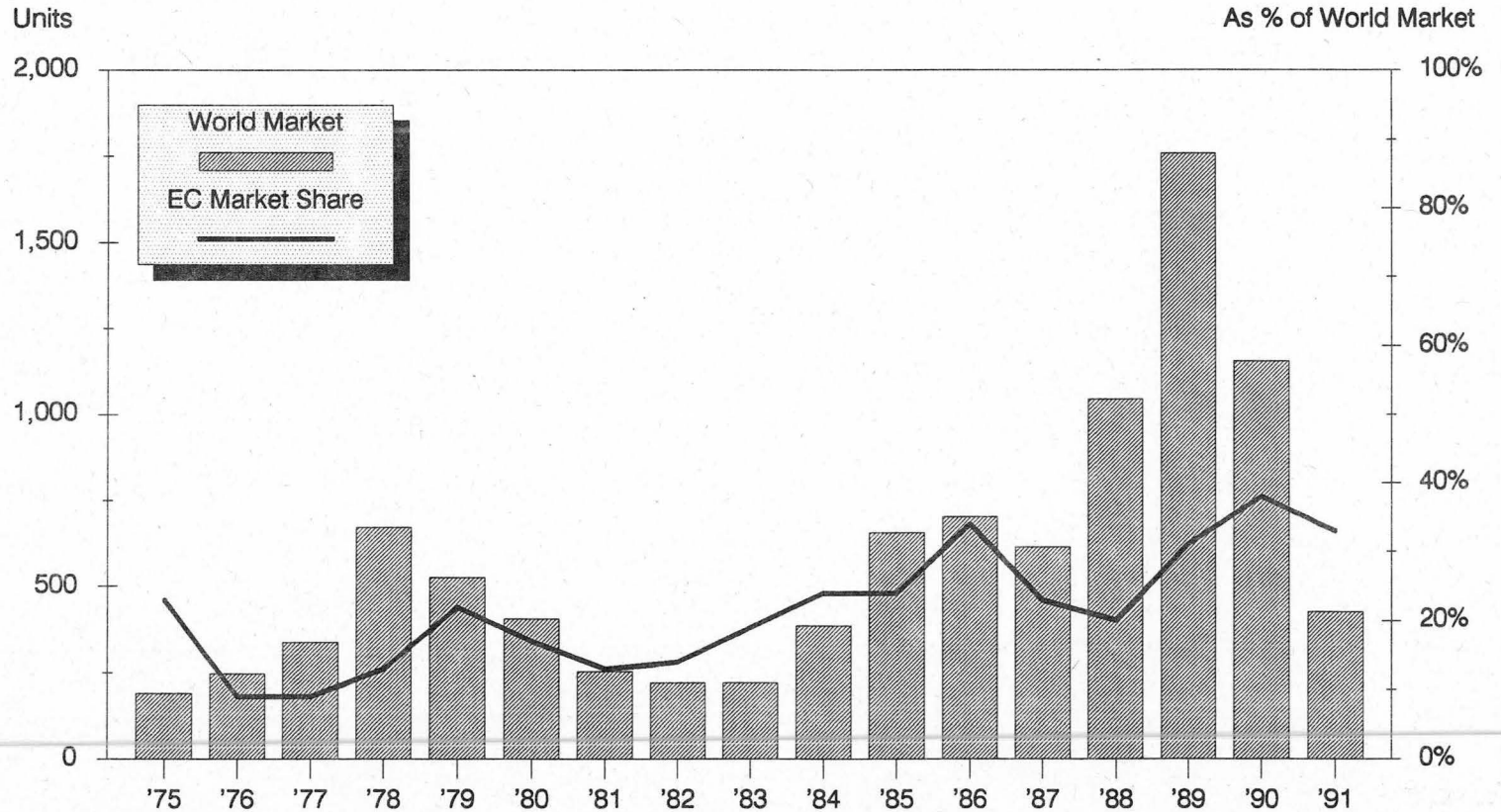
EC-Designed Civil Jet Aircraft World Market

Units



Source: AIRBUS, BAe, Fokker

Civil Jet Aircraft Orders



Source: manufacturers

CIVIL AIRCRAFT ORDERS (UNITS)

	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1980- 1991	GRAND TOTAL
A-300	186	36	15	3		11	24	7	29	21	54	31	40	271	457
A-310	37	10	4	2	10	12	35	19	27	22	33	40	12	226	263
A-320						51	39	146	58	116	110	138	15	673	673
A-321											20	117	3	140	140
A-330										3	110	25	5	143	143
A-340										3	78	8	26	115	115
AIRBUS	223	46	19	5	10	74	98	172	114	165	405	359	101	1,568	1,791
BAC 111	230					2								2	232
BAE 146			4	4	24	9	16	21	24	36	43	30	27	238	238
CONCORDE	10	3	1											4	14
F.28	151	20	10	22	7	9	20	2						90	241
F.100							26	40	1	8	106	44	13	238	238
EUROPE	614	69	34	31	41	94	160	235	139	209	554	433	141	2,140	2,754
B-707	762			1										1	763
B-727	1,713	68	38	11	1									118	1,831
B-737	758	98	122	72	64	130	282	211	183	340	463	162	72	2,199	2,957
B-747	508	49	23	14	24	21	38	81	76	49	68	172	38	653	1,161
B-757	38	64	3	2	26	2	45	13	46	161	227	97	43	729	767
B-767	113	13	7	2	16	15	21	23	57	82	125	52	72	485	598
B-777												49	27	76	76
BOEING	3,892	292	193	102	131	168	386	328	362	632	883	532	252	4,261	8,153
DC-9	968	6	2											8	976
MD-80	72	12	16	86	42	110	102	106	78	155	217	61	23	1,008	1,080
MD-87						6	4	15	12	21	34			92	92
MD-90												76		76	76
DC-10	352	11	3		2	6	3	5	2	2				34	386
MD-11								11	20	24	71	52	10	188	188
MC DD	1,392	29	21	86	44	122	109	137	112	202	322	189	33	1,406	2,798
L.1011	111	14	5		5									24	249
TOTAL	6,009	404	253	219	221	384	655	700	613	1,043	1,759	1,154	426	7,831	13,954

■ SOURCE: MANUFACTURERS

CIVIL AIRCRAFT ORDERS (UNITS)

MARKET SHARE OF EC BUILT AIRCRAFT (AS % OF WORLD TOTAL)

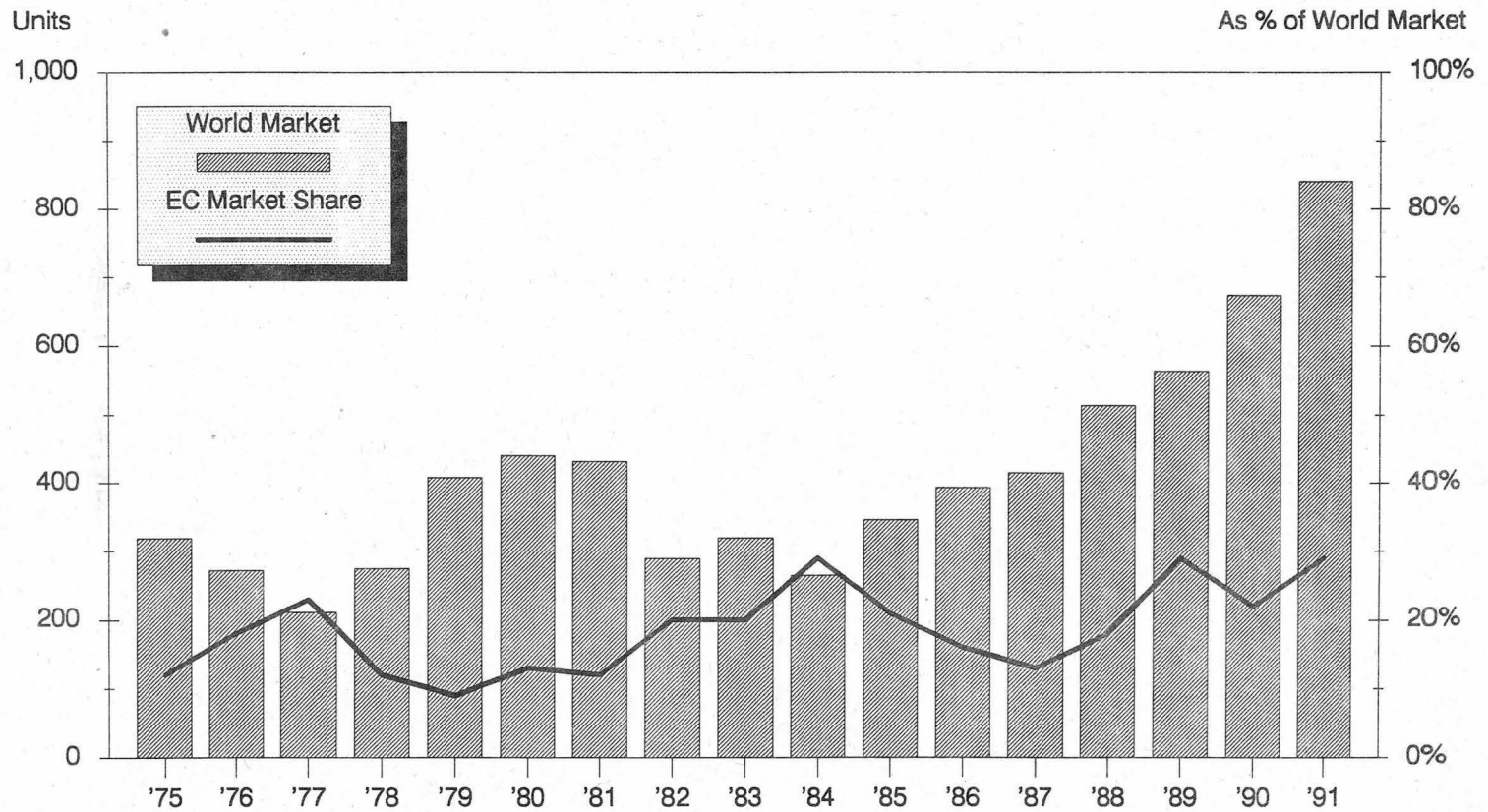
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1980- 1991	GRAND TOTAL
S-M HAUL	20	15	15	22	26	26	39	27	21	31	46	33	30	24
... NARROW BODY	7	7	13	19	22	19	38	21	19	23	45	30	25	18
... WIDE BODY	78	73	71	38	61	74	53	50	36	61	49	37	53	56
LONG HAUL	4	3	0	0	0	0	0	0	4	36	3	35	12	4
... NARROW BODY	100	100	0	-	-	-	-	-	-	-	-	-	80	2
... WIDE BODY	0	0	0	0	0	0	0	0	4	36	3	35	11	5
TOTAL	17	13	14	19	24	24	34	23	20	31	38	33	27	20
... NARROW BODY	8	8	13	19	22	19	38	21	19	23	45	30	25	17
... WIDE BODY	35	33	24	18	35	49	18	27	24	51	24	36	34	27

BREAKDOWN INTO CATEGORIES (AS % OF WORLD TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1980- 1991	GRAND TOTAL
S-M HAUL	81	87	93	86	93	94	86	84	93	88	80	83	87	79
... NARROW BODY	66	77	90	74	83	82	79	66	80	69	63	46	72	68
... WIDE BODY	15	10	3	12	10	12	7	18	12	18	17	37	15	11
LONG HAUL	19	13	7	14	7	6	14	16	7	12	20	17	13	21
... NARROW BODY	1	0	0	0	0	0	0	0	0	0	0	0	0	6
... WIDE BODY	18	12	6	14	7	6	14	16	7	12	20	17	13	15
ALL NARROW BODY	67	77	90	74	83	82	79	66	80	69	63	46	72	74
... WIDE BODY	33	23	10	26	17	18	21	34	20	31	37	54	28	26

■ SOURCE: MANUFACTURERS

Civil Jet Aircraft Deliveries



Source: manufacturers

CIVIL AIRCRAFT DELIVERIES (UNITS)

	BEFORE 1980	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1980- 1991	GRAND TOTAL
A-300	84	37	37	46	19	19	16	11	10	17	24	19	25	280	364*
A-310					17	29	26	19	21	28	23	18	19	200	200
A-320										16	58	58	119	251	251
A-321															
A-330															
A-340															
AIRBUS	84	37	37	46	36	48	42	30	31	61	105	95	163	731	815
BAC 111	224	3	2	1		1		1						8	232
BAE 146					10	11	18	22	23	22	35	25	26	192	192
CONCORDE	10	3	1											4	14
F.28	144	14	12	10	18	17	13	11	2					97	241
F.100										11	25	31	56	123	123
EUROPE	462	57	52	57	64	77	73	64	56	94	165	151	245	1,155	1,617
B-707	762			1										1	763
B-727	1,561	131	94	26	11	8								270	1,831
B-737	623	92	108	95	82	67	115	141	161	165	146	174	215	1,561	2,184
B-747	414	73	53	25	23	16	24	35	23	24	45	70	64	475	889
B-757				2	25	18	36	35	40	48	51	77	80	412	412
B-767				20	55	29	25	27	37	53	37	60	62	405	405
B-777															
BOEING	3,360	296	255	169	196	138	200	238	261	290	279	381	421	3,124	6,484
DC-9	932	18	16	10										44	976
MD-80		5	62	34	50	44	71	86	92	107	103	115	140	909	909
MD-87									3	14	15	24		56	56
MD-90															
DC-10	299	40	19	5	4	2		5	3	8	1			87	386
MD-11												3	34	37	37
MC DD	1,231	63	97	49	54	46	71	91	98	129	119	142	174	1,133	2,364
L.1011	30	24	28	14	6	4	2							78	249
TOTAL	5,083	440	432	289	320	265	346	393	415	513	563	674	840	5,490	10,714

■ SOURCE: MANUFACTURERS

CIVIL AIRCRAFT DELIVERIES (UNITS)

MARKET SHARE OF EC BUILT AIRCRAFT (AS % OF WORLD TOTAL)

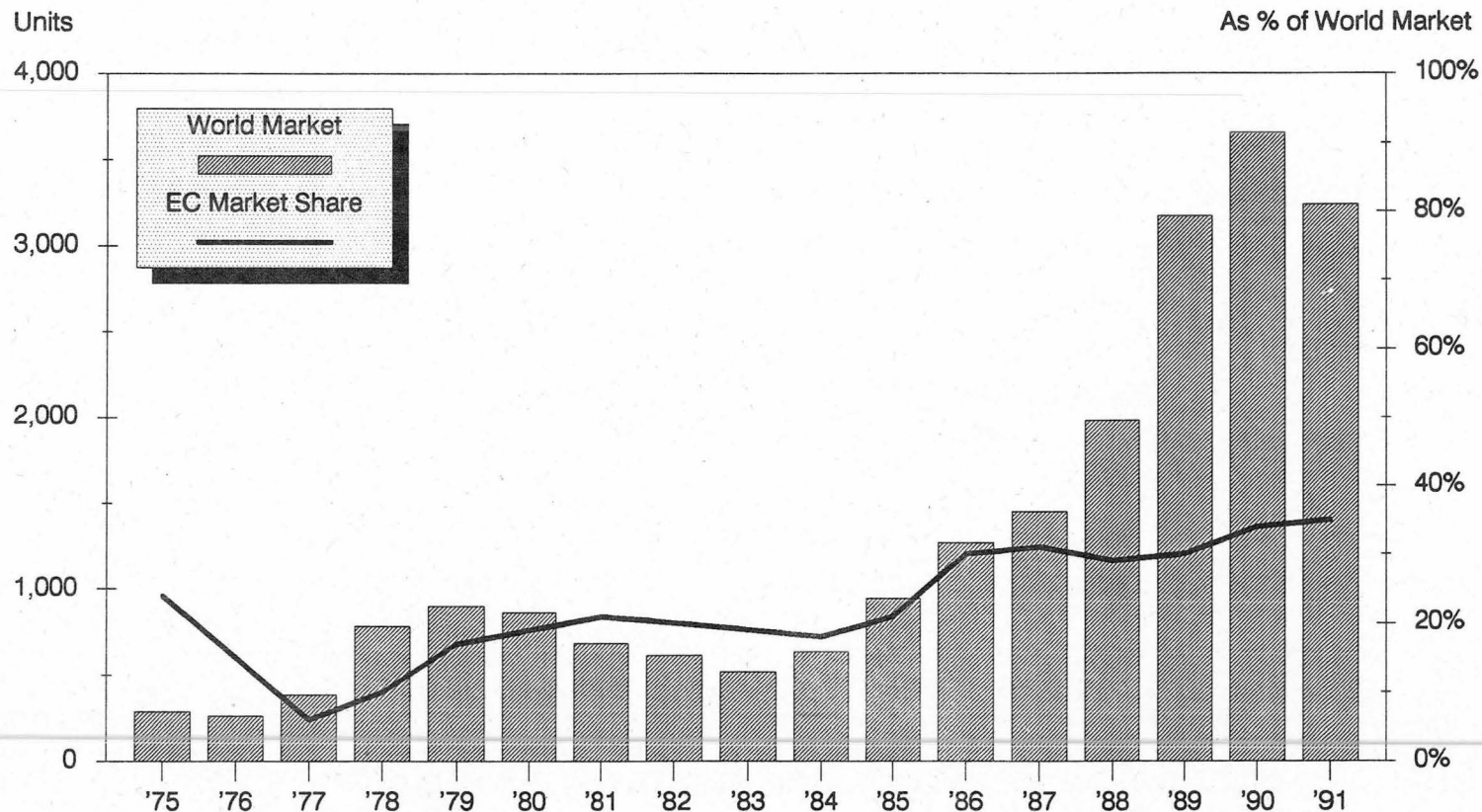
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1980- 1991	GRAND TOTAL
S-M HAUL	18	15	23	22	32	23	18	14	20	32	25	33	24	19
... NARROW BODY	6	5	6	14	17	12	11	8	13	27	23	32	17	14
... WIDE BODY	100	100	70	40	62	63	53	46	46	56	38	42	54	58
LONG HAUL	2	1	0	0	0	0	0	0	0	0	0	0	1	1
... NARROW BODY	100	100	0	-	-	-	-	-	-	-	-	-	80	2
... WIDE BODY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	13	12	20	20	29	21	16	13	18	29	22	29	21	15
... NARROW BODY	8	5	6	14	17	12	11	8	13	27	23	32	17	13
... WIDE BODY	21	27	42	29	48	45	31	33	35	36	22	22	31	22

BREAKDOWN INTO CATEGORIES (AS % OF WORLD TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1980- 1991	GRAND TOTAL
S-M HAUL	68	77	84	90	92	92	90	94	94	92	89	88	88	78
... NARROW BODY	60	68	62	61	63	73	75	77	75	77	75	76	71	69
... WIDE BODY	8	9	23	28	29	19	15	16	19	15	14	13	16	9
LONG HAUL	32	23	16	10	8	8	10	6	6	8	11	12	12	22
... NARROW BODY	1	0	0	0	0	0	0	0	0	0	0	0	0	7
... WIDE BODY	31	23	15	10	8	8	10	6	6	8	11	12	12	15
ALL NARROW BODY	60	68	62	61	63	73	75	77	75	77	75	76	72	76
... WIDE BODY	40	32	38	39	37	27	25	23	25	23	25	24	28	24

■ SOURCE: MANUFACTURERS

Civil Jet Aircraft Backlog



Source: manufacturers

CIVIL AIRCRAFT BACKLOG (UNITS)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
A-300	101	79	36	17	9	17	13	32	36	66	78	93
A-310	47	51	53	46	29	38	38	44	38	48	70	63
A-320					51	90	236	294	394	446	526	422
A-321										20	137	140
A-330									3	113	138	143
A-340									3	81	89	115
AIRBUS	148	130	89	63	89	145	287	370	474	774	1,038	976
BAC 111	3	1			1	1						
BAE 146		4	8	22	20	18	17	18	32	40	45	46
CONCORDE												
F.28	13	11	23	12	4	11	2					
F.100						26	66	67	64	145	158	115
EUROPE	164	146	120	97	114	201	372	455	570	959	1,241	1,137
B-707												
B-727	89	33	18	8								
B-737	141	155	132	114	177	344	414	436	611	928	916	773
B-747	70	40	29	30	35	49	95	148	173	196	298	272
B-757	102	105	105	106	90	99	77	83	196	372	392	355
B-767	126	133	115	76	62	58	54	74	103	191	183	193
B-777											49	76
BOEING	528	466	399	334	364	550	640	741	1,083	1,687	1,838	1,669
DC-9	24	10										
MD-80	79	33	85	77	143	174	194	180	228	342	288	171
MD-87					6	10	25	34	41	60	36	36
MD-90											76	76
DC-10	24	8	3	1	5	8	8	7	1			
MD-11							11	31	55	126	175	151
MC DD	127	51	88	78	154	192	238	252	325	528	575	434
L.1011	44	21	7	6	2							
TOTAL	863	684	614	515	634	943	1,250	1,448	1,978	3,174	3,654	3,240

■ SOURCE: MANUFACTURERS

CIVIL AIRCRAFT BACKLOG (UNITS)

MARKET SHARE OF EC BUILT AIRCRAFT (AS % OF WORLD TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
S-M HAUL	23	24	21	20	19	23	33	36	32	32	37	38
... NARROW BODY	4	5	8	10	15	19	31	34	31	28	34	34
... WIDE BODY	54	49	44	45	38	49	49	51	43	54	55	53

LONG HAUL	0	0	0	0	0	0	0	0	1	20	16	21
... NARROW BODY	-	-	-	-	-	-	-	-	-	-	-	-
... WIDE BODY	0	0	0	0	0	0	0	0	1	20	16	21

TOTAL	19	21	20	19	18	21	30	31	29	30	34	35
... NARROW BODY	4	5	8	10	15	19	31	34	31	28	34	34
... WIDE BODY	36	39	37	36	27	32	23	23	19	38	35	37

BREAKDOWN INTO CATEGORIES (AS % OF WORLD TOTAL)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
S-M HAUL	84	90	94	93	93	94	91	87	88	87	85	83
... NARROW BODY	52	51	60	66	78	82	82	77	79	74	70	66
... WIDE BODY	32	38	33	27	16	12	8	10	9	13	14	18

LONG HAUL	16	10	6	7	7	6	9	13	12	13	15	17
... NARROW BODY	0	0	0	0	0	0	0	0	0	0	0	0
... WIDE BODY	16	10	6	7	7	6	9	13	12	13	15	17

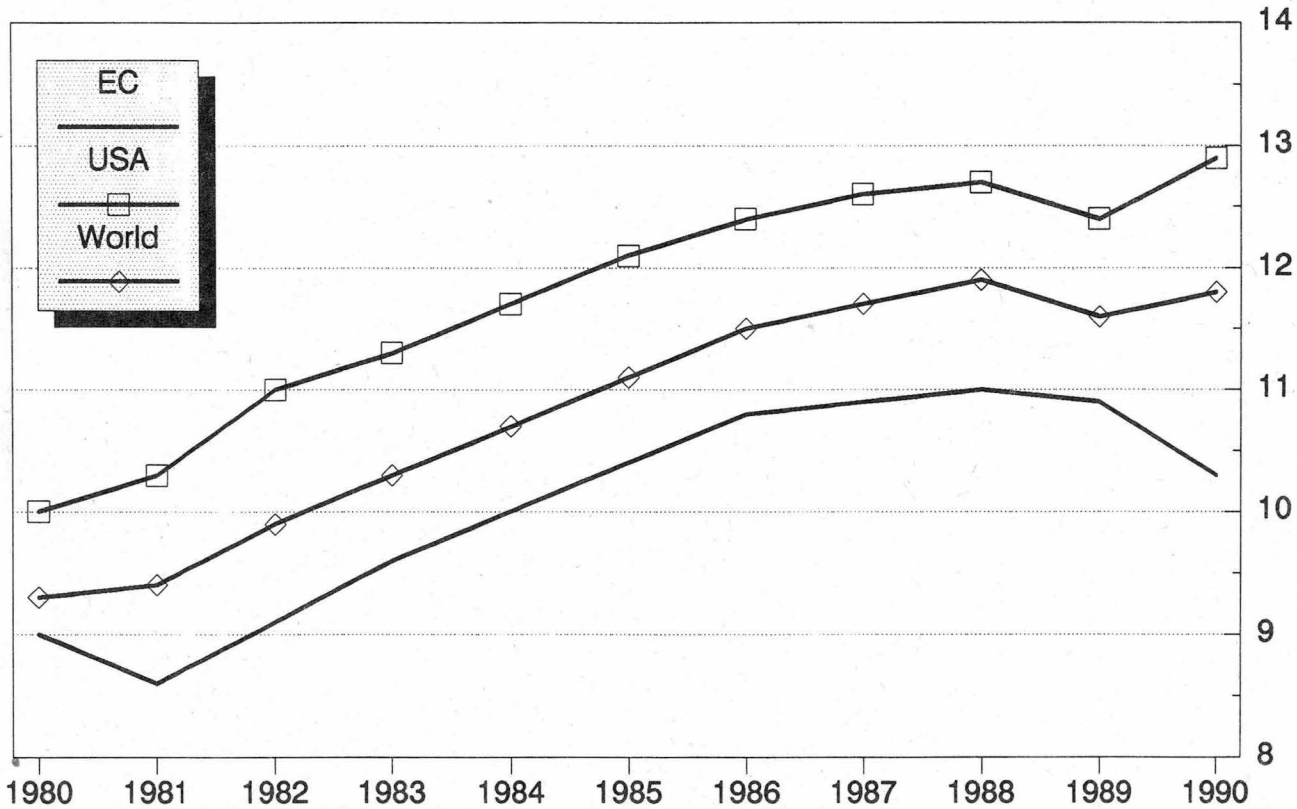
ALL NARROW BODY	52	51	60	66	78	82	82	77	79	74	70	66
... WIDE BODY	48	49	40	34	22	18	18	23	21	26	30	34

■ SOURCE: MANUFACTURERS

CIVIL AIRCRAFT FLEET AGE

According to Seats

Years



■ SOURCE: AEROSPATIALE

CIVIL AIRCRAFT FLEET AGE (AT YEAR-END)

ACCORDING TO UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	8.0	9.1	9.1	9.8	11.1	10.6	11.1	11.5	11.5	12.5	11.5	11.7
DENMARK	8.7	10.1	8.5	9.3	10.1	10.8	10.9	10.4	9.9	11.4	11.6	12.1
FRG	6.3	8.3	6.7	6.9	7.6	8.0	8.2	8.6	7.9	8.2	7.7	7.0
SPAIN	6.5	8.1	8.5	9.2	10.1	10.8	11.5	12.5	13.2	12.3	12.6	12.3
FRANCE	8.8	10.5	10.6	11.0	11.6	12.4	13.1	13.6	13.8	13.7	13.5	13.3
GREECE	8.7	9.8	8.3	8.5	9.3	9.3	9.6	10.6	11.7	12.5	13.5	12.0
IRELAND	10.0	12.3	12.4	13.7	13.2	13.0	13.6	13.8	11.0	13.2	12.9	13.2
ITALY	8.0	9.7	9.1	10.1	10.9	11.6	11.1	10.4	10.2	10.2	10.6	10.7
LUXEMBOURG	11.7	10.0	10.7	12.4	13.6	12.1	13.6	13.7	11.2	13.0	10.7	10.3
NETHERLANDS	8.6	10.5	10.9	11.1	11.0	11.3	11.4	10.9	10.8	11.1	9.5	8.5
PORTUGAL	4.5	8.6	9.4	10.1	8.6	9.4	10.6	11.5	11.6	11.4	10.5	9.6
UK	10.9	10.7	10.4	10.8	11.0	11.5	11.5	11.9	11.7	11.4	11.4	10.8
EC	8.7	9.8	9.5	10.0	10.5	11.0	11.3	11.7	11.5	11.5	11.3	10.9
REST OF EUROPE	6.8	9.2	9.0	9.6	10.0	10.6	10.8	10.6	10.7	10.6	10.1	9.7
USA	8.4	10.2	10.3	10.9	11.2	11.3	11.5	11.7	11.7	11.8	11.4	11.9
REST OF THE WORLD	8.0	9.3	9.5	9.8	10.2	10.7	11.2	11.6	12.0	12.2	11.9	12.2
WORLD	8.3	9.7	9.8	10.3	10.6	11.0	11.3	11.6	11.7	11.8	11.5	11.7

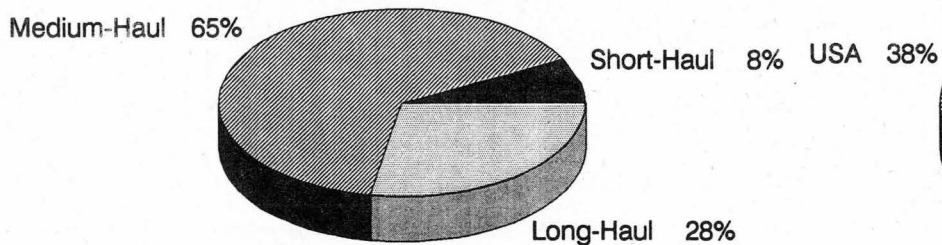
ACCORDING TO SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	7.6	9.5	9.5	10.1	11.2	10.6	11.0	11.1	11.0	12.0	11.5	11.6
DENMARK	9.3	10.8	9.7	10.0	11.4	12.8	12.6	11.3	10.4	11.5	10.6	10.3
FRG	6.1	7.2	6.2	6.6	7.4	8.0	8.2	8.5	8.1	8.7	8.1	7.2
SPAIN	7.1	8.9	8.8	9.4	10.3	11.0	11.7	12.9	12.8	11.8	12.5	11.5
FRANCE	8.3	9.0	8.8	9.0	9.7	10.5	11.4	11.6	12.5	12.5	12.7	12.5
GREECE	8.5	10.0	8.6	8.8	9.7	9.8	10.2	11.0	12.1	12.8	13.8	13.4
IRELAND	10.2	12.7	12.8	14.0	14.5	15.0	15.9	16.0	12.9	15.8	15.5	14.7
ITALY	7.4	8.4	7.0	7.8	8.4	9.0	8.5	8.7	9.1	9.6	10.0	10.3
LUXEMBOURG	11.8	6.9	7.2	9.5	11.2	6.3	7.4	12.5	9.8	13.5	12.2	11.7
NETHERLANDS	6.9	8.6	9.0	9.5	9.3	9.6	10.0	9.9	10.1	10.4	8.7	8.2
PORTUGAL	5.7	11.0	11.5	11.8	8.9	9.3	10.3	11.3	11.1	9.1	8.0	6.7
UK	9.9	9.6	9.4	10.1	10.2	10.6	10.6	11.3	11.3	11.0	11.1	10.3
EC	8.1	9.0	8.6	9.1	9.6	10.0	10.4	10.8	10.9	11.0	10.9	10.3
REST OF EUROPE	6.3	9.1	8.8	9.6	9.8	10.1	10.5	10.4	10.6	10.6	9.9	9.4
USA	7.8	10.0	10.3	11.0	11.3	11.7	12.1	12.4	12.6	12.7	12.4	12.9
REST OF THE WORLD	7.5	8.6	8.8	9.0	9.5	10.0	10.4	10.7	11.2	11.4	11.2	11.4
WORLD	7.7	9.3	9.4	9.9	10.3	10.7	11.1	11.5	11.7	11.9	11.6	11.8

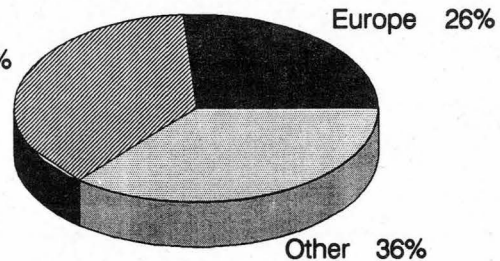
■ SOURCE: AEROSPATIALE

CIVIL AIRCRAFT IN SERVICE

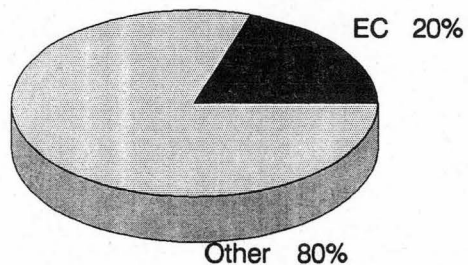
(IN VALUE - 1990)



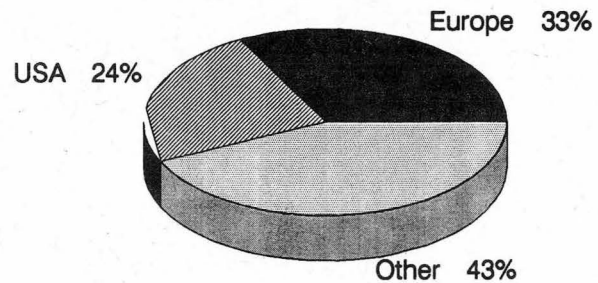
BREAKDOWN BY TYPE



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT FLEET (AT YEAR-END)

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	18%	18%	18%	18%	18%	17%	16%	16%	15%	15%	17%	16%
REST OF EUROPE	2%	3%	3%	3%	3%	4%	4%	4%	5%	4%	4%	4%
USA	24%	25%	26%	28%	30%	32%	34%	36%	36%	36%	36%	35%
OTHER WORLD	56%	53%	53%	51%	49%	48%	46%	44%	45%	44%	42%	44%
TOTAL	1,773	2,546	2,716	2,870	2,997	3,135	3,367	3,656	4,035	4,398	4,712	5,567

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	18%	19%	19%	18%	18%	18%	17%	17%	16%	18%	19%	18%
REST OF EUROPE	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%	5%
USA	23%	24%	25%	27%	28%	29%	31%	34%	34%	33%	34%	33%
OTHER WORLD	57%	54%	53%	52%	50%	49%	48%	46%	45%	44%	43%	45%
TOTAL	71	87	90	94	96	99	106	116	126	137	147	175

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	16%	17%	17%	16%	16%	15%	14%	14%	14%	16%	18%	17%
REST OF EUROPE	2%	2%	3%	3%	3%	4%	4%	5%	6%	6%	6%	6%
USA	23%	26%	27%	29%	31%	34%	37%	40%	41%	41%	41%	40%
OTHER WORLD	59%	55%	54%	53%	50%	48%	45%	41%	39%	38%	36%	36%
TOTAL	5,004	4,709	6,101	7,059	7,743	8,839	9,656	8,615	8,575	9,967	12,545	13,751

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT FLEET (AT YEAR-END)

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	91	81	78	78	79	82	80	79	73	72	74	80
REST OF EUROPE	49	37	38	34	33	43	49	55	59	60	63	66
USA	30	25	23	26	26	28	33	33	35	38	39	43
OTHER WORLD	58	48	48	47	48	49	50	49	49	49	45	49
TOTAL	57	48	47	46	47	48	49	48	48	49	49	52

SEATS												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	94	88	86	85	86	88	86	84	80	79	80	85
REST OF EUROPE	73	53	52	46	45	53	61	64	69	70	72	74
USA	35	30	29	32	31	34	38	36	39	41	42	48
OTHER WORLD	71	63	62	62	62	63	63	61	60	59	56	58
TOTAL	66	59	58	57	57	58	59	57	56	57	57	60

VALUE												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	91	76	72	72	73	76	74	75	71	72	74	82
REST OF EUROPE	56	38	29	22	21	36	52	59	67	70	74	79
USA	23	24	22	24	27	32	41	44	47	51	49	51
OTHER WORLD	62	52	53	53	56	56	56	56	55	56	53	57
TOTAL	58	49	47	47	48	50	52	54	55	57	56	60

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT FLEET (AT YEAR-END)

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	28	31	30	30	30	29	27	26	22	23	26	25
REST OF EUROPE	2	2	3	2	2	3	4	5	6	6	6	5
USA	13	13	13	15	16	19	22	24	26	28	29	29
OTHER WORLD	58	54	54	52	51	49	47	45	46	44	39	41

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	26	28	27	27	27	27	25	25	23	24	26	25
REST OF EUROPE	2	2	2	2	2	3	4	5	6	6	6	6
USA	12	12	12	15	15	17	20	22	23	24	25	26
OTHER WORLD	60	58	58	56	55	53	51	49	48	46	43	43

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	25	26	26	25	24	23	20	19	19	20	23	23
REST OF EUROPE	2	2	2	1	1	3	4	6	7	7	8	8
USA	9	13	12	14	17	21	29	33	35	37	35	34
OTHER WORLD	63	59	60	60	58	53	48	42	39	37	34	34

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT FLEET (AT YEAR-END)

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	20%	17%	16%	16%	16%	15%	15%	15%	15%	16%	18%	18%
REST OF EUROPE	5%	5%	5%	5%	5%	4%	4%	5%	5%	5%	5%	5%
USA	48%	48%	48%	48%	50%	52%	53%	52%	52%	52%	50%	50%
OTHER WORLD	27%	30%	30%	31%	30%	29%	28%	28%	27%	27%	28%	27%
TOTAL	3,600	4,551	4,770	4,935	5,213	5,437	5,731	5,994	6,420	6,968	7,040	7,711

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	19%	16%	16%	15%	15%	15%	14%	15%	15%	15%	17%	17%
REST OF EUROPE	4%	4%	4%	4%	4%	3%	4%	4%	4%	4%	4%	4%
USA	52%	50%	50%	50%	51%	52%	53%	52%	53%	52%	50%	50%
OTHER WORLD	25%	29%	30%	31%	30%	30%	29%	29%	29%	28%	29%	28%
TOTAL	484	638	674	703	748	783	828	868	933	1,016	1,018	1,127

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	18%	16%	17%	16%	16%	16%	16%	16%	16%	17%	18%	20%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%
USA	52%	48%	47%	46%	47%	47%	48%	47%	48%	48%	46%	44%
OTHER WORLD	26%	31%	32%	34%	33%	33%	33%	33%	31%	30%	30%	30%
TOTAL	60,969	62,233	81,301	92,945	105,377	119,950	127,267	107,818	97,528	100,593	118,372	114,599

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT FLEET (AT YEAR-END)

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	49	38	37	35	34	35	33	32	31	30	31	33
REST OF EUROPE	19	20	19	18	20	21	22	23	20	22	20	19
USA	3	4	4	4	4	5	6	7	7	7	8	7
OTHER WORLD	24	22	22	24	25	25	25	27	27	27	31	29
TOTAL	19	16	16	16	16	16	16	17	17	17	19	18

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	46	38	38	37	37	37	36	35	34	33	34	35
REST OF EUROPE	17	17	17	14	18	20	22	22	19	21	19	17
USA	2	3	4	4	4	5	6	7	6	7	8	7
OTHER WORLD	20	20	20	23	24	26	26	28	28	29	33	30
TOTAL	16	14	15	16	16	16	17	18	17	17	20	19

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	40	36	35	36	35	37	35	34	31	29	31	34
REST OF EUROPE	14	18	18	13	21	21	24	24	21	23	21	18
USA	2	4	4	5	5	6	8	9	9	10	11	11
OTHER WORLD	17	20	21	25	27	30	30	33	33	33	37	35
TOTAL	13	15	15	17	18	19	20	21	20	21	23	23

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT FLEET (AT YEAR-END)

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	52	41	39	35	34	33	30	28	29	29	29	32
REST OF EUROPE	5	6	6	6	6	5	6	6	6	6	5	5
USA	9	11	13	13	14	16	20	22	22	21	21	20
OTHER WORLD	34	41	42	46	46	45	44	44	44	44	45	43

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	55	43	40	36	35	34	31	29	29	29	29	32
REST OF EUROPE	5	5	5	3	4	4	5	5	4	5	4	4
USA	7	12	13	14	14	15	18	20	20	20	20	19
OTHER WORLD	33	40	42	46	47	47	46	47	47	46	47	45

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	54	40	38	34	31	31	28	25	25	24	25	29
REST OF EUROPE	5	5	5	3	4	4	5	5	5	5	5	4
USA	7	12	13	12	13	14	18	20	21	23	23	20
OTHER WORLD	34	44	45	51	51	51	49	50	50	48	48	46

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT FLEET (AT YEAR-END)

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	23%	22%	20%	20%	19%	19%	19%	20%	20%	19%	20%	19%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	3%	2%
USA	41%	33%	30%	29%	29%	29%	29%	28%	29%	30%	32%	36%
OTHER WORLD	32%	42%	46%	47%	47%	48%	48%	48%	47%	47%	46%	43%
TOTAL	1,592	1,644	1,593	1,555	1,560	1,543	1,558	1,591	1,650	1,695	1,775	1,960

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	23%	23%	22%	21%	21%	20%	21%	22%	22%	21%	22%	21%
REST OF EUROPE	4%	4%	4%	3%	4%	4%	4%	4%	4%	3%	3%	2%
USA	41%	32%	30%	29%	29%	29%	29%	28%	28%	29%	29%	34%
OTHER WORLD	32%	42%	45%	46%	46%	47%	47%	47%	46%	47%	46%	43%
TOTAL	336	402	405	402	411	411	420	433	450	467	499	551

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	24%	24%	24%	24%	23%	23%	24%	25%	25%	25%	26%	26%
REST OF EUROPE	5%	3%	4%	3%	4%	4%	4%	4%	4%	3%	2%	2%
USA	39%	27%	25%	23%	23%	23%	21%	20%	19%	17%	16%	22%
OTHER WORLD	33%	45%	48%	50%	50%	51%	51%	51%	52%	55%	55%	50%
TOTAL	47,034	45,506	56,824	60,893	64,916	68,858	68,294	54,900	46,248	44,506	49,156	49,152

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT FLEET (AT YEAR-END)

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	15	10	11	11	10	12	11	11	11	12	10	4
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	3	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	2	2	2	2	2	2	2	2	2	2	1

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	7	4	4	4	4	5	4	4	4	4	4	1
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	2	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	1	1	1	1	1	1	1	1	1	1	0

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	5	3	3	3	2	2	2	2	1	1	1	1
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	1	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	1	1	1	1	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT FLEET (AT YEAR-END)

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	78	92	95	94	94	95	94	94	95	95	95	100
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	22	8	5	6	6	5	6	6	5	5	5	0

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	76	93	95	95	94	97	95	95	98	98	95	100
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	24	7	5	5	6	5	5	5	5	5	5	0

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	76	98	100	100	100	100	100	100	100	100	100	100
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	24	2	0	0	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT FLEET (AT YEAR-END)

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	20%	18%	18%	17%	17%	16%	16%	16%	16%	16%	18%	17%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	5%	4%
USA	40%	39%	38%	39%	41%	42%	43%	44%	44%	44%	43%	43%
OTHER WORLD	35%	39%	40%	40%	38%	38%	37%	36%	36%	35%	35%	35%
TOTAL	6,965	8,741	9,079	9,360	9,770	10,115	10,656	11,241	12,105	13,061	13,527	15,238

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	20%	19%	18%	18%	17%	17%	17%	17%	17%	17%	19%	18%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
USA	46%	42%	41%	41%	42%	43%	44%	43%	44%	44%	42%	44%
OTHER WORLD	30%	36%	37%	38%	37%	37%	36%	36%	35%	35%	35%	34%
TOTAL	891	1,126	1,169	1,199	1,254	1,293	1,354	1,417	1,509	1,620	1,663	1,853

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	20%	20%	19%	19%	19%	18%	18%	19%	19%	19%	20%	22%
REST OF EUROPE	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	5%	4%
USA	45%	39%	37%	36%	38%	38%	39%	38%	39%	39%	38%	38%
OTHER WORLD	30%	38%	39%	41%	40%	40%	39%	39%	38%	38%	37%	36%
TOTAL	113,006	112,448	144,226	160,897	178,036	197,647	205,218	171,333	152,352	155,066	180,073	177,501

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT FLEET (AT YEAR-END)

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	50	44	44	44	44	46	44	43	41	41	43	45
REST OF EUROPE	19	20	21	19	20	24	27	30	30	32	33	35
USA	7	7	8	8	9	10	12	13	14	15	16	17
OTHER WORLD	34	28	28	28	29	30	30	31	31	32	32	33
TOTAL	25	23	23	23	23	24	25	25	25	26	27	28

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	33	27	28	27	28	29	28	27	26	27	27	28
REST OF EUROPE	12	13	13	11	14	16	18	19	19	20	21	22
USA	3	4	4	5	5	5	6	7	7	8	9	8
OTHER WORLD	20	17	16	18	18	19	20	20	21	21	22	22
TOTAL	15	13	13	14	14	15	15	16	16	16	17	17

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	25	21	21	21	21	23	22	21	21	21	23	26
REST OF EUROPE	9	12	12	9	13	14	18	20	19	22	23	23
USA	2	3	4	4	5	6	8	9	10	11	13	12
OTHER WORLD	14	13	13	15	16	18	19	20	20	21	23	24
TOTAL	10	10	11	12	13	14	15	16	16	17	19	20

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT FLEET (AT YEAR-END)

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	39	36	35	33	32	31	29	28	26	26	28	27
REST OF EUROPE	3	4	4	3	4	4	5	5	5	6	6	5
USA	11	12	13	14	15	18	21	23	24	25	26	26
OTHER WORLD	47	48	49	49	49	47	45	44	45	44	41	42

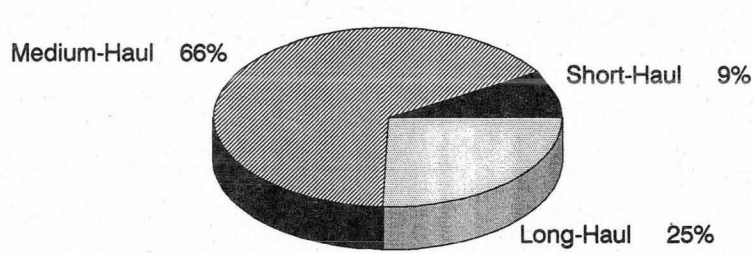
SEATS												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	46	39	37	35	34	33	30	29	28	29	29	30
REST OF EUROPE	3	4	4	3	4	4	4	5	5	5	5	5
USA	9	11	13	14	14	16	19	20	20	21	21	21
OTHER WORLD	42	45	46	49	49	48	47	47	47	46	45	45

VALUE												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	48	39	37	34	31	30	27	24	24	24	25	28
REST OF EUROPE	4	4	4	3	4	4	5	5	5	6	5	5
USA	7	11	12	12	14	15	20	22	23	26	25	24
OTHER WORLD	41	45	46	51	51	51	49	48	47	45	45	43

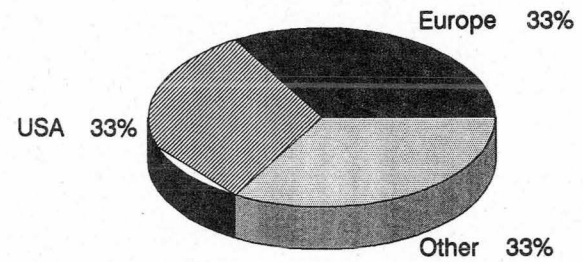
■ SOURCE: AEROSPATIALE

CIVIL AIRCRAFT DELIVERIES

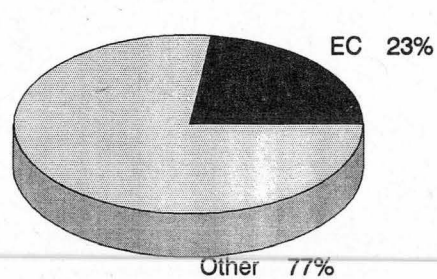
(IN VALUE - 1990)



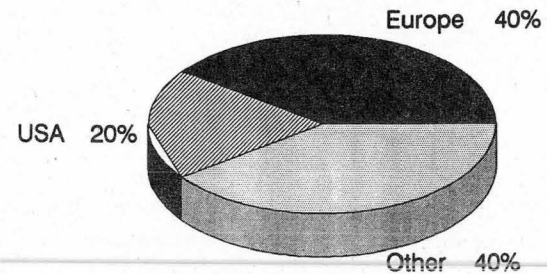
BREAKDOWN BY TYPE



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT DELIVERIES

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	29%	15%	14%	16%	12%	12%	8%	11%	19%	16%	17%	17%
REST OF EUROPE	0%	4%	5%	3%	4%	6%	5%	6%	4%	4%	6%	8%
USA	10%	42%	41%	37%	49%	57%	67%	66%	54%	48%	39%	48%
OTHER WORLD	61%	40%	40%	43%	36%	25%	20%	17%	23%	32%	39%	26%
TOTAL	150	258	256	182	185	235	281	282	320	379	431	463

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	27%	13%	17%	14%	10%	13%	8%	13%	21%	20%	22%	19%
REST OF EUROPE	0%	3%	3%	2%	8%	7%	5%	7%	5%	5%	7%	11%
USA	11%	44%	39%	35%	44%	48%	64%	62%	49%	43%	34%	41%
OTHER WORLD	65%	38%	41%	47%	40%	28%	23%	17%	23%	32%	37%	27%
TOTAL	4	6	7	5	5	6	8	9	10	12	14	16

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	25%	13%	15%	15%	12%	15%	8%	12%	21%	20%	21%	21%
REST OF EUROPE	0%	4%	4%	2%	6%	6%	7%	8%	5%	5%	7%	11%
USA	8%	44%	38%	35%	43%	50%	63%	62%	49%	42%	34%	41%
OTHER WORLD	63%	40%	41%	47%	37%	29%	22%	18%	25%	32%	37%	28%
TOTAL	477	683	946	782	873	1,206	1,612	1,475	1,519	1,943	2,658	2,591

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT DELIVERIES

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	95	16	40	59	91	93	86	77	73	69	75	72
REST OF EUROPE	-	40	23	0	29	85	93	88	86	88	83	92
USA	13	30	19	15	40	34	55	51	53	55	37	50
OTHER WORLD	34	25	52	49	88	75	53	49	45	56	40	49
TOTAL	49	26	36	36	63	54	59	56	57	59	47	57

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	100	25	45	57	100	100	100	82	76	75	81	80
REST OF EUROPE	-	50	0	0	25	75	100	100	80	100	90	94
USA	25	37	19	18	48	45	62	55	56	61	41	55
OTHER WORLD	54	30	59	57	89	65	56	53	48	63	46	55
TOTAL	62	33	41	43	69	60	65	60	59	66	55	64

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	100	27	50	60	87	92	89	87	77	77	81	78
REST OF EUROPE	-	33	0	0	25	80	86	90	88	91	85	92
USA	25	36	20	17	48	44	63	56	57	61	41	54
OTHER WORLD	56	30	59	58	92	67	57	50	45	61	47	55
TOTAL	63	33	41	42	69	60	65	61	60	66	55	64

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT DELIVERIES

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	55	9	15	26	17	20	11	15	24	18	27	22
REST OF EUROPE	0	6	3	0	2	9	8	9	7	7	10	13
USA	3	48	22	15	31	36	62	61	51	44	30	42
OTHER WORLD	42	37	59	59	50	35	18	15	18	30	33	23

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	43	10	19	19	15	22	12	17	28	23	32	24
REST OF EUROPE	0	5	0	0	3	8	8	12	7	8	11	16
USA	4	50	19	14	30	36	61	56	47	40	25	35
OTHER WORLD	57	35	59	62	52	31	20	15	19	31	32	23

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	41	11	19	21	15	22	12	17	27	23	32	26
REST OF EUROPE	0	4	0	0	2	8	9	12	8	8	11	16
USA	3	48	19	14	30	37	61	57	47	39	26	35
OTHER WORLD	56	37	59	64	50	33	19	14	19	30	32	24

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT DELIVERIES

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	15%	24%	23%	12%	19%	18%	16%	11%	22%	23%	26%	29%
REST OF EUROPE	6%	4%	7%	3%	4%	2%	6%	10%	6%	7%	7%	6%
USA	33%	40%	36%	44%	49%	50%	52%	51%	53%	51%	38%	38%
OTHER WORLD	46%	31%	35%	41%	29%	31%	26%	28%	19%	19%	30%	27%
TOTAL	273	349	368	296	305	276	355	362	419	509	624	649

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	16%	22%	21%	11%	18%	19%	16%	11%	22%	21%	24%	28%
REST OF EUROPE	5%	4%	6%	2%	4%	2%	6%	10%	5%	6%	7%	6%
USA	38%	39%	36%	42%	49%	44%	50%	49%	51%	52%	37%	37%
OTHER WORLD	43%	35%	37%	45%	29%	35%	28%	31%	22%	22%	32%	29%
TOTAL	42	56	57	49	49	44	54	53	63	79	95	99

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	15%	22%	21%	11%	18%	19%	16%	11%	22%	21%	25%	28%
REST OF EUROPE	5%	4%	6%	2%	4%	2%	6%	10%	5%	6%	7%	6%
USA	38%	39%	36%	42%	49%	44%	50%	49%	51%	52%	37%	37%
OTHER WORLD	42%	35%	37%	45%	29%	35%	29%	31%	21%	22%	32%	29%
TOTAL	7,641	9,051	11,527	11,241	12,436	12,560	15,967	13,111	13,384	16,047	21,198	20,104

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT DELIVERIES

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	29	21	19	42	28	35	18	18	18	24	35	36
REST OF EUROPE	0	29	12	38	42	40	20	35	16	38	26	8
USA	0	7	8	5	7	11	20	19	8	10	20	13
OTHER WORLD	22	22	22	34	40	53	32	36	32	26	48	41
TOTAL	14	16	15	23	22	29	23	25	16	18	32	27

SEATS												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	35	33	33	54	34	45	22	20	24	26	35	35
REST OF EUROPE	0	39	11	22	50	37	28	38	9	35	27	7
USA	0	8	9	7	8	11	19	15	7	15	22	11
OTHER WORLD	16	26	28	44	39	54	38	41	34	30	47	42
TOTAL	12	21	21	29	23	33	26	26	17	22	33	27

VALUE												
	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	36	33	33	53	34	45	22	20	24	26	35	35
REST OF EUROPE	0	38	12	26	51	31	28	39	9	36	27	7
USA	0	8	9	7	8	11	19	15	8	15	22	11
OTHER WORLD	16	25	27	44	39	54	38	41	34	29	47	42
TOTAL	12	21	21	29	23	33	26	26	17	22	33	26

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT DELIVERIES

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	31	32	28	22	24	22	12	8	26	30	28	39
REST OF EUROPE	0	7	5	4	8	3	5	14	6	14	5	2
USA	0	18	18	10	15	19	46	38	28	29	23	18
OTHER WORLD	69	43	49	63	53	57	37	40	40	27	44	41

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	44	35	33	21	26	26	14	8	31	25	26	37
REST OF EUROPE	0	8	3	1	8	2	7	14	3	9	6	2
USA	0	15	16	11	17	14	38	29	22	36	24	15
OTHER WORLD	56	43	48	68	48	58	42	49	44	30	45	45

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	44	35	33	20	26	26	14	8	32	25	26	38
REST OF EUROPE	0	8	3	2	9	2	6	15	3	10	6	2
USA	0	15	16	10	17	15	38	29	23	36	24	15
OTHER WORLD	56	43	48	68	49	58	42	48	43	30	45	46

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT DELIVERIES

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	32%	28%	24%	23%	29%	19%	25%	24%	21%	13%	27%	28%
REST OF EUROPE	15%	2%	3%	6%	13%	0%	0%	0%	3%	0%	0%	1%
USA	11%	22%	10%	0%	3%	14%	3%	24%	15%	15%	25%	26%
OTHER WORLD	42%	49%	62%	71%	55%	67%	72%	52%	62%	72%	48%	45%
TOTAL	62	130	86	35	31	21	32	46	34	40	60	85

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	32%	27%	26%	26%	25%	13%	22%	27%	23%	13%	28%	30%
REST OF EUROPE	13%	1%	4%	4%	15%	0%	0%	0%	3%	0%	0%	1%
USA	13%	19%	8%	0%	3%	15%	3%	19%	15%	14%	22%	22%
OTHER WORLD	43%	53%	62%	70%	57%	72%	76%	54%	60%	73%	50%	47%
TOTAL	18	42	28	12	12	7	12	17	13	15	23	33

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	32%	27%	26%	26%	25%	13%	22%	27%	23%	13%	29%	30%
REST OF EUROPE	13%	1%	4%	4%	15%	0%	0%	0%	3%	0%	0%	1%
USA	12%	19%	8%	0%	3%	15%	2%	19%	14%	14%	22%	22%
OTHER WORLD	43%	53%	62%	70%	56%	73%	76%	54%	60%	72%	50%	47%
TOTAL	3,891	7,976	6,756	3,352	3,441	2,427	4,106	4,945	3,260	3,751	6,043	7,759

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT DELIVERIES

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	10	6	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	-	-	-	0	-	-	0
USA	0	0	0	-	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3	2	0	0	0	0	0	0	0	0	0	0

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	3	2	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	-	-	-	0	-	-	0
USA	0	0	0	-	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	0	0	0	0	0	0	0	0	0	0

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	4	2	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	-	-	-	0	-	-	0
USA	0	0	0	-	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	1	0	0	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT DELIVERIES

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	100	100	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	100	100	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	100	100	0	0	0	0	0	0	0	0	0	0
REST OF EUROPE	0	0	0	0	0	0	0	0	0	0	0	0
USA	0	0	0	0	0	0	0	0	0	0	0	0
OTHER WORLD	0	0	0	0	0	0	0	0	0	0	0	0

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT DELIVERIES

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	21%	22%	20%	14%	17%	15%	13%	12%	21%	19%	23%	25%
REST OF EUROPE	5%	4%	6%	3%	4%	3%	5%	8%	5%	5%	6%	6%
USA	23%	38%	35%	39%	46%	52%	56%	56%	52%	48%	37%	41%
OTHER WORLD	50%	37%	40%	44%	33%	30%	26%	25%	23%	27%	34%	28%
TOTAL	485	737	710	513	521	532	668	690	773	928	1,115	1,197

SEATS (X 1,000)

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	21%	24%	23%	14%	19%	18%	16%	14%	22%	20%	25%	28%
REST OF EUROPE	7%	3%	5%	2%	6%	2%	5%	7%	5%	5%	6%	5%
USA	29%	31%	27%	34%	40%	41%	44%	44%	45%	45%	34%	34%
OTHER WORLD	44%	42%	45%	50%	35%	39%	36%	35%	28%	30%	35%	33%
TOTAL	64	104	92	66	65	57	73	79	86	106	132	147

CONSTANT VALUE - MIO 1990 ECU

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	21%	24%	23%	14%	19%	18%	17%	15%	22%	20%	25%	28%
REST OF EUROPE	7%	3%	5%	2%	6%	2%	5%	7%	5%	5%	6%	5%
USA	28%	30%	26%	32%	39%	40%	42%	42%	44%	44%	33%	33%
OTHER WORLD	43%	43%	46%	51%	35%	41%	37%	36%	29%	31%	36%	33%
TOTAL	12,009	17,711	19,229	15,374	16,750	16,192	21,685	19,531	18,163	21,741	29,899	30,454

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT DELIVERIES

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	53	16	22	44	41	53	34	38	38	39	44	43
REST OF EUROPE	0	31	15	19	30	72	51	52	40	55	46	49
USA	2	15	12	9	19	22	38	34	27	28	26	29
OTHER WORLD	24	18	29	36	55	56	34	34	34	37	41	39
TOTAL	24	17	21	26	35	39	37	36	32	34	36	37

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	26	18	22	35	28	45	21	18	26	29	33	30
REST OF EUROPE	0	33	8	13	26	50	36	45	17	42	35	26
USA	1	8	10	8	11	15	26	20	13	19	21	15
OTHER WORLD	15	13	18	33	32	42	26	27	24	23	36	29
TOTAL	12	13	16	25	23	32	26	24	19	23	30	24

VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	23	17	20	33	26	43	19	15	24	27	30	28
REST OF EUROPE	0	30	8	16	25	43	34	43	15	41	33	22
USA	0	7	9	8	10	13	24	18	12	18	20	14
OTHER WORLD	13	12	16	31	29	40	24	26	22	21	34	28
TOTAL	11	12	15	23	21	30	24	22	18	22	28	23

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT DELIVERIES

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	48	21	20	24	20	21	12	12	25	22	27	29
REST OF EUROPE	0	6	4	2	4	6	7	11	7	9	8	9
USA	2	34	20	13	25	30	57	53	45	40	27	33
OTHER WORLD	50	39	55	61	51	43	24	24	24	29	38	30

SEATS

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	45	32	30	20	24	25	13	11	30	24	27	34
REST OF EUROPE	0	7	3	1	7	3	7	14	4	9	7	6
USA	1	20	16	11	20	19	44	36	31	37	24	21
OTHER WORLD	55	42	50	67	49	52	36	39	35	30	42	39

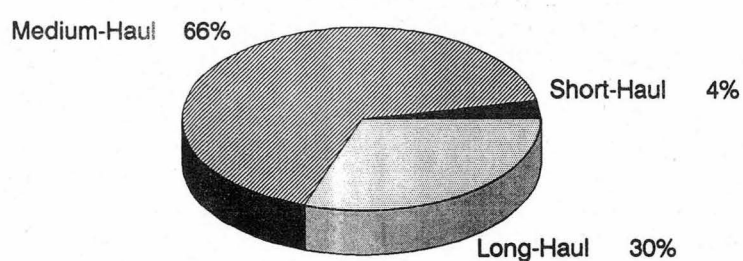
VALUE

	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
EC	45	33	31	20	24	25	13	10	30	24	27	35
REST OF EUROPE	0	7	3	2	7	3	7	14	4	9	7	5
USA	1	18	16	11	19	18	42	35	30	37	24	20
OTHER WORLD	54	42	49	67	49	54	38	41	36	30	43	40

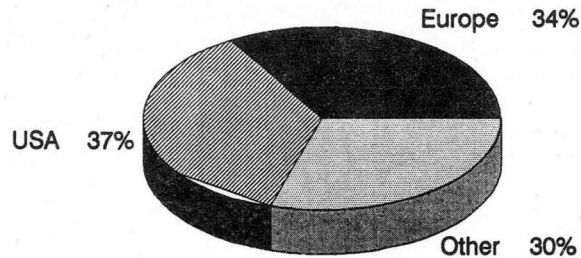
■ SOURCE: AEROSPATIALE

CIVIL AIRCRAFT ORDERS (BACKLOG)

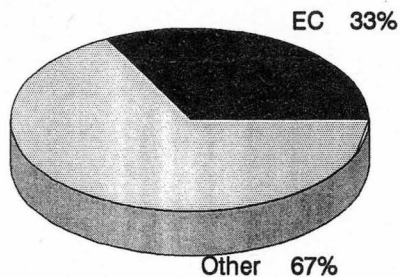
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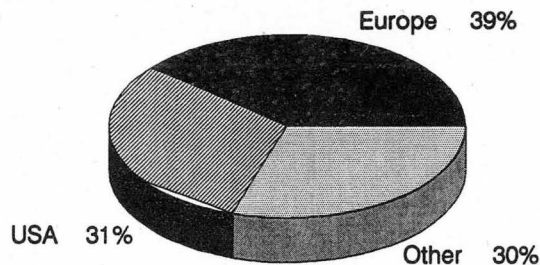
BREAKDOWN BY TYPE



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT ORDERS

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1986	1987	1988	1989	1990
EC	17%	17%	21%	29%	22%
REST OF EUROPE	5%	5%	8%	6%	7%
USA	26%	36%	34%	37%	42%
OTHER WORLD	51%	43%	37%	28%	29%
TOTAL	449	509	643	773	878

SEATS (X 1,000)

	1986	1987	1988	1989	1990
EC	18%	17%	25%	32%	27%
REST OF EUROPE	7%	6%	9%	7%	8%
USA	24%	34%	29%	33%	37%
OTHER WORLD	51%	43%	37%	28%	27%
TOTAL	16	20	26	32	33

CONSTANT VALUE - MIO 1990 ECU

	1986	1987	1988	1989	1990
EC	19%	17%	25%	32%	27%
REST OF EUROPE	7%	5%	9%	7%	9%
USA	23%	34%	29%	33%	53%
OTHER WORLD	52%	44%	37%	27%	12%
TOTAL	2,821	3,068	4,244	5,804	5,638

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT ORDERS

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	83	76	83	72	71
REST OF EUROPE	100	96	94	100	90
USA	42	45	34	58	43
OTHER WORLD	55	70	64	67	73
TOTAL	59	63	60	67	61

SEATS

	1986	1987	1988	1989	1990
EC	90	85	88	79	80
REST OF EUROPE	100	91	96	100	93
USA	49	52	40	63	55
OTHER WORLD	58	74	70	72	80
TOTAL	65	69	68	74	72

VALUE

	1986	1987	1988	1989	1990
EC	89	83	88	80	80
REST OF EUROPE	100	100	95	100	92
USA	49	52	40	63	68
OTHER WORLD	58	74	70	73	54
TOTAL	65	69	68	74	72

■ SOURCE: AEROSPATIALE

SHORT HAUL AIRCRAFT ORDERS

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	25	20	30	31	26
REST OF EUROPE	9	7	12	10	10
USA	19	26	19	32	30
OTHER WORLD	48	47	40	28	34

SEATS

	1986	1987	1988	1989	1990
EC	25	21	32	35	30
REST OF EUROPE	10	7	13	10	11
USA	18	26	17	28	28
OTHER WORLD	46	46	38	27	30

VALUE

	1986	1987	1988	1989	1990
EC	26	20	32	35	30
REST OF EUROPE	10	7	13	10	11
USA	17	26	17	28	50
OTHER WORLD	46	47	38	27	9

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT ORDERS

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1986	1987	1988	1989	1990
EC	18%	22%	23%	31%	30%
REST OF EUROPE	5%	6%	6%	5%	5%
USA	60%	53%	53%	48%	43%
OTHER WORLD	17%	20%	18%	17%	22%
TOTAL	1,257	1,321	1,654	2,873	3,217

SEATS (X 1,000)

	1986	1987	1988	1989	1990
EC	17%	21%	22%	30%	29%
REST OF EUROPE	5%	5%	6%	5%	5%
USA	58%	51%	52%	47%	43%
OTHER WORLD	19%	22%	19%	18%	23%
TOTAL	181	195	252	445	519

CONSTANT VALUE - MIO 1990 ECU

	1986	1987	1988	1989	1990
EC	17%	21%	22%	30%	29%
REST OF EUROPE	5%	5%	6%	5%	5%
USA	58%	52%	53%	48%	43%
OTHER WORLD	19%	22%	19%	18%	23%
TOTAL	44,515	41,308	50,848	99,478	105,945

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT ORDERS

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	40	39	11	29	42
REST OF EUROPE	25	40	6	26	43
USA	30	41	29	27	26
OTHER WORLD	36	41	34	54	53
TOTAL	32	40	24	32	38

SEATS

	1986	1987	1988	1989	1990
EC	45	41	13	31	44
REST OF EUROPE	24	38	7	28	46
USA	28	41	28	29	28
OTHER WORLD	36	43	36	59	57
TOTAL	32	41	25	35	40

VALUE

	1986	1987	1988	1989	1990
EC	44	41	13	31	44
REST OF EUROPE	25	38	7	27	46
USA	28	41	28	29	28
OTHER WORLD	36	43	36	59	57
TOTAL	32	41	25	35	40

■ SOURCE: AEROSPATIALE

MEDIUM HAUL AIRCRAFT ORDERS

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	22	21	11	28	34
REST OF EUROPE	4	6	1	4	6
USA	55	53	63	41	29
OTHER WORLD	19	20	25	28	31

SEATS

	1986	1987	1988	1989	1990
EC	24	21	12	27	32
REST OF EUROPE	4	5	2	4	6
USA	51	51	58	40	29
OTHER WORLD	21	23	28	30	33

VALUE

	1986	1987	1988	1989	1990
EC	23	20	12	27	32
REST OF EUROPE	4	5	2	4	6
USA	51	51	58	40	29
OTHER WORLD	21	23	28	30	33

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT ORDERS

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1986	1987	1988	1989	1990
EC	31%	43%	31%	32%	30%
REST OF EUROPE	2%	4%	5%	4%	5%
USA	12%	22%	21%	22%	23%
OTHER WORLD	55%	31%	42%	42%	43%
TOTAL	149	300	318	459	595

SEATS (X 1,000)

	1986	1987	1988	1989	1990
EC	32%	42%	31%	31%	29%
REST OF EUROPE	1%	3%	4%	4%	4%
USA	13%	20%	19%	21%	21%
OTHER WORLD	54%	35%	45%	45%	46%
TOTAL	54	106	116	157	205

CONSTANT VALUE - MIO 1990 ECU

	1986	1987	1988	1989	1990
EC	32%	42%	32%	31%	29%
REST OF EUROPE	1%	3%	4%	3%	4%
USA	13%	20%	20%	21%	21%
OTHER WORLD	54%	35%	45%	45%	46%
TOTAL	15,318	26,384	28,556	41,029	48,398

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT ORDERS

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	0	33	17	30	26
REST OF EUROPE	67	0	0	0	0
USA	0	31	4	32	22
OTHER WORLD	0	5	0	4	9
TOTAL	1	23	6	18	16

SEATS

	1986	1987	1988	1989	1990
EC	0	28	14	27	23
REST OF EUROPE	33	0	0	0	0
USA	0	28	4	29	20
OTHER WORLD	0	4	0	3	7
TOTAL	0	19	5	16	14

VALUE

	1986	1987	1988	1989	1990
EC	0	28	14	27	23
REST OF EUROPE	0	0	0	0	0
USA	0	28	4	29	20
OTHER WORLD	0	4	0	3	7
TOTAL	0	19	5	16	14

■ SOURCE: AEROSPATIALE

LONG HAUL AIRCRAFT ORDERS

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	0	63	85	54	48
REST OF EUROPE	100	0	0	0	0
USA	0	29	15	38	30
OTHER WORLD	0	7	0	8	22

SEATS

	1986	1987	1988	1989	1990
EC	0	63	85	54	48
REST OF EUROPE	100	0	0	0	0
USA	0	29	15	38	30
OTHER WORLD	0	7	0	8	22

VALUE

	1986	1987	1988	1989	1990
EC	0	63	85	54	48
REST OF EUROPE	0	0	0	0	0
USA	0	29	15	38	30
OTHER WORLD	0	7	0	8	22

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT ORDERS

ABSOLUTE FIGURES (INCLUDING GEOGRAPHICAL BREAKDOWN)

UNITS

	1986	1987	1988	1989	1990
EC	19%	23%	24%	31%	29%
REST OF EUROPE	5%	5%	7%	5%	5%
USA	48%	44%	44%	43%	40%
OTHER WORLD	28%	27%	26%	21%	26%
TOTAL	1,855	2,130	2,615	4,105	4,690

SEATS (X 1,000)

	1986	1987	1988	1989	1990
EC	21%	28%	25%	30%	29%
REST OF EUROPE	4%	5%	6%	4%	5%
USA	46%	40%	41%	40%	37%
OTHER WORLD	29%	28%	28%	25%	30%
TOTAL	251	321	394	633	758

CONSTANT VALUE - MIO 1990 ECU

	1986	1987	1988	1989	1990
EC	21%	29%	26%	30%	29%
REST OF EUROPE	4%	4%	6%	4%	5%
USA	46%	39%	40%	39%	37%
OTHER WORLD	29%	28%	29%	26%	30%
TOTAL	62,654	70,759	83,647	146,311	159,981

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT ORDERS

EC MARKET SHARE BY AREA (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	44	44	28	36	44
REST OF EUROPE	45	47	30	41	49
USA	31	41	28	33	29
OTHER WORLD	38	46	38	46	48
TOTAL	36	43	31	37	39

SEATS

	1986	1987	1988	1989	1990
EC	32	36	18	33	40
REST OF EUROPE	32	33	14	28	40
USA	27	40	25	31	28
OTHER WORLD	24	30	22	35	37
TOTAL	28	36	22	32	34

VALUE

	1986	1987	1988	1989	1990
EC	29	35	17	32	39
REST OF EUROPE	29	31	13	26	38
USA	27	39	24	30	28
OTHER WORLD	22	27	19	32	34
TOTAL	26	34	20	31	33

■ SOURCE: AEROSPATIALE

TOTAL CIVIL AIRCRAFT ORDERS

BREAKDOWN OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

UNITS

	1986	1987	1988	1989	1990
EC	23	24	22	30	33
REST OF EUROPE	6	6	6	6	7
USA	40	42	40	38	29
OTHER WORLD	30	29	31	27	31

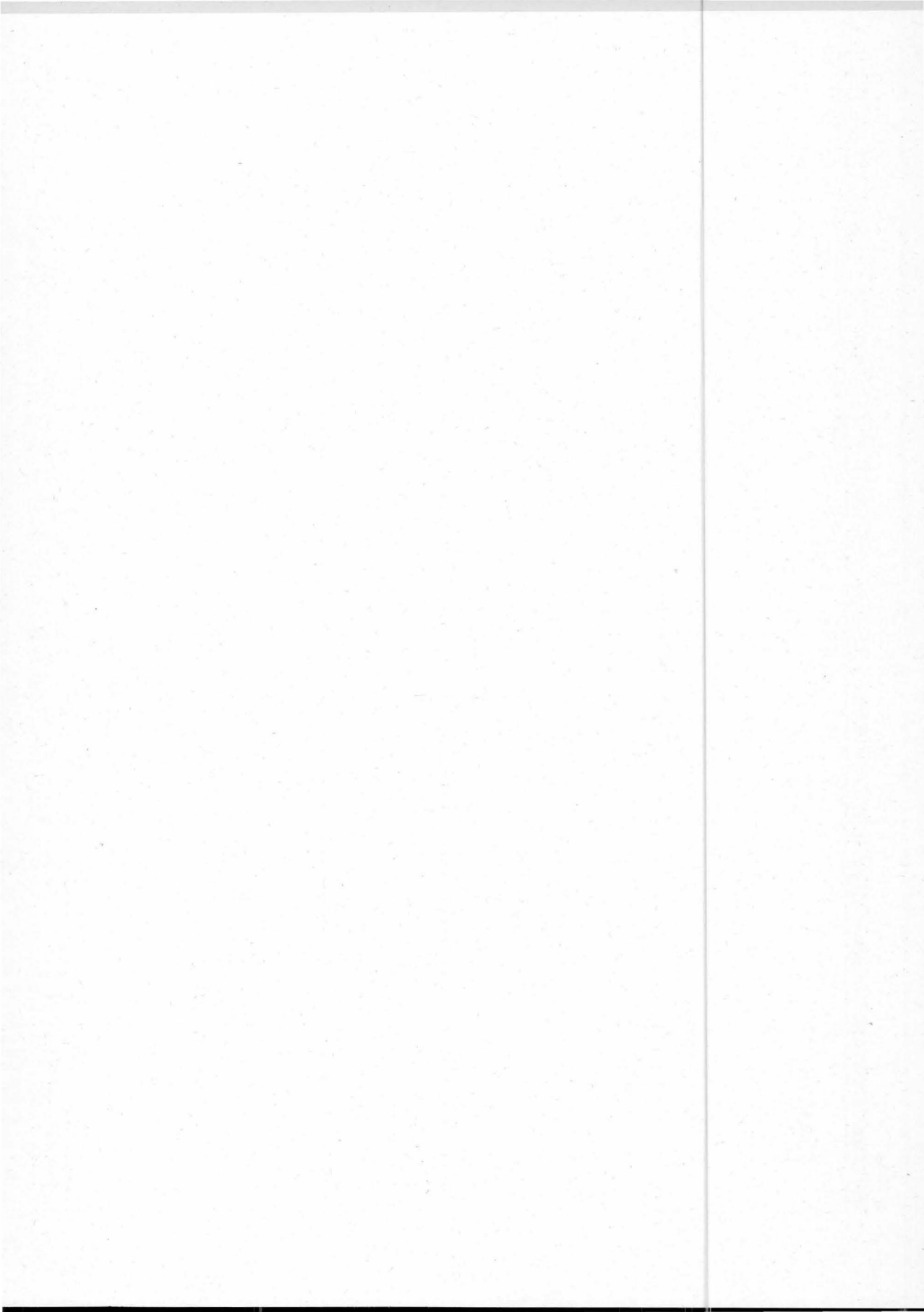
SEATS

	1986	1987	1988	1989	1990
EC	24	28	21	31	33
REST OF EUROPE	5	4	4	4	5
USA	45	44	47	38	29
OTHER WORLD	25	23	28	27	32

VALUE

	1986	1987	1988	1989	1990
EC	24	29	22	31	34
REST OF EUROPE	5	4	3	4	5
USA	47	45	48	38	31
OTHER WORLD	24	22	27	27	30

■ SOURCE: AEROSPATIALE



CIVIL TURBINE ENGINES

Data relating to *civil engines* are extracted from *JP Airline Fleets International* and cover the number of deliveries of *civil turbine aircraft engines* in the world.

Civil engines deliveries are broken down according to: *category of engines, design origin, and geographical areas.*

Civil engines deliveries are broken down into the following *thrust categories:*

- *Turbofan* above 14 Tons
- *Turbofan* between 7 and 14 Tons
- *Turbofan* between 3 and 7 Tons
- *Turbofan* below 3 Tons
- *Turboprop* and *Turboshaft*

For each category, the tables show the manufacturers' market shares according to the number and thrust of *civil engines delivered:*

- | | |
|------------------------------|-------------------------------------|
| ● <i>CFM International</i> | ● <i>IAE</i> |
| ● <i>Rolls-Royce</i> | ● <i>Turbomeca</i> |
| ● <i>Allison</i> | ● <i>Garrett</i> |
| ● <i>General Electric</i> | ● <i>Textron Lycoming</i> |
| ● <i>Pratt & Whitney</i> | ● <i>Pratt & Whitney Canada</i> |

Manufacturer reflects the company that originated the design (or has significantly redesigned /developed the engine) and not necessarily indicate production and/or assembly origin.

A list of *Civil engines* is given hereafter.

Turbofan below 3 Tons

- *GARRETT* ATF3
TFE731
- *GENERAL ELECTRIC*CF700
CJ610
- *PRATT & WHITNEY Canada* JT15D

Turbofan between 3 and 7 Tons

- *GENERAL ELECTRIC*CF34
- *PRATT & WHITNEY* JT8D-9A
- *ROLLS-ROYCE* Spey
Tay
- *TEXTRON LYCOMING* ALF502

Turbofan between 7 and 14 Tons

- *CFM Intl*CFM56
- *IAE* V2500
- *PRATT & WHITNEY* JT8D-15/17
JT8D-209/217/219

Turbofan between 7 and 14 Tons (continued)

- *ROLLS-ROYCE*Tay-670
-

Turbofan above 14 Tons

- *GENERAL ELECTRIC* CF6
 - *PRATT & WHITNEY* JT9D-7
PW2000/4000
 - *ROLLS-ROYCE*RB211
-

Turboprop and Turboshaft

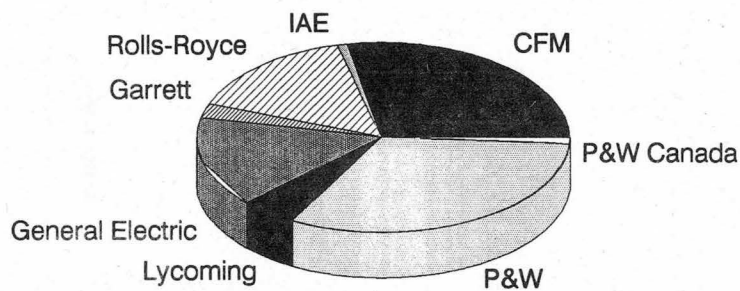
- *ALLISON*250
501
T56
- *GARRETT*TPE331
- *GENERAL ELECTRIC* CT58
CT7
- *PRATT & WHITNEY Canada* PT6
PW100
- *ROLLS-ROYCE* Dart
Gem
Gnome
Tyne

Turboprop and Turboshaft (continued)

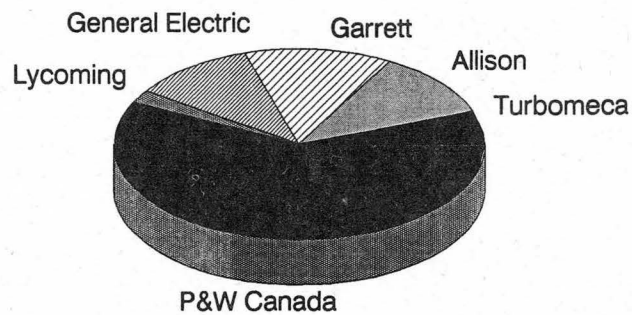
- *TEXTRON LYCOMING* 5512
LTS101
T53-13B/-17A
T5508D
 - *TURBOMECA* Arriel
Artouste
Astazou
Makila
Turmo
-

Civil Turbine Engines Deliveries

(Units - 1990)



TURBOFAN



TURBOPROP/SHAFT

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

CIVIL TURBINE ENGINES DELIVERIES

MARKET SHARE BY MANUFACTURER (UNITS - AS % OF TOTAL)

TURBOFAN - THRUST BELOW 3 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	0	0	0	0	0	0	0
IAE	0	0	0	0	0	0	0	0	0	0	0
ROLLS-ROYCE	0	0	0	0	0	0	0	0	0	0	0
GARRETT	55	62	55	59	57	46	52	61	64	81	64
GENERAL ELECTRIC	12	6	3	5	7	8	0	0	0	0	0
LYCOMING	0	0	0	0	0	0	0	0	0	0	0
P-W	0	0	0	0	0	0	0	0	0	0	0
P-W CANADA	33	32	42	35	35	46	48	39	36	19	36
TOTAL (UNITS)	166	212	139	74	80	78	71	57	72	115	66

TURBOFAN - THRUST OF 3 TO 7 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	0	0	0	0	0	0	0
IAE	0	0	0	0	0	0	0	0	0	0	0
ROLLS-ROYCE	37	41	29	58	43	23	34	25	26	26	45
GARRETT	0	0	0	0	0	0	0	0	0	0	0
GENERAL ELECTRIC	0	0	0	0	17	7	15	0	3	3	1
LYCOMING	8	9	28	32	34	67	51	72	68	71	54
P-W	55	50	43	10	6	3	0	3	3	0	0
P-W CANADA	0	0	0	0	0	0	0	0	0	0	0
TOTAL (UNITS)	125	133	116	118	94	120	118	134	152	194	152

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

CIVIL TURBINE ENGINES DELIVERIES

MARKET SHARE BY MANUFACTURER (UNITS - AS % OF TOTAL)

TURBOFAN - THRUST OF 7 TO 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	9	44	55	55	61	55	60
IAE	0	0	0	0	0	0	0	0	0	10	3
ROLLS-ROYCE	0	0	0	0	0	0	0	0	0	0	0
GARRETT	0	0	0	0	0	0	0	0	0	0	0
GENERAL ELECTRIC	0	0	0	0	0	0	0	0	0	0	0
LYCOMING	0	0	0	0	0	0	0	0	0	0	0
P-W	100	100	100	100	91	56	45	45	39	36	37
P-W CANADA	0	0	0	0	0	0	0	0	0	0	0
TOTAL (UNITS)	602	585	339	243	245	340	494	512	622	642	750

TURBOFAN - THRUST ABOVE 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	0	0	0	0	0	0	0
IAE	0	0	0	0	0	0	0	0	0	0	0
ROLLS-ROYCE	17	38	27	22	13	22	20	19	15	28	28
GARRETT	0	0	0	0	0	0	0	0	0	0	0
GENERAL ELECTRIC	47	39	43	39	30	38	44	43	52	37	36
LYCOMING	0	0	0	0	0	0	0	0	0	0	0
P-W	36	23	31	39	57	40	36	39	33	35	37
P-W CANADA	0	0	0	0	0	0	0	0	0	0	0
TOTAL (UNITS)	540	447	330	376	255	273	323	327	417	444	659

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

CIVIL TURBINE ENGINES DELIVERIES

MARKET SHARE BY MANUFACTURER (UNITS - AS % OF TOTAL)

TURBOFAN - TOTAL

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	3	18	27	27	30	25	28
IAE	0	0	0	0	0	0	0	0	0	4	1
ROLLS-ROYCE	10	16	13	19	11	11	10	9	8	12	15
GARRETT	6	10	8	5	7	4	4	3	4	7	3
GENERAL ELECTRIC	19	14	16	19	15	15	16	13	17	12	15
LYCOMING	1	1	3	5	5	10	6	9	8	10	5
P-W	60	55	53	49	56	37	34	35	30	27	32
P-W CANADA	4	5	6	3	4	4	3	2	2	2	1
TOTAL (UNITS)	1,433	1,377	924	811	674	811	1,006	1,030	1,263	1,395	1,627

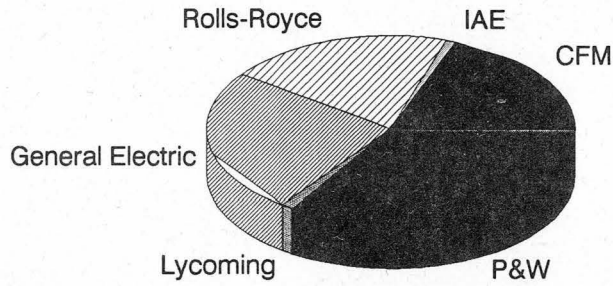
TURBOPROP AND TURBOSHAFT

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ROLLS-ROYCE	2	3	5	5	6	3	3	2	0	0	0
TURBOMECA	7	7	13	18	13	10	8	7	4	4	6
ALLISON	31	33	31	25	20	15	8	6	7	8	11
GARRETT	13	13	15	23	17	22	22	24	19	12	13
GENERAL ELECTRIC	1	0	1	1	5	8	8	8	7	9	11
LYCOMING	4	3	2	3	3	4	9	5	2	2	2
P-W CANADA	41	41	33	25	37	38	42	48	60	64	58
TOTAL (UNITS)	1,349	1,411	1,174	752	659	785	858	893	999	963	1,015

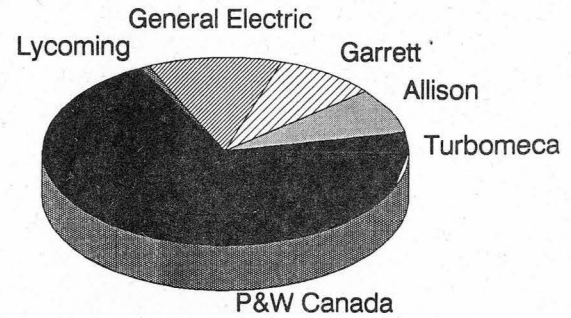
■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

Civil Turbine Engines Deliveries

(Thrust - 1990)



TURBOFAN



TURBOPROP/SHAFT

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

CIVIL TURBINE ENGINES DELIVERIES

MARKET SHARE BY MANUFACTURER (THRUST - AS % OF TOTAL)

TURBOFAN - THRUST BELOW 3 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	0	0	0	0	0	0	0
IAE	0	0	0	0	0	0	0	0	0	0	0
ROLLS-ROYCE	0	0	0	0	0	0	0	0	0	0	0
GARRETT	60	69	64	66	65	55	63	72	74	86	73
GENERAL ELECTRIC	16	8	4	7	10	11	0	0	0	0	0
LYCOMING	0	0	0	0	0	0	0	0	0	0	0
P-W	0	0	0	0	0	0	0	0	0	0	0
P-W CANADA	24	24	32	26	25	35	37	28	26	14	27
TOTAL (THRUST)	554	696	440	245	274	256	235	202	258	443	238

TURBOFAN - THRUST OF 3 TO 7 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	0	0	0	0	0	0	0
IAE	0	0	0	0	0	0	0	0	0	0	0
ROLLS-ROYCE	32	35	27	62	48	30	43	35	39	41	63
GARRETT	0	0	0	0	0	0	0	0	0	0	0
GENERAL ELECTRIC	0	0	0	0	17	7	16	0	3	3	1
LYCOMING	5	5	18	23	25	57	41	60	54	55	36
P-W	64	60	55	15	10	6	0	5	4	0	0
P-W CANADA	0	0	0	0	0	0	0	0	0	0	0
TOTAL (THRUST)	1,574	1,628	1,308	1,155	879	981	1,029	1,124	1,354	1,735	1,604

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

CIVIL TURBINE ENGINES DELIVERIES

MARKET SHARE BY MANUFACTURER (THRUST - AS % OF TOTAL)

TURBOFAN - THRUST OF 7 TO 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	11	46	56	56	63	56	62
IAE	0	0	0	0	0	0	0	0	0	11	3
ROLLS-ROYCE	0	0	0	0	0	0	0	0	0	0	0
GARRETT	0	0	0	0	0	0	0	0	0	0	0
GENERAL ELECTRIC	0	0	0	0	0	0	0	0	0	0	0
LYCOMING	0	0	0	0	0	0	0	0	0	0	0
P-W	100	100	100	100	89	54	44	44	37	33	35
P-W CANADA	0	0	0	0	0	0	0	0	0	0	0
TOTAL (THRUST)	9,542	9,565	5,703	4,186	4,386	6,681	9,827	10,416	13,095	14,040	16,261

TURBOFAN - THRUST ABOVE 14 TONS

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	0	0	0	0	0	0	0
IAE	0	0	0	0	0	0	0	0	0	0	0
ROLLS-ROYCE	16	37	25	21	12	21	19	18	13	26	27
GARRETT	0	0	0	0	0	0	0	0	0	0	0
GENERAL ELECTRIC	47	39	44	39	30	39	46	45	56	40	38
LYCOMING	0	0	0	0	0	0	0	0	0	0	0
P-W	36	24	31	40	59	40	35	37	31	34	35
P-W CANADA	0	0	0	0	0	0	0	0	0	0	0
TOTAL (THRUST)	27,590	22,785	16,533	18,609	12,460	13,071	15,739	16,261	21,362	23,769	35,157

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

CIVIL TURBINE ENGINES DELIVERIES

MARKET SHARE BY MANUFACTURER (THRUST - AS % OF TOTAL)

TURBOFAN - TOTAL

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
CFM	0	0	0	0	3	15	21	21	23	20	19
IAE	0	0	0	0	0	0	0	0	0	4	1
ROLLS-ROYCE	13	26	19	19	10	14	13	12	9	17	20
GARRETT	1	1	1	1	1	1	1	1	1	1	0
GENERAL ELECTRIC	33	26	30	30	22	25	28	26	33	24	25
LYCOMING	0	0	1	1	1	3	2	2	2	2	1
P-W	52	46	48	49	63	42	36	38	32	32	34
P-W CANADA	0	0	1	0	0	0	0	0	0	0	0
TOTAL (THRUST)	39,260	34,674	23,983	24,196	17,998	20,989	26,830	28,003	36,069	39,986	53,260

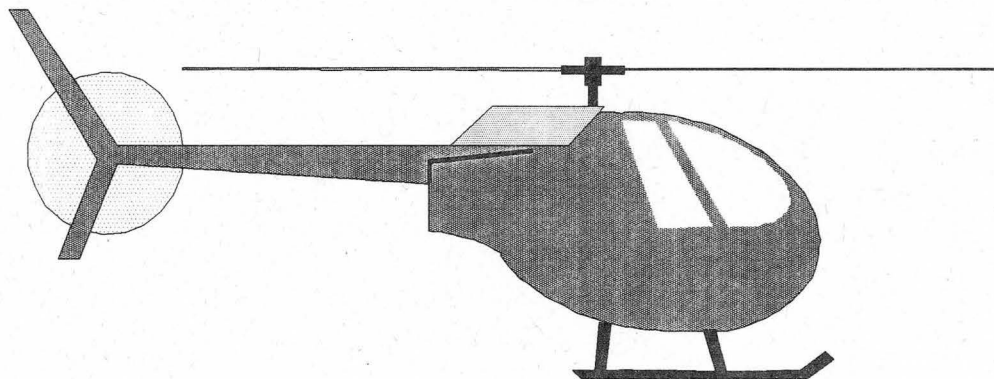
TURBOPROP AND TURBOSHAFT

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ROLLS-ROYCE	10	14	20	12	18	7	3	2	1	0	0
TURBOMECA	5	5	11	19	12	9	4	4	2	2	3
ALLISON	26	25	26	24	11	14	3	5	2	3	8
GARRETT	13	13	13	20	15	19	18	19	14	9	9
GENERAL ELECTRIC	1	0	1	2	7	13	12	11	9	10	12
LYCOMING	5	4	3	2	2	2	4	2	1	1	1
P-W CANADA	40	39	27	21	35	37	55	56	70	75	67
TOTAL (THRUST)	1,243	1,394	1,374	857	711	872	987	1,127	1,379	1,415	1,579

■ SOURCE: JP AIRLINE FLEETS INTERNATIONAL

HELICOPTER AND LIGHT AIRCRAFT

C H A P T E R 3



LIGHT AIRCRAFT

The data on the EC fleet of single-engine aircraft, twin-engine aircraft and executive jets are compiled by *BUREAU VERITAS*.

The EC fleet of *light aircraft* (less than 15,000 kg.) is broken down into three aircraft categories:

- *single-engine aircraft* : less than 5.7 Tons
- *twin-engine aircraft* : less than 5.7 Tons
- *executive jets* : from 5.7 to 15 Tons

Data for Belgium (1988), Denmark (1988, 1990), Greece (1986) and Spain (1986,1987) are estimated.

The data on the *business aircraft* fleet (in value and units) are prepared by *ITA* (Air Transport Institute, Paris).

There is no definition of what is a "*business aircraft*". These terms relate, however, to the transport of passengers traveling for business reasons. In this study, a "*business aircraft*" is defined as follows:

- aircraft that is not used on scheduled routes,
- aircraft whose services are not marketed to the public (via travel agencies, for example), the available capacity (generally limited) being bought for a sole use, linked to professional reasons. Therefore there is *double counting* of some large transport aircraft, which are also included in the *transport aircraft* fleet (Chapter 2) and that are specially equipped for the V.I.P.,

- aircraft that is not specifically equipped for other activities.

The study is limited to "*air taxi*" (e.a. commercial transport on request), or to private transport for companies or institutions having an aircraft fleet for their own needs (governments, businesses, etc.).

The study excludes piston aircraft, which by nature are designed for activities such as general aviation, leisure transport, training, etc.

The study distinguishes 3 main *business aircraft* categories:

- *large jet aircraft* whose initial use is not business transport, but that are specially equipped for that use and are called "V.I.P."
- *small jet aircraft* specially build for business transport (their high costs imply that they are seldom used on scheduled routes)
- *turboprop aircraft* that are used for air taxi.

For the last 2 categories, and because of the large number of aircraft models, the study excludes those of which less than 10 units were in service for business transport (less than 1% of the market).

The price of the business jets and turboprops is the standard price, e.a. the average selling price, excluding the cost of the equipment.

The value of the fleet is computed as follows:

- for *aircraft that are no longer built*, an average price is computed between the aircraft maximum price, its minimum price and its price after some improvements, between the first year of manufacturing and the last one.
- for *aircraft still in production and put into service for more than 5 years*, the average price is estimated between the new aircraft price, weighted by a factor 2, its maximum price and its price after some improvements on aircraft of the first year of production.
- for *aircraft in production for less than 5 years*, the price of new aircraft is used.

A list of *business aircraft* and their categories is given in the following pages.

Business aircraft of EC design

Manufacturer	Model	Seats	Year	Value 1990 (Mio ECUS)
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Business jets

<i>AIRBUS</i>	A300-600		1984--	41.998
<i>AEROSPATIALE</i>	Caravelle		1958-73	1.433
	Corvette 100	6-12	1972-79	0.318
<i>BRITISH AEROSPACE</i>	BAC 111	79	1963-82	1.354
	HS-125-400/600	7-8	1962-76	0.597
	HS-125-700	8-10	1977-84	3.025
	HS-125-800	2 + 8	1984--	6.210
<i>DASSAULT BREGUET</i>	Falcon 10/100	2 + 7	1973--	2.468
	Falcon 20/200	2 + 9	1965--	3.981
	Falcon 50	2 + 10	1978--	8.360
	Falcon 900	2 + 12/14	1986--	16.401
<i>FOKKER</i>	F-28		1967--	5.772
<i>MBB</i>	Hansa Jet	9-15	1966-73	0.255
<i>SOCATA</i>	Paris Jet	4	1958-64	0.119

Business Turboprops

<i>BRITISH AEROSPACE</i>	Jetstream 31	2 + 18	1967--	1.990
	HS-748	40/50	1961--	2.094
<i>SHORT</i>	Skyvan	19	1966--	0.406
<i>FOKKER</i>	F-27	40/60	1957-85	0.876
<i>PILATUS</i>	Porter	8/11	1965--	0.183

Business aircraft of US design

Manufacturer	Model	Seats	Year	Value 1990 (Mio ECUS)
Business jets				
<i>BOEING</i>	B-707/720		1957-79	1.990
	B-727		1963-84	2.946
	B-737		1967--	4.777
	B-747SP		1969--	18.710
<i>McDONNELL DOUGLAS</i>	DC-8		1959--	1.035
	DC-9		1965-81	2.826
<i>BEECH</i>	Beechjet (Diamond II)	2 + 7/9	1985--	3.264
<i>CESSNA</i>	Citation 1	2 + 5/7	1972-85	0.995
	Citation II	2 + 10	1978--	2.189
	Citation III	2 + 13	1982--	4.777
<i>GATES LEARJET</i>	Learjet 23/24/25	2 + 6	1964-85	0.677
	Learjet 25/26	2 + 10	1974--	1.990
	Learjet 55	2 + 10	1980--	3.344
<i>GULFSTREAM</i>	G II	10/19	1966-80	4.140
	G III/IV	3/19	1979--	11.943
<i>LOCKHEED</i>	Jetstar 6/8/731	2 + 10	1960-73	0.637
	Jetstar II	2 + 10	1976-80	1.831
<i>ROCKWELL</i>	Jet Commander	2 + 8	1965-68	0.159
	Saber 40	2 + 8	1964-74	0.358
	Saber 60/65/75/80	2 + 10	1967-78	1.115

Business aircraft of US design (continued)

Manufacturer	Model	Seats	Year	Value 1990 (Mio ECUS)
Business Turboprops				
<i>BEECH</i>	Beech 18	10	1946-66	0.034
	King Air 90	1+9	1964--	0.796
	King Air 100	1+10	1969-83	0.557
	King Air 200	1+10	1973--	1.417
	King Air 300	1+10	1984--	2.189
	Beech 1900	2+19	1982--	2.309
<i>CESSNA</i>	C-421	1+7	1967-85	0.147
	C-425/441	1+10	1980--	0.756
<i>CONVAIR</i>	CV 580/640	56	1960-69	0.677
<i>FAIRCHILD</i>	F-27/FH-227	40	1958-68	0.518
	Merlin II	2+6	1967-68	0.167
	Merlin III	2+9	1970-83	0.478
	Merlin IV	2+15	1971--	1.234
<i>GULFSTREAM/ ROCKWELL</i>	Turbo-Commander	11	1966-69	0.080
	COM 681/6909	1970-79	0.239
<i>PIPER</i>	COM 900/980/840	1+7/10	1980-85	0.693
	COM 1000	1+7/10	1981-85	1.075
	Gulfstream I	12/26	1959-69	0.502
	Gosse	7/11	1933-45	0.135
	P-31T/1	1+8	1974--	0.358
	P-31T-2/2XL	1+10	1981--	0.677
	P-42/400	11	1980--	1.314

Business aircraft of other design

Manufacturer	Model	Seats	Year	Value 1990 (Mio ECUS)
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Business jets

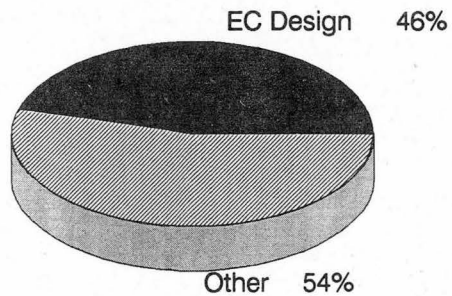
<i>CANADAIR</i>	CL-600	2 + 19	1980-83	4.777
	CL-601	2 + 19	1982--	10.510
<i>IAI</i>	Westwind 1/2	2 + 10	1965--	2.309
	Astra	2 + 10	1985--	4.299
<i>MITSUBISHI</i>	Diamond	9/11	1981-85	1.600

Business Turboprops

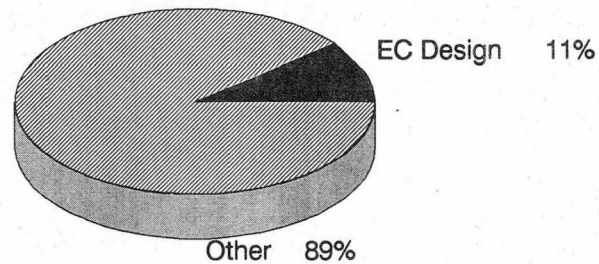
<i>DE HAVILLAND</i>	Twin Otter	22	1965--	0.414
	Dash-7	54	1977--	2.787
	Turbo Beaver	8	1948-68	0.040
<i>EMBRAER</i>	EMB-110	2 + 18	1973--	1.075
	EMB-120/121	2 + 9	1979--	4.936
<i>MITSUBISHI</i>	MU-2	9	1967-85	0.318
	Marquise	11	1979-85	0.748

EC Light Aircraft Fleet

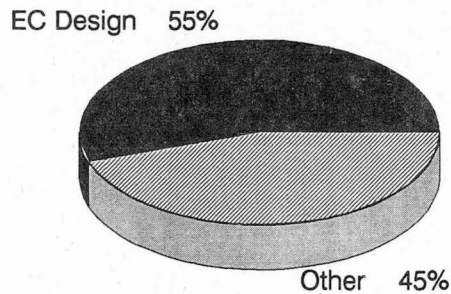
in units (1990)



SINGLE-ENGINE AIRCRAFT



TWIN-ENGINE AIRCRAFT



EXECUTIVE JET

■ SOURCE: BUREAU VERITAS

LIGHT AIRCRAFT FLEET (UNITS)

1) SINGLE-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	715	668	5,607	4,838	121	246	1,193	41	413	4,475	18,317	-	-	-
1984	652	690	5,546	4,756	130	218	1,201	43	395	4,548	18,179	-	-	-
1985	625	702	5,470	4,728	107	239	1,221	43	393	4,771	18,299	224	212	18,735
1986	599	679	5,488	4,846	106	249	1,235	43	408	4,745	18,398	432	232	19,062
1987	635	685	5,578	4,913	109	196	1,239	43	439	5,081	18,918	657	237	19,812
1988	658	725	5,739	4,932	105	273	1,246	50	435	4,246	18,409	842	251	19,502
1989	730	819	5,902	5,037	110	290	1,296	53	467	4,587	19,291	875	272	20,438
1990	824	737	6,663	5,263	113	326	1,319	54	513	5,038	20,850	1,053	295	22,198

2) TWIN-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	68	127	695	571	10	40	227	5	69	973	2,785	-	-	-
1984	72	144	670	559	5	38	231	6	59	937	2,721	-	-	-
1985	51	183	652	561	10	28	234	7	63	958	2,747	31	31	2,809
1986	76	190	674	619	10	37	262	9	82	776	2,735	64	33	2,832
1987	67	195	718	623	11	31	265	8	71	784	2,773	98	34	2,905
1988	71	185	738	691	6	38	273	8	89	756	2,855	137	35	3,027
1989	75	173	722	719	6	38	282	9	89	798	2,911	194	36	3,141
1990	94	155	719	780	21	41	288	11	92	863	3,064	222	37	3,323

3) EXECUTIVE JET

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	11	8	58	50	6	2	49	0	4	131	319	-	-	-
1984	4	8	58	52	0	2	54	1	4	84	267	-	-	-
1985	3	14	48	65	0	3	64	1	13	72	283	0	1	284
1986	6	10	48	71	0	3	80	0	5	70	293	6	0	299
1987	4	10	70	73	0	2	86	1	7	75	328	13	0	341
1988	5	16	62	87	0	3	109	1	7	79	369	21	1	391
1989	5	21	56	98	0	2	123	0	8	73	386	25	3	414
1990	5	14	150	132	0	3	127	0	9	86	526	30	3	559

■ SOURCE: BUREAU VERITAS

LIGHT AIRCRAFT FLEET: BREAKDOWN INTO COUNTRIES (AS % OF TOTAL EC)

1) SINGLE-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	ES	PO
1983	3.9	3.6	30.6	26.4	0.7	1.3	6.5	0.2	2.3	24.4	-	-
1984	3.6	3.8	30.5	26.2	0.7	1.2	6.6	0.2	2.2	25.0	-	-
1985	3.3	3.7	29.2	25.2	0.6	1.3	6.5	0.2	2.1	25.5	1.2	1.1
1986	3.1	3.6	28.8	25.4	0.6	1.3	6.5	0.2	2.1	24.9	2.3	1.2
1987	3.2	3.5	28.2	24.8	0.6	1.0	6.3	0.2	2.2	25.6	3.3	1.2
1988	3.4	3.7	29.4	25.3	0.5	1.4	6.4	0.3	2.2	21.8	4.3	1.3
1989	3.6	4.0	28.9	24.6	0.5	1.4	6.3	0.3	2.3	22.4	4.3	1.3
1990	3.7	3.3	30.0	23.7	0.5	1.5	5.9	0.2	2.3	22.7	4.7	1.3

2) TWIN-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	ES	PO
1983	2.4	4.6	25.0	20.5	0.4	1.4	8.2	0.2	2.5	34.9	-	-
1984	2.6	5.3	24.6	20.5	0.2	1.4	8.5	0.2	2.2	34.4	-	-
1985	1.8	6.5	23.2	20.0	0.4	1.0	8.3	0.2	2.2	34.1	1.1	1.1
1986	2.7	6.7	23.8	21.9	0.4	1.3	9.3	0.3	2.9	27.4	2.3	1.2
1987	2.3	6.7	24.7	21.4	0.4	1.1	9.1	0.3	2.4	27.0	3.4	1.2
1988	2.3	6.1	24.4	22.8	0.2	1.3	9.0	0.3	2.9	25.0	4.5	1.2
1989	2.4	5.5	23.0	22.9	0.2	1.2	9.0	0.3	2.8	25.4	6.2	1.1
1990	2.8	4.7	21.6	23.5	0.6	1.2	8.7	0.3	2.8	26.0	6.7	1.1

3) EXECUTIVE JET

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	ES	PO
1983	3.4	2.5	18.2	15.7	1.9	0.6	15.4	0.0	1.3	41.1	-	-
1984	1.5	3.0	21.7	19.5	0.0	0.7	20.2	0.4	1.5	31.5	-	-
1985	1.1	4.9	16.9	22.9	0.0	1.1	22.5	0.4	4.6	25.4	0.0	0.4
1986	2.0	3.3	16.1	23.7	0.0	1.0	26.8	0.0	1.7	23.4	2.0	0.0
1987	1.2	2.9	20.5	21.4	0.0	0.6	25.2	0.3	2.1	22.0	3.8	0.0
1988	1.3	4.1	15.9	22.3	0.0	0.8	27.9	0.3	1.8	20.2	5.4	0.3
1989	1.2	5.1	13.5	23.7	0.0	0.5	29.7	0.0	1.9	17.6	6.0	0.7
1990	0.9	2.5	26.8	23.6	0.0	0.5	22.7	0.0	1.6	15.4	5.4	0.5

■ SOURCE: BUREAU VERITAS

LIGHT AIRCRAFT FLEET: MARKET SHARE OF EC-BUILT AIRCRAFT (AS %)

1) SINGLE-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	36.6	27.2	39.0	67.9	14.0	49.2	56.6	31.7	14.5	39.8	46.9	-	-	-
1984	38.7	26.8	38.6	68.0	36.2	35.8	56.5	27.9	10.1	47.4	48.5	-	-	-
1985	38.1	26.1	38.4	67.8	36.4	56.5	55.4	30.2	14.5	48.6	49.0	28.1	24.5	48.5
1986	37.9	22.2	38.6	72.8	26.4	54.2	54.6	51.2	15.2	48.0	50.1	28.2	27.6	49.4
1987	38.7	19.7	39.4	71.2	16.5	46.9	54.5	51.2	15.3	45.8	49.0	28.2	27.8	48.1
1988	38.3	20.4	31.3	71.6	19.0	34.8	52.2	48.0	15.6	34.4	43.7	28.1	27.1	42.8
1989	38.2	21.1	30.8	70.7	21.8	14.1	48.1	41.5	16.1	37.0	43.1	28.1	26.8	42.2
1990	38.2	21.2	44.0	69.3	38.9	29.8	47.9	37.0	18.1	37.1	47.0	28.1	25.1	45.8

2) TWIN-ENGINE

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	23.5	10.2	8.9	14.7	40.0	20.0	24.7	0.0	14.5	19.0	15.7	-	-	-
1984	20.8	9.7	9.0	8.9	80.0	18.4	25.5	0.0	3.4	20.3	14.7	-	-	-
1985	7.8	16.4	8.6	7.5	90.0	14.3	26.1	0.0	6.3	19.5	14.5	9.7	0.0	14.2
1986	7.9	10.0	8.2	6.1	80.0	18.9	24.8	11.1	8.5	14.9	11.8	9.4	15.2	11.8
1987	3.0	11.3	7.7	5.8	63.6	19.4	24.9	0.0	8.5	13.1	10.9	9.2	14.7	10.9
1988	5.6	9.7	7.6	5.5	0.0	18.4	24.5	0.0	10.1	11.8	10.1	9.5	14.3	10.1
1989	6.7	8.1	7.8	5.6	0.0	23.7	24.1	11.1	10.1	11.7	10.1	9.8	13.9	10.2
1990	6.4	8.4	9.6	5.1	42.9	17.1	24.3	27.3	9.8	11.9	10.7	9.5	10.8	10.7

3) EXECUTIVE JET

	BE	DK	DE	FR	HE	IR	IT	LX	NL	UK	EC 10	ES	PO	EC 12
1983	18.2	62.5	37.9	66.0	0.0	50.0	61.2	-	50.0	82.4	63.6	-	-	-
1984	25.0	50.0	34.5	67.3	-	50.0	64.8	100.0	50.0	81.0	62.5	-	-	-
1985	33.3	28.6	43.8	73.8	-	66.7	57.8	100.0	30.8	77.8	61.5	-	0.0	61.3
1986	0.0	40.0	29.2	81.7	-	66.7	51.2	-	60.0	75.7	59.7	83.3	-	60.2
1987	0.0	40.0	27.1	80.8	-	50.0	47.7	100.0	57.1	69.3	55.2	76.9	-	56.0
1988	0.0	50.0	41.9	80.5	-	66.7	39.4	100.0	57.1	75.9	58.0	81.0	0.0	59.1
1989	0.0	52.4	39.3	80.6	-	0.0	50.4	-	50.0	65.8	58.5	80.0	100.0	60.1
1990	0.0	28.6	42.0	84.1	-	0.0	30.7	-	44.4	64.0	52.5	80.0	100.0	54.2

■ SOURCE: BUREAU VERITAS

BUSINESS AIRCRAFT FLEET

TOTAL (IN UNITS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	6.5%	2.1%	2.7%	2.8%	5.1%	2.8%	76.7%	1.2%	13,597
1987	7.6%	2.2%	2.8%	2.9%	5.5%	2.8%	74.7%	1.5%	13,798
1988	8.5%	2.6%	2.9%	2.9%	6.1%	3.1%	72.1%	1.7%	14,067
1989	9.2%	2.7%	2.9%	3.1%	6.6%	3.5%	70.4%	1.8%	14,374
1990	10.2%	2.7%	3.1%	3.1%	7.3%	3.7%	68.2%	1.6%	14,789

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	27.8	14.8	23.7	20.8	2.7	11.5	9.6	13.2	11.3
1987	26.3	14.8	23.2	20.6	2.9	11.2	9.9	15.8	11.7
1988	26.0	16.4	21.5	18.8	2.6	10.5	10.2	14.0	11.9
1989	26.8	16.9	20.3	19.1	2.8	9.2	10.3	11.9	12.1
1990	27.0	18.2	18.4	19.4	3.0	8.8	10.4	11.2	12.2

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	16.0	2.8	5.6	5.2	1.2	2.8	64.9	1.4
1987	17.1	2.8	5.4	5.2	1.4	2.7	63.4	2.0
1988	18.6	3.5	5.2	4.7	1.3	2.7	61.9	2.0
1989	20.4	3.7	4.9	4.8	1.6	2.7	60.2	1.7
1990	22.5	4.0	4.6	4.9	1.8	2.7	58.0	1.5

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

TOTAL (IN MIO ECUS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.0%	2.5%	3.1%	4.9%	4.2%	2.2%	74.8%	1.2%	25,941
1987	7.7%	2.4%	3.1%	5.3%	4.3%	2.1%	73.6%	1.5%	23,554
1988	8.8%	3.3%	3.2%	5.0%	4.3%	2.2%	71.6%	1.7%	24,552
1989	9.6%	3.5%	3.2%	5.5%	4.5%	2.4%	69.6%	1.8%	29,683
1990	11.1%	3.5%	3.3%	5.4%	5.1%	2.5%	67.4%	1.6%	29,442

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	47.8	31.5	33.4	26.2	4.1	23.9	21.3	34.4	23.5
1987	45.6	35.3	33.7	31.2	5.0	23.2	21.8	38.9	24.4
1988	47.8	39.3	32.7	30.0	5.0	21.3	23.8	38.4	26.4
1989	48.9	35.8	33.7	30.7	6.0	19.5	23.2	41.0	26.3
1990	46.5	36.2	32.3	33.0	8.1	16.8	22.8	38.7	26.1

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	14.2	3.4	4.4	5.5	0.7	2.3	67.7	1.8
1987	14.3	3.5	4.2	6.8	0.9	2.0	65.8	2.5
1988	16.0	4.9	3.9	5.7	0.8	1.8	64.5	2.5
1989	17.8	4.8	4.1	6.4	1.0	1.8	61.4	2.9
1990	19.7	4.9	4.1	6.8	1.6	1.6	58.8	2.4

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

TOTAL (IN UNITS - AT YEAR-END)

GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	2.2	5.1	21.1	3.8	24.5	0.2	1.3	13.9	0.1	2.9	0.2	24.5
1987	2.0	5.4	20.7	4.6	24.3	0.1	1.2	16.1	0.2	2.1	0.3	23.0
1988	2.3	4.9	18.8	4.9	26.3	0.1	1.1	16.3	0.2	2.3	0.6	22.4
1989	2.3	4.0	17.5	5.1	30.4	0.1	1.0	16.9	0.2	2.4	0.7	19.5
1990	2.1	3.6	18.0	5.0	32.7	0.1	1.2	15.8	0.2	2.6	0.6	18.2

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	8.9	16.0	26.5	36.7	0.0	25.0	32.3	100.0	26.9	0.0	33.5
1987	0.0	8.8	14.7	37.5	35.3	0.0	23.1	26.6	100.0	27.3	0.0	31.0
1988	3.7	8.5	16.0	40.7	32.7	0.0	7.7	22.1	50.0	25.0	14.3	33.6
1989	10.0	11.3	16.1	38.8	32.0	0.0	7.7	23.9	66.7	25.8	33.3	33.5
1990	9.4	9.3	14.4	35.5	32.9	0.0	5.6	22.2	66.7	23.1	33.3	37.6

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	1.6	12.1	3.6	32.4	0.0	1.2	16.2	0.4	2.8	0.0	29.6
1987	0.0	1.8	11.6	6.5	32.6	0.0	1.1	16.3	0.7	2.2	0.0	27.2
1988	0.3	1.6	11.5	7.7	33.0	0.0	0.3	13.8	0.3	2.2	0.3	28.8
1989	0.8	1.7	10.5	7.4	36.3	0.0	0.3	15.0	0.6	2.3	0.8	24.4
1990	0.7	1.2	9.6	6.6	39.8	0.0	0.2	13.0	0.5	2.2	0.7	25.3

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET**TOTAL (IN MIO ECUS - AT YEAR-END)****GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)**

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	2.5	3.5	17.9	3.0	25.6	0.2	1.2	19.0	0.5	3.3	0.1	23.3
1987	2.1	3.5	17.2	4.4	24.2	0.1	1.7	21.6	1.1	2.6	0.1	21.5
1988	2.5	2.9	14.9	4.7	26.2	0.1	1.8	21.3	0.8	2.6	0.4	21.9
1989	2.7	2.4	13.2	4.2	28.3	0.1	1.5	23.4	0.8	2.6	0.6	20.1
1990	2.3	2.2	13.8	3.9	29.7	0.0	2.4	21.0	0.6	2.5	0.5	21.1

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	17.1	33.9	42.9	60.0	0.0	25.0	60.0	100.0	59.4	0.0	44.5
1987	0.0	13.8	31.5	60.9	61.3	0.0	13.0	48.6	100.0	63.9	0.0	40.5
1988	8.4	13.6	36.7	68.2	63.2	0.0	7.5	46.7	96.0	61.2	56.5	42.9
1989	23.8	17.1	34.4	66.7	62.0	0.0	7.5	49.4	96.7	63.4	79.5	40.9
1990	22.2	13.6	28.0	58.5	60.7	0.0	3.9	44.2	96.4	58.7	78.1	46.1

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	1.3	12.7	2.7	32.1	0.0	0.6	23.9	1.0	4.1	0.0	21.6
1987	0.0	1.1	11.9	5.9	32.6	0.0	0.5	23.0	2.4	3.7	0.0	19.1
1988	0.4	0.8	11.5	6.6	34.6	0.0	0.3	20.8	1.6	3.3	0.4	19.6
1989	1.3	0.8	9.3	5.7	35.9	0.0	0.2	23.7	1.7	3.4	1.0	16.8
1990	1.1	0.6	8.3	5.0	38.7	0.0	0.2	19.9	1.3	3.1	0.8	20.9

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

V.I.P. (IN UNITS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	4.5%	3.7%	11.2%	23.1%	0.7%	5.2%	50.7%	0.7%	134
1987	5.1%	2.9%	12.4%	24.8%	0.7%	5.1%	46.7%	2.2%	137
1988	3.8%	3.1%	10.7%	25.2%	0.8%	4.6%	50.4%	1.5%	131
1989	3.8%	3.0%	9.8%	25.0%	0.8%	4.5%	50.8%	2.3%	132
1990	5.3%	3.0%	10.5%	25.6%	0.8%	3.8%	49.6%	1.5%	133

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	0.0	20.0	20.0	0.0	0.0	0.0	1.5	0.0	3.7
1987	14.3	0.0	17.6	5.9	0.0	0.0	1.6	0.0	5.1
1988	20.0	0.0	0.0	6.1	0.0	0.0	1.5	0.0	3.1
1989	0.0	0.0	0.0	6.1	0.0	0.0	1.5	0.0	2.3
1990	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	1.5

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	0.0	20.0	60.0	0.0	0.0	0.0	20.0	0.0
1987	14.3	0.0	42.9	28.6	0.0	0.0	14.3	0.0
1988	25.0	0.0	0.0	50.0	0.0	0.0	25.0	0.0
1989	0.0	0.0	0.0	66.7	0.0	0.0	33.3	0.0
1990	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

V.I.P. (IN MIO ECUS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	4.2%	3.3%	7.7%	31.2%	1.2%	5.8%	45.9%	0.7%	565
1987	3.8%	2.5%	7.2%	42.6%	1.0%	4.9%	36.2%	1.8%	571
1988	3.0%	2.4%	6.4%	44.1%	0.9%	4.2%	37.8%	1.2%	508
1989	2.8%	2.5%	5.9%	45.0%	0.9%	4.0%	37.2%	1.7%	611
1990	3.5%	2.4%	6.3%	47.2%	0.9%	3.3%	35.5%	1.0%	561

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	0.0	9.3	12.0	0.0	0.0	0.0	0.7	0.0	1.5
1987	7.0	0.0	11.2	37.4	0.0	0.0	0.7	0.0	17.3
1988	9.6	0.0	0.0	39.4	0.0	0.0	0.8	0.0	18.0
1989	0.0	0.0	0.0	35.0	0.0	0.0	0.7	0.0	16.0
1990	0.0	0.0	0.0	31.7	0.0	0.0	0.0	0.0	15.0

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	0.0	20.0	60.0	0.0	0.0	0.0	20.0	0.0
1987	1.5	0.0	4.6	92.3	0.0	0.0	1.5	0.0
1988	1.6	0.0	0.0	96.8	0.0	0.0	1.6	0.0
1989	0.0	0.0	0.0	98.4	0.0	0.0	1.6	0.0
1990	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

V.I.P. (IN UNITS - AT YEAR-END)

GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
1987	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	85.7
1988	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0
1989	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	80.0
1990	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	85.7

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	-	-	-	-	-	-	-	-	-	-	-	-
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	-	-	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-	-	-	-	-

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

V.I.P. (IN MIO ECUS - AT YEAR-END)

GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
1987	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	93.0
1988	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0	90.4
1989	0.0	0.0	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0	79.8
1990	0.0	0.0	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	84.9

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	-	-	-	-	-	-	-	-	-	-	-	-
1987	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	-	-	-	-	-	-	-	-	-	-	-	-
1990	-	-	-	-	-	-	-	-	-	-	-	-

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

JETS = V.I.P. + OTHER JETS (IN UNITS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.2%	2.3%	2.3%	3.6%	3.1%	3.2%	77.3%	1.1%	5,987
1987	8.0%	2.3%	2.4%	3.5%	3.5%	3.3%	75.7%	1.3%	6,183
1988	9.0%	2.8%	2.5%	3.3%	4.0%	3.7%	73.3%	1.4%	6,379
1989	9.6%	3.0%	2.4%	3.4%	4.4%	4.2%	71.5%	1.3%	6,609
1990	10.9%	3.1%	2.5%	3.4%	5.0%	4.6%	69.2%	1.2%	6,910

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	52.2	27.4	50.7	32.4	7.5	20.8	20.9	33.3	24.1
1987	50.8	27.5	48.7	33.9	7.9	20.0	21.2	39.2	24.6
1988	49.7	30.2	45.0	31.6	6.7	18.1	21.5	37.1	24.7
1989	50.4	29.1	43.5	32.6	7.5	15.4	21.5	32.6	24.7
1990	49.6	30.9	39.2	33.5	8.1	14.1	21.3	30.6	24.7

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	15.5	2.6	4.9	4.8	1.0	2.8	67.0	1.5
1987	16.5	2.6	4.8	4.9	1.1	2.7	65.4	2.0
1988	18.0	3.4	4.6	4.3	1.1	2.7	63.8	2.1
1989	19.6	3.6	4.3	4.5	1.3	2.6	62.3	1.8
1990	21.8	3.9	4.0	4.6	1.6	2.6	59.8	1.5

■ SOURCE: IATA

BUSINESS AIRCRAFT FLEET**JETS = V.I.P. + OTHER JETS (IN MIO ECUS - AT YEAR-END)****WORLD TOTAL - GEOGRAPHICAL BREAKDOWN**

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.0%	2.8%	3.0%	6.0%	2.3%	2.3%	75.5%	1.2%	18,368
1987	7.4%	2.6%	2.9%	6.3%	2.3%	2.1%	74.8%	1.5%	17,160
1988	8.7%	3.6%	3.0%	5.7%	2.4%	2.2%	72.7%	1.6%	18,461
1989	9.5%	3.9%	2.9%	6.2%	2.6%	2.4%	70.8%	1.8%	22,694
1990	11.1%	3.9%	3.0%	6.1%	3.3%	2.5%	68.6%	1.5%	22,671

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	63.8	39.4	45.7	29.6	10.2	32.4	29.6	50.4	32.6
1987	61.9	44.8	46.1	35.6	12.1	31.3	29.3	53.9	33.0
1988	62.0	46.7	44.1	34.3	11.2	27.8	30.9	53.1	34.6
1989	62.7	41.6	46.0	34.8	13.1	25.1	29.7	55.7	34.0
1990	58.8	42.5	44.5	37.4	16.3	21.2	28.9	54.1	33.5

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	13.7	3.4	4.2	5.5	0.7	2.3	68.5	1.8
1987	13.9	3.5	4.1	6.7	0.9	2.0	66.4	2.5
1988	15.6	4.9	3.8	5.6	0.8	1.8	65.0	2.5
1989	17.5	4.7	3.9	6.3	1.0	1.8	61.9	2.9
1990	19.5	4.9	4.0	6.8	1.6	1.6	59.2	2.5

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET**JETS = V.I.P. + OTHER JETS (IN UNITS - AT YEAR-END)****GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)**

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	1.2	3.5	15.2	4.0	23.8	0.2	1.9	22.1	0.2	3.5	0.0	24.5
1987	1.6	3.2	15.4	5.5	22.3	0.0	1.8	24.1	0.4	2.0	0.0	23.7
1988	1.6	3.1	13.5	5.8	22.4	0.0	1.6	24.1	0.2	2.3	0.3	25.2
1989	1.7	3.1	12.1	6.0	23.5	0.0	1.4	26.0	0.3	2.4	0.6	22.8
1990	1.7	2.8	12.9	5.2	25.6	0.0	1.9	24.3	0.3	2.5	0.5	22.3

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	26.7	30.8	52.9	74.5	0.0	37.5	42.1	100.0	40.0	0.0	61.9
1987	0.0	31.3	28.9	66.7	77.3	0.0	33.3	36.1	100.0	50.0	0.0	58.1
1988	11.1	27.8	33.8	72.7	77.3	0.0	11.1	29.7	100.0	46.2	50.0	54.9
1989	27.3	25.0	32.5	68.4	80.5	0.0	11.1	30.3	100.0	46.7	75.0	53.8
1990	23.1	19.0	27.8	69.2	79.7	0.0	7.1	27.5	100.0	42.1	75.0	56.3

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	1.8	8.9	4.0	33.9	0.0	1.3	17.9	0.4	2.7	0.0	29.0
1987	0.0	2.0	8.8	7.2	33.9	0.0	1.2	17.1	0.8	2.0	0.0	27.1
1988	0.4	1.8	9.2	8.5	34.9	0.0	0.4	14.4	0.4	2.1	0.4	27.8
1989	0.9	1.6	7.8	8.1	37.5	0.0	0.3	15.6	0.6	2.2	0.9	24.4
1990	0.8	1.1	7.3	7.3	41.1	0.0	0.3	13.4	0.5	2.2	0.8	25.3

■ SOURCE: IATA

BUSINESS AIRCRAFT FLEET**JETS = V.I.P. + OTHER JETS (IN MIO ECUS - AT YEAR-END)****GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)**

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.6	2.9	14.1	3.2	26.6	0.2	1.3	24.7	0.7	3.7	0.0	22.0
1987	0.6	2.2	13.7	5.3	24.2	0.0	2.1	27.4	1.5	2.8	0.0	20.2
1988	1.5	1.8	11.7	5.4	25.4	0.0	2.2	26.1	1.0	2.7	0.4	21.6
1989	2.0	1.7	9.8	4.8	25.9	0.0	1.8	28.7	1.1	2.8	0.8	20.7
1990	1.6	1.6	11.0	4.2	26.7	0.0	2.9	25.6	0.8	2.5	0.5	22.5

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	29.6	46.6	57.4	81.1	0.0	31.3	65.2	100.0	74.4	0.0	59.3
1987	0.0	31.0	45.3	71.3	86.3	0.0	15.0	54.1	100.0	84.1	0.0	56.1
1988	18.7	29.3	53.5	78.7	87.4	0.0	8.3	51.4	100.0	76.8	71.1	53.0
1989	43.5	25.6	51.6	76.6	89.3	0.0	8.4	53.1	100.0	79.3	88.6	49.2
1990	40.2	18.5	39.4	70.6	86.9	0.0	4.2	46.7	100.0	74.6	88.2	53.6

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	1.3	10.3	2.8	33.8	0.0	0.7	25.2	1.1	4.3	0.0	20.5
1987	0.0	1.1	10.0	6.1	33.8	0.0	0.5	23.9	2.5	3.8	0.0	18.3
1988	0.5	0.9	10.1	6.9	35.8	0.0	0.3	21.6	1.6	3.4	0.5	18.4
1989	1.4	0.7	8.1	5.9	36.9	0.0	0.2	24.3	1.7	3.5	1.1	16.3
1990	1.1	0.5	7.3	5.1	39.5	0.0	0.2	20.4	1.4	3.2	0.8	20.5

■ SOURCE: IATA

BUSINESS AIRCRAFT FLEET

TURBOPROPS (IN UNITS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	6.1%	2.0%	2.9%	2.2%	6.7%	2.4%	76.3%	1.4%	7,610
1987	7.3%	2.1%	3.0%	2.5%	7.1%	2.5%	73.8%	1.6%	7,615
1988	8.2%	2.4%	3.2%	2.6%	7.9%	2.6%	71.2%	2.0%	7,688
1989	8.8%	2.4%	3.3%	2.8%	8.4%	2.8%	69.4%	2.1%	7,765
1990	9.6%	2.3%	3.6%	2.9%	9.4%	2.9%	67.4%	2.0%	7,879

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	5.0	3.9	6.7	5.9	1.0	1.6	0.6	1.0	1.2
1987	4.5	3.7	6.5	5.3	0.9	1.6	0.6	0.8	1.3
1988	4.5	2.8	6.1	5.4	0.8	1.5	0.6	0.6	1.3
1989	4.8	3.8	5.8	5.1	0.8	1.4	0.5	0.6	1.3
1990	4.6	3.3	5.3	4.9	0.7	1.3	0.5	0.6	1.3

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	24.2	6.3	15.8	10.5	5.3	3.2	33.7	1.1
1987	26.0	6.3	15.6	10.4	5.2	3.1	32.3	1.0
1988	28.3	5.1	15.2	11.1	5.1	3.0	31.3	1.0
1989	31.7	6.7	14.4	10.6	4.8	2.9	27.9	1.0
1990	33.3	5.7	14.3	10.5	4.8	2.9	27.6	1.0

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

TURBOPROPS (IN MIO ECUS - AT YEAR-END)

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	7.0%	2.0%	3.3%	2.3%	8.9%	2.1%	73.0%	1.4%	7,574
1987	8.3%	2.1%	3.5%	2.6%	9.6%	2.1%	70.2%	1.6%	6,394
1988	9.2%	2.3%	3.7%	2.9%	9.8%	2.2%	68.0%	1.9%	6,091
1989	9.9%	2.3%	4.0%	3.1%	10.5%	2.4%	65.8%	2.1%	6,989
1990	10.9%	2.5%	4.3%	3.0%	11.4%	2.3%	63.5%	2.1%	6,771

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA	WORLD
1986	8.8	4.5	6.6	4.5	0.4	1.4	0.4	1.1	1.4
1987	6.3	3.8	5.6	3.5	0.3	1.3	0.4	0.8	1.2
1988	7.1	3.4	5.4	4.5	0.3	1.3	0.5	0.7	1.5
1989	5.7	4.8	4.8	3.9	0.2	0.9	0.5	0.7	1.4
1990	4.7	3.9	3.9	3.4	0.2	0.8	0.4	0.6	1.2

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	EC	REST OF EUROPE	AFRICA	ASIA	SOUTH AMERICA	CENTRAL AMERICA	NORTH AMERICA	AUSTRAL ASIA
1986	43.2	6.3	15.6	7.3	2.2	2.1	22.3	1.0
1987	42.1	6.4	15.7	7.4	2.3	2.1	22.8	1.1
1988	44.2	5.2	13.7	8.8	2.0	1.8	23.3	0.9
1989	42.0	8.3	14.4	8.8	1.8	1.6	22.0	1.1
1990	43.1	8.3	14.2	8.6	1.7	1.5	21.4	1.1

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

TURBOPROPS (IN UNITS - AT YEAR-END)

GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	3.3	6.5	26.7	3.7	25.2	0.2	0.9	6.3	0.0	2.4	0.4	24.5
1987	2.3	7.4	25.5	3.8	26.0	0.2	0.7	9.0	0.0	2.2	0.5	22.4
1988	2.9	6.5	23.6	4.1	29.8	0.2	0.6	9.1	0.2	2.4	0.8	19.8
1989	2.8	4.8	22.5	4.3	36.9	0.1	0.6	8.4	0.1	2.3	0.7	16.4
1990	2.5	4.3	22.9	4.9	39.7	0.1	0.5	7.5	0.1	2.6	0.7	14.1

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	8.1	0.0	3.4	0.0	0.0	0.0	0.0	9.1	0.0	7.1
1987	0.0	0.0	7.0	0.0	3.4	0.0	0.0	4.0	0.0	8.3	0.0	5.6
1988	0.0	0.0	6.8	0.0	2.1	0.0	0.0	3.5	0.0	6.7	0.0	8.9
1989	0.0	3.0	7.8	0.0	3.2	0.0	0.0	5.3	0.0	6.3	0.0	7.1
1990	0.0	3.0	6.9	0.0	3.0	0.0	0.0	5.3	0.0	5.0	0.0	8.4

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	43.5	0.0	17.4	0.0	0.0	0.0	0.0	4.3	0.0	34.8
1987	0.0	0.0	40.0	0.0	20.0	0.0	0.0	8.0	0.0	4.0	0.0	28.0
1988	0.0	0.0	35.7	0.0	14.3	0.0	0.0	7.1	0.0	3.6	0.0	39.3
1989	0.0	3.0	36.4	0.0	24.2	0.0	0.0	9.1	0.0	3.0	0.0	24.2
1990	0.0	2.9	34.3	0.0	25.7	0.0	0.0	8.6	0.0	2.9	0.0	25.7

■ SOURCE: ITA

BUSINESS AIRCRAFT FLEET

TURBOPROPS (IN MIO ECUS - AT YEAR-END)

GEOGRAPHICAL BREAKDOWN (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	6.9	5.1	27.2	2.6	23.1	0.2	0.8	5.2	0.0	2.4	0.3	26.2
1987	5.6	6.6	25.8	2.2	24.2	0.2	0.8	7.6	0.0	2.2	0.3	24.6
1988	5.3	6.0	24.2	2.4	28.2	0.2	0.7	7.7	0.1	2.1	0.3	22.7
1989	5.1	4.5	23.7	2.2	35.9	0.2	0.7	6.8	0.1	2.2	0.3	18.3
1990	4.5	4.0	23.6	3.0	39.8	0.2	0.7	5.2	0.1	2.3	0.2	16.4

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	17.9	0.0	1.0	0.0	0.0	0.0	0.0	2.4	0.0	14.1
1987	0.0	0.0	13.8	0.0	0.9	0.0	0.0	1.2	0.0	2.1	0.0	9.8
1988	0.0	0.0	13.5	0.0	0.6	0.0	0.0	1.1	0.0	2.0	0.0	15.5
1989	0.0	7.2	12.3	0.0	0.7	0.0	0.0	1.5	0.0	1.5	0.0	11.5
1990	0.0	6.7	9.9	0.0	0.6	0.0	0.0	1.4	0.0	1.1	0.0	10.7

BREAKDOWN OF EC-BUILT AIRCRAFT INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1986	0.0	0.0	55.0	0.0	2.5	0.0	0.0	0.0	0.0	0.6	0.0	41.8
1987	0.0	0.0	56.3	0.0	3.6	0.0	0.0	1.5	0.0	0.7	0.0	37.9
1988	0.0	0.0	46.1	0.0	2.4	0.0	0.0	1.2	0.0	0.6	0.0	49.7
1989	0.0	5.6	50.6	0.0	4.7	0.0	0.0	1.7	0.0	0.6	0.0	36.8
1990	0.0	5.8	49.8	0.0	4.8	0.0	0.0	1.6	0.0	0.5	0.0	37.5

■ SOURCE: ITA

CIVIL HELICOPTERS

The figures on the *civil and para-public helicopter* fleet are provided by *AEROSPATIALE*.

The data on the *commercial helicopter* fleet (in value and units) are prepared by *ITA*. (Air Transport Institute, Paris).

The study includes the "*civil helicopters*". Therefore some helicopters used by public authorities are included while they may also be included in the *military helicopters* fleet given in chapter 4.

The analysis covers the following *geographical areas*:

- *EC*
- *Other Europe*: Austria, Cyprus, Finland, Gibraltar, Greenland, Iceland, Liechtenstein, Malta, Monaco, Norway, Sweden, Switzerland, Turkey
- *USA*
- *Rest of the world*

Aviation Data Wichita is the source, except *Bureau Veritas* for the EC.

The value of the *civil helicopter* fleet is computed as follows:

- for *helicopters that are no longer built*, an average price is computed between the helicopter maximum price, its minimum price and its price after some improvements, between the first year of manufacturing and the last one.

- for *helicopters still in production*, the average price is estimated between the new helicopter price, weighted by a factor 2, and its maximum price, its minimum price and its price after some improvements on helicopters of the first year of production.
- for *helicopters in production for less than 5 years*, the price of new helicopter is used.

A list of *commercial helicopters* covered by the study is given in the following pages.

Helicopters of EC design

Manufacturer	Model	Seats	Year	Value 1990 (Mio ECUS)
<i>AEROSPATIALE</i>	Lama (SA315B)	5	1971--	0.299
	Alouette III (SA316)	7	1966-81	0.239
	Alouette II (SA318)	5	1969-75	0.088
	Alouette III (SA319)	7	1974-76	0.239
	Puma (SA330J)	18-22	1974-80	1.409
	SuperPuma (SA332C)	23	1982--	2.787
	SuperPuma (SA332L)	22	1982--	3.742
	Gazelle (SA341,342)	5	1972-80	0.151
	Ecureuil (AS350)	6	1978--	0.358
	Ecureuil/2 (AS355)	6	1981--	0.589
	Dauphin (SA360)	14	1976-80	0.437
	Dauphin/2 (SA365)	14	1977-81	0.717
	Dauphin/2 (SA365N)	14	1981-	1.831
<i>AGUSTA</i>	A 109A	8	1975--	0.876
<i>MBB</i>	BO-105	5	1973--	0.557
	BK-117	11	1983--	1.274
<i>WESTLAND</i>	WG-30	20	1983--	2.389
	Wessex 60	19	1965--	0.398

Helicopters of US design

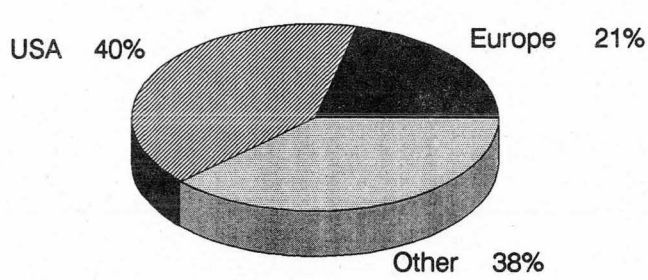
<i>AGUSTA BELL</i>	A-204/205	10	1965-67	0.279
	A-206B	5	1966-77	0.279
	A-212	15	1971---	1.354
	A-412	15	1981---	2.389

Helicopters of US design (continued)

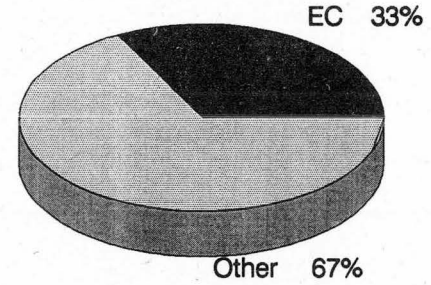
Manufacturer	Model	Seats	Year	Value 1990 (Mio ECUS)
<i>BELL</i>	47 (series - including Agusta Bell 47)	.3-4	1957-73	0.033
	204B	10	1965-67	0.279
	205A	15	1968-80	0.478
	Jet Ranger 206 A,B	.5	1966---	0.279
	Long Range 206L	.7	1975---	0.438
	B-212	15	1971---	1.354
	B-214B	16	1976-81	0.954
	B-214ST	20	1982---	3.583
	B-222	8-10	1980---	0.955
	B-412	15	1981---	2.389
	<i>BOEING VERTOL</i>	B-107	28	1961-65
B-234		47	1981---	11.146
<i>ENSTRÖM</i>	F-28 (series)	.3	1966--	0.052
	F-280	.3	1974--	0.080
<i>FAIRCHILD</i>	FH-1100	.5	1966-72	0.072
<i>HILLER</i>	UH-12 (series)	3-4	1959---	0.088
<i>HUGHES (McDD)</i>	269/300	2-3	1961---	0.056
	369/500	.7	1969--	0.279
<i>ROBINSON</i>	R-22 (series)	.2	1979--	0.056
<i>SIKORSKY</i>	S-55	12	1949-61	0.048
	S-58	20	1953-77	0.279
	S-61	30	1968-79	1.592
	S-62	12	1960-70	0.096
	S-64	3-5	1972--	4.618
	S-76A	14	1979--	2.269

Civil Helicopters Fleet

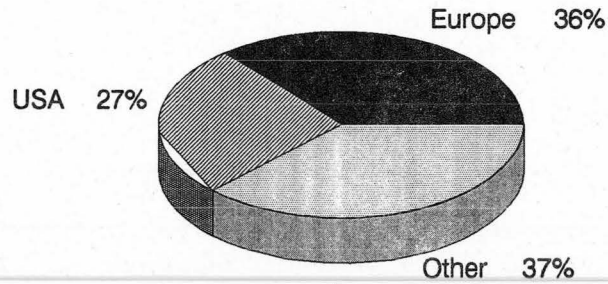
(in value - 1990)



BREAKDOWN BY AREA



EC MARKET SHARE



BREAKDOWN OF EC MARKETS

■ Source: ITA

CIVIL AND PARA-PUBLIC HELICOPTER FLEET

UNITS (AT YEAR-END)

	EC				USA			
	TOTAL	AS % OF TOTAL			TOTAL	AS % OF TOTAL		
		DESIGN ORIGIN		LICENCE (1)		DESIGN ORIGIN		
		EC	USA			EC	USA	
1960	176	22.7	77.3	48.3	-	-	-	
1965	406	33.0	67.0	30.0	1,854	0.6	99.4	
1970	598	27.6	72.4	32.4	2,980	1.1	98.9	
1975	1,023	32.7	67.3	22.0	4,803	3.3	96.7	
1980	1,477	36.4	63.6	23.0	7,259	6.3	93.7	
1981	1,614	37.7	62.3	20.8	7,735	7.4	92.6	
1982	1,709	38.4	61.6	20.6	7,947	8.5	91.5	
1983	1,775	40.5	59.5	20.1	8,192	8.7	91.3	
1984	1,829	42.2	57.8	19.5	8,469	9.1	90.9	
1985	1,840	43.5	56.5	18.5	8,540	9.7	90.3	
1986	1,918	43.8	56.2	17.2	8,577	10.6	89.4	
1987	2,067	44.1	55.9	16.3	8,409	11.0	89.0	
1988	2,308	42.7	57.3	14.8	8,210	11.2	88.8	
1989	2,610	41.0	59.0	13.7	8,323	11.1	88.9	
1990 (2)	2,891	39.6	60.4	12.2	8,522	11.3	88.7	

(1) HELICOPTERS OF US DESIGN MANUFACTURED IN THE EC UNDER LICENCE (AS % OF TOTAL)

(2) DOES NOT INCLUDE 22 USSR-DESIGNED HELICOPTERS REGISTERED IN FRG

■ SOURCE: AEROSPATIALE

EC CIVIL AND PARA-PUBLIC HELICOPTER FLEET

UNITS (AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1960	10	0	14	0	82	0	0	32	0	3	0	35
1965	2	6	75	16	148	2	2	49	0	7	3	96
1970	13	11	121	31	155	4	6	66	0	17	1	173
1975	26	22	247	59	227	8	6	85	0	29	9	305
1980	26	37	334	68	383	18	13	133	0	26	6	433
1981	28	44	356	76	407	19	15	158	0	31	8	472
1982	26	41	368	83	451	23	14	181	0	31	7	484
1983	28	36	383	91	467	22	13	201	0	36	9	489
1984	25	34	399	92	487	25	14	218	0	39	8	488
1985	24	37	400	86	475	25	16	224	0	41	8	504
1986	27	37	425	99	496	25	15	227	0	42	11	514
1987	25	40	436	119	555	31	16	264	0	33	14	534
1988	27	43	430	131	628	31	22	315	0	32	22	627
1989	31	42	433	163	701	41	25	367	0	35	25	747
1990 (1)	35	46	457	194	791	42	31	406	0	37	29	823

(1) DOES NOT INCLUDE 22 USSR-DESIGNED HELICOPTERS REGISTERED IN FRG

■ SOURCE: AEROSPATIALE

EC CIVIL AND PARA-PUBLIC HELICOPTER FLEET

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF FLEET AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1960	0.0	-	7.1	-	41.5	-	-	6.3	-	100.0	-	0.0
1965	50.0	0.0	40.0	0.0	61.5	0.0	0.0	10.2	-	57.1	100.0	0.0
1970	38.5	0.0	30.6	9.7	63.9	50.0	33.3	7.6	-	41.2	0.0	2.9
1975	34.6	0.0	37.7	25.4	67.0	75.0	33.3	16.5	-	65.5	11.1	7.9
1980	34.6	0.0	44.6	30.9	60.1	33.3	7.7	43.6	-	53.8	0.0	11.5
1981	32.1	0.0	48.6	32.9	62.9	31.6	6.7	43.0	-	54.8	0.0	11.2
1982	34.6	0.0	46.2	32.5	62.1	30.4	7.1	42.0	-	48.4	0.0	14.7
1983	32.1	5.6	43.9	35.2	63.0	40.9	15.4	40.8	-	50.0	11.1	20.9
1984	36.0	5.9	45.1	41.3	63.0	32.0	14.3	41.7	-	48.7	12.5	23.6
1985	41.7	8.1	45.5	40.7	67.2	32.0	18.8	41.5	-	48.8	12.5	25.0
1986	40.7	10.8	44.0	44.4	66.1	24.0	20.0	45.4	-	42.9	18.2	26.3
1987	44.0	10.0	45.0	47.9	63.8	19.4	18.8	49.6	-	39.4	28.6	24.9
1988	40.7	11.6	47.2	50.4	59.1	19.4	18.2	48.3	-	31.3	59.1	23.1
1989	38.7	11.9	44.8	48.5	57.9	24.4	20.0	46.6	-	31.4	68.0	21.4
1990 (1)	34.3	13.0	42.5	45.4	55.6	26.2	16.1	46.1	-	32.4	58.6	21.1

(1) DOES NOT INCLUDE 22 USSR-DESIGNED HELICOPTERS REGISTERED IN FRG

■ SOURCE: AEROSPATIALE

CIVIL HELICOPTER FLEET

IN UNITS - AT YEAR-END

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	1984	1985	1986	1987	1988	1989	1990
EC	11.4%	11.4%	11.5%	11.8%	13.0%	14.3%	14.9%
REST OF EUROPE	2.8%	3.0%	3.2%	3.4%	3.6%	3.6%	3.9%
USA	59.5%	58.1%	56.8%	55.2%	52.3%	51.1%	49.2%
OTHER WORLD	26.3%	27.4%	28.5%	29.6%	31.1%	31.1%	32.0%
TOTAL	15,328	16,087	16,865	17,172	17,838	18,273	19,142

MARKET SHARE WON BY EC-BUILT HELICOPTERS (AS % OF TOTAL)

	1984	1985	1986	1987	1988	1989	1990
EC	38.5	39.7	40.7	40.1	39.5	38.6	37.4
REST OF EUROPE	21.7	26.0	27.2	28.0	28.2	29.6	31.3
USA	10.0	10.2	10.4	10.6	10.6	11.0	11.0
OTHER WORLD	13.7	14.5	15.7	16.5	18.3	19.6	20.4
TOTAL	14.6	15.2	15.9	16.5	17.4	18.2	18.7

BREAKDOWN OF EC-BUILT HELICOPTERS INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	1984	1985	1986	1987	1988	1989	1990
EC	30.2	29.8	29.3	28.7	29.6	30.2	29.9
REST OF EUROPE	4.1	5.2	5.5	5.8	5.8	5.8	6.4
USA	40.9	39.0	37.0	35.7	31.9	30.7	28.9
OTHER WORLD	24.8	26.1	28.1	29.8	32.7	33.4	34.8

■ SOURCE: ITA

CIVIL HELICOPTER FLEET

IN UNITS - AT YEAR-END

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK	EC
1984	20	33	397	51	419	22	12	247	1	33	11	505	1,751
1985	18	41	412	66	435	22	13	259	1	35	12	522	1,836
1986	20	39	434	69	459	25	16	282	0	39	14	541	1,938
1987	20	31	443	83	482	28	17	308	0	32	18	561	2,023
1988	20	33	439	132	592	34	24	348	0	31	18	652	2,323
1989	22	32	447	185	647	38	22	385	0	31	20	779	2,608
1990	22	43	465	177	737	33	32	430	0	34	27	859	2,859

BREAKDOWN INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1984	0.3	2.3	14.8	2.6	13.6	0.7	1.0	9.4	0.0	3.7	0.1	51.4
1985	0.3	3.3	15.4	2.9	12.3	0.4	0.8	10.1	0.0	4.1	0.1	50.2
1986	0.4	3.2	16.1	2.9	11.9	0.6	1.0	11.3	0.0	4.2	0.1	48.2
1987	0.4	2.4	17.6	3.3	12.2	0.6	1.0	12.7	0.0	3.0	0.3	46.5
1988	0.4	2.4	16.8	4.2	14.3	0.7	1.3	13.7	0.0	2.7	0.2	43.4
1989	0.4	2.1	16.5	5.8	15.3	0.8	0.6	16.0	0.0	2.3	0.3	40.0
1990	0.3	2.7	16.1	4.8	16.2	0.6	0.9	16.3	0.0	2.5	0.5	39.1

MARKET SHARE WON BY EC-BUILT HELICOPTERS (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK	EC
1984	5.0	9.1	46.3	49.0	52.3	36.4	16.7	37.2	100.0	39.4	9.1	25.0	38.5
1985	11.1	9.8	46.6	48.5	55.4	31.8	23.1	37.5	100.0	42.9	8.3	25.7	39.7
1986	15.0	7.7	46.3	47.8	55.3	32.0	25.0	41.5	-	43.6	14.3	27.0	40.7
1987	15.0	12.9	46.3	47.0	53.3	28.6	23.5	43.2	-	34.4	22.2	25.7	40.1
1988	15.0	12.1	47.2	42.4	52.5	26.5	20.8	44.5	-	32.3	22.2	23.5	39.5
1989	13.6	12.5	45.0	40.5	51.9	28.9	22.7	43.9	-	25.8	30.0	24.1	38.6
1990	13.6	14.0	43.4	42.4	51.2	27.3	15.6	43.5	-	29.4	29.6	21.9	37.4

■ SOURCE: ITA

CIVIL HELICOPTER FLEET

IN MIO ECUS - AT YEAR-END

WORLD TOTAL - GEOGRAPHICAL BREAKDOWN

	1984	1985	1986	1987	1988	1989	1990
EC	17.7%	16.6%	16.8%	15.8%	16.4%	16.6%	16.6%
REST OF EUROPE	4.9%	4.6%	5.0%	4.8%	4.9%	4.4%	4.8%
USA	50.3%	51.4%	46.8%	46.9%	44.2%	43.5%	40.3%
OTHER WORLD	27.2%	27.4%	31.3%	32.4%	34.5%	35.5%	38.2%
TOTAL	7,268	7,516	7,099	6,423	6,553	7,418	7,532

MARKET SHARE WON BY EC-BUILT HELICOPTERS (AS % OF TOTAL)

	1984	1985	1986	1987	1988	1989	1990
EC	53.1	53.1	56.6	56.5	58.6	60.6	58.3
REST OF EUROPE	27.7	37.3	35.8	35.5	36.0	42.8	43.1
USA	16.6	16.3	19.4	19.3	19.5	20.8	21.5
OTHER WORLD	21.6	22.2	24.7	25.9	29.5	28.7	31.9
TOTAL	24.9	25.0	28.1	28.1	30.1	31.2	32.6

BREAKDOWN OF EC-BUILT HELICOPTERS INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	1984	1985	1986	1987	1988	1989	1990
EC	37.6	35.2	33.9	31.8	31.8	32.3	29.6
REST OF EUROPE	5.4	6.9	6.3	6.1	5.9	6.0	6.4
USA	33.5	33.5	32.3	32.2	28.6	29.0	26.6
OTHER WORLD	23.5	24.4	27.5	29.8	33.7	32.6	37.4

■ SOURCE: ITA

CIVIL HELICOPTER FLEET

IN MIO ECUS - AT YEAR-END

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK	EC
1984	4	30	190	34	175	9	13	121	0	48	1	660	1,284
1985	4	42	192	36	154	5	10	126	0	51	1	625	1,246
1986	5	38	192	35	142	8	12	135	0	50	2	576	1,196
1987	4	25	179	34	124	6	10	129	0	31	3	473	1,017
1988	4	26	180	45	153	7	14	146	0	29	3	466	1,072
1989	5	26	203	72	188	10	7	197	0	28	4	493	1,233
1990	4	34	201	61	203	7	11	204	0	31	6	488	1,249

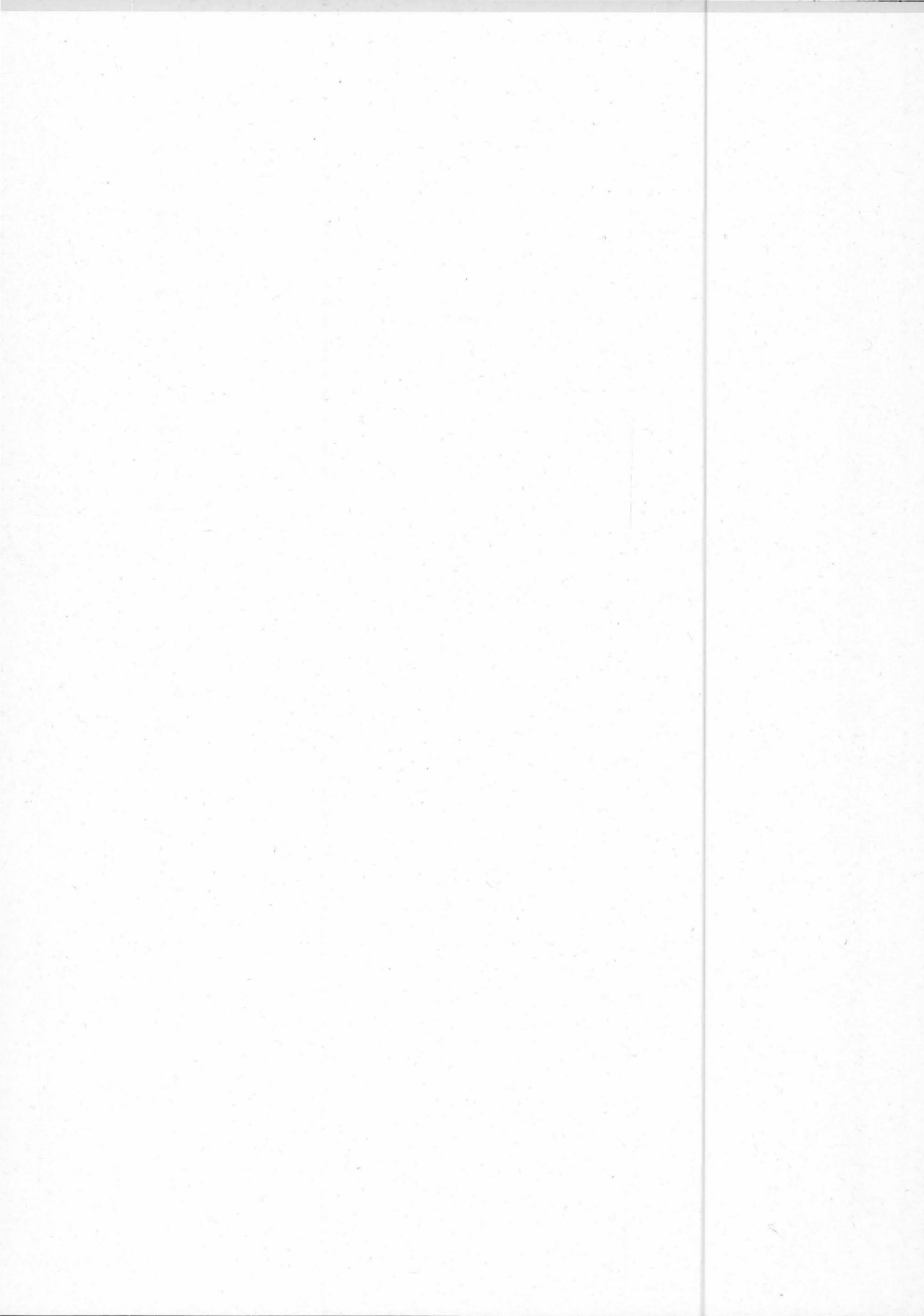
BREAKDOWN INTO GEOGRAPHICAL ZONES (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1984	0.3	2.3	14.8	2.6	13.6	0.7	1.0	9.4	0.0	3.7	0.1	51.4
1985	0.3	3.3	15.4	2.9	12.3	0.4	0.8	10.1	0.0	4.1	0.1	50.2
1986	0.4	3.2	16.1	2.9	11.9	0.6	1.0	11.3	0.0	4.2	0.1	48.2
1987	0.4	2.4	17.6	3.3	12.2	0.6	1.0	12.7	0.0	3.0	0.3	46.5
1988	0.4	2.4	16.8	4.2	14.3	0.7	1.3	13.7	0.0	2.7	0.2	43.4
1989	0.4	2.1	16.5	5.8	15.3	0.8	0.6	16.0	0.0	2.3	0.3	40.0
1990	0.3	2.7	16.1	4.8	16.2	0.6	0.9	16.3	0.0	2.5	0.5	39.1

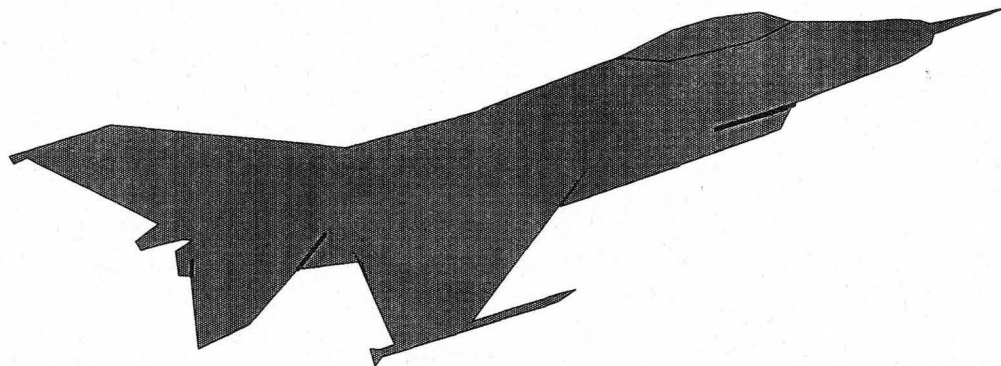
MARKET SHARE WON BY EC-BUILT HELICOPTERS (AS % OF TOTAL)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK	EC
1984	7.7	38.3	67.8	61.4	83.6	40.8	7.5	59.5	100.0	38.7	25.5	42.1	53.1
1985	44.2	25.2	67.7	64.1	83.8	71.2	9.1	57.6	100.0	38.7	24.7	43.3	53.1
1986	44.1	27.0	70.0	64.6	82.7	43.5	13.4	59.1	-	39.4	38.6	49.3	56.6
1987	40.8	35.7	68.0	63.4	79.9	57.4	14.3	60.9	-	28.4	42.4	48.4	56.5
1988	42.5	33.0	71.7	64.9	77.8	58.1	15.8	60.4	-	25.9	43.1	51.0	58.6
1989	44.1	35.2	65.2	63.7	75.1	66.2	37.0	57.9	-	21.9	54.9	57.8	60.6
1990	44.0	26.5	63.0	66.0	73.8	73.2	22.4	56.7	-	32.8	37.8	54.5	58.3

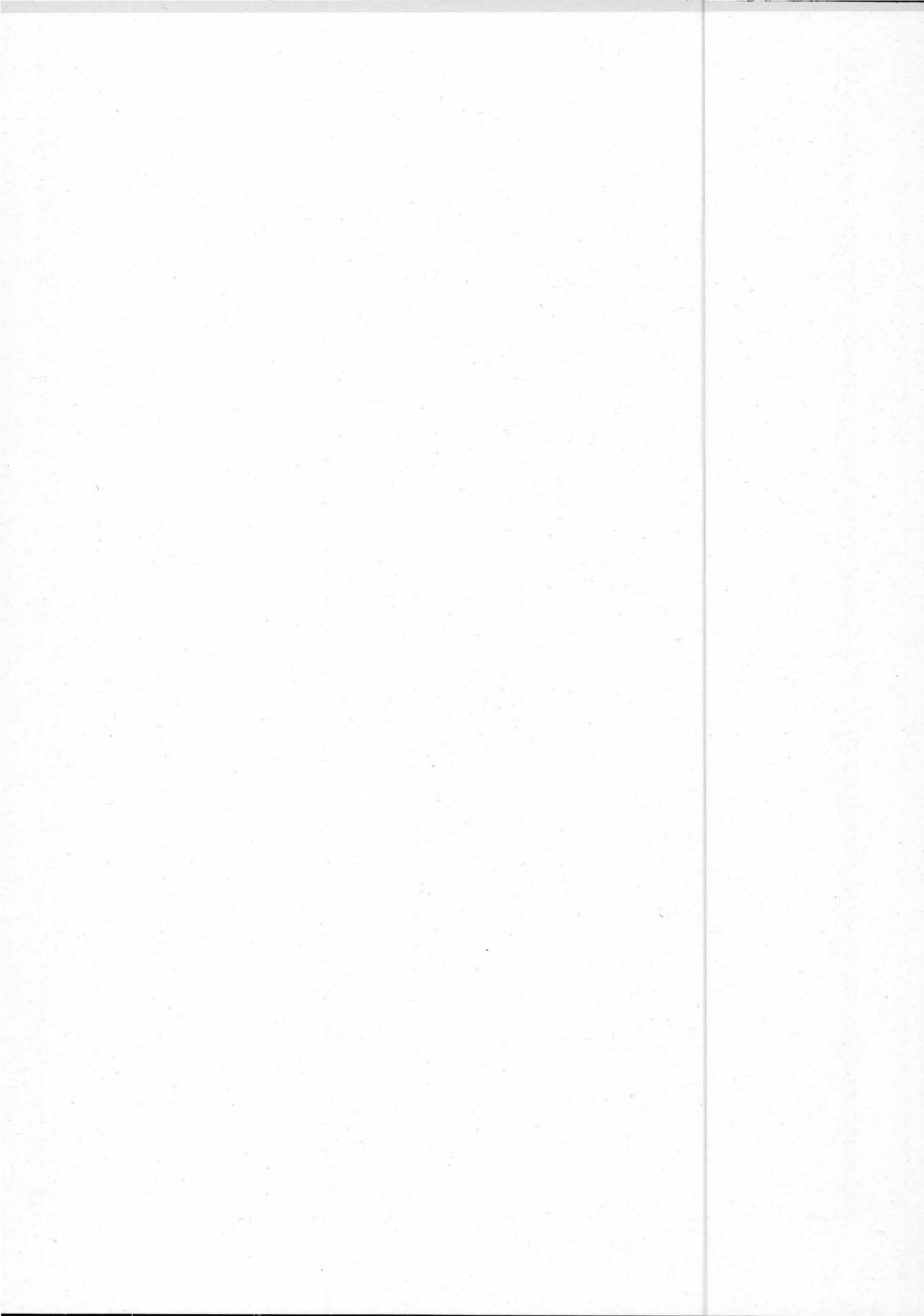
SOURCE: ITA



MILITARY AIRCRAFT



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MILITARY AIRCRAFT

Data relating to *military aircraft* cover the number of military aircraft in service in the world. Assessment of fleets excludes aircraft in long term storage unless replacement outstanding. Warsaw Pact and P.R.China fleets have been excluded throughout, however military aircraft exported by these countries have been included in the relevant category under "OTHER" design origin.

The criteria used to define a *military aircraft* is that it is not registered on a civil register. Therefore a commercial aircraft used by public authorities may be included while it is already included in the *civil transport aircraft* fleets presented in Chapters 2 or 3.

Military aircraft are broken down into the following categories:

- *Interceptor/air superiority*
- *Fighter/attack*
- *Attack*
- *Bomber/interdictor*
- *AEW/Maritime Patrol/Electronics*
- *Advanced Trainer/Light Attack*
- *Elementary/Basic Trainer*
- *Transport - tactical/Strategic/Tanker*
- *Transport - VIP/liaison/communication*
- *Helicopters*

Flight refuelling tankers have been included in the tactical/strategic transport category since the majority have dual

transport role. Transports and trainers have been sub-categorised to provide more useful data.

Military aircraft are also broken down according to *design origin*: EC, USA and OTHER. Design origin reflects country of original design and not necessarily the country of production and/or assembly.

Military aircraft are broken down into the following *geographical areas*: EC, EUR (Austria, Cyprus, Finland, Iceland, Malta, Norway, Sweden, Switzerland, Turkey, Yugoslavia), USA, CANADA, LATIN AMERICA & CARIBBEAN, MIDDLE EAST & NORTH AFRICA, AFRICA (south of Sahara), REPUBLIC OF SOUTH AFRICA, ASIA and AUSTRALASIA.

Programme unit costs (i.e. cost of replacement fleets, including flyaway costs of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the quantity of aircraft in the fleet) have been used in estimating average unit replacement values. This method yields more indicative unit procurement costs for fleet replacements than the use of estimated flyaway costs of individual aircraft.

A list of *military aircraft* is given in the following pages.

Military Aircraft of EC design

Manufacturer	Model	Typical price (Mio ECUS) (*)
<i>AERMACCHI</i>	MB-339	4.91 - 7.41
<i>AEROSPATIALE</i>	Epsilon	TB-30
	SuperPuma	AS-332
	Gazelle	AS-341
	Dauphin	SA-365
<i>AGUSTA</i>	A-129	4.73 - 6.96
<i>AERITALIA-AERMACCHI-EMBRAER</i>	AMX	11.03 - 12.61
<i>BRITISH AEROSPACE</i>	Hawk	7.53 - 9.45
<i>CASA</i>	C-101	Aviojet
	C-212	Aviocar
<i>DASSAULT-BREGUET</i>	Mirage 2000	24.09 - 39.75
	Alpha Jet	7.87 - 9.76
<i>MBB</i>	BO-105	1.23 - 1.48
<i>PANAVIA</i>	Tornado	39.86 - 58.97
<i>SIAI-MARCHETTI</i>	S-211	2.37 - 3.17
	SF-260 TP	0.59 - 0.79
<i>WESTLAND</i>	Lynx	4.10 - 5.50

* Prices quoted represent average programme unit costs of new-built aircraft in 1990. Programme unit costs comprise flyaway cost of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the number of aircraft procured.

Military Aircraft of US design

Manufacturer	Model	Typical price (Mio ECUS) (*)
<i>BELL</i>	AH-1 Cobra	6.90 - 10.45
<i>BOEING VERTOL</i>	CH-47C Chinook	13.90 - 16.71
<i>GENERAL DYNAMICS</i>	F-16 Fighting Falcon	19.17 - 30.20
<i>GRUMMAN</i>	A-6E Intruder	27.12 - 30.20
	E-2C Hawkeye	47.24 - 60.82
	F-14 Tomcat	34.43 - 49.05
<i>LOCKHEED</i>	C-130 Hercules	17.05 - 28.66
	P-3C Orion	34.89 - 48.78
<i>McDONNELL DOUGLAS</i>	AH-64 Apache	7.54 - 13.18
	F-15 Eagle	33.62 - 42.70
	F/A-18 Hornet	31.80 - 41.79
<i>SIKORSKY</i>	CH-53E Super Stallion	13.94 - 22.48
	UH-60 Blackhawk	6.27 - 13.72
	SH-60 Seahawk	15.17 - 21.35

* Prices quoted represent average programme unit costs of new-built aircraft in 1990. Programme unit costs comprise flyaway cost of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the number of aircraft procured.

Military aircraft of other design

Manufacturer	Model	Typical Price (Mio ECUS) (*)
<i>EMBRAER</i>	EMB-312Tucano	1.39 - 1.97
<i>ISRAEL AIRCRAFT INDUSTRIES</i>	Kfir	11.99 - 16.13
<i>PILATUS</i>	PC-7 Turbo-trainer	1.17 - 1.94
	PC-9	2.35 - 2.46
<i>SAAB</i>	JAS39 Gripen	37.71 - 47.86
<i>MIKOYAN</i>	Mig-29	28.40 - 35.99

* Prices quoted represent average programme unit costs of new-built aircraft in 1990. Programme unit costs comprise flyaway cost of aircraft, initial spares, ground support equipment, R&D levies and other associated costs divided by the number of aircraft procured.

MILITARY AIRCRAFT FLEET (AT YEAR-END)

INTERCEPTOR/AIR SUPERIORITY (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	189	39	1,374	62	0	53	0	0	0	0	1,717
1980	101	0	1,226	40	0	194	0	0	24	0	1,585
1985	118	0	1,275	0	0	344	0	0	100	0	1,837
1986	139	0	1,314	0	0	335	0	0	161	0	1,949
1987	163	0	1,355	0	0	387	0	0	205	0	2,110
1988	240	0	1,310	0	0	425	0	0	254	0	2,229
1989	254	16	1,314	0	14	458	0	0	270	0	2,326
1990	331	16	1,317	0	14	521	0	0	287	0	2,486

FIGHTER/ATTACK (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	3,362	1,673	3,904	301	566	2,243	287	78	3,687	103	16,204
1980	3,108	1,550	3,043	173	544	2,690	420	98	3,214	91	14,931
1985	2,475	1,458	3,206	154	668	3,332	527	95	3,282	80	15,277
1986	2,239	1,466	3,250	186	675	3,135	466	94	3,328	90	14,929
1987	2,288	1,529	3,239	199	674	3,298	487	92	3,387	80	15,273
1988	2,225	1,472	3,213	217	630	3,332	472	87	3,246	62	14,956
1989	2,204	1,459	3,082	217	625	3,250	479	87	3,244	72	14,719
1990	2,233	1,473	3,142	214	641	3,217	470	75	3,233	72	14,770

ATTACK (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	422	90	2,825	0	83	647	6	9	253	31	4,366
1980	600	140	2,867	0	172	667	5	6	369	28	4,854
1985	476	211	2,862	0	169	743	33	6	515	22	5,037
1986	466	211	2,716	0	169	741	33	6	624	22	4,988
1987	457	195	2,633	0	168	726	40	6	685	22	4,932
1988	477	261	2,568	0	165	662	40	6	710	22	4,911
1989	481	258	2,480	0	136	648	39	6	703	21	4,772
1990	496	268	2,393	0	134	610	39	6	717	21	4,684

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET (AT YEAR-END)

BOMBER/INTERDICTOR (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	306	2	925	0	122	139	29	9	217	36	1,785
1980	241	4	781	0	70	122	18	7	187	32	1,462
1985	593	0	699	0	52	89	4	7	152	24	1,620
1986	647	0	729	0	51	100	0	7	125	23	1,682
1987	652	0	758	0	51	94	0	7	121	22	1,705
1988	649	0	757	0	50	94	0	7	110	22	1,689
1989	661	0	813	0	26	77	0	7	103	22	1,709
1990	735	0	808	0	21	126	0	7	103	22	1,822

AEW/MARITIME PATROL/ELECTRONICS (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	323	25	1,415	63	84	16	0	7	222	37	2,192
1980	220	30	1,138	46	88	12	1	7	227	43	1,812
1985	200	34	1,206	36	88	8	2	0	257	26	1,857
1986	192	42	1,206	36	82	11	4	0	255	26	1,854
1987	177	47	1,171	36	80	15	4	0	256	26	1,812
1988	179	45	1,160	36	75	15	6	0	249	26	1,791
1989	185	46	1,179	36	61	17	6	0	252	26	1,808
1990	187	46	1,161	18	70	16	6	0	262	26	1,792

ADVANCED TRAINER/LIGHT ATTACK (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	794	470	1,637	209	416	418	127	188	609	101	4,969
1980	813	406	1,406	172	476	451	134	212	563	99	4,732
1985	942	608	1,288	145	493	515	214	217	586	97	5,105
1986	920	575	1,241	143	524	482	185	216	573	95	4,954
1987	929	527	1,153	143	525	519	198	215	549	94	4,852
1988	921	491	1,112	143	556	539	195	214	576	91	4,838
1989	905	477	1,100	143	534	669	197	214	576	90	4,905
1990	899	458	1,101	143	538	672	200	212	561	85	4,869

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MILITARY AIRCRAFT FLEET (AT YEAR-END)

ELEMENTARY/BASIC TRAINER (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,761	531	1,766	25	1,280	745	245	75	1,513	68	8,009
1980	1,474	520	1,310	25	1,016	736	318	70	1,209	54	6,732
1985	1,410	496	1,204	20	1,058	846	303	50	1,255	63	6,705
1986	1,299	467	1,201	20	1,124	958	306	49	1,361	69	6,854
1987	1,324	473	1,176	20	1,126	963	284	49	1,466	72	6,953
1988	1,343	496	1,150	20	1,122	952	277	49	1,422	78	6,909
1989	1,327	485	1,164	20	1,081	976	270	49	1,410	96	6,878
1990	1,330	480	1,172	20	1,083	1,001	292	49	1,421	114	6,962

TRANSPORT - TACTICAL/STRATEGIC/TANKER (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	852	215	2,792	70	633	474	270	61	1,078	98	6,543
1980	679	160	2,181	59	604	444	300	51	708	95	5,281
1985	618	160	2,163	59	597	508	359	55	702	91	5,312
1986	603	145	2,186	61	626	506	338	56	737	83	5,341
1987	587	119	2,152	61	633	528	333	58	733	86	5,290
1988	583	120	2,135	61	654	524	319	58	723	89	5,266
1989	589	119	2,109	62	644	511	319	58	729	89	5,229
1990	610	118	2,107	64	638	526	320	58	735	89	5,265

TRANSPORT - VIP/LIAISON/COMMUNICATION (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,116	328	3,029	46	921	345	306	98	1,083	29	7,301
1980	877	293	891	45	759	346	349	123	753	36	4,472
1985	730	235	945	29	881	380	395	83	784	35	4,497
1986	776	231	869	28	906	389	380	83	808	36	4,506
1987	759	252	780	31	921	367	382	82	849	35	4,458
1988	747	256	771	31	889	367	384	124	824	46	4,439
1989	722	253	766	23	889	355	384	125	796	48	4,361
1990	739	235	785	25	880	363	387	101	800	48	4,363

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET (AT YEAR-END)

HELICOPTERS (UNITS)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	3,689	629	12,541	188	869	1,382	306	157	1,788	204	21,753
1980	3,703	711	10,609	181	782	2,087	419	156	2,189	172	21,009
1985	4,308	1,007	10,543	184	1,170	2,574	625	153	2,800	176	23,540
1986	4,238	1,025	10,756	184	1,244	2,642	649	152	2,940	176	24,006
1987	4,123	1,043	10,454	182	1,258	2,725	717	146	2,930	169	23,747
1988	4,103	1,065	10,205	181	1,225	2,699	718	143	3,073	158	23,570
1989	4,076	1,051	10,115	178	1,282	2,658	703	143	3,118	172	23,496
1990	4,200	1,064	10,337	178	1,368	2,669	692	127	3,203	194	24,032

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : INTERCEPTOR/AIR SUPERIORITY (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	124	0	0	0	0	53	0	0	0	0	177
1980	71	0	0	0	0	30	0	0	0	0	101
1985	99	0	0	0	0	22	0	0	23	0	144
1986	120	0	0	0	0	4	0	0	40	0	164
1987	144	0	0	0	0	19	0	0	44	0	207
1988	221	0	0	0	0	19	0	0	47	0	287
1989	235	0	0	0	0	47	0	0	46	0	328
1990	292	0	0	0	0	72	0	0	46	0	410

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	65	39	1,374	62	0	0	0	0	0	0	1,540
1980	30	0	1,226	40	0	100	0	0	24	0	1,420
1985	19	0	1,275	0	0	167	0	0	69	0	1,530
1986	19	0	1,314	0	0	175	0	0	101	0	1,609
1987	19	0	1,355	0	0	172	0	0	109	0	1,655
1988	19	0	1,310	0	0	167	0	0	125	0	1,621
1989	19	0	1,314	0	0	167	0	0	143	0	1,643
1990	19	0	1,317	0	0	191	0	0	160	0	1,687

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	0	0	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	64	0	0	0	0	64
1985	0	0	0	0	0	155	0	0	8	0	163
1986	0	0	0	0	0	156	0	0	20	0	176
1987	0	0	0	0	0	196	0	0	52	0	248
1988	0	0	0	0	0	239	0	0	82	0	321
1989	0	16	0	0	14	244	0	0	81	0	355
1990	20	16	0	0	14	258	0	0	81	0	389

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : FIGHTER/ATTACK (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,441	416	0	0	165	397	32	66	465	103	3,085
1980	1,287	342	0	0	194	369	46	98	221	91	2,648
1985	1,064	248	0	0	245	552	44	95	237	75	2,560
1986	1,023	207	0	0	249	544	37	94	188	68	2,410
1987	988	206	0	0	246	521	41	92	187	47	2,328
1988	909	206	0	0	244	507	39	87	166	5	2,163
1989	888	206	0	0	234	504	38	87	169	0	2,126
1990	903	176	0	0	241	490	38	75	181	0	2,104

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,879	673	3,904	269	166	653	26	12	1,554	0	9,136
1980	1,778	588	3,043	165	110	728	26	0	1,173	0	7,611
1985	1,368	650	3,194	154	119	807	21	0	1,152	5	7,470
1986	1,173	679	3,238	186	107	818	12	0	1,144	22	7,379
1987	1,257	758	3,214	199	109	879	12	0	1,146	33	7,607
1988	1,273	681	3,200	217	123	889	10	0	1,187	57	7,637
1989	1,273	695	3,082	217	140	894	8	0	1,212	72	7,593
1990	1,287	738	3,142	214	140	891	8	0	1,209	72	7,701

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	42	584	0	32	235	1,193	229	0	1,668	0	3,983
1980	43	620	0	8	240	1,593	348	0	1,820	0	4,672
1985	43	560	12	0	304	1,973	462	0	1,893	0	5,247
1986	43	580	12	0	319	1,773	417	0	1,996	0	5,140
1987	43	565	25	0	319	1,898	434	0	2,054	0	5,338
1988	43	585	13	0	263	1,936	423	0	1,893	0	5,156
1989	43	558	0	0	251	1,852	433	0	1,863	0	5,000
1990	43	559	0	0	260	1,836	424	0	1,843	0	4,965

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA AUS - AUSTRALASIA
 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

MILITARY AIRCRAFT FLEET - TYPE : ATTACK (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	404	0	86	0	0	0	0	9	0	0	499
1980	540	0	70	0	12	11	0	6	18	0	657
1985	374	0	116	0	11	21	16	6	52	0	596
1986	366	0	73	0	11	22	16	6	64	0	558
1987	358	0	101	0	11	22	16	6	79	0	593
1988	379	0	141	0	10	22	16	6	88	0	662
1989	386	0	173	0	9	22	15	6	97	0	708
1990	402	0	202	0	8	22	15	6	105	0	760

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	18	0	2,739	0	77	312	0	0	91	31	3,268
1980	60	0	2,797	0	92	269	0	0	100	28	3,346
1985	102	0	2,746	0	45	253	0	0	156	22	3,324
1986	100	0	2,643	0	45	253	0	0	187	22	3,250
1987	99	0	2,532	0	44	253	0	0	185	22	3,135
1988	98	0	2,427	0	42	180	0	0	179	22	2,948
1989	95	0	2,307	0	35	145	0	0	168	21	2,771
1990	94	0	2,191	0	35	117	0	0	174	21	2,632

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	90	0	0	6	335	6	0	162	0	599
1980	0	140	0	0	68	387	5	0	251	0	851
1985	0	211	0	0	113	469	17	0	307	0	1,117
1986	0	211	0	0	113	466	17	0	373	0	1,180
1987	0	195	0	0	113	451	24	0	421	0	1,204
1988	0	261	0	0	113	460	24	0	443	0	1,301
1989	0	258	0	0	92	481	24	0	438	0	1,293
1990	0	268	0	0	91	471	24	0	438	0	1,292

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

MILITARY AIRCRAFT FLEET - TYPE : BOMBER/INTERDICTOR (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	306	0	42	0	70	0	18	9	108	12	565
1980	241	0	17	0	59	0	13	7	87	12	436
1985	593	0	0	0	52	0	1	7	72	0	725
1986	647	0	0	0	51	6	0	7	45	0	756
1987	652	0	0	0	51	20	0	7	45	0	775
1988	649	0	0	0	50	20	0	7	38	0	764
1989	661	0	0	0	26	23	0	7	37	0	754
1990	735	0	0	0	21	38	0	7	37	0	838

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	0	883	0	52	0	0	0	9	24	968
1980	0	0	764	0	11	0	0	0	0	20	795
1985	0	0	699	0	0	0	0	0	0	24	723
1986	0	0	729	0	0	0	0	0	0	23	752
1987	0	0	758	0	0	0	0	0	0	22	780
1988	0	0	757	0	0	0	0	0	0	22	779
1989	0	0	813	0	0	0	0	0	0	22	835
1990	0	0	808	0	0	0	0	0	0	22	830

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	2	0	0	0	139	11	0	100	0	252
1980	0	4	0	0	0	122	5	0	100	0	231
1985	0	0	0	0	0	89	3	0	80	0	172
1986	0	0	0	0	0	94	0	0	80	0	174
1987	0	0	0	0	0	74	0	0	76	0	150
1988	0	0	0	0	0	74	0	0	72	0	146
1989	0	0	0	0	0	54	0	0	66	0	120
1990	0	0	0	0	0	88	0	0	66	0	154

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA AUS - AUSTRALASIA
 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

MILITARY AIRCRAFT FLEET - TYPE : AEW/MARITIME PATROL/ELECTRONICS (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	225	0	0	0	0	0	0	7	14	0	246
1980	182	0	0	0	2	0	1	7	16	0	208
1985	173	0	41	0	2	0	1	0	21	0	238
1986	165	0	41	0	1	0	3	0	21	0	231
1987	149	0	41	0	0	0	3	0	21	0	214
1988	149	0	41	0	0	0	3	0	21	0	214
1989	149	0	41	0	0	0	3	0	22	0	215
1990	151	0	41	0	0	0	3	0	22	0	217

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	98	25	1,415	32	84	6	0	0	190	37	1,887
1980	38	30	1,138	36	68	12	0	0	184	43	1,549
1985	27	30	1,165	36	69	8	0	0	194	26	1,555
1986	27	42	1,165	36	64	11	0	0	193	26	1,564
1987	28	47	1,130	36	63	15	0	0	201	26	1,546
1988	30	45	1,119	36	58	15	0	0	196	26	1,525
1989	36	46	1,138	36	44	17	0	0	192	26	1,535
1990	36	46	1,120	18	43	16	0	0	202	26	1,507

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	0	0	31	0	10	0	0	18	0	59
1980	0	0	0	10	18	0	0	0	27	0	55
1985	0	4	0	0	17	0	1	0	42	0	64
1986	0	0	0	0	17	0	1	0	41	0	59
1987	0	0	0	0	17	0	1	0	34	0	52
1988	0	0	0	0	17	0	3	0	32	0	52
1989	0	0	0	0	17	0	3	0	38	0	58
1990	0	0	0	0	27	0	3	0	38	0	68

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : ADVANCED TRAINER/LIGHT ATTACK (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	306	36	0	0	161	103	62	188	29	101	986
1980	498	38	0	0	218	112	74	212	26	99	1,277
1985	777	83	0	0	225	187	119	217	47	97	1,752
1986	772	82	0	0	227	182	113	216	42	95	1,729
1987	779	82	0	0	225	197	114	215	26	94	1,732
1988	771	81	2	0	226	228	119	214	26	91	1,758
1989	755	80	2	0	218	226	110	214	25	90	1,720
1990	749	61	4	0	221	218	110	212	25	85	1,685

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	488	187	1,637	92	225	28	11	0	460	0	3,128
1980	315	130	1,406	70	226	12	10	0	360	0	2,529
1985	165	155	1,288	64	221	0	0	0	327	0	2,220
1986	148	126	1,241	64	252	0	0	0	309	0	2,140
1987	150	111	1,153	64	255	0	0	0	283	0	2,016
1988	150	105	1,110	64	279	0	0	0	283	0	1,991
1989	150	105	1,098	64	274	0	0	0	283	0	1,974
1990	150	105	1,097	64	272	0	0	0	248	0	1,936

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	247	0	117	30	287	54	0	120	0	855
1980	0	238	0	102	32	327	50	0	177	0	926
1985	0	370	0	81	47	328	95	0	212	0	1,133
1986	0	367	0	79	45	300	72	0	222	0	1,085
1987	0	334	0	79	45	322	84	0	240	0	1,104
1988	0	305	0	79	51	311	76	0	267	0	1,089
1989	0	292	0	79	42	443	87	0	268	0	1,211
1990	0	292	0	79	45	454	90	0	288	0	1,248

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : ELEMENTARY/BASIC TRAINER (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,051	145	0	0	34	194	109	0	118	0	1,651
1980	965	125	0	0	16	300	140	0	121	0	1,667
1985	973	98	0	0	44	332	147	0	139	0	1,733
1986	900	70	0	0	41	410	153	0	155	0	1,729
1987	928	69	0	0	41	408	152	0	188	0	1,786
1988	920	68	0	0	41	396	147	0	204	0	1,776
1989	890	68	0	0	41	398	150	0	189	0	1,736
1990	846	68	0	0	43	398	149	0	197	0	1,701

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	478	120	1,766	25	948	100	86	75	779	20	4,397
1980	324	136	1,310	25	670	70	79	70	372	0	3,056
1985	260	137	1,204	20	539	70	64	50	289	0	2,633
1986	224	137	1,201	20	512	70	61	49	309	0	2,583
1987	222	143	1,176	20	474	70	49	49	292	0	2,495
1988	208	168	1,150	20	461	57	49	49	263	0	2,425
1989	207	168	1,164	20	407	70	42	49	254	0	2,381
1990	205	168	1,172	20	389	70	42	49	253	0	2,368

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	232	266	0	0	298	451	50	0	616	48	1,961
1980	185	259	0	0	330	366	99	0	716	54	2,009
1985	177	261	0	0	475	444	92	0	827	63	2,339
1986	175	260	0	0	571	478	92	0	897	69	2,542
1987	174	261	0	0	611	485	83	0	986	72	2,672
1988	215	260	0	0	620	499	81	0	955	78	2,708
1989	230	249	0	0	633	508	78	0	967	96	2,761
1990	279	244	0	0	651	533	101	0	971	114	2,893

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : TRANSPORT - TACTICAL/STRATEGIC/TANKER (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	538	31	0	0	54	69	39	10	89	23	853
1980	469	31	0	0	83	61	59	10	105	27	845
1985	420	31	21	0	125	87	94	10	138	29	955
1986	404	31	25	0	130	78	80	9	150	20	927
1987	385	33	27	0	132	81	87	9	147	24	925
1988	390	33	28	0	136	80	85	9	150	25	936
1989	391	33	28	0	139	79	87	9	148	25	939
1990	390	33	27	0	141	86	86	9	150	25	947

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	302	158	2,690	56	454	235	167	51	775	50	4,938
1980	198	94	2,128	43	332	247	144	41	398	46	3,671
1985	167	88	2,114	43	272	256	128	45	298	43	3,454
1986	169	73	2,150	45	228	262	118	47	271	44	3,407
1987	172	63	2,114	45	224	267	113	49	281	43	3,371
1988	163	61	2,096	45	238	270	111	49	257	45	3,335
1989	168	61	2,070	44	224	267	111	49	228	45	3,267
1990	169	61	2,069	44	219	274	111	49	235	45	3,276

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	12	26	102	14	125	170	64	0	214	25	752
1980	12	35	53	16	189	136	97	0	205	22	765
1985	31	41	28	16	200	165	137	0	266	19	903
1986	30	41	11	16	268	166	140	0	316	19	1,007
1987	30	23	11	16	277	180	133	0	305	19	994
1988	30	26	11	16	280	174	123	0	316	19	995
1989	30	25	11	18	281	165	121	0	353	19	1,023
1990	51	24	11	20	278	166	123	0	350	19	1,042

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : TRANSPORT - VIP/LIAISON/COMMUNICATION (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	742	53	0	8	37	70	154	56	53	9	1,182
1980	673	33	0	7	39	105	170	62	45	6	1,140
1985	552	38	3	7	55	81	211	26	61	2	1,036
1986	564	38	3	7	58	89	198	26	63	3	1,049
1987	536	34	3	6	57	75	198	26	73	3	1,011
1988	529	36	3	6	58	73	198	63	68	3	1,037
1989	539	35	4	0	58	72	198	63	66	5	1,040
1990	542	35	9	0	57	73	199	39	74	5	1,033

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	342	204	2,626	0	534	231	103	42	677	0	4,759
1980	186	195	881	0	445	199	134	30	418	0	2,488
1985	122	102	930	0	531	224	150	27	412	2	2,500
1986	157	98	854	0	553	227	154	27	420	2	2,492
1987	157	97	766	0	563	225	156	26	419	3	2,412
1988	156	99	757	0	580	227	158	26	412	3	2,418
1989	124	97	751	0	606	218	157	27	418	3	2,401
1990	126	97	765	2	605	225	158	27	419	3	2,427

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	32	71	403	38	350	44	49	0	353	20	1,360
1980	18	65	10	38	275	42	45	31	290	30	844
1985	56	95	12	22	295	75	34	30	311	31	961
1986	55	95	12	21	295	73	28	30	325	31	965
1987	66	121	11	25	301	67	28	30	357	29	1,035
1988	62	121	11	25	251	67	28	35	344	40	984
1989	59	121	11	23	225	65	29	35	312	40	920
1990	71	103	11	23	218	65	30	35	307	40	903

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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MILITARY AIRCRAFT FLEET - TYPE : HELICOPTERS (UNITS)

DESIGN ORIGIN : EUROPE

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,973	220	0	0	130	237	184	157	261	23	3,185
1980	2,159	261	0	0	203	396	219	156	466	23	3,883
1985	2,553	360	22	0	288	656	335	153	562	49	4,978
1986	2,524	379	50	0	331	679	338	152	571	49	5,073
1987	2,462	388	86	0	358	729	343	146	589	48	5,149
1988	2,453	405	90	0	366	697	328	143	622	37	5,141
1989	2,433	395	69	0	396	673	320	143	635	38	5,102
1990	2,466	398	96	0	439	664	322	127	641	38	5,191

DESIGN ORIGIN : USA

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,716	372	12,541	188	624	790	77	0	1,259	181	17,748
1980	1,544	388	10,609	181	525	1,242	112	0	1,426	149	16,176
1985	1,755	573	10,521	184	746	1,412	167	0	1,842	127	17,327
1986	1,714	573	10,706	184	771	1,458	176	0	1,926	127	17,635
1987	1,661	571	10,368	182	755	1,464	177	0	1,891	121	17,190
1988	1,650	576	10,115	181	716	1,444	178	0	1,929	121	16,910
1989	1,643	572	10,046	178	716	1,429	183	0	1,982	134	16,883
1990	1,654	581	10,241	178	742	1,450	177	0	2,052	156	17,231

DESIGN ORIGIN : OTHER

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	37	0	0	115	355	45	0	268	0	820
1980	0	62	0	0	54	449	88	0	297	0	950
1985	0	74	0	0	136	506	123	0	396	0	1,235
1986	0	73	0	0	142	505	135	0	443	0	1,298
1987	0	84	0	0	145	532	197	0	450	0	1,408
1988	0	84	0	0	143	558	212	0	522	0	1,519
1989	0	84	0	0	170	556	200	0	501	0	1,511
1990	80	85	0	0	187	555	193	0	510	0	1,610

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA ASA - ASIA
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AVERAGE UNIT REPLACEMENT VALUE OF MILITARY AIRCRAFT IN SERVICE IN THE EC (MIO ECUS)

DESIGN ORIGIN : EUROPE

	I/AS	F/AT	ATT	B/IN	AEW	A/L T	E/B T	T/S/T	V/L/C	HEL
1975	4.86	4.25	5.46	16.19	12.78	2.30	0.57	6.87	0.63	0.58
1980	24.14	10.93	11.67	21.89	16.84	4.17	0.65	8.75	0.75	0.93
1985	36.41	23.78	26.72	39.73	39.61	9.30	1.44	15.43	2.35	2.33
1986	37.78	25.26	29.97	42.66	42.01	10.98	1.49	16.43	2.42	2.56
1987	39.83	26.58	36.16	45.78	46.60	11.41	1.52	18.27	2.69	2.69
1988	42.41	30.72	39.29	47.89	47.77	11.79	1.75	19.36	3.38	2.89
1989	44.49	31.51	40.29	49.51	55.77	11.99	1.80	20.86	3.47	2.93
1990	39.70	28.12	31.29	44.18	49.77	10.70	1.39	18.61	2.69	2.61

DESIGN ORIGIN : USA

	I/AS	F/AT	ATT	B/IN	AEW	A/L T	E/B T	T/S/T	V/L/C	HEL
1975	4.71	5.08	5.12	-	16.21	2.51	0.44	6.94	0.15	1.23
1980	16.02	11.36	9.34	-	19.17	4.33	0.55	10.28	0.32	1.77
1985	42.21	27.16	29.11	-	64.78	8.88	1.05	22.77	1.86	5.91
1986	44.21	28.99	30.48	-	68.74	10.41	1.14	23.57	1.89	6.14
1987	46.31	30.20	32.32	-	76.56	10.63	1.15	24.30	1.94	6.54
1988	49.47	31.24	32.86	-	78.22	11.24	1.33	27.23	2.10	7.42
1989	50.81	32.09	36.78	-	79.34	11.55	1.36	27.70	2.16	7.51
1990	44.90	28.36	32.50	-	70.12	8.78	1.17	24.48	1.64	6.64

DESIGN ORIGIN : OTHER

	I/AS	F/AT	ATT	B/IN	AEW	A/L T	E/B T	T/S/T	V/L/C	HEL
1975	-	5.51	-	-	-	-	0.29	3.63	0.18	-
1980	-	11.18	-	-	-	-	0.40	4.68	0.52	-
1985	-	29.98	-	-	-	-	1.03	9.98	2.22	-
1986	-	31.93	-	-	-	-	1.09	10.60	3.62	-
1987	-	34.30	-	-	-	-	1.21	11.20	3.68	-
1988	-	38.38	-	-	-	-	1.23	12.05	4.13	-
1989	-	39.06	-	-	-	-	1.26	12.42	4.25	-
1990	34.61	34.94	-	-	-	-	1.13	9.64	3.30	5.28

I/AS .. INTERCEPTOR/AIR SUPERIORITY F/AT .. FIGHTER/ATTACK ATT ... ATTACK
 B/IN .. BOMBER/INTERDICTOR A/L T . ADVANCED TRAINER/LIGHT ATTACK . HEL ... HELICOPTERS
 AEW ... AEW/MARITIME PATROL/ELECTRONICS..... E/B T . ELEMENTARY/BASIC TRAINER
 T/S/T . TRANSPORT - TACTICAL/STRATEGIC/TANKER . V/L/C . TRANSPORT - VIP/LIAISON/COMMUNICATION

MILITARY HELICOPTER FLEET

UNITS (AT YEAR-END)

	EC				USA		
	TOTAL	AS % OF TOTAL			TOTAL	AS % OF TOTAL	
		DESIGN ORIGIN		LICENCE (1)		DESIGN ORIGIN	
		EC	USA			EC	USA
1960	1,742	35.3	64.7	41.4	4,423	0.0	100.0
1965	2,478	41.3	58.7	38.3	6,185	0.0	100.0
1970	3,335	37.2	62.8	39.9	15,874	0.0	100.0
1975	3,637	43.6	56.4	37.2	15,338	0.0	100.0
1980	3,559	55.9	44.1	26.0	8,749	0.0	100.0
1981	3,665	57.0	43.0	25.0	8,190	0.0	100.0
1982	3,743	58.1	41.9	24.3	7,640	0.0	100.0
1983	3,863	60.1	39.9	23.2	7,760	0.0	100.0
1984	3,894	61.2	38.8	22.2	7,848	0.0	100.0
1985	3,917	61.3	38.7	22.5	7,658	0.0	100.0
1986	3,977	61.5	38.5	22.8	7,646	0.0	100.0
1987	3,961	61.0	39.0	23.2	7,924	0.0	100.0
1988	4,018	58.3	41.7	26.1	8,019	0.0	100.0
1989	4,059	59.0	41.0	25.5	7,817	0.0	100.0
1990 (2)	4,002	59.4	40.6	24.7	7,783	0.0	100.0

(1) HELICOPTERS OF US DESIGN MANUFACTURED IN THE EC UNDER LICENCE (AS % OF TOTAL)

(2) DOES NOT INCLUDE 50 USSR-DESIGNED HELICOPTERS BASED IN FRG

■ SOURCE: AEROSPATIALE

MILITARY HELICOPTER FLEET IN THE EC

UNITS (AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1960	10	14	243	27	801	7	0	98	0	49	2	491
1965	43	25	490	39	758	7	3	227	0	90	32	764
1970	80	17	765	75	734	55	3	352	0	98	126	1,030
1975	79	32	714	196	805	64	8	548	0	91	113	987
1980	80	35	701	253	812	141	9	495	0	124	62	847
1981	80	33	742	303	829	126	11	493	0	122	62	864
1982	80	29	831	311	847	122	11	506	0	120	62	824
1983	79	29	915	310	860	116	10	514	0	120	62	848
1984	79	29	932	312	903	116	10	515	0	118	62	818
1985	78	28	922	308	922	128	10	509	0	117	64	831
1986	74	28	913	305	937	142	15	528	0	117	87	831
1987	73	29	915	311	953	140	15	543	0	117	39	826
1988	69	28	913	322	929	140	15	584	0	118	42	858
1989	68	29	913	323	954	140	15	596	0	118	41	862
1990 (1)	68	41	918	325	926	140	15	583	0	116	41	829

(1) DOES NOT INCLUDE 50 USSR-DESIGNED HELICOPTERS BASED IN FRG

■ SOURCE: AEROSPATIALE

MILITARY HELICOPTER FLEET IN THE EC

MARKET SHARE OF EC-BUILT AIRCRAFT (AS % OF FLEET AT YEAR-END)

	BE	DK	DE	ES	FR	HE	IR	IT	LU	NL	PO	UK
1960	100.0	35.7	65.8	44.4	38.3	0.0	-	0.0	-	16.3	100.0	22.6
1965	88.4	32.0	60.2	0.0	49.3	0.0	100.0	0.0	-	63.3	96.9	28.4
1970	90.0	47.1	33.5	0.0	61.6	0.0	100.0	0.0	-	85.7	99.2	23.2
1975	89.9	25.0	36.3	4.6	83.5	6.3	100.0	3.6	-	92.3	100.0	34.1
1980	93.8	37.1	40.4	12.6	100.0	2.8	100.0	1.0	-	100.0	100.0	67.3
1981	93.8	36.4	43.7	20.8	100.0	3.2	100.0	1.0	-	100.0	100.0	67.5
1982	93.8	27.6	49.8	28.0	100.0	3.3	100.0	1.0	-	100.0	100.0	65.9
1983	93.7	27.6	54.4	31.0	100.0	3.4	100.0	1.0	-	100.0	100.0	69.0
1984	93.7	27.6	55.3	31.4	100.0	3.4	100.0	1.0	-	100.0	100.0	71.9
1985	88.5	25.0	54.9	31.5	100.0	3.1	100.0	0.8	-	100.0	100.0	72.4
1986	93.2	25.0	54.5	31.8	100.0	2.8	100.0	3.2	-	100.0	100.0	71.8
1987	93.2	27.6	54.6	31.8	100.0	2.9	100.0	3.1	-	100.0	100.0	72.0
1988	92.8	25.0	54.7	33.5	100.0	2.9	100.0	7.0	-	100.0	100.0	59.9
1989	92.6	24.1	54.7	34.4	100.0	2.9	100.0	8.9	-	100.0	100.0	61.5
1990 (1)	92.6	29.3	54.9	34.8	100.0	2.9	100.0	9.9	-	100.0	100.0	63.4

(1) DOES NOT INCLUDE 50 USSR-DESIGNED HELICOPTERS BASED IN FRG

■ SOURCE: AEROSPATIALE

MILITARY TURBINE ENGINES

Data relating to *military engines* cover the number of *turbine aircraft engines in military service* in the world. Allowance has been made for spare engines held in reserve. Warsaw Pact and P.R.China fleets have been excluded throughout, however engines exported by these countries have been included in the relevant category under "OTHER" design origin.

Military engines are broken down according to: *category of engines, design origin, and geographical areas.*

Military engines are broken down into the following *categories*:

- *Turbofan* above 14 Tons (*)
- *Turbofan* between 7 and 14 Tons (*)
- *Turbofan* between 3 and 7 Tons (*)
- *Turbofan* below 3 Tons (*)
- *Turbojet* between 7 and 14 Tons (*)
- *Turbojet* between 3 and 7 Tons (*)
- *Turbojet* below 3 Tons (*)
- *Turboprop*
- *Turboshaft*

(*) Maximum thrust, including reheat where applicable

Military engines are also broken down according to *design origin: EC, USA and OTHER.* Design origin reflects country of original design and not necessarily the country of production and/or assembly.

Military engines are also broken down according to *manufacturer*:

- *CFM International* ● *General Electric* ● *Pratt & Whitney*
- *Rolls-Royce* ● *SNECMA* ● *Turbo-Union,*
- *other*

Manufacturer reflects the company that originated the design (or has significantly redesigned /developed the engine) and not necessarily indicate production and/or assembly origin.

Military engines are broken down into the following *geographical areas*:

- *EC*
- *EUR:* Austria, Cyprus, Finland, Malta, Norway, Sweden, Switzerland, Turkey, Yugoslavia
- *USA*
- *Canada*
- *Latin America and Caribbean*
- *Middle East and North Africa*
- *Africa (south of Sahara)*
- *Republic of South Africa*
- *Asia*
- *Australasia*

A list of *military engines* is given in the following pages.

Turbine Aircraft Engines In Military Service

	EC Design	USA Design	Other Design
Turbofans	<i>CFM IntL</i>CFM56(*)	<i>AVCO LYCOMING</i>ALF-502	<i>IHI</i>F-3
	<i>ROLLS-ROYCE</i>Conway	<i>GARRETT</i>ATF-3	<i>IVCHENKO</i>AI-25
	M54H	TFE 731	<i>KUZNETOV</i>NK-8
	Pegasus	<i>GENERAL ELECTRIC</i> ..CF6	<i>P&W CANADA</i>JT15D
	RB-211	CF-34 (TF34)	<i>SOLOVIEV</i>D20
	Spey	CF-700	D30
	Tay	F-101	<i>TUMANSKY</i>R29
	<i>R-R/TURBOMECA</i>Adour	F-404	R33
	<i>SNECMA</i>M53	TF-39	
	<i>SNECMA/TURBOMECA</i> Larzac	<i>PRATT & WHITNEY</i> ...F-100	
	<i>TURBOMECA</i>Aubisque	JT-3D (TF33)	
	<i>TURBO-UNION</i>RB-199	JT-8D	
		JT-9D	
	TF-30		
Turbojets	<i>DE HAVILLAND</i>Goblin	<i>ALLISON</i>J-33	<i>IHI</i>J-3
	<i>HISPANO-SUIZA</i>Verdon	J-35	<i>INSTYTUT LOTNICTVASO</i> -3
	<i>ROLLS-ROYCE</i>Avon	<i>FAIRCHILD</i>J-44	<i>KLIMOV</i>VK-1
	Derwent	<i>GENERAL ELECTRIC</i> ..CJ-610	<i>KOLIESOV</i>VD-7
	Nene	CJ-805	<i>LYULKA</i>AL-7F
	Olympus	J-47	AL-21F
	Orpheus	J-79	<i>MIKULIN</i>AM-3
	Viper	J-85	
	<i>SNECMA</i>Atar	<i>PRATT & WHITNEY</i> ...J-48	
		J-52	

* EC/USA design

Turbine Aircraft Engines In Military Service

	EC Design	USA Design	Other Design
Turbojets (continued)	<i>TURBOMECA</i>Mabore	<i>PRATT & WHITNEY</i>J-57	<i>MOTORLET</i>M701
		J-58	<i>ORENDA</i>11
		J-75	<i>TUMANSKY</i>RD9
		JT12 (60)	R13
		<i>TELEDYNE</i>J-69	RU19
		<i>WESTINGHOUSE</i>J-34	R25
		<i>WRIGHT</i>J-65	R31
Turboprops	<i>NAPIER</i>Eland	<i>ALLISON</i>250	<i>IVCHENKO</i>AI-20
	<i>ROLLS-ROYCE</i>Dart	501 (T56)	AI-24
	Mamba	<i>AVCO LYCOMING</i>T53	<i>P&W CANADA</i>PT-6A (T74)
	Tyne	LTP101	<i>WALTER</i>M601
	<i>TURBOMECA</i>Astazou	<i>GARRETT</i>TPE331 (T76)	
	Bastan	<i>GENERAL ELECTRIC</i> ..T-64	
Turboshafts	<i>NAPIER</i>Gazelle	<i>ALLISON</i>250 (T63)	<i>GLUSHENKOV</i>GTD-3
	<i>ROLLS-ROYCE</i>Gem	<i>AVCO LYCOMING</i>LTC4	<i>ISOTOV</i>GTD-350
	Gnome	LTS101	TV-2
	Nimbus	T-53	TV-3
	<i>TURBOMECA</i>Arriel	T-55	<i>LOTAREV</i>D136
	Artouste	<i>GENERAL ELECTRIC</i> ..T-58	<i>P&W CANADA</i>PT-6T (T400)
	Astazou	T-64	<i>SOLOVIEV</i>D25
	Makila	T-700	
	Turmo	<i>PRATT & WHITNEY</i>T-73	

MILITARY TURBINE ENGINES FLEET

TURBOFAN - MAXIMUM THRUST ABOVE 14 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0	0	372	0	0	51	0	0	0	0	423
1980	0	0	376	0	0	46	0	0	0	0	422
1985	14	0	512	0	0	28	0	0	0	0	554
1986	24	0	590	0	0	28	0	0	0	0	642
1987	24	0	673	0	4	32	0	0	0	0	733
1988	24	0	783	0	4	32	0	0	0	0	843
1989	28	0	802	0	7	32	0	0	0	0	869
1990	31	0	812	0	7	32	0	0	0	0	882

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	-	-	0.0	-	-	0.0	-	-	-	-	0.0
1980	-	-	0.0	-	-	0.0	-	-	-	-	0.0
1985	100.0	-	0.0	-	-	17.9	-	-	-	-	3.4
1986	100.0	-	0.0	-	-	17.9	-	-	-	-	4.5
1987	100.0	-	0.0	-	0.0	28.1	-	-	-	-	4.5
1988	100.0	-	0.0	-	0.0	28.1	-	-	-	-	3.9
1989	100.0	-	0.0	-	42.9	28.1	-	-	-	-	4.6
1990	100.0	-	0.0	-	42.9	28.1	-	-	-	-	4.9

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA..... ASA - ASIA
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA..... AUS - AUSTRALASIA
 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

MILITARY TURBINE ENGINES FLEET

TURBOFAN - MAXIMUM THRUST OF 7 TO 14 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	769	160	5,911	25	15	271	0	0	5	60	7,216
1980	913	233	8,091	25	107	1,018	30	0	79	60	10,556
1985	2,519	364	10,997	180	208	1,632	77	0	566	93	16,636
1986	2,741	381	11,553	260	221	1,641	77	10	827	133	17,844
1987	2,963	426	13,072	298	239	2,104	149	20	1,013	158	20,442
1988	3,256	488	13,581	348	251	2,244	143	20	1,321	228	21,880
1989	3,411	516	14,362	348	306	2,344	130	20	1,449	265	23,151
1990	3,718	547	14,978	340	311	2,578	122	20	1,511	265	24,390

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	87.6	0.0	17.9	0.0	0.0	1.8	-	-	0.0	0.0	24.1
1980	78.6	0.0	14.0	0.0	0.0	0.0	0.0	-	0.0	0.0	17.5
1985	81.8	0.0	10.8	0.0	0.0	0.0	0.0	-	7.1	0.0	19.8
1986	82.0	0.0	9.6	0.0	2.3	1.5	0.0	0.0	7.5	0.0	19.3
1987	80.7	0.0	8.8	0.0	6.3	3.6	0.0	0.0	6.6	0.0	18.1
1988	80.1	0.0	7.8	0.0	6.0	3.3	0.0	0.0	5.1	0.0	17.5
1989	78.1	0.0	7.2	0.0	4.9	6.1	0.0	0.0	5.0	0.0	17.0
1990	77.2	0.0	6.4	0.0	4.8	8.3	0.0	0.0	6.0	0.0	17.0

MARKET SHARE OF ENGINES OF INTERNATIONAL DESIGN ORIGIN (EC / USA) (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0.0	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0
1980	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0
1985	0.9	0.0	7.1	0.0	0.0	0.3	0.0	-	0.5	0.0	4.9
1986	1.9	0.0	8.4	0.0	0.0	1.4	0.0	0.0	0.4	0.0	5.9
1987	1.7	0.0	8.9	0.0	0.0	3.1	0.0	0.0	0.3	0.0	6.3
1988	1.6	0.0	9.9	0.0	0.0	2.9	0.0	0.0	0.2	0.0	6.7
1989	1.5	0.0	10.6	0.0	0.0	2.9	0.0	0.0	0.2	0.0	7.1
1990	1.4	0.0	11.4	0.0	0.0	2.7	0.0	0.0	0.2	0.0	7.5

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA..... ASA - ASIA
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA..... AUS - AUSTRALASIA
 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

MILITARY TURBINE ENGINES FLEET

TURBOFAN - MAXIMUM THRUST OF 3 TO 7 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,083	0	381	0	23	24	20	23	68	5	1,627
1980	1,410	0	1,622	0	78	63	37	15	405	5	3,635
1985	1,076	0	2,328	23	120	119	96	15	595	13	4,385
1986	1,075	0	2,302	23	130	124	95	15	636	13	4,413
1987	1,024	0	2,263	26	134	126	101	15	688	13	4,390
1988	1,001	5	2,398	40	127	124	98	15	740	13	4,561
1989	1,015	5	2,406	40	128	135	100	15	808	13	4,665
1990	1,077	5	2,363	40	118	136	103	15	848	8	4,713

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	98.8	-	0.8	-	100.0	33.3	100.0	100.0	55.9	100.0	73.1
1980	99.1	-	0.2	-	75.6	61.9	73.0	100.0	83.0	100.0	51.7
1985	92.5	-	0.4	0.0	54.2	73.9	78.1	100.0	84.2	38.5	40.0
1986	91.8	-	0.7	0.0	54.6	74.2	76.8	100.0	84.3	38.5	40.7
1987	90.6	-	1.5	0.0	53.0	77.0	78.2	100.0	84.9	38.5	41.3
1988	90.5	100.0	1.8	0.0	53.5	78.2	77.6	100.0	86.1	38.5	40.6
1989	91.0	100.0	1.7	0.0	53.9	80.0	74.0	100.0	81.9	38.5	40.8
1990	90.2	100.0	1.8	0.0	61.9	81.6	74.8	100.0	80.4	0.0	41.9

EUR - NON-EC EUROPE..... MOY - MIDDLE EAST AND NORTH AFRICA..... ASA - ASIA
 CDN - CANADA..... AFR - AFRICA SOUTH OF SAHARA..... AUS - AUSTRALASIA
 LAT - LATIN AMERICA AND CARIBBEAN..... SAF - REPUBLIC OF SOUTH AFRICA

MILITARY TURBINE ENGINES FLEET

TURBOFAN - MAXIMUM THRUST BELOW 3 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	65	384	0	20	3	29	12	0	3	8	524
1980	671	369	0	18	31	179	60	0	29	8	1,365
1985	1,386	463	313	18	138	449	244	0	162	5	3,178
1986	1,387	286	313	18	164	441	216	0	187	8	3,020
1987	1,383	286	322	15	175	503	233	0	238	8	3,163
1988	1,393	451	325	15	191	578	239	0	288	8	3,488
1989	1,414	453	325	0	215	820	243	0	363	20	3,853
1990	1,418	471	341	0	227	833	242	0	431	20	3,983

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	0.0	95.8	-	0.0	0.0	0.0	0.0	-	0.0	0.0	70.2
1980	83.9	94.9	-	0.0	0.0	21.2	35.0	-	27.6	0.0	71.8
1985	80.9	87.7	0.0	0.0	0.0	49.7	48.0	-	11.7	0.0	59.3
1986	80.2	80.1	0.0	0.0	0.0	52.8	52.8	-	10.2	0.0	56.6
1987	79.9	80.1	0.0	0.0	0.0	47.7	48.1	-	8.0	0.0	53.9
1988	79.0	87.4	0.9	0.0	0.0	46.9	48.1	-	6.6	0.0	54.6
1989	77.2	86.3	0.9	-	0.0	32.4	44.9	-	5.0	0.0	48.7
1990	76.7	86.8	1.8	-	0.0	31.1	45.0	-	4.2	0.0	47.4

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MILITARY TURBINE ENGINES FLEET

TURBOJET - MAXIMUM THRUST OF 7 TO 14 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	2,943	978	9,536	180	106	2,300	100	20	1,731	0	17,894
1980	2,983	1,010	6,616	110	144	2,804	193	70	2,221	0	16,151
1985	1,877	1,022	5,237	0	259	3,460	293	69	2,210	0	14,427
1986	1,807	1,070	4,775	0	259	3,346	268	68	2,102	0	13,695
1987	1,655	1,141	3,992	0	259	3,357	265	65	2,120	0	12,854
1988	1,603	1,025	3,349	0	239	3,441	284	65	2,112	0	12,118
1989	1,518	977	2,595	0	257	3,380	287	79	2,219	0	11,312
1990	1,501	972	1,969	0	269	3,311	284	84	2,270	0	10,660

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	29.2	38.5	0.0	0.0	0.0	6.4	0.0	100.0	0.0	-	7.8
1980	29.0	34.5	0.0	0.0	21.5	7.6	0.0	100.0	0.0	-	9.5
1985	29.8	23.8	0.0	-	15.1	12.4	0.0	100.0	0.0	-	9.3
1986	32.0	23.7	0.0	-	15.1	10.8	0.0	100.0	0.0	-	9.5
1987	30.4	17.2	0.0	-	15.1	10.8	0.0	100.0	0.0	-	9.1
1988	27.9	19.6	0.0	-	15.9	10.5	0.0	100.0	0.0	-	9.2
1989	28.9	18.6	0.0	-	14.4	11.0	0.0	100.0	0.0	-	9.8
1990	28.7	18.6	0.0	-	13.8	10.7	0.0	100.0	0.0	-	10.2

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MILITARY TURBINE ENGINES FLEET

TURBOJET - MAXIMUM THRUST OF 3 TO 7 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,781	392	10,286	264	642	1,597	288	88	2,352	202	17,892
1980	1,335	295	8,756	134	648	1,270	356	73	2,182	184	15,233
1985	992	229	6,040	8	614	1,398	368	70	2,050	122	11,891
1986	871	228	5,664	8	616	1,283	336	70	2,342	113	11,531
1987	770	228	5,214	0	601	1,249	321	70	2,405	87	10,945
1988	657	228	4,936	0	595	1,179	311	64	2,086	36	10,092
1989	616	228	4,167	0	361	1,038	304	50	1,797	26	8,587
1990	602	226	3,845	0	348	1,003	304	30	1,751	26	8,135

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	94.4	94.6	0.0	0.0	57.0	33.3	30.6	100.0	28.2	80.7	22.1
1980	96.4	100.0	0.0	0.0	53.1	27.3	24.7	100.0	22.7	80.4	20.2
1985	95.5	100.0	0.0	0.0	62.2	24.1	18.5	100.0	24.9	77.0	22.2
1986	94.8	100.0	0.0	0.0	62.3	25.8	17.6	100.0	15.6	75.2	20.4
1987	98.6	100.0	0.0	-	61.6	23.8	19.9	100.0	15.1	67.8	20.2
1988	100.0	100.0	0.0	-	61.5	23.7	19.6	100.0	15.2	22.2	19.6
1989	100.0	100.0	0.0	-	77.8	25.6	19.7	100.0	17.5	0.0	21.1
1990	100.0	100.0	0.0	-	77.0	26.4	19.7	100.0	18.0	0.0	21.7

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MILITARY TURBINE ENGINES FLEET

TURBOJET - MAXIMUM THRUST BELOW 3 TONS (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	4,591	1,883	7,526	588	1,469	2,131	352	267	4,652	151	23,610
1980	3,734	1,744	6,058	419	1,406	2,084	347	277	3,937	124	20,130
1985	3,005	1,868	5,065	416	1,322	2,021	349	279	3,987	122	18,434
1986	2,693	1,696	4,922	414	1,326	1,964	308	278	3,896	119	17,616
1987	2,688	1,661	4,711	414	1,309	1,906	271	277	3,801	118	17,156
1988	2,537	1,746	4,578	409	1,368	1,817	251	281	3,701	114	16,802
1989	2,370	1,783	4,446	409	1,347	1,718	248	281	3,550	113	16,265
1990	2,389	1,750	4,414	409	1,326	1,716	253	278	3,420	107	16,062

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	61.1	35.1	0.0	21.9	27.8	26.8	45.2	93.6	18.4	83.4	25.2
1980	60.8	35.7	0.0	23.4	30.4	26.8	43.8	100.0	16.9	100.0	25.8
1985	57.4	44.5	0.0	21.6	30.4	26.5	42.7	100.0	15.4	100.0	25.8
1986	53.4	41.6	0.0	21.7	30.4	26.4	43.5	100.0	15.7	100.0	24.4
1987	53.9	39.9	0.0	21.7	30.3	27.4	49.1	100.0	14.9	100.0	24.6
1988	53.9	43.6	0.0	22.0	28.1	27.8	51.4	100.0	13.5	100.0	24.6
1989	52.9	42.4	0.0	22.0	26.3	29.5	51.2	100.0	12.1	100.0	24.0
1990	51.1	38.1	0.0	22.0	26.6	29.5	50.2	100.0	11.7	100.0	23.3

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MILITARY TURBINE ENGINES FLEET

TURBOPROP (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	1,568	268	7,599	213	898	1,114	216	78	1,170	199	13,323
1980	1,807	334	7,725	246	1,511	1,355	445	73	1,712	356	15,564
1985	2,091	453	8,662	278	2,048	1,772	780	65	2,233	383	18,765
1986	2,076	453	8,815	280	2,192	1,774	821	62	2,506	353	19,332
1987	2,121	400	8,690	280	2,340	1,853	827	60	2,608	369	19,548
1988	2,184	413	8,517	280	2,468	1,997	826	60	2,852	409	20,006
1989	2,316	417	8,425	281	2,414	1,982	824	62	2,997	432	20,150
1990	2,439	409	8,480	291	2,461	2,023	853	62	3,112	459	20,589

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	63.1	22.8	0.3	8.5	21.2	5.3	22.7	35.9	19.9	14.1	12.6
1980	46.8	19.8	0.2	7.3	17.2	5.8	16.0	38.4	16.7	17.1	11.1
1985	41.6	15.9	0.4	6.5	17.4	6.0	8.3	43.1	14.6	17.2	10.4
1986	40.6	14.8	0.4	6.4	15.5	6.0	8.3	40.3	13.2	10.2	9.7
1987	40.4	16.7	0.4	6.4	14.4	5.7	8.3	41.7	12.5	14.4	9.7
1988	39.5	16.2	0.4	6.4	13.7	5.3	7.7	41.7	12.1	13.7	9.6
1989	37.4	16.1	0.4	6.4	11.8	5.3	7.8	40.3	11.5	13.0	9.3
1990	35.8	16.4	0.4	6.2	11.4	5.2	7.5	40.3	11.1	13.3	9.1

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MILITARY TURBINE ENGINES FLEET

TURBOSHAFT (UNITS IN SERVICE AT YEAR-END)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	4,524	713	15,256	342	710	1,929	380	259	1,950	215	26,278
1980	5,361	894	15,679	330	977	3,200	672	285	2,938	211	30,547
1985	6,857	1,221	16,013	328	1,655	3,998	1,033	278	3,983	218	35,584
1986	6,794	1,242	16,622	328	1,855	4,097	1,090	276	4,262	217	36,783
1987	6,619	1,351	16,551	323	1,893	4,430	1,264	269	4,400	210	37,310
1988	6,702	1,400	16,624	322	1,879	4,420	1,302	262	4,661	205	37,777
1989	6,709	1,395	16,663	317	2,107	4,423	1,266	262	4,704	237	38,083
1990	6,994	1,419	17,220	317	2,278	4,441	1,247	212	4,953	289	39,370

MARKET SHARE OF ENGINES OF EC DESIGN ORIGIN (AS % OF TOTAL)

	EC	EUR	USA	CDN	LAT	ME	AFR	SAF	ASA	AUS	TOTAL
1975	65.8	45.6	0.0	0.0	22.0	22.5	70.3	100.0	17.5	24.2	18.3
1980	64.0	41.6	0.0	0.0	27.8	21.0	44.6	100.0	20.1	20.9	19.5
1985	51.9	41.3	0.0	0.0	22.2	24.7	45.7	100.0	17.7	36.7	19.5
1986	52.1	40.3	0.0	0.0	23.2	25.1	44.8	100.0	17.2	35.9	19.2
1987	51.4	37.2	0.0	0.0	23.1	24.9	37.6	100.0	17.5	36.7	18.9
1988	51.1	37.1	0.0	0.0	23.5	23.3	34.5	100.0	17.3	31.2	18.5
1989	50.6	36.6	0.0	0.0	23.2	22.5	34.0	100.0	18.1	27.8	18.4
1990	49.7	36.5	0.0	0.0	24.9	22.4	35.0	100.0	18.0	22.8	18.2

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MILITARY TURBINE ENGINES FLEET - MARKET SHARE BY MANUFACTURER

TURBOFAN - MAXIMUM THRUST ABOVE 14 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	0%	0%	0%	88%	12%	0%	423
1980	0%	0%	0%	0%	89%	11%	0%	422
1985	0%	3%	0%	0%	92%	4%	0%	554
1986	0%	5%	0%	0%	92%	4%	0%	642
1987	0%	5%	0%	0%	92%	3%	0%	733
1988	0%	4%	0%	0%	93%	3%	0%	843
1989	0%	5%	0%	0%	93%	3%	0%	869
1990	0%	5%	0%	0%	93%	3%	0%	882

TURBOFAN - MAXIMUM THRUST OF 7 TO 14 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	24%	0%	0%	0%	73%	3%	7,216
1980	0%	17%	0%	0%	0%	75%	7%	10,559
1985	5%	11%	0%	8%	4%	63%	8%	16,636
1986	6%	10%	1%	8%	4%	62%	8%	17,844
1987	6%	9%	1%	8%	10%	56%	9%	20,442
1988	7%	8%	1%	8%	12%	54%	10%	21,880
1989	7%	8%	1%	8%	14%	51%	11%	23,151
1990	8%	7%	2%	9%	15%	50%	11%	24,390

TURBOFAN - MAXIMUM THRUST OF 3 TO 7 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	73%	0%	0%	16%	11%	0%	1,627
1980	0%	52%	0%	0%	41%	7%	0%	3,635
1985	0%	40%	0%	0%	49%	10%	1%	4,385
1986	0%	41%	0%	0%	48%	10%	1%	4,413
1987	0%	41%	0%	0%	47%	10%	1%	4,390
1988	0%	41%	0%	0%	48%	10%	1%	4,561
1989	0%	41%	0%	0%	48%	10%	1%	4,665
1990	0%	42%	0%	0%	47%	9%	1%	4,713

MILITARY TURBINE ENGINES FLEET - MARKET SHARE BY MANUFACTURER

TURBOFAN - MAXIMUM THRUST BELOW 3 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	0%	0%	0%	22%	0%	78%	524
1980	0%	15%	31%	0%	11%	0%	42%	1,359
1985	0%	11%	38%	0%	6%	0%	46%	3,178
1986	0%	11%	40%	0%	6%	0%	43%	3,020
1987	0%	11%	38%	0%	6%	0%	46%	3,163
1988	0%	11%	34%	0%	5%	0%	50%	3,488
1989	0%	9%	31%	0%	4%	0%	55%	3,853
1990	0%	10%	30%	0%	4%	0%	56%	3,983

TURBOJET - MAXIMUM THRUST OF 7 TO 14 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	7%	1%	0%	59%	18%	15%	17,894
1980	0%	7%	3%	0%	60%	9%	21%	16,151
1985	0%	3%	6%	0%	59%	4%	28%	14,427
1986	0%	3%	6%	0%	58%	3%	29%	13,695
1987	0%	2%	7%	0%	56%	3%	32%	12,854
1988	0%	2%	7%	0%	55%	1%	35%	12,118
1989	0%	2%	8%	0%	52%	1%	37%	11,312
1990	0%	2%	8%	0%	49%	1%	40%	10,660

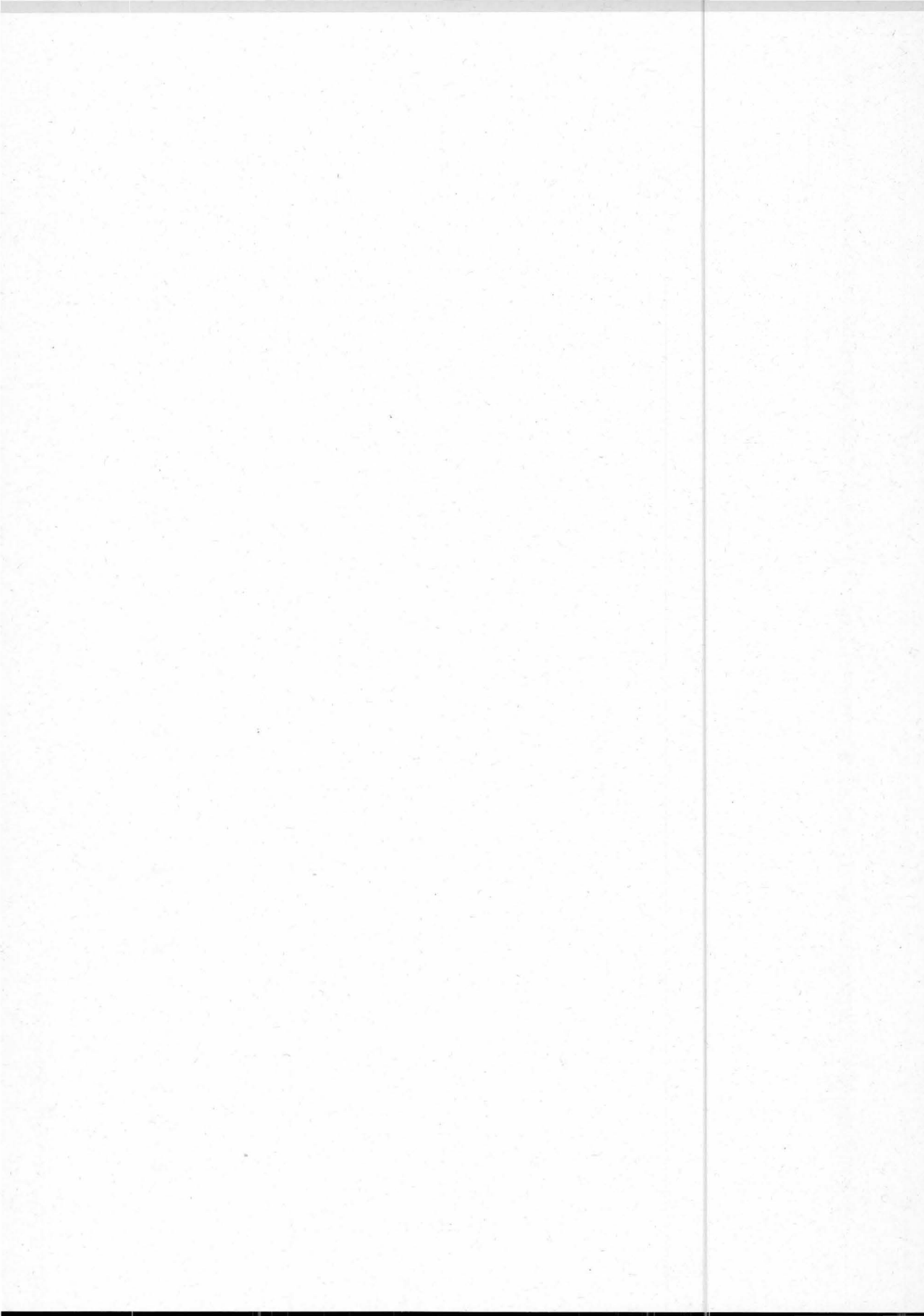
TURBOJET - MAXIMUM THRUST OF 3 TO 7 TONS

	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	11%	10%	0%	0%	59%	20%	17,892
1980	0%	10%	10%	0%	0%	61%	19%	15,233
1985	0%	10%	12%	0%	0%	55%	22%	11,897
1986	0%	9%	12%	0%	0%	54%	25%	11,531
1987	0%	9%	12%	0%	0%	53%	27%	10,945
1988	0%	9%	11%	0%	0%	54%	27%	10,092
1989	0%	9%	12%	0%	0%	53%	26%	8,592
1990	0%	9%	13%	0%	0%	51%	27%	8,135

MILITARY TURBINE ENGINES FLEET - MARKET SHARE BY MANUFACTURER

TURBOJET - MAXIMUM THRUST BELOW 3 TONS

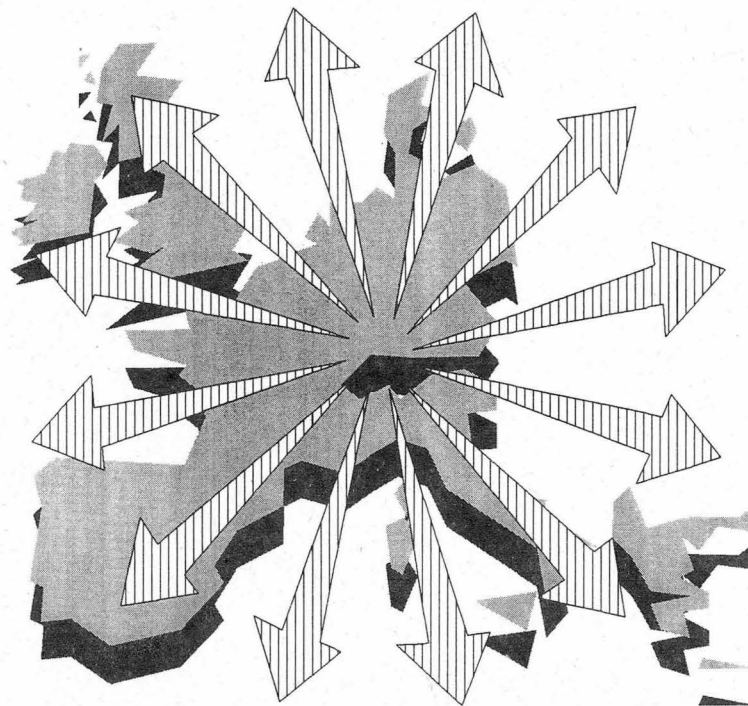
	CFM	ROLLS-ROYCE	SNECMA	TURBO-UNION	GENERAL ELECTRIC	PRATT AND WHITNEY	OTHER	TOTAL (UNITS)
1975	0%	14%	0%	0%	43%	3%	40%	23,610
1980	0%	15%	0%	0%	45%	3%	37%	20,130
1985	0%	16%	0%	0%	48%	2%	35%	18,434
1986	0%	17%	0%	0%	49%	2%	33%	17,616
1987	0%	17%	0%	0%	50%	1%	32%	17,156
1988	0%	17%	0%	0%	50%	1%	32%	16,802
1989	0%	17%	0%	0%	51%	1%	31%	16,265
1990	0%	16%	0%	0%	52%	1%	30%	16,062

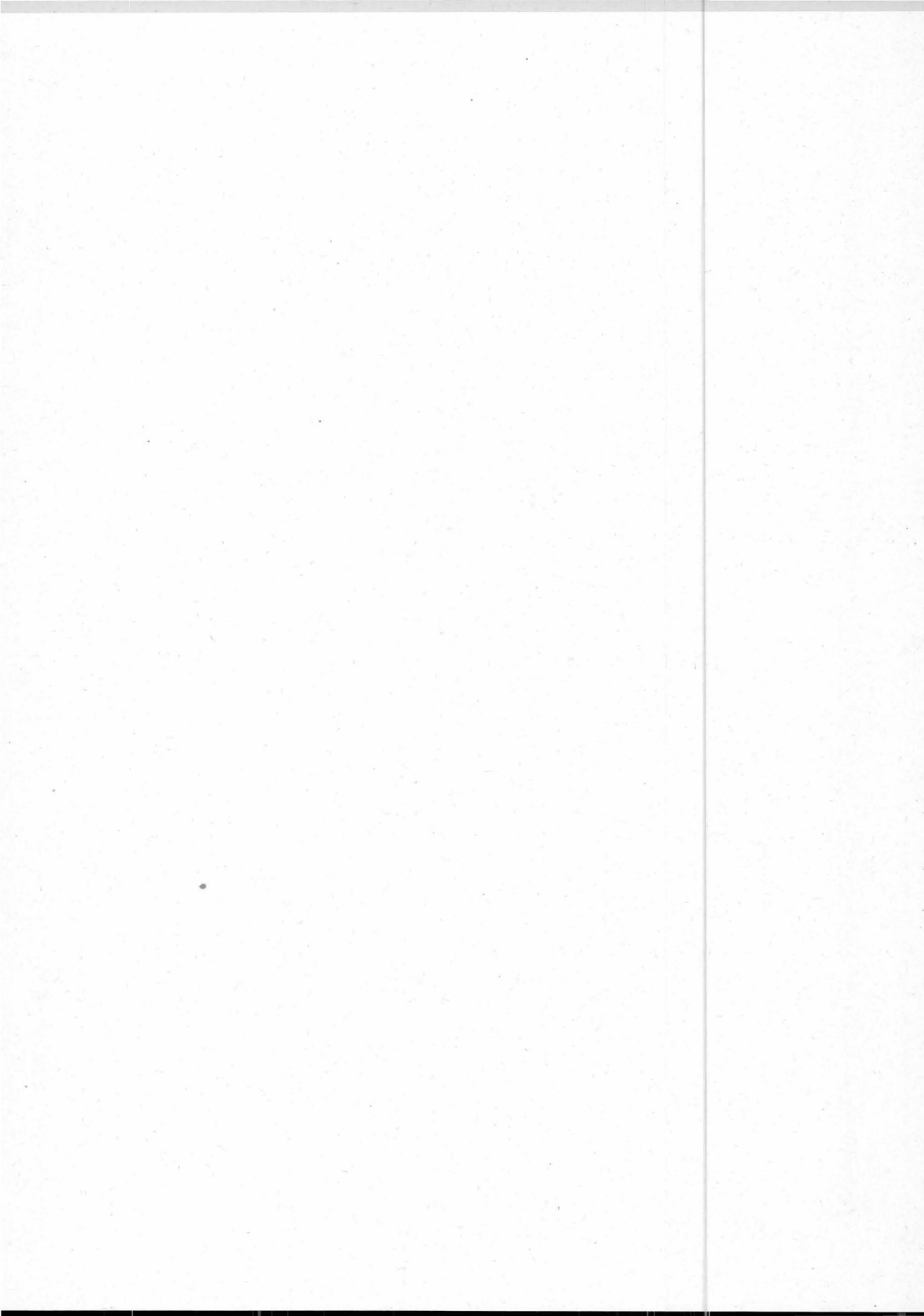


CIVIL AEROSPACE TRADE

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CIVIL AEROSPACE TRADE

The figures on external trade in aerospace products are obtained using the *NIMEXE* tables supplied by the **Statistical Office of The European Communities (SOEC-Eurostat)**.

The statistical data only concern the *civil aircraft, goods for use in civil aircraft* and for incorporation therein during their manufacture, repair, maintenance, rebuilding, modification or conversion, and *ground flying-trainers and their parts, for civil use*. "Civil aircraft" means aircraft other than aircraft used in military or similar services in the Member States, which carry a military or non-civil registration.

Data concerning the United Kingdom are not complete and do not allow the subdivision as indicated below.

So as to simplify the presentation of the data concerning trade on these products, four groups of products have been created: *airframes, engines, equipment and other material*.

● airframes

- ✘ Balloons and dirigibles; gliders, hand gliders and other non-powered aircraft
- ✘ Helicopters
- ✘ Aeroplanes and other aircraft
- ✘ Propellers and rotors and parts thereof
- ✘ Under-carriages and parts thereof
- ✘ Ground flying trainers and parts thereof

● engines

- ✘ Spark-ignition internal combustion piston engines
- ✘ Compression-ignition internal combustion piston engines (diesel or semi-diesel engines)
- ✘ Parts suitable for use solely or principally with spark- or compression-ignition aircraft engines
- ✘ Turbo-jets, turbo-propellers and other gas turbines, and parts
- ✘ Other engines and motors (reaction engines other than turbo-jets, hydraulic and pneumatic power engines and motors, etc.) and parts

● equipment

- ✘ Automatic data-processing machines and units thereof
- ✘ Hypodermic batteries; mechanical actuators for thrust reversers; toilet units specially designed; air humidifiers and dehumidifiers; servo-mechanisms, non-electric; non-electric starter motors; pneumatic starters for turbo-jets, turbo-propellers and other gas turbines; windscreens wipers, non-electric; propeller regulators, non-electric
- ✘ Transmission shafts (including cam shafts and crank shafts) and cranks

● equipment (continued)

- ✘ Bearing housings, not incorporating ball or roller bearings; plain shaft bearings
- ✘ Gears and gearing, other than toothed wheels, chain sprockets and other transmission elements presented separately; ball screws; gear boxes and other speed changers, including torque converters
- ✘ Flywheels and pulleys, including pulley blocks
- ✘ Clutches and shaft couplings (including universal joints)
- ✘ Microphones and stands therefor; loudspeakers; telephones, earphones and combined microphone/speaker sets; audio-frequency electric amplifiers; electric sound amplifier sets
- ✘ Magnetic tape recorders and other sound recording apparatus
- ✘ Video magnetic tape recording or reproducing apparatus
- ✘ Transmission apparatus for radio-telephony or radio-telegraphy
- ✘ Radar apparatus, radio navigational aid apparatus and radio remote control apparatus
- ✘ Reception apparatus for radio-telephony or radio-telegraphy
- ✘ Aerials and aerial reflectors; parts suitable for use therewith
- ✘ Electric sound or visual signalling apparatus (fire alarms and similar apparatus, indicator panels incorporating liquid crystal devices (LCD) or light emitting diodes (LED), etc.)

- ✘ Flight recorders
- ✘ Ignition wiring sets and other wiring sets
- ✘ Optical elements
- ✘ Direction finding compasses
- ✘ Stall warning calculators
- ✘ Breathing appliances and gas masks (excluding parts thereof)
- ✘ Hydrometers and similar floating instruments, thermometers, pyrometers, barometers, hygrometers and psychrometers
- ✘ Instruments and apparatus for measuring or checking the flow, level, pressure or other variables of liquids or gases
- ✘ Revolution counters, speed indicators and tachometers
- ✘ Oscilloscopes, spectrum analysers and other instruments and apparatus for measuring or checking electrical quantities, measuring or detecting ionizing radiations
- ✘ Other measuring or checking instruments, appliances and machines
- ✘ Automatic regulating or controlling instruments and apparatus
- ✘ Instrument panel clocks
- ✘ Clock movements, complete and assembled

● Other material

- ✘ Tubes, pipes and hoses, and fittings therefor (for example, joints, elbows, flanges), of plastics
- ✘ Other articles of plastics for technical uses

● **Other material (continued)**

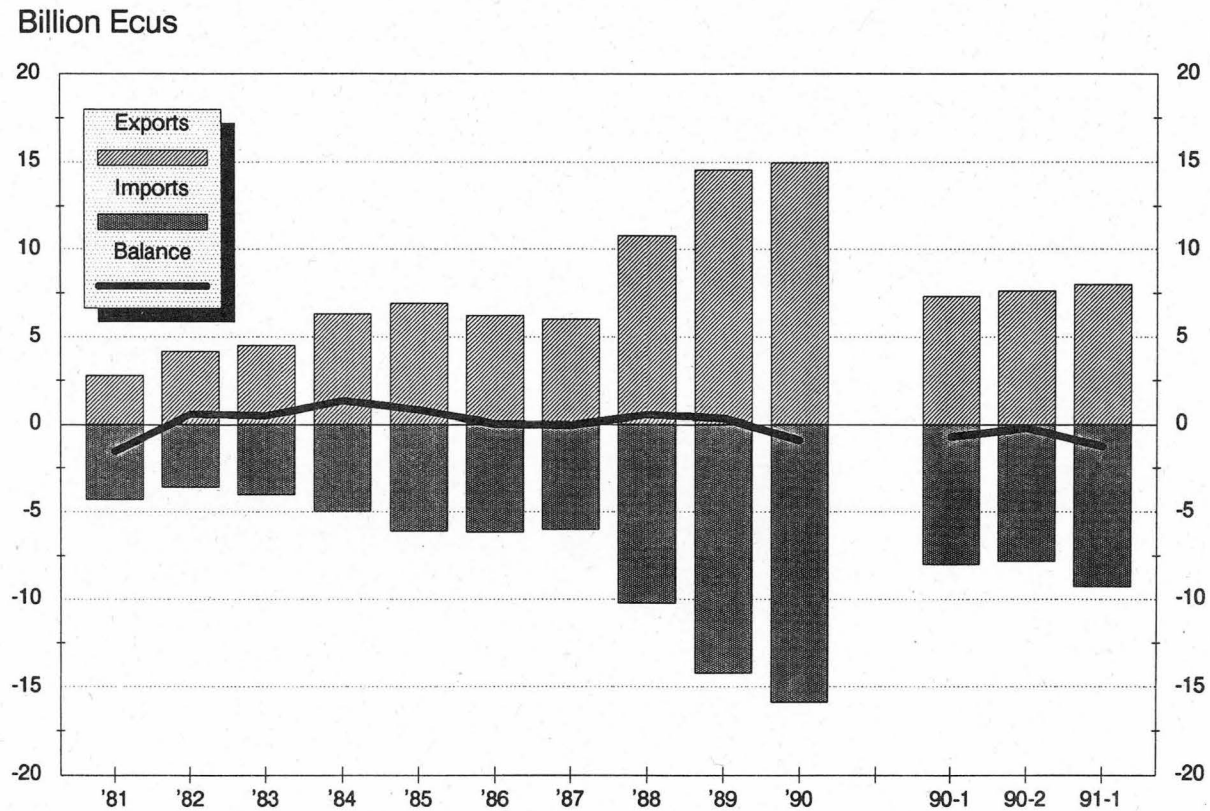
- ✘ Profile shapes, cut to size, of vulcanized rubber other than hard rubber
- ✘ Tubes, pipes and hoses, of vulcanized rubber other than hard rubber, with fittings, suitable for conducting gases or liquids
- ✘ New pneumatic tyres, of rubber
- ✘ Retreaded or used pneumatic tyres, of rubber
- ✘ Other articles of vulcanized rubber other than hard rubber
- ✘ Piping and tubing of hard rubber, with fittings attached, suitable for conducting gases or liquids
- ✘ Gaskets, washers and other seals of agglomerated cork
- ✘ Gaskets, washers and other seals of paper pulp, paper or paperboard
- ✘ Articles of asbestos or of asbestos and magnesium carbonate
- ✘ Friction material and articles thereof, not mounted, for brakes, for clutches or the like, with a basis of asbestos or other mineral substances
- ✘ Windshields of laminated safety glass, not framed
- ✘ Tubes, pipes and hollow profiles, of iron or steel, with fittings attached, suitable for conducting gases or liquids
- ✘ Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated, with fittings attached
- ✘ Air heaters and hot air distributors (excluding parts thereof)

- ✘ Sanitary ware (excluding parts thereof), of iron and steel
- ✘ Other articles of iron or steel wire
- ✘ Stranded wire, cables, plaited bands and the like, of copper, not electrically insulated, with fittings attached
- ✘ Aluminium tubes and pipes, with fittings attached, suitable for conducting gases or liquids
- ✘ Titanium tubes and pipes, with fittings attached, suitable for conducting gases or liquids
- ✘ Base metal mountings, fittings and similar articles (hinges, castors, automatic door closers, etc.)
- ✘ Flexible tubing of base metal, with fittings attached
- ✘ Pumps for liquids; liquid elevators, and parts
- ✘ Air vacuum pumps, air or other gas compressors and fans, and parts
- ✘ Air conditioning machines and parts
- ✘ Refrigerators, freezers and other refrigerating or freezing equipment; heat pumps other than air conditioning machines
- ✘ Heat exchange units and parts
- ✘ Other machinery for making hot drinks or for cooking or heating food
- ✘ Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases
- ✘ Fire extinguishers
- ✘ Pulley tackle and hoists other than skip hoists; winches and capstans; jacks
- ✘ Cranes

● Other material (continued)

- ❑ Other lifting, handling, loading or unloading machinery (for example, lifts, skip hoists, elevators and conveyors, etc.)
- ❑ Gaskets and similar joints of metal sheeting combined with other material or of two or more layers of metal
- ❑ Electric motors and generators (excluding generating sets)
- ❑ Electric generating sets and rotary converters
- ❑ Electric transformers, static converters and inductors
- ❑ Electric accumulators, including separators therefor
- ❑ Electrical ignition or starting equipment of a kind used for spark-ignition or compression-ignition internal combustion engines; generators and cut-outs of a kind used together with such engines
- ❑ Electric heating resistors, assembled only with a simple insulated former and electrical connections, used for anti-icing or de-icing
- ❑ Sealed beam lamp units
- ❑ Furniture
- ❑ Lamps and lighting fittings; illuminated signs and name-plates

EC Civil Aerospace Trade



■ SOURCE: EUROSTAT

EC CIVIL AEROSPACE TRADE (*)

TOTAL EXTRA-EC (MIO ECUS)

1) IMPORTS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	2,492	1,454	1,491	1,721	2,660	2,817	2,633	5,754	8,763	10,064	5,122	4,942	6,240
ENGINES	1,326	1,567	1,879	2,504	2,644	2,555	2,648	2,970	3,592	3,869	1,975	1,895	1,979
EQUIPMENT	346	415	499	556	573	579	560	589	694	755	363	392	370
OTHER MATERIAL	134	139	153	192	234	225	194	933	1,147	1,175	577	598	664
TOTAL	4,298	3,575	4,022	4,974	6,111	6,176	6,035	10,246	14,196	15,863	8,036	7,827	9,253

2) EXPORTS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	2,116	3,031	2,791	3,962	3,704	2,956	2,651	6,228	8,959	8,072	4,035	4,037	4,560
ENGINES	352	757	1,285	1,875	2,649	2,655	2,806	2,901	3,684	4,788	2,257	2,531	2,387
EQUIPMENT	195	218	247	296	356	387	361	477	537	622	312	310	283
OTHER MATERIAL	105	146	145	164	205	189	169	1,183	1,360	1,462	726	737	760
TOTAL	2,767	4,151	4,468	6,297	6,914	6,187	5,988	10,789	14,541	14,945	7,329	7,615	7,990

3) BALANCE

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	- 376	1,577	1,300	2,240	1,044	139	18	474	196	-1,992	-1,087	- 905	-1,681
ENGINES	- 975	- 810	- 594	- 629	5	100	159	-68	92	919	282	637	408
EQUIPMENT	- 151	- 198	- 252	- 260	- 217	- 193	- 199	- 112	- 157	- 133	-51	-82	-86
OTHER MATERIAL	-29	7	-8	-28	-30	-36	-25	250	214	287	149	138	96
TOTAL	-1,531	576	445	1,323	803	11	-47	543	345	- 919	- 707	- 212	-1,263

(*) 1981-85: EC 10 - 1986-91: EC 12

■ SOURCE: EUROSTAT

EC CIVIL AEROSPACE TRADE (*)

WITH USA (MIO ECUS)

1) IMPORTS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	2,323	1,297	1,282	1,484	2,338	2,604	2,236	3,826	6,846	8,134	4,136	3,998	4,992
ENGINES	1,236	1,459	1,702	2,124	2,226	2,196	2,252	2,574	3,081	3,363	1,725	1,638	1,755
EQUIPMENT	310	375	447	492	512	518	505	489	595	637	311	326	316
OTHER MATERIAL	119	124	132	163	208	204	166	370	459	465	229	236	260
TOTAL	3,988	3,255	3,563	4,262	5,285	5,522	5,159	7,259	10,981	12,599	6,400	6,198	7,323

2) EXPORTS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	708	727	609	879	1,507	806	1,035	2,008	2,635	2,340	1,307	1,033	1,073
ENGINES	205	454	803	1,201	1,852	1,844	1,823	1,965	2,556	3,481	1,576	1,905	1,800
EQUIPMENT	60	66	76	95	126	140	137	147	164	209	102	107	102
OTHER MATERIAL	24	34	29	39	60	62	52	293	315	310	154	155	158
TOTAL	997	1,281	1,517	2,214	3,544	2,852	3,047	4,412	5,669	6,340	3,140	3,200	3,133

3) BALANCE

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	-1,615	- 570	- 673	- 605	- 832	-1,798	-1,202	-1,818	-4,211	-5,794	-2,829	-2,965	-3,918
ENGINES	-1,031	-1,005	- 899	- 923	- 374	- 352	- 429	- 609	- 524	118	- 148	267	45
EQUIPMENT	- 250	- 309	- 372	- 397	- 387	- 378	- 367	- 343	- 431	- 428	- 209	- 219	- 214
OTHER MATERIAL	-95	-89	- 103	- 124	- 148	- 143	- 114	-77	- 145	- 155	-74	-81	- 102
TOTAL	-2,991	-1,973	-2,047	-2,048	-1,741	-2,671	-2,112	-2,847	-5,312	-6,259	-3,261	-2,998	-4,190

(*) 1981-85: EC 10 - 1986-91: EC 12

■ SOURCE: EUROSTAT

EC CIVIL AEROSPACE TRADE (*)

WITH JAPAN (MIO ECUS)

1) IMPORTS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	1	10	29	9	2	3	4	57	34	13	8	5	13
ENGINES	0	1	0	0	3	2	3	4	10	2	1	1	0
EQUIPMENT	1	1	1	1	1	3	3	3	5	6	3	3	4
OTHER MATERIAL	3	2	4	8	5	4	4	83	97	90	43	47	51
TOTAL	5	14	35	18	10	12	14	147	146	111	55	56	69

2) EXPORTS

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	76	100	181	18	135	119	46	166	223	365	169	196	459
ENGINES	6	7	4	6	12	18	49	42	41	46	24	22	14
EQUIPMENT	2	3	2	2	3	4	4	6	7	22	10	13	11
OTHER MATERIAL	1	1	1	1	7	4	3	30	35	41	19	22	20
TOTAL	85	111	188	27	158	145	102	245	306	474	221	253	504

3) BALANCE

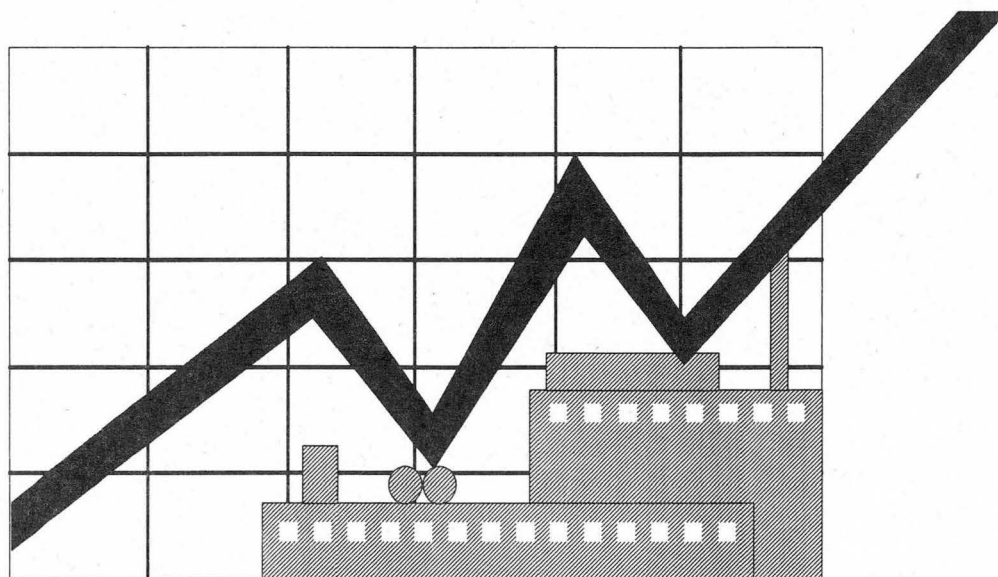
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1990-1	1990-2	1991-1
AIRFRAMES	75	90	152	8	134	116	42	109	188	352	161	191	446
ENGINES	6	6	3	5	9	17	46	38	32	44	23	21	13
EQUIPMENT	2	2	2	2	2	1	1	3	3	16	6	10	7
OTHER MATERIAL	-2	-1	-4	-7	3	-1	-0	-52	-62	-49	-24	-25	-31
TOTAL	81	96	153	8	147	133	88	97	161	363	166	197	435

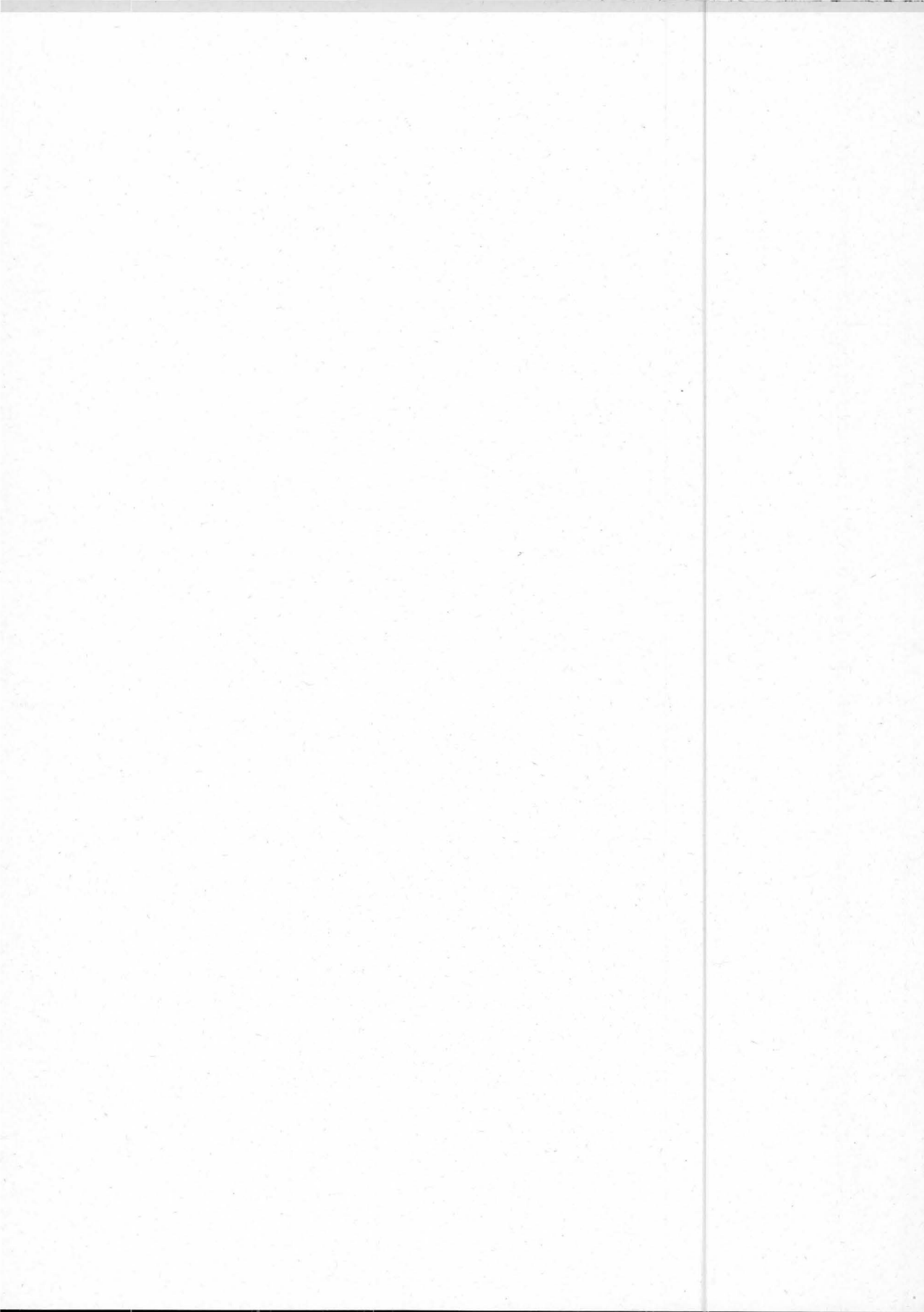
(*) 1981-85: EC 10 - 1986-91: EC 12

■ SOURCE: EUROSTAT

TURNOVER

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TURNOVER

The survey carried out each year together with the industrial associations in each Member State enables the *turnover* of the European aerospace industry to be broken down by type of customer and sector. Participants to this survey are the aerospace companies whose turnover concerns (partly or entirely) one or more of the groups of products listed in the columns of the tables.

Data for Spain relating to years 1984-86 had to be estimated from other sources.

Estimates for missing data for the turnover of the aerospace industry are compiled using linear estimates performing a least-squares approximation to indicators such as turnover of the major aerospace companies.

Where data relating to international co-operation programmes are concerned, only the turnover that corresponds to that part of these programmes that concerns the national industry (i.e., after deduction of that part of the turnover which concerns other countries) should be included in the total turnover. This applies both to the country that markets the product and to the country that supplies part of the product to the country which markets it. In all cases, the turnover is entered under the heading "*End-Users*".

However, standardization problems of the accounting methods remain and may affect turnover consolidated at the EC level.

Turnover corresponding to sales to international public organizations (e.g. *ESA*) is entered under the heading "*National State*". In this case too, only the turnover corresponding to that part of these programmes that concerns the national industry is included in the national turnover.

A distinction is made between the following:

- **Overall national turnover**

Overall national turnover includes transactions between national aerospace companies. Therefore, it does not indicate the output of the aerospace sector as such, since it includes intermediate exchanges at national level.

- **Turnover consolidated at national level**

Turnover consolidated at national level does not include transactions between national aerospace companies, and so represents the output of the aerospace sector as such.

The difference between *overall national turnover* and *turnover consolidated at national level* therefore represents the sale of aerospace goods and services between national companies in the various sub-sectors (aircraft, space, propulsion devices and equipment) and between national companies in the same subsectors (e.g. contracting between airframe manufacturers for certain sub-assemblies).

● **Turnover consolidated at Community level**

Turnover consolidated at Community level represents the output of the EC as a whole, since it does not include intra-Community transactions between aerospace companies.

The difference between *turnover consolidated at national level* and *turnover consolidated at EC level* therefore includes the sale of aerospace goods and services between companies located in the different EC Member States.

The turnover is broken down by *group of products* and by *category of customer* (civil and military).

The *groups of products* considered are as follows:

a. **Complete aerospace systems:**

- ✕ *Aircraft* (aeroplane, helicopters and gliders), *Missiles*, their parts and spares.
- ✕ *Space* (space vehicles, satellites, launchers, ground installations, etc.).

b. **Propulsion devices**

(Piston engines, turboprops, turbojets, etc.), their parts and spares, equipment and accessories, for installation in the aerospace systems mentioned under (a).

c. **Equipment**

Equipment for the aerospace systems mentioned under (a) (finished products, parts and spares, sub-assemblies) including test and ground-training equipment.

The breakdown of turnover between the different *categories of customer* is carried out as follows:

- *National State*: sales or services (including R&D) to the State (public authorities) in which the company is established;
- *Aerospace industry*: sales or services (including R&D) to other aerospace companies (generally sub-contracting);
- *End-users*: sales or services (including R&D), i.e., neither to the State nor to other aerospace companies.

In the case of the "*Aerospace Industry*" and "*End-Users*", turnover is broken down between:

- *National*: sales or services in the country in which the company is established,
- *Other EC States*: sales or services in other EC countries,
- *Third countries*: sales or services in a non-EC country.

The *activities* considered concern:

- *R&D* contracts,
- *production*, assembly,
- post-delivery *modifications*, repairs and maintenance of material sold, where these operations are carried out by the company itself.

Repair and maintenance operations carried out by users, whether civil or military, are not covered by this survey.

Turnover relating to the category of customer "*National State*" is broken down between:

- R&D,
- post-delivery *modifications*, repairs and maintenance of material sold, where these operations are carried out by the company itself and *not* by the customer, and
- *sales*.

For the other two categories of customer, "*Aerospace Industry*" and "*End-Users*", the data refer to all these activities.

FINANCIAL DATA

The financial data published at the end of this chapter are extracted from "*L'industrie Aéronautique et Spatiale Mondiale*", a study by EUROSTAF, in collaboration with AEROSPATIALE.

The financial data are aggregated by country, each table summing the major national producers:

- USA: source: Bureau of the Census - A.I.A.
- EC = aggregate of the six following countries
- France = Aérospatiale + Dassault + Matra + Snecma + Thomson-Csf
- FRG = DASA (Dornier + MBB + MTU)
- Italy = Alenia (Aeritalia + Selenia) + Agusta
- Netherlands = Fokker
- Spain = CASA
- UK = British Aerospace + Rolls-Royce + Westland

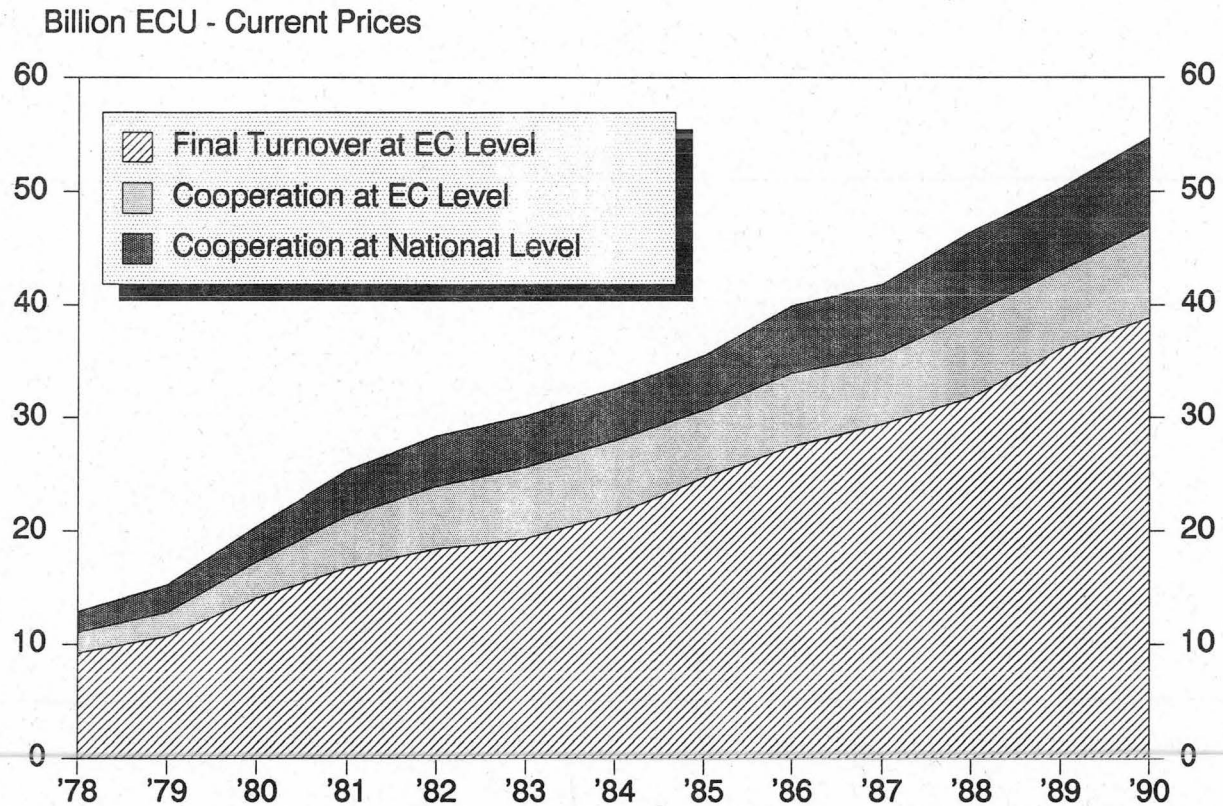
For each country, the following series are provided:

- **turnover**
- **value added** = turnover *minus* external costs and expenses, excluding wage costs
- **wage costs**
- **trading income** = value added *minus* wage costs
- **net income** = trading income *minus* investments, financial costs and income taxes
- **equity** = assets *minus* all liabilities, except to shareholders
- **long and medium term debt**
- **total permanent liabilities** = equity *plus* long and medium term debt
- **Permanent assets**
- **Total R&D**, out of which industry-funded R&D
- **Operating Investments**
- **Employment**

The ratios are defined as follows:

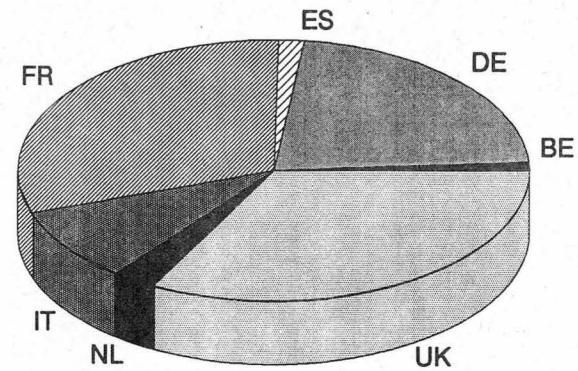
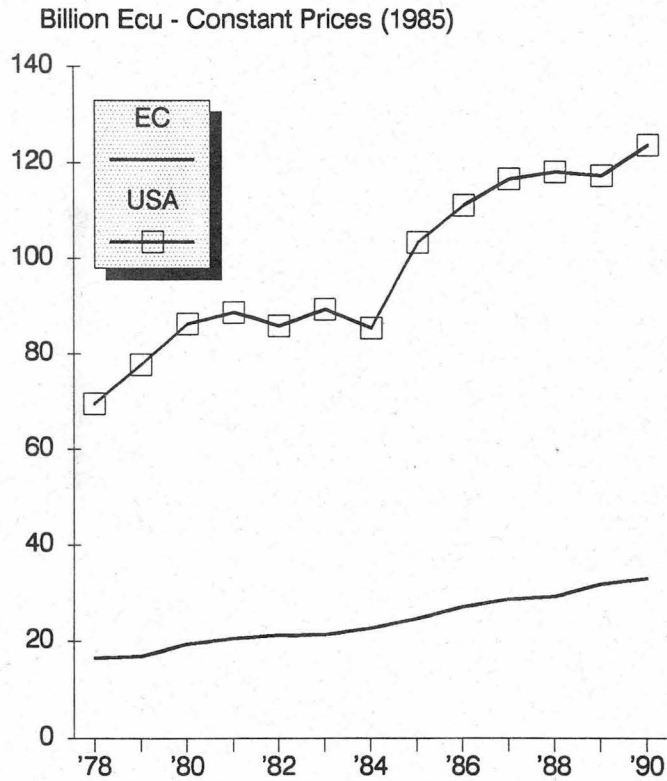
- **apparent labor productivity** = value added on wage costs and worker
- **research effort** = total R&D and industry-funded R&D on Turnover
- **Investments on Value Added**
- **debt ratio**: long and medium term debt on permanent liabilities
- **profitability**: trading income on value added and net income on value added, equity and assets

EC Aerospace Turnover



■ SOURCE: INDUSTRIAL ASSOCIATIONS

Aerospace Turnover



Breakdown by Country (1990)

OVERALL NATIONAL AEROSPACE TURNOVER

1) MIO ECU - CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	146	1,984	133	5,076	814	288	4,407	12,846	24,453	1,440	790
1979	218	3,077	132	5,767	990	338	4,702	15,224	28,061	1,278	1,032
1980	333	3,359	185	7,256	1,230	372	7,646	20,381	34,040	1,273	1,353
1981	429	4,114	262	8,816	1,758	445	9,581	25,404	49,116	1,685	2,078
1982	413	5,084	356	9,813	2,181	492	10,080	28,419	59,944	2,540	2,292
1983	344	5,380	348	10,827	2,661	605	10,015	30,179	72,019	2,914	2,353
1984	287	5,628	376	11,731	2,767	594	11,210	32,593	84,168	3,642	3,187
1985	361	6,524	419	12,555	3,070	533	12,035	35,498	103,326	4,652	3,914
1986	338	9,780	392	13,168	3,421	584	12,266	39,949	86,468	4,815	3,456
1987	339	10,079	426	13,145	3,649	452	13,735	41,826	77,089	5,225	3,680
1988	329	11,190	649	14,267	3,960	880	15,147	46,422	77,449	5,831	4,114
1989	363	11,895	806	15,782	4,422	1,199	15,855	50,321	87,052	6,653	5,280
1990	392	12,364	961	17,153	4,940	1,385	17,511	54,706	82,775	-	5,493

2) COMPARISON OF TURNOVER BY GEOGRAPHICAL AREA (EC = 100)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	1.1	15.4	1.0	39.5	6.3	2.2	34.3	100.0	190.3	11.2	6.2
1979	1.4	20.2	0.9	37.9	6.5	2.2	30.9	100.0	184.3	8.4	6.8
1980	1.6	16.5	0.9	35.6	6.0	1.8	37.5	100.0	167.0	6.2	6.6
1981	1.7	16.2	1.0	34.7	6.9	1.8	37.7	100.0	193.3	6.6	8.2
1982	1.5	17.9	1.3	34.5	7.7	1.7	35.5	100.0	210.9	8.9	8.1
1983	1.1	17.8	1.2	35.9	8.8	2.0	33.2	100.0	238.6	9.7	7.8
1984	0.9	17.3	1.2	36.0	8.5	1.8	34.4	100.0	258.2	11.2	9.8
1985	1.0	18.4	1.2	35.4	8.6	1.5	33.9	100.0	291.1	13.1	11.0
1986	0.8	24.5	1.0	33.0	8.6	1.5	30.7	100.0	216.4	12.1	8.7
1987	0.8	24.1	1.0	31.4	8.7	1.1	32.8	100.0	184.3	12.5	8.8
1988	0.7	24.1	1.4	30.7	8.5	1.9	32.6	100.0	166.8	12.6	8.9
1989	0.7	23.6	1.6	31.4	8.8	2.4	31.5	100.0	173.0	13.2	10.5
1990	0.7	22.6	1.8	31.4	9.0	2.5	32.0	100.0	151.3	-	10.0

■ SOURCE: INDUSTRIAL ASSOCIATIONS

OVERALL NATIONAL AEROSPACE TURNOVER

3) MIO ECU - CONSTANT PRICES (1985)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	186	2,900	230	8,183	1,628	410	9,480	23,016	69,553	2,476	1,796
1979	267	4,250	183	8,575	1,811	462	8,600	24,148	77,774	2,399	2,349
1980	398	4,450	244	9,732	1,953	483	10,837	28,097	86,263	2,414	2,823
1981	498	5,218	319	10,930	2,505	551	11,261	31,282	88,606	2,413	3,218
1982	484	5,840	399	11,565	2,801	542	11,166	32,796	85,798	3,544	2,949
1983	388	5,719	414	12,245	3,010	634	11,029	33,439	89,285	3,501	2,620
1984	308	5,783	400	12,554	2,875	608	11,870	34,399	85,406	3,826	3,205
1985	361	6,524	419	12,555	3,070	533	12,035	35,498	103,326	4,652	3,914
1986	318	9,068	375	12,514	3,207	556	13,500	39,537	111,075	4,322	4,433
1987	306	8,915	399	12,366	3,305	420	15,101	40,812	116,621	4,750	5,041
1988	295	9,762	557	13,191	3,472	804	14,730	42,811	118,011	4,791	5,114
1989	311	10,092	613	14,064	3,581	1,079	14,617	44,356	117,239	5,404	5,611
1990	318	10,059	676	14,643	3,752	1,200	15,791	46,439	123,773	-	6,451

4) GROWTH RATE OF TURNOVER (AS % - CONSTANT PRICES)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	15.9	5.8	-	-1.4	8.1	-6.0	4.0	-	8.6	6.5	14.2
1979	43.3	46.5	-20.3	4.8	11.2	12.9	-9.3	4.9	11.8	-3.1	30.8
1980	49.2	4.7	33.3	13.5	7.9	4.4	26.0	16.4	10.9	0.6	20.2
1981	25.2	17.2	30.7	12.3	28.3	14.1	3.9	11.3	2.7	-0.0	14.0
1982	-2.9	11.9	25.0	5.8	11.8	-1.7	-0.8	4.8	-3.2	46.9	-8.4
1983	-19.8	-2.1	3.7	5.9	7.5	17.0	-1.2	2.0	4.1	-1.2	-11.2
1984	-20.5	1.1	-3.2	2.5	-4.5	-4.1	7.6	2.9	-4.3	9.3	22.3
1985	17.3	12.8	4.7	0.0	6.8	-12.3	1.4	3.2	21.0	21.6	22.1
1986	-12.1	39.0	-10.5	-0.3	4.5	4.3	12.2	11.4	7.5	-7.1	13.3
1987	-3.5	-1.7	6.3	-1.2	3.0	-24.4	11.9	3.2	5.0	9.9	13.7
1988	-3.7	9.5	39.5	6.7	5.1	91.4	-2.5	4.9	1.2	0.9	1.5
1989	5.3	3.4	10.1	6.6	3.1	34.2	-0.8	3.6	-0.7	12.8	9.7
1990	2.4	-0.3	10.3	4.1	4.8	11.2	8.0	4.7	5.6	-	15.0

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978-90	4.6	10.9	9.4	5.0	7.2	9.4	4.3	6.0	4.9	-	11.2

■ SOURCE: INDUSTRIAL ASSOCIATIONS

AEROSPACE TURNOVER CONSOLIDATED AT NATIONAL LEVEL

1) MIO ECU - CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	132	1,705	132	4,214	623	285	3,889	10,980	24,453	1,440	790
1979	215	2,590	131	4,732	773	337	4,030	12,807	28,061	1,278	1,032
1980	320	2,710	184	5,978	1,028	371	6,648	17,239	34,040	1,273	1,353
1981	426	3,317	262	7,241	1,526	441	8,153	21,366	49,116	1,685	2,078
1982	409	4,112	354	7,982	1,866	486	8,706	23,915	59,944	2,540	2,292
1983	339	4,272	346	8,904	2,220	595	8,895	25,572	72,019	2,914	2,353
1984	284	4,515	367	9,969	2,332	584	9,890	27,941	84,168	3,642	3,187
1985	360	5,319	405	10,782	2,611	533	10,660	30,670	103,326	4,652	3,914
1986	336	7,901	374	10,966	2,851	584	10,919	33,932	86,468	4,815	3,456
1987	337	8,292	360	10,924	3,028	452	12,080	35,473	77,089	5,225	3,680
1988	328	9,117	609	11,852	3,286	880	13,211	39,283	77,449	5,831	4,114
1989	363	9,929	789	13,317	3,675	1,199	13,787	43,059	87,052	6,653	5,280
1990	391	10,363	931	14,334	4,106	1,385	15,297	46,806	82,775	-	5,493

2) COMPARISON OF TURNOVER BY GEOGRAPHICAL AREA (EC = 100)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	1.2	15.5	1.2	38.4	5.7	2.6	35.4	100.0	222.7	13.1	7.2
1979	1.7	20.2	1.0	36.9	6.0	2.6	31.5	100.0	219.1	10.0	8.1
1980	1.9	15.7	1.1	34.7	6.0	2.2	38.6	100.0	197.5	7.4	7.8
1981	2.0	15.5	1.2	33.9	7.1	2.1	38.2	100.0	229.9	7.9	9.7
1982	1.7	17.2	1.5	33.4	7.8	2.0	36.4	100.0	250.7	10.6	9.6
1983	1.3	16.7	1.4	34.8	8.7	2.3	34.8	100.0	281.6	11.4	9.2
1984	1.0	16.2	1.3	35.7	8.3	2.1	35.4	100.0	301.2	13.0	11.4
1985	1.2	17.3	1.3	35.2	8.5	1.7	34.8	100.0	336.9	15.2	12.8
1986	1.0	23.3	1.1	32.3	8.4	1.7	32.2	100.0	254.8	14.2	10.2
1987	0.9	23.4	1.0	30.8	8.5	1.3	34.1	100.0	217.3	14.7	10.4
1988	0.8	23.2	1.6	30.2	8.4	2.2	33.6	100.0	197.2	14.8	10.5
1989	0.8	23.1	1.8	30.9	8.5	2.8	32.0	100.0	202.2	15.5	12.3
1990	0.8	22.1	2.0	30.6	8.8	3.0	32.7	100.0	176.8	-	11.7

■ SOURCE: INDUSTRIAL ASSOCIATIONS

AEROSPACE TURNOVER CONSOLIDATED AT NATIONAL LEVEL

3) MIO ECU - CONSTANT PRICES (1985)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	168	2,493	229	6,792	1,247	406	8,365	19,700	69,553	2,476	1,796
1979	263	3,577	182	7,036	1,413	460	7,370	20,302	77,774	2,399	2,349
1980	382	3,591	244	8,018	1,633	482	9,421	23,770	86,263	2,414	2,823
1981	494	4,208	319	8,977	2,175	546	9,583	26,301	88,606	2,413	3,218
1982	479	4,723	396	9,408	2,397	535	9,644	27,582	85,798	3,544	2,949
1983	382	4,542	412	10,070	2,512	624	9,796	28,338	89,285	3,501	2,620
1984	305	4,639	390	10,668	2,423	597	10,473	29,497	85,406	3,826	3,205
1985	360	5,319	405	10,782	2,611	533	10,660	30,670	103,326	4,652	3,914
1986	316	7,325	358	10,421	2,673	556	12,018	33,667	111,075	4,322	4,433
1987	304	7,334	337	10,276	2,742	420	13,282	34,695	116,621	4,750	5,041
1988	294	7,954	523	10,958	2,881	804	12,848	36,261	118,011	4,791	5,114
1989	311	8,424	600	11,867	2,976	1,079	12,711	37,968	117,239	5,404	5,611
1990	318	8,431	655	12,236	3,118	1,200	13,795	39,751	123,773	-	6,451

4) GROWTH RATE OF TURNOVER (AS % - CONSTANT PRICES)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	8.4	10.1	-	-0.2	3.3	-6.8	3.7	-	8.6	6.5	14.2
1979	56.4	43.5	-20.4	3.6	13.3	13.3	-11.9	3.1	11.8	-3.1	30.8
1980	45.0	0.4	33.8	14.0	15.6	4.7	27.8	17.1	10.9	0.6	20.2
1981	29.4	17.2	30.7	12.0	33.2	13.3	1.7	10.6	2.7	-0.0	14.0
1982	-3.1	12.2	24.4	4.8	10.2	-2.1	0.6	4.9	-3.2	46.9	-8.4
1983	-20.2	-3.8	3.8	7.0	4.8	16.7	1.6	2.7	4.1	-1.2	-11.2
1984	-20.2	2.1	-5.1	5.9	-3.5	-4.2	6.9	4.1	-4.3	9.3	22.3
1985	18.0	14.7	3.6	1.1	7.7	-10.7	1.8	4.0	21.0	21.6	22.1
1986	-12.2	37.7	-11.5	-3.3	2.4	4.3	12.7	9.8	7.5	-7.1	13.3
1987	-3.8	0.1	-5.9	-1.4	2.6	-24.4	10.5	3.1	5.0	9.9	13.7
1988	-3.4	8.4	55.0	6.6	5.1	91.4	-3.3	4.5	1.2	0.9	1.5
1989	5.7	5.9	14.9	8.3	3.3	34.2	-1.1	4.7	-0.7	12.8	9.7
1990	2.3	0.1	9.1	3.1	4.8	11.2	8.5	4.7	5.6	-	15.0

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978-90	5.4	10.7	9.2	5.0	7.9	9.4	4.3	6.0	4.9	-	11.2

■ SOURCE: INDUSTRIAL ASSOCIATIONS

AEROSPACE TURNOVER CONSOLIDATED AT EC LEVEL

1) MIO ECU - CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	82	1,214	108	3,851	518	252	3,193	9,218	24,453	1,440	790
1979	158	1,966	98	4,268	681	300	3,177	10,649	28,061	1,278	1,032
1980	263	1,715	136	5,424	760	325	5,501	14,123	34,040	1,273	1,353
1981	349	1,837	189	6,535	1,307	373	6,129	16,719	49,116	1,685	2,078
1982	338	2,157	281	7,303	1,623	408	6,283	18,393	59,944	2,540	2,292
1983	271	2,175	247	7,950	1,698	518	6,409	19,269	72,019	2,914	2,353
1984	205	2,342	282	9,083	1,744	528	7,330	21,514	84,168	3,642	3,187
1985	260	3,135	316	10,278	1,830	505	8,408	24,732	103,326	4,652	3,914
1986	227	5,538	297	10,264	1,977	556	8,625	27,485	86,468	4,815	3,456
1987	224	6,084	304	10,212	2,093	404	10,110	29,429	77,089	5,225	3,680
1988	246	6,344	503	10,740	2,260	813	10,862	31,768	77,449	5,831	4,114
1989	223	7,164	639	12,895	2,558	1,115	11,522	36,117	87,052	6,653	5,280
1990	277	7,451	773	13,441	2,867	1,298	12,723	38,830	82,775	-	5,493

2) COMPARISON OF TURNOVER BY GEOGRAPHICAL AREA (EC = 100)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	0.9	13.2	1.2	41.8	5.6	2.7	34.6	100.0	265.3	15.6	8.6
1979	1.5	18.5	0.9	40.1	6.4	2.8	29.8	100.0	263.5	12.0	9.7
1980	1.9	12.1	1.0	38.4	5.4	2.3	39.0	100.0	241.0	9.0	9.6
1981	2.1	11.0	1.1	39.1	7.8	2.2	36.7	100.0	293.8	10.1	12.4
1982	1.8	11.7	1.5	39.7	8.8	2.2	34.2	100.0	325.9	13.8	12.5
1983	1.4	11.3	1.3	41.3	8.8	2.7	33.3	100.0	373.8	15.1	12.2
1984	1.0	10.9	1.3	42.2	8.1	2.5	34.1	100.0	391.2	16.9	14.8
1985	1.1	12.7	1.3	41.6	7.4	2.0	34.0	100.0	417.8	18.8	15.8
1986	0.8	20.1	1.1	37.3	7.2	2.0	31.4	100.0	314.6	17.5	12.6
1987	0.8	20.7	1.0	34.7	7.1	1.4	34.4	100.0	262.0	17.8	12.5
1988	0.8	20.0	1.6	33.8	7.1	2.6	34.2	100.0	243.8	18.4	13.0
1989	0.6	19.8	1.8	35.7	7.1	3.1	31.9	100.0	241.0	18.4	14.6
1990	0.7	19.2	2.0	34.6	7.4	3.3	32.8	100.0	213.2	-	14.1

■ SOURCE: INDUSTRIAL ASSOCIATIONS

AEROSPACE TURNOVER CONSOLIDATED AT EC LEVEL

3) MIO ECU - CONSTANT PRICES (1985)

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	105	1,775	187	6,209	1,036	359	6,868	16,539	69,553	2,476	1,796
1979	194	2,716	137	6,347	1,246	409	5,811	16,859	77,774	2,399	2,349
1980	314	2,272	180	7,274	1,207	422	7,796	19,465	86,263	2,414	2,823
1981	406	2,330	230	8,102	1,863	462	7,203	20,595	88,606	2,413	3,218
1982	396	2,478	315	8,607	2,084	449	6,960	21,289	85,798	3,544	2,949
1983	306	2,312	293	8,992	1,921	543	7,058	21,426	89,285	3,501	2,620
1984	220	2,407	300	9,720	1,813	540	7,762	22,762	85,406	3,826	3,205
1985	260	3,135	316	10,278	1,830	505	8,408	24,732	103,326	4,652	3,914
1986	214	5,135	285	9,754	1,854	529	9,492	27,262	111,075	4,322	4,433
1987	202	5,381	284	9,606	1,895	375	11,116	28,859	116,621	4,750	5,041
1988	221	5,535	432	9,930	1,981	743	10,563	29,404	118,011	4,791	5,114
1989	191	6,078	486	11,491	2,072	1,004	10,623	31,945	117,239	5,404	5,611
1990	226	6,061	544	11,474	2,177	1,124	11,473	33,079	123,773	-	6,451

4) GROWTH RATE OF TURNOVER (AS % - CONSTANT PRICES)

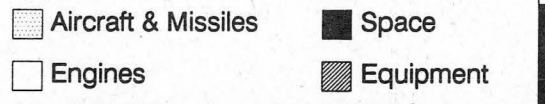
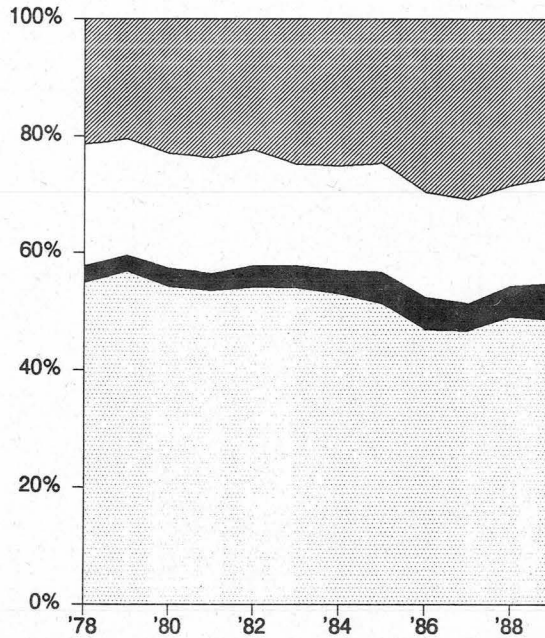
	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978	48.4	10.0	-	-0.4	-7.3	-13.5	4.1		8.6	6.5	14.2
1979	84.4	53.0	-26.9	2.2	20.3	14.1	-15.4	1.9	11.8	-3.1	30.8
1980	61.6	-16.4	31.6	14.6	-3.1	3.1	34.2	15.5	10.9	0.6	20.2
1981	29.3	2.5	27.5	11.4	54.4	9.4	-7.6	5.8	2.7	-0.0	14.0
1982	-2.3	6.4	37.1	6.2	11.8	-2.9	-3.4	3.4	-3.2	46.9	-8.4
1983	-22.8	-6.7	-6.9	4.5	-7.8	21.1	1.4	0.6	4.1	-1.2	-11.2
1984	-28.0	4.1	2.4	8.1	-5.7	-0.6	10.0	6.2	-4.3	9.3	22.3
1985	18.2	30.2	5.4	5.7	1.0	-6.5	8.3	8.7	21.0	21.6	22.1
1986	-17.9	63.8	-10.0	-5.1	1.3	4.9	12.9	10.2	7.5	-7.1	13.3
1987	-5.3	4.8	-0.2	-1.5	2.2	-29.1	17.1	5.9	5.0	9.9	13.7
1988	9.1	2.9	51.8	3.4	4.6	97.9	-5.0	1.9	1.2	0.9	1.5
1989	-13.4	9.8	12.7	15.7	4.6	35.3	0.6	8.6	-0.7	12.8	9.7
1990	18.0	-0.3	11.8	-0.1	5.1	12.0	8.0	3.6	5.6	-	15.0

	BE	DE	ES	FR	IT	NL	UK	EC	USA	JAPAN	CANADA
1978-90	6.6	10.8	9.3	5.3	6.4	10.0	4.4	5.9	4.9	-	11.2

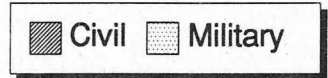
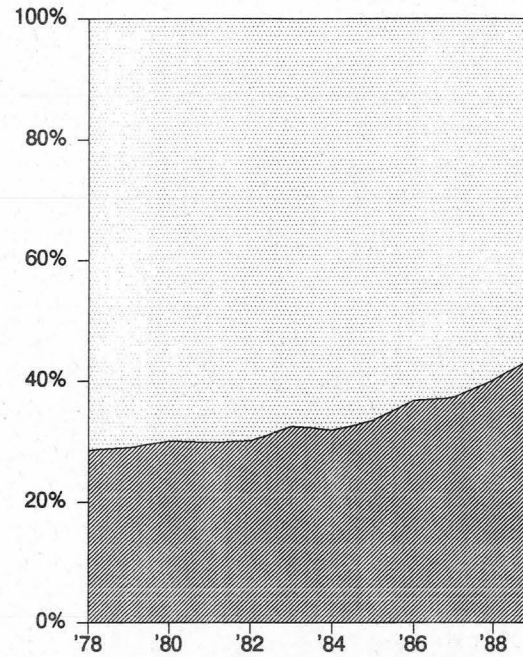
■ SOURCE: INDUSTRIAL ASSOCIATIONS

EC AEROSPACE TURNOVER

Breakdown by Sector



Breakdown by Activity



BREAKDOWN OF OVERALL AEROSPACE TURNOVER

BY SUBSECTOR (AS % OF TOTAL)

1) EC

	SUBSECTORS				DESTINATION	
	AIRCRAFT AND MISSILES	SPACE	ENGINES	EQUIPMENT	CIVIL	MILITARY
1978	54.9	2.8	20.9	21.5	28.5	71.5
1979	56.8	2.8	19.9	20.5	29.0	71.0
1980	54.2	3.2	19.6	23.1	30.0	70.0
1981	53.5	3.0	19.8	23.7	29.8	70.2
1982	54.1	3.7	19.9	22.3	30.1	69.9
1983	54.0	3.8	17.4	24.9	32.5	67.5
1984	53.0	4.0	17.9	25.1	31.9	68.1
1985	51.3	5.4	18.8	24.5	33.5	66.5
1986	46.9	5.5	18.0	29.6	36.8	63.2
1987	46.7	4.6	17.8	30.8	37.3	62.7
1988	49.0	5.3	17.2	28.5	40.2	59.8
1989	48.6	6.2	18.1	27.1	44.0	56.0

2) USA

	SUBSECTORS				DESTINATION	
	AIRCRAFT AND MISSILES	SPACE	ENGINES	EQUIPMENT	CIVIL	MILITARY
1978	57.7	7.5	17.2	17.6	36.9	63.1
1979	59.2	6.6	17.0	17.1	44.7	55.3
1980	56.1	7.3	16.5	20.0	45.5	54.5
1981	54.2	7.0	17.7	21.0	40.8	59.2
1982	49.2	8.1	17.4	25.3	29.4	70.6
1983	52.0	7.7	16.2	24.2	29.1	70.9
1984	51.7	7.9	17.1	23.3	25.9	74.1
1985	53.6	8.0	15.4	23.0	26.6	73.4
1986	54.3	7.4	15.0	23.3	27.4	72.6
1987	52.5	8.7	16.9	21.6	25.0	75.0
1988	49.3	9.4	20.1	21.1	28.5	71.5
1989	49.2	10.2	19.8	20.7	33.6	66.4

■ SOURCE: INDUSTRIAL ASSOCIATIONS

**BREAKDOWN OF OVERALL AEROSPACE TURNOVER
BY SUBSECTOR (AS % OF TOTAL)**

3) JAPAN

	SUBSECTORS				DESTINATION	
	AIRCRAFT AND MISSILES	SPACE	ENGINES	EQUIPMENT	CIVIL	MILITARY
1978	44.1	27.4	14.9	13.6	37.2	62.8
1979	43.3	26.9	14.7	15.2	37.4	62.6
1980	40.1	31.5	14.8	13.6	43.5	56.5
1981	42.9	29.4	15.0	12.7	44.7	55.3
1982	45.6	27.3	14.1	13.1	43.9	56.1
1983	44.2	27.7	13.5	14.7	43.4	56.6
1984	47.8	21.7	15.0	15.5	35.4	64.6
1985	48.1	23.5	14.3	14.1	35.5	64.5
1986	45.0	21.6	15.2	18.2	34.5	65.5
1987	44.7	23.1	14.0	18.1	38.0	62.0
1988	43.0	25.1	13.8	18.0	40.8	59.2
1989	40.3	27.7	13.6	18.4	44.8	55.2

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

TOTAL (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	5,444	6,576	6,776	7,285	8,188	9,312	10,632	11,938	13,338	13,559	14,206
.. R-D CONTRACTS	1,850	2,038	2,061	2,153	2,492	2,877	3,117	3,562	4,168	3,600	4,256
.. MAINTENANCE	808	1,055	1,151	1,251	1,236	1,601	1,684	1,960	2,131	2,313	2,564
.. PROCUREMENT	2,786	3,483	3,565	3,880	4,460	4,834	5,830	6,416	7,039	7,646	7,386
AEROSPACE MANUFACTURERS	5,282	7,507	10,411	11,872	12,765	13,305	13,745	16,397	16,066	18,677	17,746
.. NATIONAL	2,417	3,142	4,039	4,504	4,607	4,652	4,829	6,018	6,354	7,139	7,262
.. IN OTHER EC STATES	2,157	3,116	4,647	5,522	6,303	6,426	5,938	6,447	6,044	7,516	6,942
.. IN THIRD COUNTRIES	707	1,248	1,725	1,846	1,855	2,226	2,978	3,933	3,669	4,023	3,542
FINAL USERS	4,498	6,312	8,222	9,263	9,226	9,975	11,122	11,614	12,422	14,186	18,369
.. NATIONAL	621	847	878	911	850	1,123	1,420	1,562	1,543	1,906	2,564
.. IN OTHER EC STATES	501	1,033	1,008	1,161	928	953	1,089	1,012	1,313	1,744	2,066
.. IN THIRD COUNTRIES	3,375	4,432	6,337	7,190	7,449	7,898	8,612	9,040	9,566	10,535	13,740
TOTAL	15,224	20,381	25,404	28,419	30,179	32,593	35,498	39,949	41,826	46,422	50,321
EC PUBLIC MARKET.....(1)	5,602	7,197	7,331	7,983	8,673	9,699	11,017	12,404	13,898	14,181	15,308
EC COMMERCIAL MARKET..(2)	5,540	7,517	10,015	11,399	12,202	12,767	12,891	14,573	14,693	17,682	17,732
EXPORTS.....(3)	4,083	5,681	8,062	9,036	9,304	10,125	11,590	12,973	13,235	14,558	17,282

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

TOTAL (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	35.8	32.3	26.7	25.6	27.1	28.6	30.0	29.9	31.9	29.2	28.2
.. R-D CONTRACTS	12.1	10.0	8.1	7.6	8.3	8.8	8.8	8.9	10.0	7.8	8.5
.. MAINTENANCE	5.3	5.2	4.5	4.4	4.1	4.9	4.7	4.9	5.1	5.0	5.1
.. PROCUREMENT	18.3	17.1	14.0	13.7	14.8	14.8	16.4	16.1	16.8	16.5	14.7
AEROSPACE MANUFACTURERS	34.7	36.8	41.0	41.8	42.3	40.8	38.7	41.0	38.4	40.2	35.3
.. NATIONAL	15.9	15.4	15.9	15.8	15.3	14.3	13.6	15.1	15.2	15.4	14.4
.. IN OTHER EC STATES	14.2	15.3	18.3	19.4	20.9	19.7	16.7	16.1	14.4	16.2	13.8
.. IN THIRD COUNTRIES	4.6	6.1	6.8	6.5	6.1	6.8	8.4	9.8	8.8	8.7	7.0
FINAL USERS	29.5	31.0	32.4	32.6	30.6	30.6	31.3	29.1	29.7	30.6	36.5
.. NATIONAL	4.1	4.2	3.5	3.2	2.8	3.4	4.0	3.9	3.7	4.1	5.1
.. IN OTHER EC STATES	3.3	5.1	4.0	4.1	3.1	2.9	3.1	2.5	3.1	3.8	4.1
.. IN THIRD COUNTRIES	22.2	21.7	24.9	25.3	24.7	24.2	24.3	22.6	22.9	22.7	27.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	36.8	35.3	28.9	28.1	28.7	29.8	31.0	31.0	33.2	30.5	30.4
EC COMMERCIAL MARKET..(2)	36.4	36.9	39.4	40.1	40.4	39.2	36.3	36.5	35.1	38.1	35.2
EXPORTS.....(3)	26.8	27.9	31.7	31.8	30.8	31.1	32.7	32.5	31.6	31.4	34.3

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

CIVIL SECTOR (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	730	579	572	677	896	749	942	1,440	2,303	1,947	2,626
.. R-D CONTRACTS	187	334	276	347	334	360	554	717	1,261	769	1,083
.. MAINTENANCE	42	66	68	58	64	58	75	56	154	178	303
.. PROCUREMENT	501	180	228	273	498	332	313	666	887	1,000	1,239
AEROSPACE MANUFACTURERS	1,766	2,811	3,667	4,564	4,995	5,178	5,972	6,918	7,607	9,243	8,917
.. NATIONAL	901	1,389	1,495	1,644	1,888	1,786	2,044	2,355	2,553	2,974	2,994
.. IN OTHER EC STATES	490	734	1,177	1,872	2,036	1,972	2,251	2,334	2,469	3,548	3,404
.. IN THIRD COUNTRIES	375	687	995	1,048	1,071	1,420	1,677	2,228	2,585	2,721	2,519
FINAL USERS	1,912	2,728	3,336	3,306	3,917	4,464	4,975	6,343	5,693	7,491	10,619
.. NATIONAL	621	847	878	911	850	1,123	1,420	1,562	1,543	1,906	2,564
.. IN OTHER EC STATES	344	412	452	462	442	565	704	546	753	1,122	964
.. IN THIRD COUNTRIES	947	1,468	2,006	1,933	2,625	2,775	2,851	4,235	3,397	4,463	7,090
TOTAL	4,408	6,118	7,575	8,548	9,808	10,391	11,890	14,701	15,603	18,680	22,162
EC PUBLIC MARKET.....(1)	730	579	572	677	896	749	942	1,440	2,303	1,947	2,626
EC COMMERCIAL MARKET..(2)	2,356	3,383	4,002	4,889	5,216	5,447	6,420	6,798	7,318	9,550	9,927
EXPORTS.....(3)	1,322	2,155	3,001	2,981	3,695	4,195	4,528	6,464	5,982	7,183	9,609

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

CIVIL SECTOR (AS % OF SECTORAL TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	16.6	9.5	7.6	7.9	9.1	7.2	7.9	9.8	14.8	10.4	11.9
.. R-D CONTRACTS	4.2	5.5	3.6	4.1	3.4	3.5	4.7	4.9	8.1	4.1	4.9
.. MAINTENANCE	0.9	1.1	0.9	0.7	0.7	0.6	0.6	0.4	1.0	1.0	1.4
.. PROCUREMENT	11.4	2.9	3.0	3.2	5.1	3.2	2.6	4.5	5.7	5.4	5.6
AEROSPACE MANUFACTURERS	40.1	45.9	48.4	53.4	50.9	49.8	50.2	47.1	48.8	49.5	40.2
.. NATIONAL	20.4	22.7	19.7	19.2	19.3	17.2	17.2	16.0	16.4	15.9	13.5
.. IN OTHER EC STATES	11.1	12.0	15.5	21.9	20.8	19.0	18.9	15.9	15.8	19.0	15.4
.. IN THIRD COUNTRIES	8.5	11.2	13.1	12.3	10.9	13.7	14.1	15.2	16.6	14.6	11.4
FINAL USERS	43.4	44.6	44.0	38.7	39.9	43.0	41.8	43.1	36.5	40.1	47.9
.. NATIONAL	14.1	13.9	11.6	10.7	8.7	10.8	11.9	10.6	9.9	10.2	11.6
.. IN OTHER EC STATES	7.8	6.7	6.0	5.4	4.5	5.4	5.9	3.7	4.8	6.0	4.4
.. IN THIRD COUNTRIES	21.5	24.0	26.5	22.6	26.8	26.7	24.0	28.8	21.8	23.9	32.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	16.6	9.5	7.6	7.9	9.1	7.2	7.9	9.8	14.8	10.4	11.9
EC COMMERCIAL MARKET..(2)	53.4	55.3	52.8	57.2	53.2	52.4	54.0	46.2	46.9	51.1	44.8
EXPORTS.....(3)	30.0	35.2	39.6	34.9	37.7	40.4	38.1	44.0	38.3	38.5	43.4

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

CIVIL SECTOR (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	4.8	2.8	2.3	2.4	3.0	2.3	2.7	3.6	5.5	4.2	5.2
.. R-D CONTRACTS	1.2	1.6	1.1	1.2	1.1	1.1	1.6	1.8	3.0	1.7	2.2
.. MAINTENANCE	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.4	0.4	0.6
.. PROCUREMENT	3.3	0.9	0.9	1.0	1.6	1.0	0.9	1.7	2.1	2.2	2.5
AEROSPACE MANUFACTURERS	11.6	13.8	14.4	16.1	16.6	15.9	16.8	17.3	18.2	19.9	17.7
.. NATIONAL	5.9	6.8	5.9	5.8	6.3	5.5	5.8	5.9	6.1	6.4	5.9
.. IN OTHER EC STATES	3.2	3.6	4.6	6.6	6.7	6.0	6.3	5.8	5.9	7.6	6.8
.. IN THIRD COUNTRIES	2.5	3.4	3.9	3.7	3.5	4.4	4.7	5.6	6.2	5.9	5.0
FINAL USERS	12.6	13.4	13.1	11.6	13.0	13.7	14.0	15.9	13.6	16.1	21.1
.. NATIONAL	4.1	4.2	3.5	3.2	2.8	3.4	4.0	3.9	3.7	4.1	5.1
.. IN OTHER EC STATES	2.3	2.0	1.8	1.6	1.5	1.7	2.0	1.4	1.8	2.4	1.9
.. IN THIRD COUNTRIES	6.2	7.2	7.9	6.8	8.7	8.5	8.0	10.6	8.1	9.6	14.1
TOTAL	29.0	30.0	29.8	30.1	32.5	31.9	33.5	36.8	37.3	40.2	44.0
EC PUBLIC MARKET.....(1)	4.8	2.8	2.3	2.4	3.0	2.3	2.7	3.6	5.5	4.2	5.2
EC COMMERCIAL MARKET..(2)	15.5	16.6	15.8	17.2	17.3	16.7	18.1	17.0	17.5	20.6	19.7
EXPORTS.....(3)	8.7	10.6	11.8	10.5	12.2	12.9	12.8	16.2	14.3	15.5	19.1

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

MILITARY SECTOR (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	4,714	5,996	6,204	6,607	7,291	8,562	9,690	10,498	11,035	11,612	11,580
.. R-D CONTRACTS	1,662	1,704	1,785	1,807	2,157	2,517	2,564	2,845	2,907	2,831	3,173
.. MAINTENANCE	767	989	1,083	1,192	1,172	1,543	1,609	1,904	1,977	2,135	2,260
.. PROCUREMENT	2,285	3,304	3,336	3,608	3,962	4,502	5,517	5,750	6,152	6,646	6,147
AEROSPACE MANUFACTURERS	3,515	4,696	6,744	7,307	7,770	8,126	7,772	9,480	8,459	9,434	8,829
.. NATIONAL	1,517	1,752	2,544	2,860	2,719	2,866	2,784	3,662	3,800	4,165	4,268
.. IN OTHER EC STATES	1,667	2,382	3,470	3,650	4,267	4,455	3,687	4,113	3,575	3,968	3,537
.. IN THIRD COUNTRIES	332	562	730	797	784	806	1,301	1,705	1,084	1,302	1,023
FINAL USERS	2,586	3,585	4,886	5,956	5,309	5,511	6,146	5,270	6,729	6,695	7,751
.. NATIONAL	-	-	-	-	-	-	-	-	-	-	-
.. IN OTHER EC STATES	157	621	556	699	486	387	385	466	560	622	1,101
.. IN THIRD COUNTRIES	2,429	2,964	4,331	5,257	4,824	5,124	5,761	4,805	6,169	6,073	6,649
TOTAL	10,816	14,277	17,834	19,871	20,371	22,200	23,609	25,248	26,223	27,741	28,159
EC PUBLIC MARKET.....(1)	4,871	6,617	6,759	7,306	7,777	8,950	10,075	10,964	11,595	12,234	12,681
EC COMMERCIAL MARKET..(2)	3,184	4,134	6,014	6,510	6,986	7,320	6,471	7,775	7,375	8,132	7,805
EXPORTS.....(3)	2,761	3,525	5,061	6,055	5,608	5,930	7,063	6,509	7,253	7,375	7,672

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

MILITARY SECTOR (AS % OF SECTORAL TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	43.6	42.0	34.8	33.3	35.8	38.6	41.0	41.6	42.1	41.9	41.1
.. R-D CONTRACTS	15.4	11.9	10.0	9.1	10.6	11.3	10.9	11.3	11.1	10.2	11.3
.. MAINTENANCE	7.1	6.9	6.1	6.0	5.8	7.0	6.8	7.5	7.5	7.7	8.0
.. PROCUREMENT	21.1	23.1	18.7	18.2	19.4	20.3	23.4	22.8	23.5	24.0	21.8
AEROSPACE MANUFACTURERS	32.5	32.9	37.8	36.8	38.1	36.6	32.9	37.5	32.3	34.0	31.4
.. NATIONAL	14.0	12.3	14.3	14.4	13.3	12.9	11.8	14.5	14.5	15.0	15.2
.. IN OTHER EC STATES	15.4	16.7	19.5	18.4	20.9	20.1	15.6	16.3	13.6	14.3	12.6
.. IN THIRD COUNTRIES	3.1	3.9	4.1	4.0	3.9	3.6	5.5	6.8	4.1	4.7	3.6
FINAL USERS	23.9	25.1	27.4	30.0	26.1	24.8	26.0	20.9	25.7	24.1	27.5
.. NATIONAL	-	-	-	-	-	-	-	-	-	-	-
.. IN OTHER EC STATES	1.5	4.3	3.1	3.5	2.4	1.7	1.6	1.8	2.1	2.2	3.9
.. IN THIRD COUNTRIES	22.5	20.8	24.3	26.5	23.7	23.1	24.4	19.0	23.5	21.9	23.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	45.0	46.3	37.9	36.8	38.2	40.3	42.7	43.4	44.2	44.1	45.0
EC COMMERCIAL MARKET..(2)	29.4	29.0	33.7	32.8	34.3	33.0	27.4	30.8	28.1	29.3	27.7
EXPORTS.....(3)	25.5	24.7	28.4	30.5	27.5	26.7	29.9	25.8	27.7	26.6	27.2

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

MILITARY SECTOR (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	31.0	29.4	24.4	23.2	24.2	26.3	27.3	26.3	26.4	25.0	23.0
.. R-D CONTRACTS	10.9	8.4	7.0	6.4	7.1	7.7	7.2	7.1	7.0	6.1	6.3
.. MAINTENANCE	5.0	4.9	4.3	4.2	3.9	4.7	4.5	4.8	4.7	4.6	4.5
.. PROCUREMENT	15.0	16.2	13.1	12.7	13.1	13.8	15.5	14.4	14.7	14.3	12.2
AEROSPACE MANUFACTURERS	23.1	23.0	26.5	25.7	25.7	24.9	21.9	23.7	20.2	20.3	17.5
.. NATIONAL	10.0	8.6	10.0	10.1	9.0	8.8	7.8	9.2	9.1	9.0	8.5
.. IN OTHER EC STATES	11.0	11.7	13.7	12.8	14.1	13.7	10.4	10.3	8.5	8.5	7.0
.. IN THIRD COUNTRIES	2.2	2.8	2.9	2.8	2.6	2.5	3.7	4.3	2.6	2.8	2.0
FINAL USERS	17.0	17.6	19.2	21.0	17.6	16.9	17.3	13.2	16.1	14.4	15.4
.. NATIONAL	-	-	-	-	-	-	-	-	-	-	-
.. IN OTHER EC STATES	1.0	3.0	2.2	2.5	1.6	1.2	1.1	1.2	1.3	1.3	2.2
.. IN THIRD COUNTRIES	16.0	14.5	17.0	18.5	16.0	15.7	16.2	12.0	14.7	13.1	13.2
TOTAL	71.0	70.0	70.2	69.9	67.5	68.1	66.5	63.2	62.7	59.8	56.0
EC PUBLIC MARKET.....(1)	32.0	32.5	26.6	25.7	25.8	27.5	28.4	27.4	27.7	26.4	25.2
EC COMMERCIAL MARKET..(2)	20.9	20.3	23.7	22.9	23.1	22.5	18.2	19.5	17.6	17.5	15.5
EXPORTS.....(3)	18.1	17.3	19.9	21.3	18.6	18.2	19.9	16.3	17.3	15.9	15.2

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

AIRFRAME AND MISSILES SECTOR (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	3,556	3,699	3,697	3,815	4,248	4,520	5,596	5,817	6,360	6,233	7,049
.. R-D CONTRACTS	1,169	1,093	1,133	1,137	1,312	1,588	1,651	1,955	2,031	1,694	2,418
.. MAINTENANCE	487	554	600	657	626	816	836	963	1,080	1,147	1,329
.. PROCUREMENT	1,900	2,052	1,963	2,021	2,310	2,115	3,109	2,899	3,249	3,392	3,302
AEROSPACE MANUFACTURERS	2,059	3,042	4,017	4,786	5,456	5,418	5,192	5,970	5,418	7,437	6,378
.. NATIONAL	737	938	1,212	1,356	1,441	1,343	1,315	1,408	1,494	2,172	1,965
.. IN OTHER EC STATES	1,100	1,744	2,432	2,924	3,626	3,663	3,126	3,078	3,125	4,042	3,500
.. IN THIRD COUNTRIES	221	361	374	506	389	413	752	1,484	799	1,223	913
FINAL USERS	3,038	4,302	5,875	6,785	6,590	7,328	7,438	6,944	7,771	9,079	11,049
.. NATIONAL	245	349	410	473	335	500	569	368	367	425	855
.. IN OTHER EC STATES	222	592	514	714	548	497	598	277	415	861	1,218
.. IN THIRD COUNTRIES	2,571	3,361	4,951	5,599	5,708	6,331	6,272	6,299	6,989	7,792	8,976
TOTAL	8,653	11,044	13,589	15,386	16,294	17,266	18,227	18,731	19,549	22,749	24,476
EC PUBLIC MARKET.....(1)	3,617	4,122	4,051	4,323	4,551	4,775	5,862	5,918	6,472	6,446	7,708
EC COMMERCIAL MARKET..(2)	2,243	3,200	4,214	4,958	5,646	5,747	5,341	5,029	5,290	7,287	6,879
EXPORTS.....(3)	2,792	3,721	5,325	6,104	6,097	6,744	7,023	7,783	7,788	9,016	9,889

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

AIRFRAME AND MISSILES SECTOR (AS % OF SECTORAL TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	41.1	33.5	27.2	24.8	26.1	26.2	30.7	31.1	32.5	27.4	28.8
.. R-D CONTRACTS	13.5	9.9	8.3	7.4	8.1	9.2	9.1	10.4	10.4	7.4	9.9
.. MAINTENANCE	5.6	5.0	4.4	4.3	3.8	4.7	4.6	5.1	5.5	5.0	5.4
.. PROCUREMENT	22.0	18.6	14.4	13.1	14.2	12.2	17.1	15.5	16.6	14.9	13.5
AEROSPACE MANUFACTURERS	23.8	27.5	29.6	31.1	33.5	31.4	28.5	31.9	27.7	32.7	26.1
.. NATIONAL	8.5	8.5	8.9	8.8	8.8	7.8	7.2	7.5	7.6	9.5	8.0
.. IN OTHER EC STATES	12.7	15.8	17.9	19.0	22.3	21.2	17.1	16.4	16.0	17.8	14.3
.. IN THIRD COUNTRIES	2.6	3.3	2.8	3.3	2.4	2.4	4.1	7.9	4.1	5.4	3.7
FINAL USERS	35.1	39.0	43.2	44.1	40.4	42.4	40.8	37.1	39.8	39.9	45.1
.. NATIONAL	2.8	3.2	3.0	3.1	2.1	2.9	3.1	2.0	1.9	1.9	3.5
.. IN OTHER EC STATES	2.6	5.4	3.8	4.6	3.4	2.9	3.3	1.5	2.1	3.8	5.0
.. IN THIRD COUNTRIES	29.7	30.4	36.4	36.4	35.0	36.7	34.4	33.6	35.7	34.3	36.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	41.8	37.3	29.8	28.1	27.9	27.7	32.2	31.6	33.1	28.3	31.5
EC COMMERCIAL MARKET..(2)	25.9	29.0	31.0	32.2	34.7	33.3	29.3	26.8	27.1	32.0	28.1
EXPORTS.....(3)	32.3	33.7	39.2	39.7	37.4	39.1	38.5	41.6	39.8	39.6	40.4

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

AIRFRAME AND MISSILES SECTOR (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	23.4	18.1	14.6	13.4	14.1	13.9	15.8	14.6	15.2	13.4	14.0
.. R-D CONTRACTS	7.7	5.4	4.5	4.0	4.3	4.9	4.7	4.9	4.9	3.6	4.8
.. MAINTENANCE	3.2	2.7	2.4	2.3	2.1	2.5	2.4	2.4	2.6	2.5	2.6
.. PROCUREMENT	12.5	10.1	7.7	7.1	7.7	6.5	8.8	7.3	7.8	7.3	6.6
AEROSPACE MANUFACTURERS	13.5	14.9	15.8	16.8	18.1	16.6	14.6	14.9	13.0	16.0	12.7
.. NATIONAL	4.8	4.6	4.8	4.8	4.8	4.1	3.7	3.5	3.6	4.7	3.9
.. IN OTHER EC STATES	7.2	8.6	9.6	10.3	12.0	11.2	8.8	7.7	7.5	8.7	7.0
.. IN THIRD COUNTRIES	1.5	1.8	1.5	1.8	1.3	1.3	2.1	3.7	1.9	2.6	1.8
FINAL USERS	20.0	21.1	23.1	23.9	21.8	22.5	21.0	17.4	18.6	19.6	22.0
.. NATIONAL	1.6	1.7	1.6	1.7	1.1	1.5	1.6	0.9	0.9	0.9	1.7
.. IN OTHER EC STATES	1.5	2.9	2.0	2.5	1.8	1.5	1.7	0.7	1.0	1.9	2.4
.. IN THIRD COUNTRIES	16.9	16.5	19.5	19.7	18.9	19.4	17.7	15.8	16.7	16.8	17.8
TOTAL	56.8	54.2	53.5	54.1	54.0	53.0	51.3	46.9	46.7	49.0	48.6
EC PUBLIC MARKET.....(1)	23.8	20.2	15.9	15.2	15.1	14.7	16.5	14.8	15.5	13.9	15.3
EC COMMERCIAL MARKET..(2)	14.7	15.7	16.6	17.4	18.7	17.6	15.0	12.6	12.6	15.7	13.7
EXPORTS.....(3)	18.3	18.3	21.0	21.5	20.2	20.7	19.8	19.5	18.6	19.4	19.7

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

SPACE SECTOR (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	115	229	242	351	450	474	740	481	633	892	1,063
.. R-D CONTRACTS	86	210	152	214	259	283	479	234	431	550	605
.. MAINTENANCE	3	5	1	3	5	6	19	16	18	19	17
.. PROCUREMENT	25	15	90	134	185	185	242	232	185	323	441
AEROSPACE MANUFACTURERS	152	196	277	534	509	504	660	833	830	789	1,109
.. NATIONAL	55	56	102	147	95	107	214	256	413	296	435
.. IN OTHER EC STATES	91	120	159	362	353	338	414	518	348	464	556
.. IN THIRD COUNTRIES	6	20	16	24	61	59	32	58	68	29	117
FINAL USERS	165	218	256	161	174	331	525	877	481	782	954
.. NATIONAL	6	10	14	13	17	95	219	342	234	334	294
.. IN OTHER EC STATES	115	145	180	81	91	184	221	171	169	296	187
.. IN THIRD COUNTRIES	44	62	62	67	66	52	85	365	77	152	473
TOTAL	432	643	775	1,046	1,132	1,310	1,925	2,191	1,944	2,463	3,125
EC PUBLIC MARKET.....(1)	115	230	242	351	450	475	741	482	633	940	1,168
EC COMMERCIAL MARKET..(2)	267	332	455	603	555	725	1,068	1,286	1,165	1,342	1,368
EXPORTS.....(3)	50	82	77	91	127	111	117	423	146	182	590

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

SPACE SECTOR (AS % OF SECTORAL TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	26.6	35.7	31.2	33.6	39.7	36.2	38.4	22.0	32.6	36.2	34.0
.. R-D CONTRACTS	19.9	32.6	19.6	20.5	22.9	21.6	24.9	10.7	22.2	22.3	19.3
.. MAINTENANCE	0.8	0.7	0.1	0.3	0.5	0.5	1.0	0.7	0.9	0.8	0.6
.. PROCUREMENT	5.9	2.4	11.6	12.8	16.4	14.1	12.6	10.6	9.5	13.1	14.1
AEROSPACE MANUFACTURERS	35.2	30.5	35.7	51.0	44.9	38.5	34.3	38.0	42.7	32.0	35.5
.. NATIONAL	12.8	8.8	13.2	14.1	8.4	8.2	11.1	11.7	21.3	12.0	13.9
.. IN OTHER EC STATES	21.0	18.6	20.5	34.6	31.1	25.8	21.5	23.7	17.9	18.8	17.8
.. IN THIRD COUNTRIES	1.4	3.1	2.0	2.3	5.4	4.5	1.7	2.7	3.5	1.2	3.8
FINAL USERS	38.2	33.9	33.0	15.4	15.3	25.3	27.3	40.0	24.7	31.8	30.5
.. NATIONAL	1.3	1.6	1.9	1.2	1.5	7.3	11.4	15.6	12.1	13.6	9.4
.. IN OTHER EC STATES	26.8	22.6	23.2	7.8	8.1	14.1	11.5	7.8	8.7	12.0	6.0
.. IN THIRD COUNTRIES	10.1	9.7	7.9	6.4	5.8	4.0	4.4	16.6	4.0	6.2	15.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	26.6	35.7	31.2	33.6	39.7	36.2	38.5	22.0	32.6	38.2	37.4
EC COMMERCIAL MARKET..(2)	61.9	51.6	58.8	57.7	49.0	55.3	55.5	58.7	59.9	54.5	43.8
EXPORTS.....(3)	11.5	12.7	10.0	8.7	11.2	8.4	6.1	19.3	7.5	7.4	18.9

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

SPACE SECTOR (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	0.8	1.1	1.0	1.2	1.5	1.5	2.1	1.2	1.5	1.9	2.1
.. R-D CONTRACTS	0.6	1.0	0.6	0.8	0.9	0.9	1.3	0.6	1.0	1.2	1.2
.. MAINTENANCE	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
.. PROCUREMENT	0.2	0.1	0.4	0.5	0.6	0.6	0.7	0.6	0.4	0.7	0.9
AEROSPACE MANUFACTURERS	1.0	1.0	1.1	1.9	1.7	1.5	1.9	2.1	2.0	1.7	2.2
.. NATIONAL	0.4	0.3	0.4	0.5	0.3	0.3	0.6	0.6	1.0	0.6	0.9
.. IN OTHER EC STATES	0.6	0.6	0.6	1.3	1.2	1.0	1.2	1.3	0.8	1.0	1.1
.. IN THIRD COUNTRIES	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2
FINAL USERS	1.1	1.1	1.0	0.6	0.6	1.0	1.5	2.2	1.1	1.7	1.9
.. NATIONAL	0.0	0.1	0.1	0.0	0.1	0.3	0.6	0.9	0.6	0.7	0.6
.. IN OTHER EC STATES	0.8	0.7	0.7	0.3	0.3	0.6	0.6	0.4	0.4	0.6	0.4
.. IN THIRD COUNTRIES	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.9	0.2	0.3	0.9
TOTAL	2.8	3.2	3.0	3.7	3.8	4.0	5.4	5.5	4.6	5.3	6.2
EC PUBLIC MARKET.....(1)	0.8	1.1	1.0	1.2	1.5	1.5	2.1	1.2	1.5	2.0	2.3
EC COMMERCIAL MARKET..(2)	1.8	1.6	1.8	2.1	1.8	2.2	3.0	3.2	2.8	2.9	2.7
EXPORTS.....(3)	0.3	0.4	0.3	0.3	0.4	0.3	0.3	1.1	0.3	0.4	1.2

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

ENGINE SECTOR (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	907	1,213	1,175	1,281	1,255	1,372	1,359	1,538	1,751	1,757	1,822
.. R-D CONTRACTS	358	290	324	346	375	290	324	253	390	341	385
.. MAINTENANCE	164	286	297	325	326	388	373	352	367	439	437
.. PROCUREMENT	385	637	553	610	555	694	662	933	995	977	1,001
AEROSPACE MANUFACTURERS	1,354	1,722	2,704	2,966	2,828	3,251	3,477	3,786	3,927	4,357	4,208
.. NATIONAL	510	627	877	975	738	775	951	884	842	875	1,040
.. IN OTHER EC STATES	556	573	1,041	1,156	1,205	1,398	1,263	1,365	1,235	1,547	1,467
.. IN THIRD COUNTRIES	288	522	786	836	886	1,078	1,263	1,537	1,850	1,935	1,701
FINAL USERS	761	1,063	1,149	1,394	1,165	1,212	1,822	1,861	1,764	1,883	3,069
.. NATIONAL	221	286	234	214	294	237	293	440	402	478	486
.. IN OTHER EC STATES	71	164	146	213	143	124	108	120	271	272	157
.. IN THIRD COUNTRIES	469	612	769	967	728	851	1,420	1,301	1,090	1,133	2,426
TOTAL	3,022	3,998	5,028	5,642	5,249	5,834	6,658	7,185	7,442	7,998	9,099
EC PUBLIC MARKET.....(1)	962	1,337	1,287	1,358	1,334	1,439	1,388	1,611	1,995	1,936	1,914
EC COMMERCIAL MARKET..(2)	1,303	1,528	2,186	2,481	2,301	2,466	2,587	2,736	2,507	2,995	3,059
EXPORTS.....(3)	757	1,134	1,555	1,803	1,613	1,929	2,682	2,839	2,940	3,068	4,127

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

ENGINE SECTOR (AS % OF SECTORAL TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	30.0	30.3	23.4	22.7	23.9	23.5	20.4	21.4	23.5	22.0	20.0
.. R-D CONTRACTS	11.8	7.3	6.4	6.1	7.1	5.0	4.9	3.5	5.2	4.3	4.2
.. MAINTENANCE	5.4	7.2	5.9	5.8	6.2	6.7	5.6	4.9	4.9	5.5	4.8
.. PROCUREMENT	12.7	15.9	11.0	10.8	10.6	11.9	9.9	13.0	13.4	12.2	11.0
AEROSPACE MANUFACTURERS	44.8	43.1	53.8	52.6	53.9	55.7	52.2	52.7	52.8	54.5	46.2
.. NATIONAL	16.9	15.7	17.4	17.3	14.1	13.3	14.3	12.3	11.3	10.9	11.4
.. IN OTHER EC STATES	18.4	14.3	20.7	20.5	23.0	24.0	19.0	19.0	16.6	19.3	16.1
.. IN THIRD COUNTRIES	9.5	13.1	15.6	14.8	16.9	18.5	19.0	21.4	24.9	24.2	18.7
FINAL USERS	25.2	26.6	22.8	24.7	22.2	20.8	27.4	25.9	23.7	23.5	33.7
.. NATIONAL	7.3	7.2	4.6	3.8	5.6	4.1	4.4	6.1	5.4	6.0	5.3
.. IN OTHER EC STATES	2.4	4.1	2.9	3.8	2.7	2.1	1.6	1.7	3.6	3.4	1.7
.. IN THIRD COUNTRIES	15.5	15.3	15.3	17.1	13.9	14.6	21.3	18.1	14.6	14.2	26.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	31.8	33.4	25.6	24.1	25.4	24.7	20.9	22.4	26.8	24.2	21.0
EC COMMERCIAL MARKET..(2)	43.1	38.2	43.5	44.0	43.8	42.3	38.9	38.1	33.7	37.4	33.6
EXPORTS.....(3)	25.0	28.4	30.9	32.0	30.7	33.1	40.3	39.5	39.5	38.4	45.4

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

ENGINE SECTOR (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	6.0	6.0	4.6	4.5	4.2	4.2	3.8	3.9	4.2	3.8	3.6
.. R-D CONTRACTS	2.3	1.4	1.3	1.2	1.2	0.9	0.9	0.6	0.9	0.7	0.8
.. MAINTENANCE	1.1	1.4	1.2	1.1	1.1	1.2	1.1	0.9	0.9	0.9	0.9
.. PROCUREMENT	2.5	3.1	2.2	2.1	1.8	2.1	1.9	2.3	2.4	2.1	2.0
AEROSPACE MANUFACTURERS	8.9	8.5	10.6	10.4	9.4	10.0	9.8	9.5	9.4	9.4	8.4
.. NATIONAL	3.4	3.1	3.5	3.4	2.4	2.4	2.7	2.2	2.0	1.9	2.1
.. IN OTHER EC STATES	3.7	2.8	4.1	4.1	4.0	4.3	3.6	3.4	3.0	3.3	2.9
.. IN THIRD COUNTRIES	1.9	2.6	3.1	2.9	2.9	3.3	3.6	3.8	4.4	4.2	3.4
FINAL USERS	5.0	5.2	4.5	4.9	3.9	3.7	5.1	4.7	4.2	4.1	6.1
.. NATIONAL	1.4	1.4	0.9	0.8	1.0	0.7	0.8	1.1	1.0	1.0	1.0
.. IN OTHER EC STATES	0.5	0.8	0.6	0.7	0.5	0.4	0.3	0.3	0.6	0.6	0.3
.. IN THIRD COUNTRIES	3.1	3.0	3.0	3.4	2.4	2.6	4.0	3.3	2.6	2.4	4.8
TOTAL	19.9	19.6	19.8	19.9	17.4	17.9	18.8	18.0	17.8	17.2	18.1
EC PUBLIC MARKET.....(1)	6.3	6.6	5.1	4.8	4.4	4.4	3.9	4.0	4.8	4.2	3.8
EC COMMERCIAL MARKET..(2)	8.6	7.5	8.6	8.7	7.6	7.6	7.3	6.8	6.0	6.5	6.1
EXPORTS.....(3)	5.0	5.6	6.1	6.3	5.3	5.9	7.6	7.1	7.0	6.6	8.2

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

EQUIPMENT SECTOR (MIO ECUS AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	866	1,434	1,663	1,837	2,234	2,946	2,936	4,101	4,593	4,677	4,273
.. R-D CONTRACTS	237	444	451	456	546	715	663	1,121	1,316	1,015	849
.. MAINTENANCE	153	210	253	266	278	390	456	629	667	708	781
.. PROCUREMENT	476	779	958	1,115	1,410	1,841	1,818	2,352	2,610	2,954	2,643
AEROSPACE MANUFACTURERS	1,717	2,546	3,412	3,586	3,973	4,131	4,415	5,809	5,892	6,094	6,051
.. NATIONAL	1,115	1,521	1,847	2,026	2,334	2,427	2,349	3,470	3,605	3,796	3,823
.. IN OTHER EC STATES	410	679	1,015	1,080	1,120	1,028	1,135	1,486	1,335	1,462	1,418
.. IN THIRD COUNTRIES	192	346	549	480	519	677	932	854	952	836	811
FINAL USERS	534	730	942	923	1,297	1,103	1,337	1,931	2,406	2,441	3,297
.. NATIONAL	150	201	219	211	204	291	340	413	539	668	929
.. IN OTHER EC STATES	93	131	167	153	145	148	161	444	457	315	503
.. IN THIRD COUNTRIES	291	398	556	558	947	665	836	1,075	1,410	1,458	1,865
TOTAL	3,118	4,710	6,017	6,345	7,504	8,181	8,689	11,842	12,891	13,211	13,620
EC PUBLIC MARKET.....(1)	908	1,508	1,752	1,951	2,338	3,010	3,026	4,392	4,798	4,859	4,518
EC COMMERCIAL MARKET..(2)	1,726	2,458	3,160	3,357	3,699	3,829	3,895	5,522	5,731	6,059	6,427
EXPORTS.....(3)	484	744	1,105	1,037	1,466	1,342	1,768	1,928	2,362	2,293	2,675

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

EQUIPMENT SECTOR (AS % OF SECTORAL TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	27.8	30.4	27.6	29.0	29.8	36.0	33.8	34.6	35.6	35.4	31.4
.. R-D CONTRACTS	7.6	9.4	7.5	7.2	7.3	8.7	7.6	9.5	10.2	7.7	6.2
.. MAINTENANCE	4.9	4.5	4.2	4.2	3.7	4.8	5.2	5.3	5.2	5.4	5.7
.. PROCUREMENT	15.3	16.5	15.9	17.6	18.8	22.5	20.9	19.9	20.2	22.4	19.4
AEROSPACE MANUFACTURERS	55.1	54.1	56.7	56.5	52.9	50.5	50.8	49.1	45.7	46.1	44.4
.. NATIONAL	35.8	32.3	30.7	31.9	31.1	29.7	27.0	29.3	28.0	28.7	28.1
.. IN OTHER EC STATES	13.2	14.4	16.9	17.0	14.9	12.6	13.1	12.5	10.4	11.1	10.4
.. IN THIRD COUNTRIES	6.2	7.4	9.1	7.6	6.9	8.3	10.7	7.2	7.4	6.3	6.0
FINAL USERS	17.1	15.5	15.7	14.5	17.3	13.5	15.4	16.3	18.7	18.5	24.2
.. NATIONAL	4.8	4.3	3.6	3.3	2.7	3.6	3.9	3.5	4.2	5.1	6.8
.. IN OTHER EC STATES	3.0	2.8	2.8	2.4	1.9	1.8	1.9	3.7	3.5	2.4	3.7
.. IN THIRD COUNTRIES	9.3	8.4	9.2	8.8	12.6	8.1	9.6	9.1	10.9	11.0	13.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EC PUBLIC MARKET.....(1)	29.1	32.0	29.1	30.8	31.2	36.8	34.8	37.1	37.2	36.8	33.2
EC COMMERCIAL MARKET..(2)	55.4	52.2	52.5	52.9	49.3	46.8	44.8	46.6	44.5	45.9	47.2
EXPORTS.....(3)	15.5	15.8	18.4	16.3	19.5	16.4	20.3	16.3	18.3	17.4	19.6

(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

BREAKDOWN OF EC OVERALL AEROSPACE TURNOVER

EQUIPMENT SECTOR (AS % OF GRAND TOTAL)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
NATIONAL STATE	5.7	7.0	6.5	6.5	7.4	9.0	8.3	10.3	11.0	10.1	8.5
.. R-D CONTRACTS	1.6	2.2	1.8	1.6	1.8	2.2	1.9	2.8	3.1	2.2	1.7
.. MAINTENANCE	1.0	1.0	1.0	0.9	0.9	1.2	1.3	1.6	1.6	1.5	1.6
.. PROCUREMENT	3.1	3.8	3.8	3.9	4.7	5.6	5.1	5.9	6.2	6.4	5.3
AEROSPACE MANUFACTURERS	11.3	12.5	13.4	12.6	13.2	12.7	12.4	14.5	14.1	13.1	12.0
.. NATIONAL	7.3	7.5	7.3	7.1	7.7	7.4	6.6	8.7	8.6	8.2	7.6
.. IN OTHER EC STATES	2.7	3.3	4.0	3.8	3.7	3.2	3.2	3.7	3.2	3.1	2.8
.. IN THIRD COUNTRIES	1.3	1.7	2.2	1.7	1.7	2.1	2.6	2.1	2.3	1.8	1.6
FINAL USERS	3.5	3.6	3.7	3.2	4.3	3.4	3.8	4.8	5.8	5.3	6.6
.. NATIONAL	1.0	1.0	0.9	0.7	0.7	0.9	1.0	1.0	1.3	1.4	1.8
.. IN OTHER EC STATES	0.6	0.6	0.7	0.5	0.5	0.5	0.5	1.1	1.1	0.7	1.0
.. IN THIRD COUNTRIES	1.9	2.0	2.2	2.0	3.1	2.0	2.4	2.7	3.4	3.1	3.7
TOTAL	20.5	23.1	23.7	22.3	24.9	25.1	24.5	29.6	30.8	28.5	27.1
EC PUBLIC MARKET.....(1)	6.0	7.4	6.9	6.9	7.7	9.2	8.5	11.0	11.5	10.5	9.0
EC COMMERCIAL MARKET..(2)	11.3	12.1	12.4	11.8	12.3	11.7	11.0	13.8	13.7	13.1	12.8
EXPORTS.....(3)	3.2	3.6	4.4	3.7	4.9	4.1	5.0	4.8	5.6	4.9	5.3

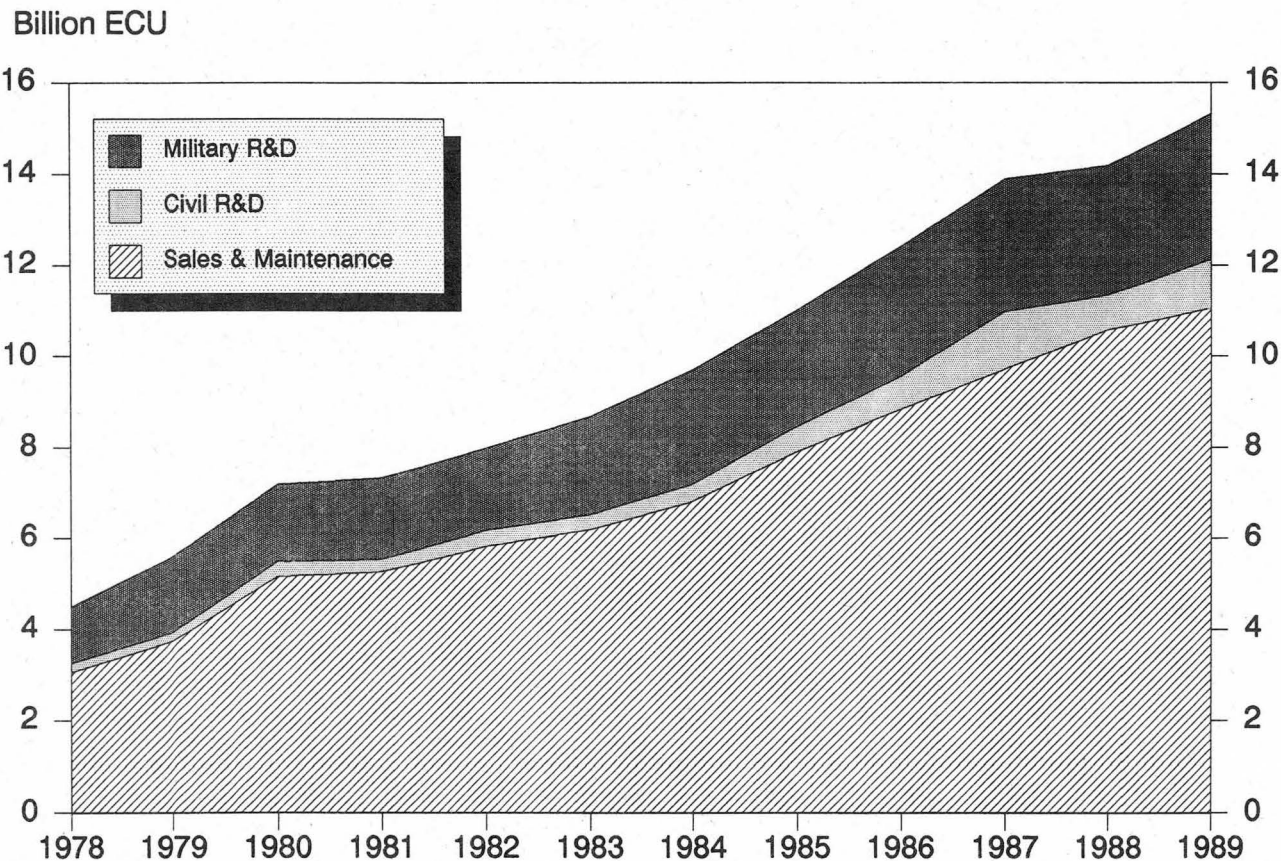
(1) NATIONAL STATE + OTHER EC FINAL MILITARY USERS

(2) NATIONAL AND OTHER EC CIVIL AND MILITARY MANUFACTURERS AND FINAL CIVIL USERS

(3) MANUFACTURERS AND FINAL USERS OF THIRD COUNTRIES

■ SOURCE: INDUSTRIAL ASSOCIATIONS

PUBLIC SUPPORT TO EC AEROSPACE INDUSTRY



■ SOURCE: INDUSTRIAL ASSOCIATIONS

PUBLIC SUPPORT TO AEROSPACE INDUSTRY

BREAKDOWN BY CONTRACT TYPE (MIO ECU AT CURRENT PRICES)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
EC											
R-D CONTRACTS	1,850	2,038	2,061	2,153	2,492	2,877	3,117	3,562	4,168	3,600	4,256
AS % OF PUBLIC SUPPORT	33%	28%	28%	27%	29%	30%	28%	29%	30%	25%	28%
PUBLIC PROCUREMENT	3,752	5,159	5,271	5,830	6,181	6,822	7,899	8,841	9,730	10,581	11,052
AS % OF PUBLIC SUPPORT	67%	72%	72%	73%	71%	70%	72%	71%	70%	75%	72%
TOTAL	5,602	7,197	7,331	7,983	8,673	9,699	11,017	12,404	13,898	14,181	15,308
AS % OF FINAL TURNOVER	44%	42%	34%	33%	34%	35%	36%	37%	39%	36%	36%
USA											
R-D CONTRACTS	4,261	4,760	7,639	10,478	12,801	18,889	21,730	15,225	16,042	16,757	17,389
AS % OF PUBLIC SUPPORT	26%	24%	26%	25%	25%	30%	28%	24%	28%	30%	29%
PUBLIC PROCUREMENT	12,388	15,200	21,922	30,908	38,494	44,059	54,587	48,681	41,670	39,404	43,116
AS % OF PUBLIC SUPPORT	74%	76%	74%	75%	75%	70%	72%	76%	72%	70%	71%
TOTAL	16,649	19,960	29,561	41,386	51,295	62,948	76,317	63,906	57,712	56,161	60,505
AS % OF TURNOVER	59%	59%	60%	69%	71%	75%	74%	74%	75%	73%	70%

■ SOURCE: INDUSTRIAL ASSOCIATIONS

PUBLIC SUPPORT FOR THE EC AEROSPACE INDUSTRY

BREAKDOWN BY CONTRACT AND SUBSECTOR (MIO ECU AT CURRENT PRICES)

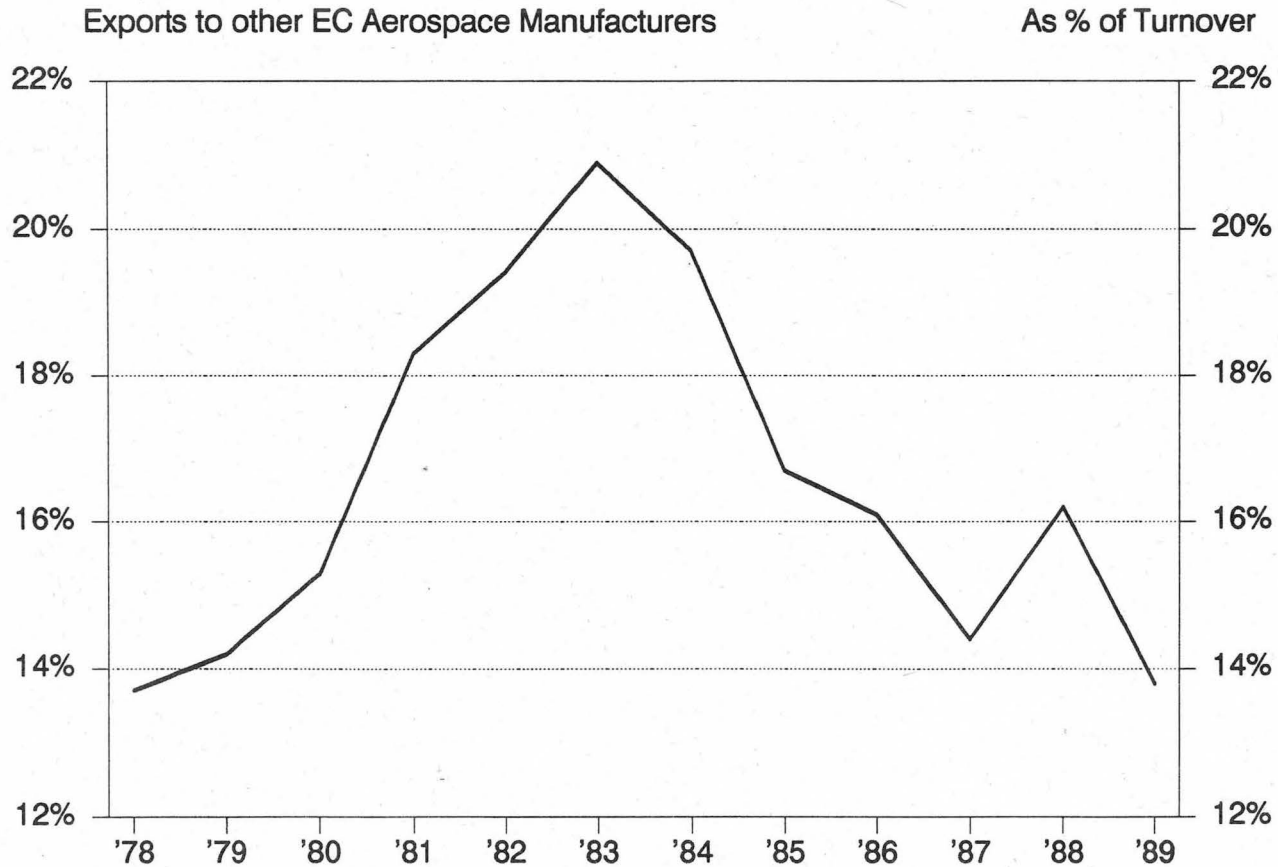
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
AIRFRAMES AND MISSILES											
R-D CONTRACTS	1,169	1,093	1,133	1,137	1,312	1,588	1,651	1,955	2,031	1,694	2,418
PUBLIC - CIVIL	455	106	95	129	285	128	92	155	168	162	227
PROCUREMENT . - MILITARY	1,933	2,500	2,468	2,548	2,651	2,803	3,852	3,707	4,162	4,377	4,404
INTRA-EC MILITARY SALES	61	423	354	508	303	256	266	101	111	213	659
TOTAL	3,617	4,122	4,051	4,323	4,551	4,775	5,862	5,918	6,472	6,446	7,708
SPACE											
R-D CONTRACTS	86	210	152	214	259	283	479	234	431	550	605
PUBLIC - CIVIL	25	6	85	108	177	185	185	159	174	292	371
PROCUREMENT . - MILITARY	4	14	6	29	14	6	76	88	28	50	87
INTRA-EC MILITARY SALES	0	0	0	0	0	0	1	1	0	48	105
TOTAL	115	230	242	351	450	475	741	482	633	940	1,168
ENGINES											
R-D CONTRACTS	358	290	324	346	375	290	324	253	390	341	385
PUBLIC - CIVIL	29	72	56	45	28	31	24	111	240	272	368
PROCUREMENT . - MILITARY	520	851	794	890	852	1,050	1,012	1,174	1,121	1,145	1,070
INTRA-EC MILITARY SALES	55	123	112	76	78	68	29	73	243	179	91
TOTAL	962	1,337	1,287	1,358	1,334	1,439	1,388	1,611	1,995	1,936	1,914
EQUIPMENT											
R-D CONTRACTS	237	444	451	456	546	715	663	1,121	1,316	1,015	849
PUBLIC - CIVIL	35	63	60	48	72	45	87	297	459	452	576
PROCUREMENT . - MILITARY	594	927	1,152	1,333	1,617	2,186	2,186	2,683	2,817	3,210	2,847
INTRA-EC MILITARY SALES	42	74	89	114	104	64	89	291	205	182	246
TOTAL	908	1,508	1,752	1,951	2,338	3,010	3,026	4,392	4,798	4,859	4,518

PUBLIC SUPPORT FOR THE EC AEROSPACE INDUSTRY

BREAKDOWN BY CONTRACT AND SUBSECTOR (AS % OF SUBSECTOR)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
AIRFRAMES AND MISSILES											
R-D CONTRACTS	32.3	26.5	28.0	26.3	28.8	33.3	28.2	33.0	31.4	26.3	31.4
PUBLIC - CIVIL	12.6	2.6	2.3	3.0	6.3	2.7	1.6	2.6	2.6	2.5	2.9
PROCUREMENT . - MILITARY	53.4	60.6	60.9	58.9	58.2	58.7	65.7	62.6	64.3	67.9	57.1
INTRA-EC MILITARY SALES	1.7	10.3	8.7	11.8	6.7	5.4	4.5	1.7	1.7	3.3	8.6
AS % OF GRAND TOTAL	64.6	57.3	55.2	54.1	52.5	49.2	53.2	47.7	46.6	45.5	50.4
SPACE											
R-D CONTRACTS	74.9	91.4	62.6	61.0	57.6	59.6	64.7	48.5	68.0	58.6	51.8
PUBLIC - CIVIL	21.6	2.4	35.1	30.9	39.3	39.1	25.0	33.0	27.5	31.1	31.8
PROCUREMENT . - MILITARY	3.5	6.1	2.3	8.1	3.2	1.3	10.2	18.3	4.5	5.3	7.4
INTRA-EC MILITARY SALES	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	5.1	9.0
AS % OF GRAND TOTAL	17.2	18.6	17.5	17.0	15.4	14.8	12.6	13.0	14.4	13.7	12.5
ENGINES											
R-D CONTRACTS	37.2	21.7	25.2	25.5	28.1	20.2	23.3	15.7	19.5	17.6	20.1
PUBLIC - CIVIL	3.0	5.4	4.4	3.3	2.1	2.2	1.7	6.9	12.1	14.0	19.2
PROCUREMENT . - MILITARY	54.1	63.7	61.7	65.6	63.9	73.0	72.9	72.9	56.2	59.1	55.9
INTRA-EC MILITARY SALES	5.7	9.2	8.7	5.6	5.9	4.7	2.1	4.5	12.2	9.2	4.8
AS % OF GRAND TOTAL	16.2	21.0	23.9	24.4	27.0	31.0	27.5	35.4	34.5	34.3	29.5
EQUIPMENT											
R-D CONTRACTS	26.1	29.5	25.8	23.3	23.3	23.8	21.9	25.5	27.4	20.9	18.8
PUBLIC - CIVIL	3.8	4.1	3.4	2.5	3.1	1.5	2.9	6.8	9.6	9.3	12.8
PROCUREMENT . - MILITARY	65.5	61.5	65.7	68.3	69.1	72.6	72.3	61.1	58.7	66.1	63.0
INTRA-EC MILITARY SALES	4.6	4.9	5.1	5.9	4.5	2.1	2.9	6.6	4.3	3.8	5.4
AS % OF GRAND TOTAL	2.0	3.2	3.3	4.4	5.2	4.9	6.7	3.9	4.6	6.6	7.6

LEVEL OF INTRA-EUROPEAN COOPERATION



■ SOURCE: INDUSTRIAL ASSOCIATIONS

LEVEL OF INTRA-EUROPEAN COOPERATION IN AEROSPACE SECTOR

PROPORTION OF TURNOVER EXPORTED TO AEROSPACE COMPANIES IN OTHER EC MEMBER STATES

AS % OF OVERALL TURNOVER

	BE	DE	ES	FR	IT	NL	UK	EC
1978	33.9	24.8	18.0	7.1	12.9	11.5	15.8	13.7
1979	25.9	20.3	24.7	8.0	9.2	11.0	18.1	14.2
1980	17.1	29.6	26.0	7.6	21.8	12.4	15.0	15.3
1981	17.8	36.0	27.9	8.0	12.5	15.2	21.1	18.3
1982	17.1	38.4	20.4	6.9	11.2	15.9	24.0	19.4
1983	19.8	39.0	28.7	8.8	19.6	12.7	24.8	20.9
1984	27.6	38.6	22.6	7.5	21.2	9.5	22.8	19.7
1985	27.6	33.5	21.1	4.0	25.4	5.4	18.7	16.7
1986	32.3	24.2	19.6	5.3	25.5	4.8	18.7	16.1
1987	33.3	21.9	13.2	5.4	25.6	10.7	14.3	14.4
1988	24.8	24.8	16.4	7.8	25.9	7.6	15.5	16.2
1989	38.5	23.2	18.6	2.7	25.3	6.9	14.3	13.8

■ SOURCE: INDUSTRIAL ASSOCIATIONS

FINANCE: EC (*)

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	-	-	-	30790	31508	36771	43521
VALUE ADDED	-	-	-	13003	12633	14521	16271
WAGE COSTS	-	-	-	10356	10630	11398	12419
TRADING INCOME	-	-	-	2647	2003	3124	3850
NET INCOME	-	-	-	716	339	1009	1229
EQUITY	-	-	-	7981	8567	12060	13418
LONG AND MEDIUM TERM DEBT	-	-	-	9152	8795	10052	11429
TOTAL PERMANENT LIABILITIES	-	-	-	17133	17362	22112	24847
PERMANENT ASSETS	-	-	-	8634	9641	13141	15644
R-D TOTAL	-	-	-	-	-	-	-
... INDUSTRY FUNDED	-	-	-	-	-	-	-
OPERATING INVESTMENTS	-	-	-	-	1717	2136	2870
EMPLOYMENT	-	-	-	386584	381309	420335	418827

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	-	-	-	125.6	118.8	127.4	131.0
- VAL.ADD./WORKER (000 ECUS)	-	-	-	33.6	33.1	34.5	38.8
R-D ON TURNOVER							
- TOTAL	-	-	-	-	-	-	-
- INDUSTRY FUNDED	-	-	-	-	-	-	-
INVESTMENTS ON VALUE ADDED	-	-	-	-	13.6	14.7	17.6
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	-	-	53.4	50.7	45.5	46.0
TRADING INCOME ON VALUE ADDED	-	-	-	20.4	15.9	21.5	23.7
NET INCOME ON VALUE ADDED	-	-	-	5.5	2.7	7.0	7.6
..... ON EQUITY	-	-	-	9.0	4.0	8.4	9.2
..... ON ASSETS	-	-	-	8.3	3.5	7.7	7.9

(*) EC = FRANCE + FRG + ITALIE + NETHERLANDS + SPAIN + UK

■ SOURCE: EUROSTAF - AEROSPATIALE

FINANCE: USA

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	91484	112452	138716	113375	96069	95430	107047
VALUE ADDED	34088	44631	50909	42154	38014	37638	41007
WAGE COSTS	26109	33096	39799	32603	29479	29543	32600
TRADING INCOME	7979	11534	11110	9551	8535	8095	8407
NET INCOME	3178	4612	4290	3143	3969	4129	1922
EQUITY	27399	33735	38915	33423	27453	28642	33497
LONG AND MEDIUM TERM DEBT	10518	11558	18168	16883	14433	15889	20721
TOTAL PERMANENT LIABILITIES	37916	45294	57084	50306	41887	44531	54218
PERMANENT ASSETS	26998	32962	45362	40492	33696	34525	42827
R-D TOTAL	17306	23900	29133	21389	21213	21706	18608
... INDUSTRY FUNDED	4505	6038	7403	6164	5171	4949	3812
OPERATING INVESTMENTS	3269	4525	4534	3861	3075	3044	3540
EMPLOYMENT	830000	850000	939000	967000	992000	982000	983000

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	130.6	134.9	127.9	129.3	129.0	127.4	125.8
- VAL.ADD./WORKER (000 ECUS)	41.1	52.5	54.2	43.6	38.3	38.3	41.7
R-D ON TURNOVER							
- TOTAL	18.9	21.3	21.0	18.9	22.1	22.7	17.4
- INDUSTRY FUNDED	4.9	5.4	5.3	5.4	5.4	5.2	3.6
INVESTMENTS ON VALUE ADDED	9.6	10.1	8.9	9.2	8.1	8.1	8.6
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	27.7	25.5	31.8	33.6	34.5	35.7	38.2
TRADING INCOME ON VALUE ADDED	23.4	25.8	21.8	22.7	22.5	21.5	20.5
NET INCOME ON VALUE ADDED	9.3	10.3	8.4	7.5	10.4	11.0	4.7
..... ON EQUITY	11.6	13.7	11.0	9.4	14.5	14.4	5.7
..... ON ASSETS	11.8	14.0	9.5	7.8	11.8	12.0	4.5

■ SOURCE: EUROSTAF - AEROSPATIALE / A.I.A.

FINANCE: FRG

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	3594	3737	4205	4239	4351	5065	4959
VALUE ADDED	1690	1783	1949	2058	2025	2322	2079
WAGE COSTS	1359	1426	1539	1744	1926	2046	1927
TRADING INCOME	331	357	410	315	99	276	152
NET INCOME	52	60	79	-18	16	51	-16
EQUITY	1104	1287	1395	1469	1397	1503	1950
LONG AND MEDIUM TERM DEBT	699	631	695	799	850	936	925
TOTAL PERMANENT LIABILITIES	1803	1918	2090	2268	2247	2439	2875
PERMANENT ASSETS	885	978	1003	1119	1241	1402	1925
R-D TOTAL	-	-	1258	1177	1327	1394	1730
... INDUSTRY FUNDED	-	-	205	238	259	239	265
OPERATING INVESTMENTS	180	156	200	287	309	332	353
EMPLOYMENT	52117	51163	52558	54283	55595	57411	48498

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	124.4	125.0	126.6	118.0	105.2	113.5	107.9
- VAL.ADD./WORKER (000 ECUS)	32.4	34.8	37.1	37.9	36.4	40.4	42.9
R-D ON TURNOVER							
- TOTAL	-	-	29.9	27.8	30.5	27.5	34.9
- INDUSTRY FUNDED	-	-	4.9	5.6	5.9	4.7	5.3
INVESTMENTS ON VALUE ADDED	10.6	8.7	10.3	14.0	15.3	14.3	17.0
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	38.8	32.9	33.2	35.2	37.8	38.4	32.2
TRADING INCOME ON VALUE ADDED	19.6	20.0	21.0	15.3	4.9	11.9	7.3
NET INCOME ON VALUE ADDED	3.1	3.3	4.0	-0.9	0.8	2.2	-0.8
..... ON EQUITY	4.7	4.6	5.7	-1.2	1.1	3.4	-0.8
..... ON ASSETS	5.9	6.1	7.9	-1.6	1.3	3.6	-0.8

■ SOURCE: EUROSTAF - AEROSPATIALE

FINANCE: SPAIN

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	-	-	355	305	313	532	601
VALUE ADDED	-	-	247	220	205	310	394
WAGE COSTS	-	-	184	207	214	261	306
TRADING INCOME	-	-	62	13	-9	49	88
NET INCOME	-	-2	13	-63	-97	-46	-36
EQUITY	-	69	89	30	-68	-29	-8
LONG AND MEDIUM TERM DEBT	-	165	206	312	285	537	616
TOTAL PERMANENT LIABILITIES	-	234	295	342	216	508	608
PERMANENT ASSETS	-	109	135	174	195	256	352
R-D TOTAL	-	-	-	-	-	-	-
... INDUSTRY FUNDED	-	14	15	15	15	18	20
OPERATING INVESTMENTS	-	36	46	47	50	62	74
EMPLOYMENT	-	10037	10238	10591	10777	10652	10138

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY	-	-	-	-	-	-	-
- VALUE ADDED ON WAGE COST	-	-	133.8	106.5	95.7	118.9	128.9
- VAL.ADD./WORKER (000 ECUS)	-	-	24.1	20.8	19.0	29.1	38.9
R-D ON TURNOVER	-	-	-	-	-	-	-
- TOTAL	-	-	-	-	-	-	-
- INDUSTRY FUNDED	-	-	4.2	4.8	4.7	3.4	3.4
INVESTMENTS ON VALUE ADDED	-	-	18.5	21.6	24.3	19.9	18.7
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	70.6	69.8	91.3	131.5	105.8	101.3
TRADING INCOME ON VALUE ADDED	-	-	25.2	6.1	-4.5	15.9	22.4
NET INCOME ON VALUE ADDED	-	-	5.1	-28.8	-47.4	-14.7	-9.0
..... ON EQUITY	-	-3.1	14.2	-212.2	142.4	154.4	465.1
..... ON ASSETS	-	-2.0	9.4	-36.5	-49.9	-17.8	-10.1

■ SOURCE : EUROSTAF - AEROSPATIALE

FINANCE: FRANCE

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	-	-	15124	15713	15078	16158	15650
VALUE ADDED	-	-	6690	6303	6128	5912	6154
WAGE COSTS	-	-	4818	5115	4888	4695	4536
TRADING INCOME	-	-	1872	1187	1240	1217	1618
NET INCOME	-	177	318	414	356	452	525
EQUITY	-	1424	1713	2854	3447	4531	4680
LONG AND MEDIUM TERM DEBT	-	5848	6246	4991	4154	3822	4014
TOTAL PERMANENT LIABILITIES	-	7271	7959	7845	7601	8353	8694
PERMANENT ASSETS	-	3638	3906	4624	4589	4993	5764
R-D TOTAL	-	-	-	-	-	-	-
... INDUSTRY FUNDED	-	-	-	-	-	-	-
OPERATING INVESTMENTS	-	-	911	872	779	701	885
EMPLOYMENT	-	-	153220	153082	133867	126210	123408

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	-	-	138.8	123.2	125.4	125.9	135.7
- VAL.ADD./WORKER (000 ECUS)	-	-	43.7	41.2	45.8	46.8	49.9
R-D ON TURNOVER							
- TOTAL	-	-	-	-	-	-	-
- INDUSTRY FUNDED	-	-	-	-	-	-	-
INVESTMENTS ON VALUE ADDED	-	-	13.6	13.8	12.7	11.9	14.4
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	80.4	78.5	63.6	54.6	45.8	46.2
TRADING INCOME ON VALUE ADDED	-	-	28.0	18.8	20.2	20.6	26.3
NET INCOME ON VALUE ADDED	-	-	4.8	6.6	5.8	7.6	8.5
..... ON EQUITY	-	12.5	18.6	14.5	10.3	10.0	11.2
..... ON ASSETS	-	4.9	8.2	9.0	7.8	9.1	9.1

■ SOURCE : EUROSTAF - AEROSPATIALE

FINANCE: ITALY

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	-	-	-	2082	2067	2140	2578
VALUE ADDED	-	-	-	971	1001	1075	1310
WAGE COSTS	-	-	-	569	653	707	824
TRADING INCOME	-	-	-	402	347	368	486
NET INCOME	-	-	-	39	56	70	65
EQUITY	-	-	-	802	891	896	1017
LONG AND MEDIUM TERM DEBT	-	-	-	1653	1573	1704	1839
TOTAL PERMANENT LIABILITIES	-	-	-	2455	2465	2601	2856
PERMANENT ASSETS	-	-	-	911	944	1250	1380
R-D TOTAL	-	-	-	605	654	623	648
... INDUSTRY FUNDED	-	-	-	-	-	-	-
OPERATING INVESTMENTS	-	-	-	-	131	151	166
EMPLOYMENT	-	-	-	29610	30223	30712	31384

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	-	-	-	170.6	153.2	152.1	158.9
- VAL.ADD./WORKER (000 ECUS)	-	-	-	32.8	33.1	35.0	41.7
R-D ON TURNOVER							
- TOTAL	-	-	-	29.1	31.6	29.1	25.1
- INDUSTRY FUNDED	-	-	-	-	-	-	-
INVESTMENTS ON VALUE ADDED	-	-	-	-	13.1	14.0	12.7
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	-	-	-	67.3	63.8	65.5	64.4
TRADING INCOME ON VALUE ADDED	-	-	-	41.4	34.7	34.3	37.1
NET INCOME ON VALUE ADDED	-	-	-	4.1	5.6	6.5	5.0
..... ON EQUITY	-	-	-	4.9	6.3	7.8	6.4
..... ON ASSETS	-	-	-	4.3	6.0	5.6	4.7

■ SOURCE : EUROSTAF - AEROSPATIALE

FINANCE: THE NETHERLANDS

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	604	619	533	584	452	880	1199
VALUE ADDED	222	209	81	300	-113	368	396
WAGE COSTS	183	186	228	277	291	299	319
TRADING INCOME	39	23	-147	22	-404	69	77
NET INCOME	7	9	13	8	-46	6	18
EQUITY	54	68	104	117	121	365	376
LONG AND MEDIUM TERM DEBT	196	229	230	245	676	637	771
TOTAL PERMANENT LIABILITIES	251	297	334	361	796	1002	1147
PERMANENT ASSETS	106	115	147	168	584	589	607
R-D TOTAL	36	100	159	153	98	39	23
... INDUSTRY FUNDED	15	15	30	40	75	12	10
OPERATING INVESTMENTS	10	19	36	27	39	24	42
EMPLOYMENT	8398	9055	10053	10860	11709	11690	12925

RATIOS (AS % UNLESS STATED OTHERWISE)

	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	121.4	112.4	35.6	108.0	-38.8	123.1	124.0
- VAL.ADD./WORKER (000 ECUS)	26.4	23.1	8.1	27.6	-9.6	31.5	30.6
R-D ON TURNOVER							
- TOTAL	6.0	16.2	29.9	26.2	21.7	4.4	1.9
- INDUSTRY FUNDED	2.5	2.5	5.6	6.9	16.7	1.4	0.8
INVESTMENTS ON VALUE ADDED	4.5	8.9	44.8	9.1	-34.8	6.6	10.7
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	78.3	77.0	68.8	67.6	84.8	63.6	67.2
TRADING INCOME ON VALUE ADDED	17.6	11.0	-180.9	7.4	357.7	18.8	19.4
NET INCOME ON VALUE ADDED	3.2	4.5	16.2	2.6	40.6	1.5	4.6
..... ON EQUITY	13.2	13.7	12.6	6.8	-37.9	1.6	4.8
..... ON ASSETS	6.7	8.1	9.0	4.7	-7.9	1.0	3.0

■ SOURCE: EUROSTAF - AEROSPATIALE

FINANCE: UNITED KINGDOM

MIO ECUS AT CURRENT PRICES

	1983	1984	1985	1986	1987	1988	1989
TURNOVER	6741	7066	7737	7868	9248	11995	18534
VALUE ADDED	2609	2990	3307	3152	3387	4534	5938
WAGE COSTS	2393	2466	2655	2444	2658	3390	4507
TRADING INCOME	216	525	651	708	730	1144	1430
NET INCOME	-153	215	186	336	54	476	673
EQUITY	2007	2308	2729	2709	2779	4794	5403
LONG AND MEDIUM TERM DEBT	1384	1463	1213	1152	1258	2415	3264
TOTAL PERMANENT LIABILITIES	3391	3771	3942	3861	4037	7209	8667
PERMANENT ASSETS	1342	1685	1764	1637	2089	4651	5616
R-D TOTAL	-	-	-	1151	1149	1418	1650
... INDUSTRY FUNDED	394	367	377	369	439	385	523
OPERATING INVESTMENTS	192	219	300	291	408	866	1350
EMPLOYMENT	136264	129690	128658	128158	139138	183660	192474

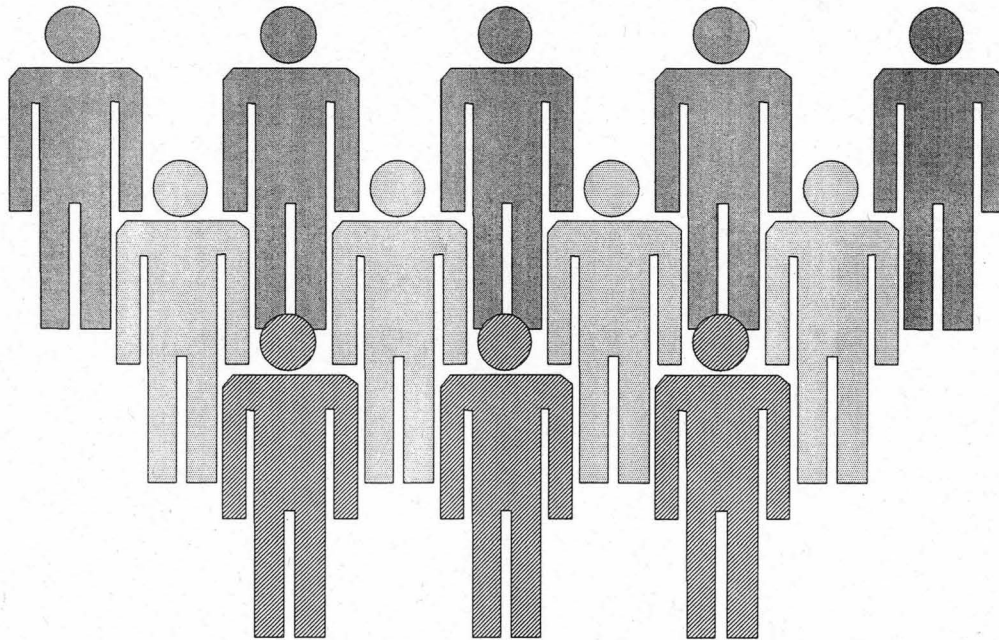
RATIOS (AS % UNLESS STATED OTHERWISE)

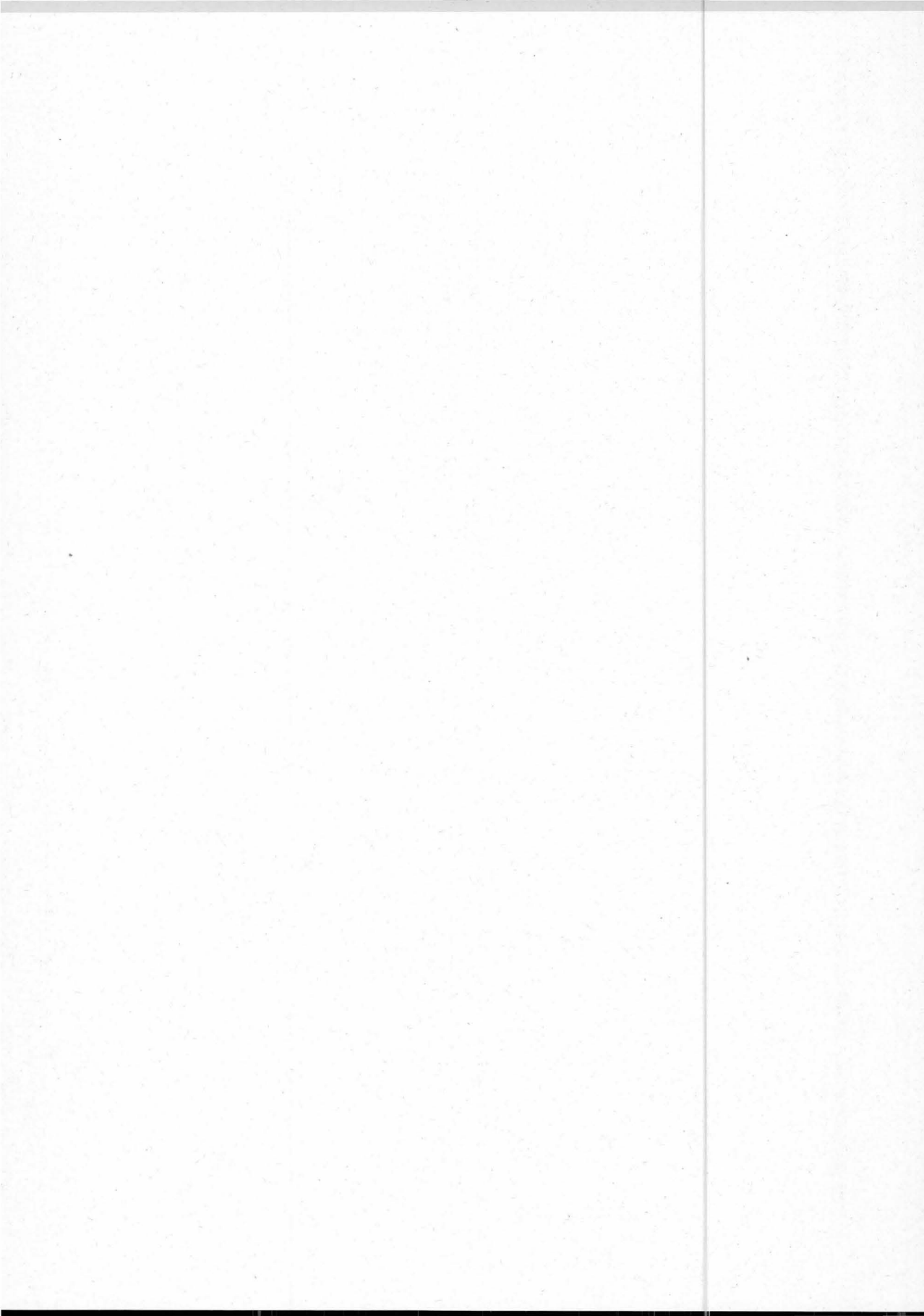
	1983	1984	1985	1986	1987	1988	1989
LABOR PRODUCTIVITY							
- VALUE ADDED ON WAGE COST	109.0	121.3	124.5	129.0	127.5	133.8	131.7
- VAL.ADD./WORKER (000 ECUS)	19.1	23.1	25.7	24.6	24.3	24.7	30.8
R-D ON TURNOVER							
- TOTAL	-	-	-	14.6	12.4	11.8	8.9
- INDUSTRY FUNDED	5.8	5.2	4.9	4.7	4.8	3.2	2.8
INVESTMENTS ON VALUE ADDED	7.4	7.3	9.1	9.2	12.1	19.1	22.7
LONG AND MEDIUM TERM DEBT ON PERMANENT LIABILITIES	40.8	38.8	30.8	29.8	31.1	33.5	37.7
TRADING INCOME ON VALUE ADDED	8.3	17.5	19.7	22.5	21.5	25.2	24.1
NET INCOME ON VALUE ADDED	-5.9	7.2	5.6	10.7	1.6	10.5	11.3
..... ON EQUITY	-7.6	9.3	6.8	12.4	1.9	9.9	12.5
..... ON ASSETS	-11.4	12.7	10.5	20.5	2.6	10.2	12.0

■ SOURCE: EUROSTAF - AEROSPATIALE

EMPLOYMENT

C H A P T E R 7





EMPLOYMENT

The annual survey conducted together with the national industrial associations enables the *employment* in the European aerospace industry to be broken down by *professional* and *activity* categories. Participants to this survey are the aerospace companies whose turnover concerns (partly or entirely) one or more of the groups of products listed in the columns of the tables.

Data for Spain relating to years 1984-86 had to be estimated from other sources.

Estimates for missing data for the employment of the aerospace industry are compiled using linear estimates performing a least-squares approximation to indicators such as employment of the major aerospace companies.

The *professional categories* are the following:

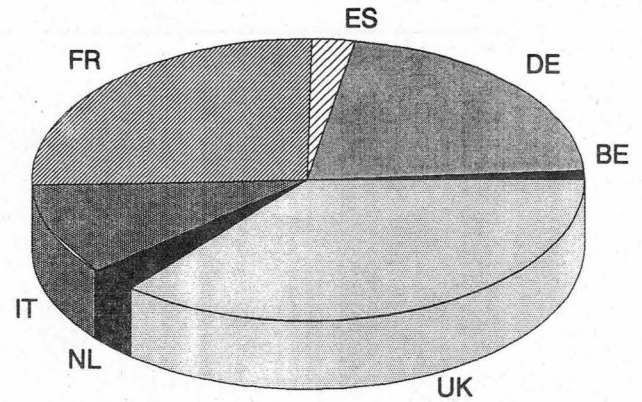
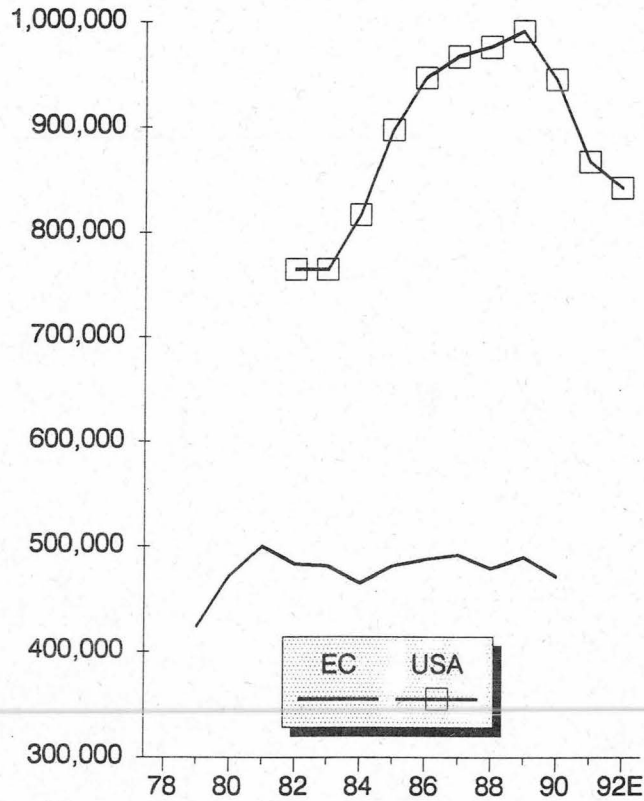
- *engineers and managers*,
- *technical employees* comprise technicians, draughtsmen, craftsmen, supervisors, foremen, etc.
- *administrative employees* comprise clerical and office staff, etc.
- *production workers* (skilled and unskilled)

The professional categories indicated correspond to the actual functions carried out, and do not necessarily correspond to the formal qualifications possessed.

The *activities* considered concern:

- *R&D*,
 - *production*, including maintenance, repairs and post-delivery modifications,
 - *marketing and management*, including all the activities involved in running the company (general management, general accounting, financial management, personnel management, etc.) besides marketing activities and after-sales services.
-

Aerospace Employment



Breakdown by Country (1990)

AEROSPACE EMPLOYMENT

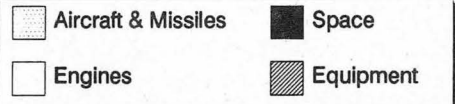
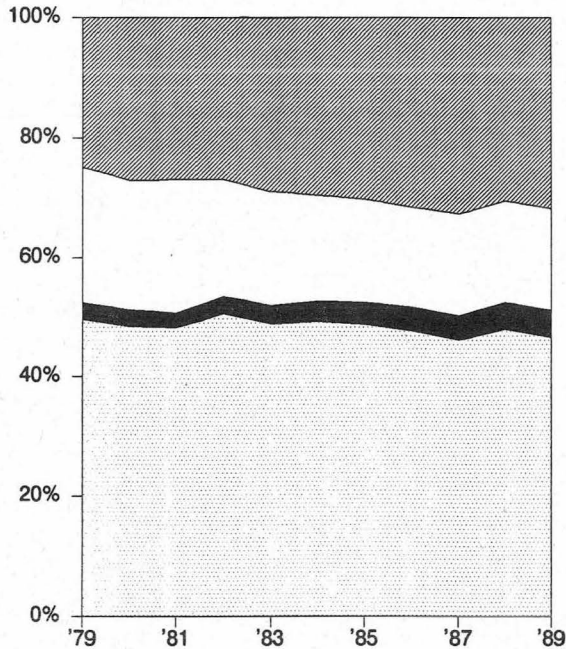
AT YEAR-END

	1973	1974	1975	1976	1977	1978	1979	1980	1981
BELGIUM	4,380	4,422	4,025	5,015	4,895	5,068	6,272	7,032	6,886
FRG	52,985	51,555	51,914	51,367	52,416	56,348	60,866	66,086	68,650
FRANCE	105,432	106,769	108,915	107,454	103,295	103,424	106,297	110,783	113,690
ITALY	30,000	30,240	30,768	31,991	34,260	36,136	38,370	40,924	41,920
NETHERLANDS	7,000	6,555	7,682	7,865	7,320	7,382	7,935	8,862	9,706
UNITED KINGDOM	201,700	210,100	233,792	227,402	219,261	214,918	196,566	229,821	249,863
EC 10	401,497	409,641	437,096	431,094	421,447	423,276	416,306	463,508	490,715
SPAIN	-	-	-	-	-	6,642	7,331	8,177	9,516
EC 12	-	-	-	-	-	429,918	423,637	471,685	500,231
USA	-	-	-	-	-	-	-	-	-
CANADA	31,700	28,400	27,300	25,300	28,900	33,800	37,700	46,800	44,800
JAPAN	26,026	25,550	26,746	25,000	23,756	25,398	25,653	26,373	27,096
	1982	1983	1984	1985	1986	1987	1988	1989	1990
BELGIUM	6,705	6,127	5,757	5,470	5,743	5,510	4,831	5,239	5,083
FRG	66,883	65,677	65,366	77,256	85,021	86,573	93,561	94,456	99,334
FRANCE	115,982	127,269	127,815	127,072	126,056	122,717	119,484	120,334	120,000
ITALY	42,907	42,546	42,885	43,284	44,780	47,000	49,500	50,500	50,698
NETHERLANDS	9,527	8,398	9,055	10,053	10,860	11,709	12,690	12,924	13,561
UNITED KINGDOM	230,961	221,102	203,083	206,876	203,643	207,161	187,293	193,911	170,000
EC 10	472,965	471,119	453,961	470,011	476,103	480,670	467,359	477,364	458,676
SPAIN	10,216	10,538	11,157	11,588	11,907	11,304	11,770	12,581	12,627
EC 12	483,181	481,657	465,118	481,599	488,010	491,974	479,129	489,945	471,303
USA	765,000	765,000	817,000	898,000	948,000	968,000	977,000	992,000	947,000
CANADA	39,800	37,100	42,300	47,627	53,678	57,804	63,650	63,632	64,553
JAPAN	27,865	25,486	25,986	25,981	26,241	27,410	27,913	28,639	-

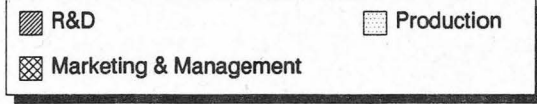
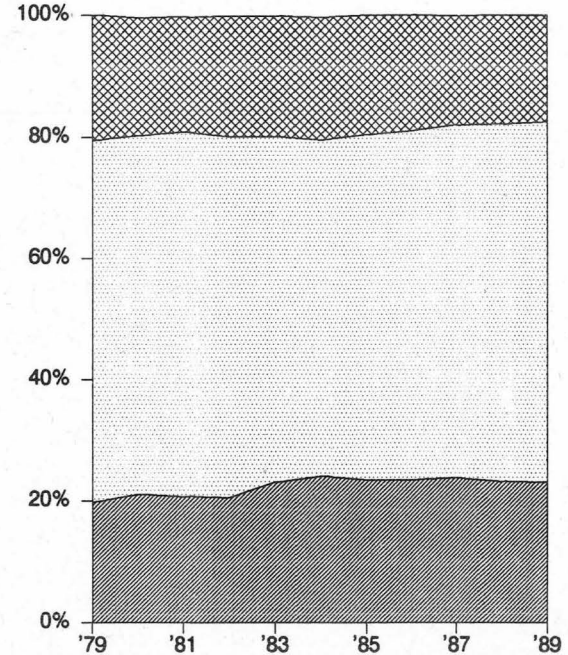
■ SOURCE: INDUSTRIAL ASSOCIATIONS

EC AEROSPACE EMPLOYMENT

Breakdown by Sector



Breakdown by Activity



■ SOURCE: INDUSTRIAL ASSOCIATIONS

AEROSPACE EMPLOYMENT

(AT YEAR-END)

AIRFRAMES AND MISSILES

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BELGIUM	3,423	3,755	3,461	3,329	2,919	2,757	2,577	2,714	2,680	2,613	2,847
FRG	37,935	40,901	42,472	40,501	38,722	39,411	41,694	44,934	40,698	43,824	45,237
FRANCE	57,757	59,358	60,406	61,160	59,714	60,525	59,807	58,321	54,713	54,317	54,466
ITALY	24,788	26,524	26,930	28,183	28,255	27,850	26,280	27,087	27,965	27,918	29,542
NETHERLANDS	5,705	6,375	6,982	6,852	6,039	6,511	7,229	7,809	8,571	9,870	9,874
UNITED KINGDOM	73,875	83,907	92,310	94,953	90,015	81,844	86,799	81,463	82,249	81,170	76,088
EC 10	203,483	220,820	232,561	234,978	225,664	218,898	224,386	222,328	216,876	219,712	218,054
SPAIN	6,413	7,290	8,553	9,233	9,535	9,830	10,085	10,234	9,808	9,601	10,469
EC 12	209,896	228,110	241,114	244,211	235,199	228,728	234,471	232,562	226,684	229,313	228,523

SPACE

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BELGIUM	290	245	299	364	410	380	434	571	555	344	549
FRG	2,841	2,766	2,681	3,727	4,432	5,067	5,447	5,553	5,896	6,304	6,474
FRANCE	3,921	4,463	4,913	5,489	5,918	6,006	6,695	7,402	7,922	8,534	9,080
ITALY	482	870	811	914	1,283	1,420	2,280	2,964	3,243	3,614	3,535
NETHERLANDS	189	209	229	226	201	217	241	260	244	272	327
UNITED KINGDOM	4,539	4,417	3,168	3,437	3,211	2,848	2,799	2,654	2,358	2,747	1,978
EC 10	12,262	12,970	12,101	14,157	15,455	15,938	17,896	19,404	20,218	21,815	21,943
SPAIN	150	146	156	140	156	224	262	300	358	371	351
EC 12	12,412	13,116	12,257	14,297	15,611	16,162	18,158	19,704	20,576	22,186	22,294

■ SOURCE: INDUSTRIAL ASSOCIATIONS

AEROSPACE EMPLOYMENT

(AT YEAR-END)

ENGINES

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BELGIUM	1,807	2,262	2,398	2,357	2,238	2,107	2,053	2,053	1,878	1,611	1,555
FRG	8,431	8,701	8,955	8,697	7,717	8,434	8,096	8,790	9,481	9,824	9,802
FRANCE	21,077	22,223	23,078	23,940	24,183	24,927	25,461	25,584	25,187	24,059	24,125
ITALY	5,783	6,037	6,292	5,984	5,803	5,645	6,475	6,086	6,392	6,830	6,868
NETHERLANDS	0	0	0	0	0	0	0	0	0	0	0
UNITED KINGDOM	58,524	62,986	70,942	53,671	51,264	40,630	40,701	38,591	39,924	38,628	40,004
EC 10	95,622	102,209	111,665	94,649	91,205	81,743	82,786	81,104	82,862	80,952	82,354
SPAIN	214	226	240	259	261	386	456	525	528	663	720
EC 12	95,836	102,435	111,905	94,908	91,466	82,129	83,242	81,629	83,390	81,615	83,074

EQUIPMENT

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BELGIUM	752	770	728	655	560	513	406	405	397	263	288
FRG	11,659	13,718	14,542	13,958	14,806	12,454	22,019	25,744	30,498	33,609	32,943
FRANCE	23,533	24,738	25,292	25,393	37,454	36,357	35,110	34,749	34,895	32,574	32,663
ITALY	7,317	7,493	7,887	7,826	7,205	7,970	8,249	8,643	9,400	11,138	10,555
NETHERLANDS	2,041	2,278	2,495	2,449	2,158	2,327	2,583	2,791	2,894	2,548	2,723
UNITED KINGDOM	59,628	78,511	83,443	78,900	76,612	77,761	76,577	80,935	82,630	64,748	75,841
EC 10	104,930	127,508	134,387	129,181	138,795	137,382	144,944	153,267	160,714	144,880	155,013
SPAIN	554	515	567	584	586	717	785	848	610	1,135	1,041
EC 12	105,484	128,023	134,954	129,765	139,381	138,099	145,729	154,115	161,324	146,015	156,054

■ SOURCE: INDUSTRIAL ASSOCIATIONS

EC 12 : BREAKDOWN OF WORKFORCE

BY OCCUPATIONAL GRADING AND BY MAIN ACTIVITY (AT YEAR-END)

AIRFRAMES AND MISSILES

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
ENGINEERS AND MANAGERS	33,668	35,016	36,593	38,766	39,277	40,253	40,557	40,324	39,573	37,992
TECHNICAL STAFF	53,991	56,553	61,053	60,307	59,387	58,150	62,432	58,900	62,488	64,561
ADMINISTRATIVE STAFF	39,339	40,453	37,279	34,846	34,696	36,593	34,794	34,562	35,221	35,320
PRODUCTION WORKERS	101,113	109,092	109,285	101,280	95,128	99,475	94,779	92,898	92,031	90,651
R-D	44,484	45,807	47,193	51,178	51,903	48,477	49,075	51,216	51,071	49,859
PRODUCTION	140,538	148,307	149,274	137,164	129,952	139,473	137,819	134,993	137,925	139,440
MARKETING AND MANAGEMENT	43,088	47,001	47,744	46,858	46,632	46,520	45,668	40,475	40,315	39,225
TOTAL	228,110	241,114	244,211	235,199	228,488	234,471	232,562	226,684	229,311	228,525
TOTAL (*)	228,110	241,114	244,211	235,199	228,728	234,471	232,562	226,684	229,313	228,523

SPACE

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
ENGINEERS AND MANAGERS	3,665	2,916	3,956	4,260	4,253	4,891	5,109	5,336	7,504	7,728
TECHNICAL STAFF	3,877	3,743	4,265	5,526	5,251	6,472	7,959	8,208	8,437	7,361
ADMINISTRATIVE STAFF	2,108	1,976	2,239	2,315	2,481	3,105	2,358	2,784	2,923	2,770
PRODUCTION WORKERS	3,466	3,622	3,836	3,509	4,176	3,690	4,278	4,249	3,322	4,435
R-D	7,314	6,876	8,028	8,955	7,719	9,904	10,798	10,827	10,721	10,763
PRODUCTION	3,679	3,562	4,064	4,149	5,831	4,852	5,520	5,758	6,834	8,121
MARKETING AND MANAGEMENT	2,124	1,820	2,205	2,507	2,614	3,402	3,387	3,991	4,631	3,410
TOTAL	13,116	12,257	14,297	15,611	16,162	18,158	19,704	20,576	22,186	22,294
TOTAL (*)	13,116	12,257	14,297	15,611	16,162	18,158	19,704	20,576	22,186	22,294

(*) INCLUDING THE STAFF THE BREAKDOWN OF WHICH IS NOT KNOWN

■ SOURCE: INDUSTRIAL ASSOCIATIONS

EC 12 : BREAKDOWN OF WORKFORCE

BY OCCUPATIONAL GRADING AND BY MAIN ACTIVITY (AT YEAR-END)

ENGINES

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
ENGINEERS AND MANAGERS	14,052	14,098	15,412	15,125	13,945	14,164	13,812	13,015	12,440	12,944
TECHNICAL STAFF	19,043	22,709	19,091	21,224	19,239	18,700	18,701	24,580	22,577	24,289
ADMINISTRATIVE STAFF	13,750	15,754	11,312	10,915	9,748	11,115	9,740	10,797	11,685	10,540
PRODUCTION WORKERS	55,591	58,945	49,093	44,202	39,197	39,262	39,377	34,998	34,913	35,302
R-D	15,596	17,455	15,962	16,988	15,843	16,432	15,403	16,274	16,268	16,641
PRODUCTION	67,132	72,993	58,305	54,388	48,821	49,063	49,781	51,795	50,261	50,908
MARKETING AND MANAGEMENT	19,707	21,057	20,641	20,090	17,465	17,749	16,445	15,321	15,086	15,525
TOTAL	102,435	111,505	94,908	91,466	82,129	83,242	81,629	83,390	81,615	83,075
TOTAL (*)	102,435	111,905	94,908	91,466	82,129	83,242	81,629	83,390	81,615	83,074

EQUIPMENT

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
ENGINEERS AND MANAGERS	24,477	24,723	23,356	26,733	27,940	30,706	35,845	34,785	26,598	30,363
TECHNICAL STAFF	26,538	28,382	27,766	33,329	32,423	35,230	34,729	37,239	36,571	39,912
ADMINISTRATIVE STAFF	20,149	20,959	20,420	22,268	23,255	23,741	23,632	27,032	22,585	24,241
PRODUCTION WORKERS	55,060	60,290	57,373	56,400	53,581	56,052	59,909	62,268	60,261	61,538
R-D	32,108	33,588	28,064	34,275	36,617	38,553	39,519	38,922	33,031	35,949
PRODUCTION	67,812	76,070	76,324	79,053	73,681	81,020	87,792	94,033	87,683	92,844
MARKETING AND MANAGEMENT	26,304	24,696	24,528	25,402	26,902	26,157	26,805	27,970	25,301	27,261
TOTAL	126,223	134,354	128,915	138,731	137,199	145,729	154,115	161,324	146,015	156,054
TOTAL (*)	128,023	134,954	129,765	139,381	138,099	145,729	154,115	161,324	146,015	156,054

(*) INCLUDING THE STAFF THE BREAKDOWN OF WHICH IS NOT KNOWN

■ SOURCE: INDUSTRIAL ASSOCIATIONS

EC 12 : BREAKDOWN OF WORKFORCE

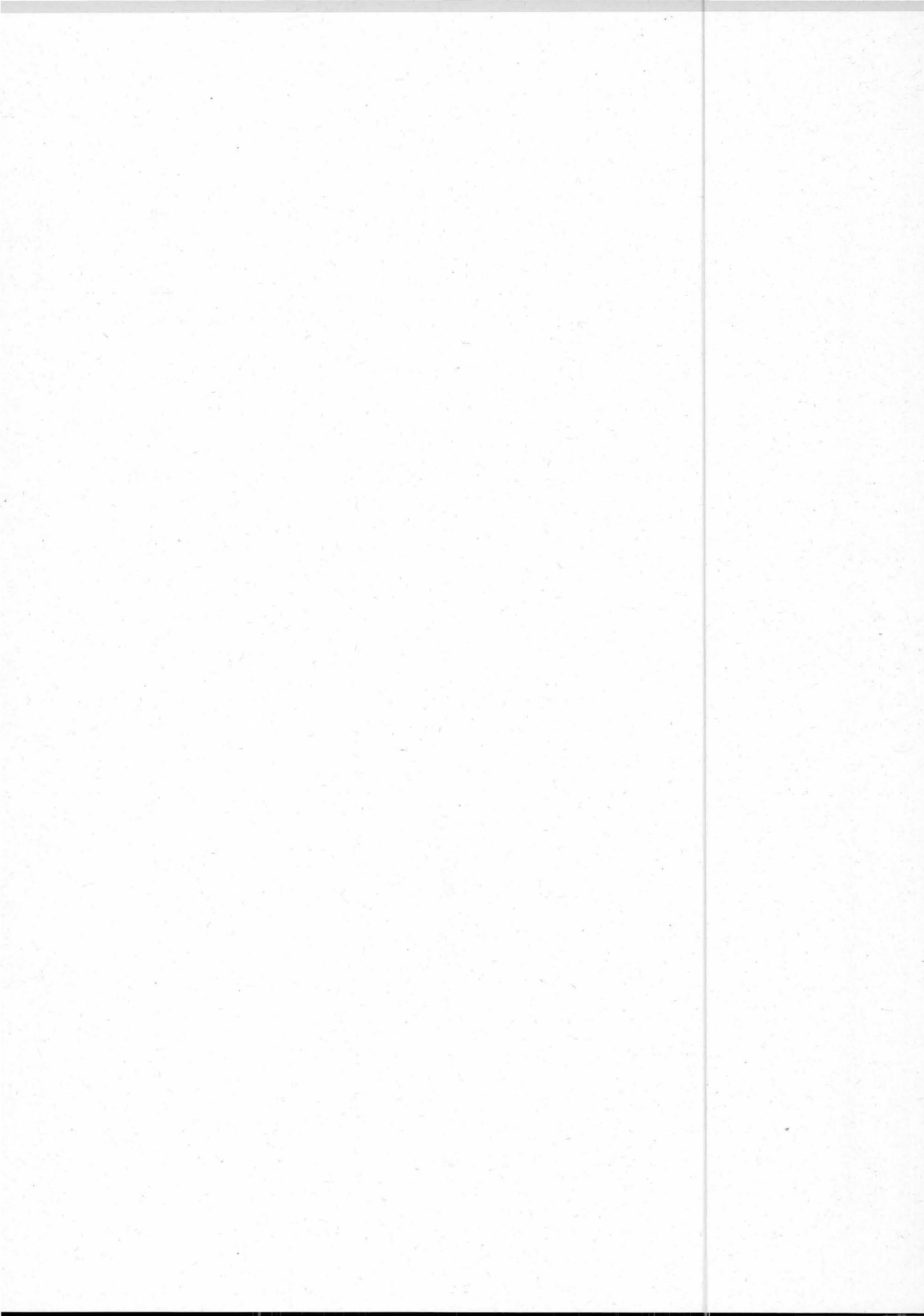
BY OCCUPATIONAL GRADING AND BY MAIN ACTIVITY (AT YEAR-END)

TOTAL

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
ENGINEERS AND MANAGERS	75,862	76,753	79,317	84,885	85,415	90,015	95,324	93,460	86,115	89,027
TECHNICAL STAFF	103,448	111,387	112,176	120,386	116,300	118,551	123,821	128,927	130,073	136,124
ADMINISTRATIVE STAFF	75,346	79,142	71,251	70,344	70,180	74,554	70,524	75,174	72,414	72,870
PRODUCTION WORKERS	215,229	231,949	219,587	205,391	192,083	198,479	198,342	194,413	190,527	191,926
R-D	99,501	103,725	99,247	111,396	112,082	113,364	114,795	117,239	111,091	113,212
PRODUCTION	279,161	300,932	287,967	274,754	258,285	274,407	280,911	286,578	282,703	291,313
MARKETING AND MANAGEMENT	91,223	94,574	95,117	94,857	93,612	93,827	92,305	87,757	85,333	85,421
TOTAL	469,885	499,231	482,331	481,007	463,978	481,599	488,010	491,974	479,127	489,946
TOTAL (*)	471,685	500,231	483,181	481,657	465,118	481,599	488,010	491,974	479,129	489,945

(*) INCLUDING THE STAFF THE BREAKDOWN OF WHICH IS NOT KNOWN

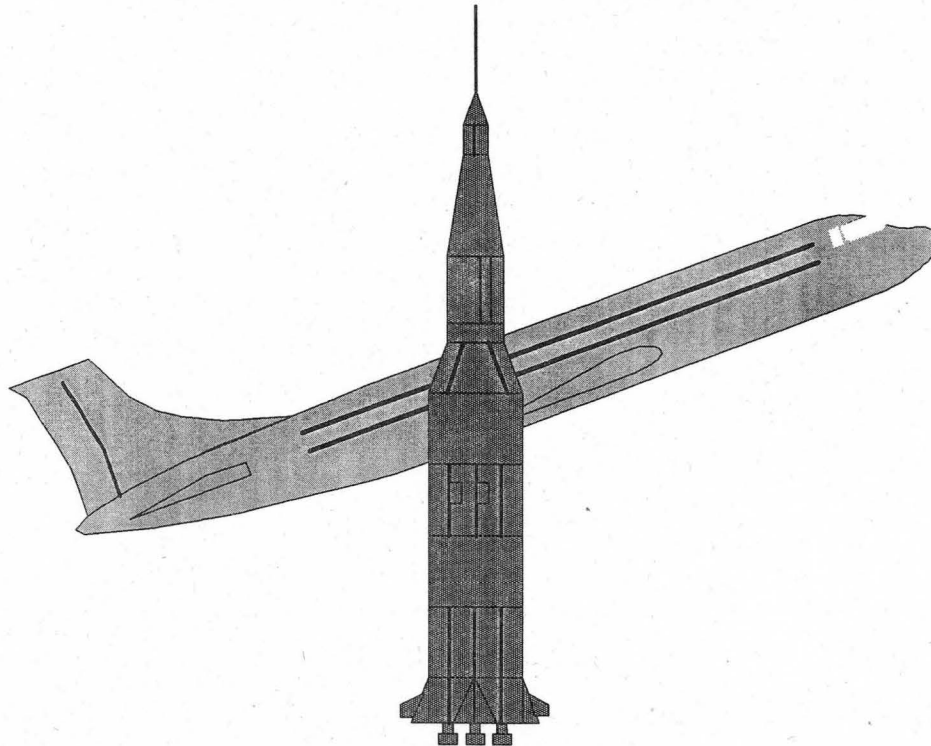
■ SOURCE: INDUSTRIAL ASSOCIATIONS

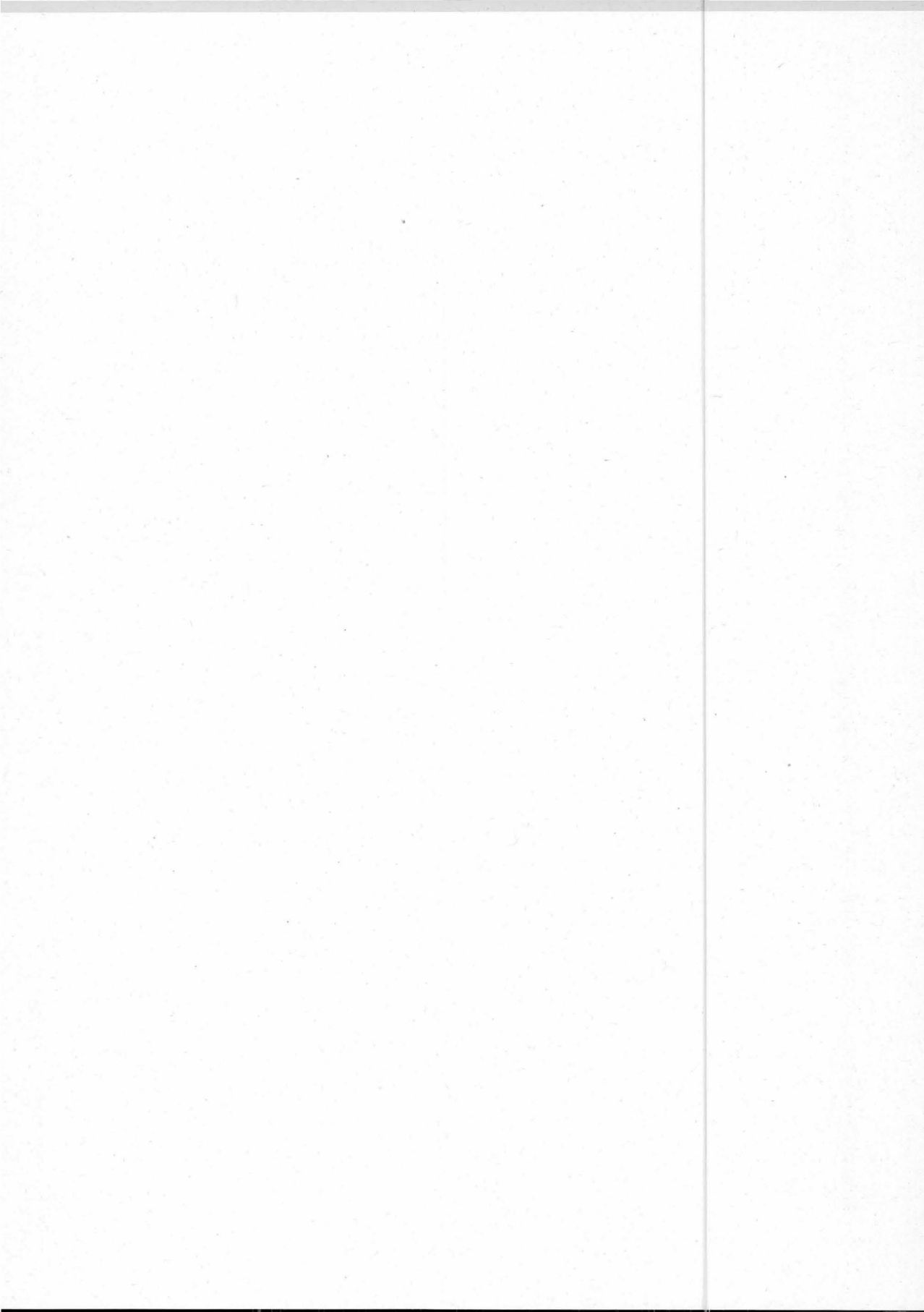


AEROSPACE MANUFACTURERS

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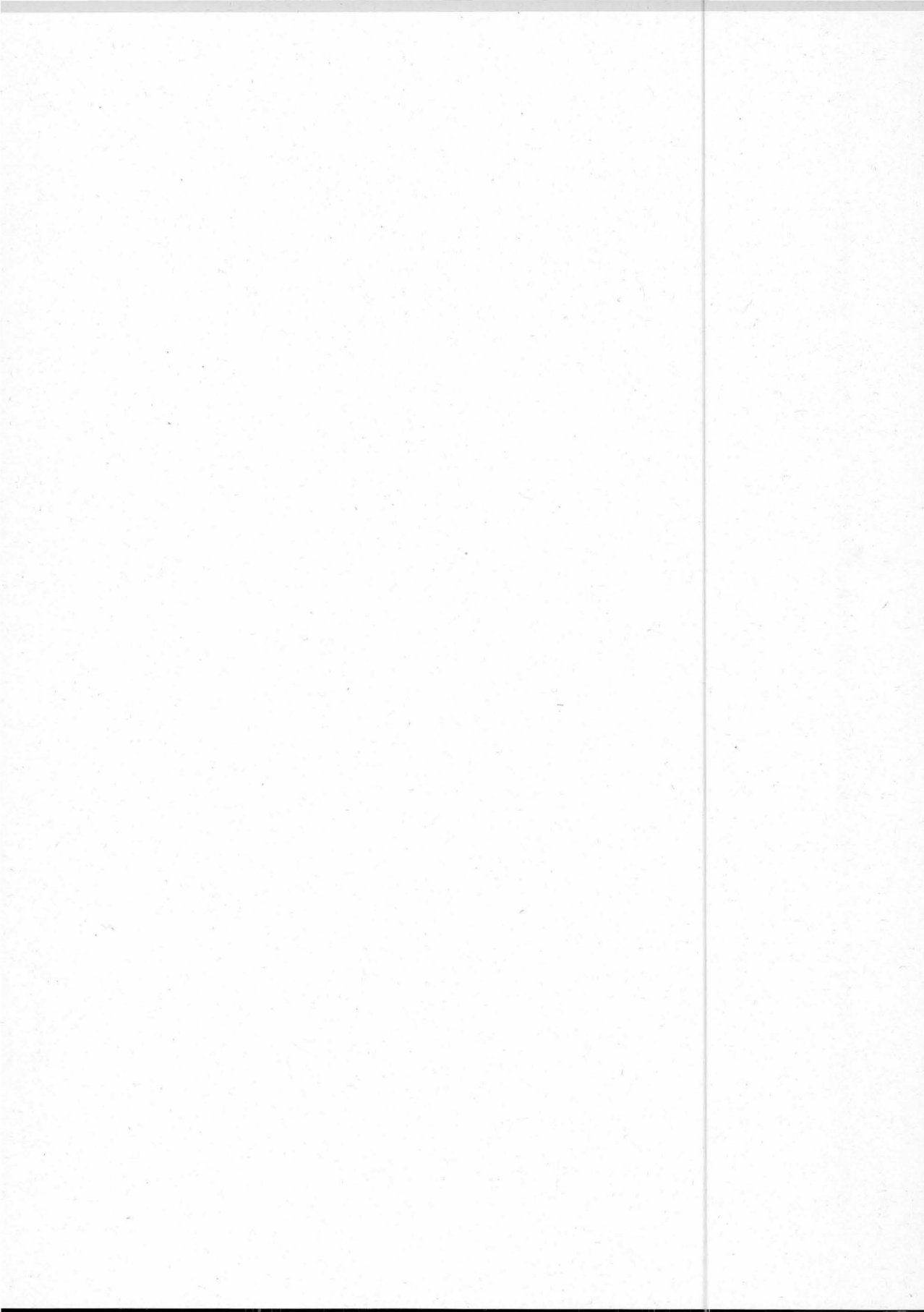


AEROSPACE MANUFACTURERS

Data for the *turnover* and *employment* of the major world *aerospace manufacturers* are taken from information supplied by the companies themselves or published in their annual reports.

Unless otherwise stated, the data relating to groups cover only their aerospace operations.

The turnover/employment ratio is not the best way of measuring productivity, since it overestimates the position of manufacturers that undertake little R&D activity and/or carry out more work under license or under sub-contracts.



TURNOVER OF MAJOR AEROSPACE MANUFACTURERS (MIO ECU AT CURRENT VALUES)

	1983	1984	1985	1986	1987	1988	1989	1990	1991P	1992E
(US) BOEING (GROUP)	12,501	13,122	18,012	16,708	13,431	14,344	18,404	21,670	-	-
(US) MC DONNELL DOUGLAS	8,633	11,319	13,777	11,768	10,436	11,260	11,709	11,308	-	-
(US) GENERAL ELECTRIC	-	-	10,218	10,461	10,425	9,999	11,024	10,344	-	-
(US) UNITED TECHNOLOGIES	8,389	10,219	10,626	8,521	7,784	8,332	9,606	8,868	-	-
(UK) BRITISH AEROSPACE	3,918	4,179	4,496	4,671	5,784	6,135	7,631	8,653	-	-
(US) LOCKHEED (GROUP)	7,290	9,912	12,204	10,242	9,722	8,956	8,978	7,820	-	-
(DE) DASA (EXCL.TST,INCL.DA)	3,405	3,480	3,844	3,766	4,037	4,883	5,789	6,204	6,484	-
(UK) ROLLS-ROYCE (GROUP)	2,267	2,386	2,718	2,683	2,922	2,969	4,399	5,141	-	-
(FR) AEROSPATIALE	3,548	3,658	3,620	3,737	3,592	3,977	4,509	4,741	5,477	5,719
(US) GENERAL DYNAMICS	3,716	5,186	5,862	5,080	4,915	4,991	5,472	4,568	3,759	3,706
(US) MARTIN MARIETTA	2,893	4,148	4,989	4,198	3,896	4,156	4,779	4,351	-	-
(US) NORTHROP (GROUP)	3,663	4,674	6,627	5,698	5,243	4,902	4,764	4,311	-	-
(US) GRUMMAN	2,533	3,300	4,061	3,558	2,924	3,078	3,230	3,173	-	-
(US) ROCKWELL	4,319	5,490	6,957	5,634	4,394	3,358	3,548	2,969	-	-
(IT) ALENIA	1,208	1,622	1,804	2,028	2,117	2,272	2,822	2,743	-	-
(FR) DASSAULT AVIATION	2,070	2,284	2,419	2,294	2,243	2,510	2,471	2,476	2,019	2,580
(JA) MITSUBISHI H.I.	1,083	1,446	1,738	1,648	1,878	1,924	2,409	2,221	-	-
(FR) SNECMA	977	1,192	1,384	1,508	1,350	1,458	1,915	2,044	2,050	-
(NL) FOKKER AIRCRAFT B.V.	605	619	533	584	452	880	1,199	1,385	1,687	1,912
(JA) KAWASAKI H.I.	482	651	731	800	765	1,160	1,234	1,239	1,323	-
(IS) I.A.I.	875	1,142	1,322	1,099	753	898	1,161	1,114	1,282	-
(US) ROHR (GROUP)	638	768	778	636	577	767	948	847	1,120	-
(ES) CASA	302	323	361	337	356	561	630	764	680	753
(IT) AGUSTA	606	493	570	580	613	667	734	722	652	702
(FR) S.E.P.	206	263	333	384	493	518	614	648	645	-
(IT) FIAT AVIAZIONE	253	261	310	415	413	457	593	631	721	853
(US) LTV	546	690	1,302	1,112	889	734	611	626	-	-
(UK) WESTLAND (GROUP)	555	502	524	513	542	531	641	576	-	-
(SW) SAAB AEROSPACE	213	296	502	468	608	563	572	575	-	-
(US) CESSNA (GENERAL DYNAMICS)	589	878	924	548	406	368	546	562	647	-
(BR) EMBRAER	208	203	287	384	411	442	636	457	-	-
(IN) HINDUSTAN AERONAUTICS	358	522	661	496	454	419	487	416	-	-
(UK) DOWTY	291	296	312	229	251	315	385	405	451	-
(SW) VOLVO	162	207	247	267	299	345	371	376	490	496
(FR) TURBOMECA	276	266	266	253	267	290	308	335	356	379
(UK) SHORTS (BOMBARDIER)	345	276	341	298	319	289	325	315	507	558
(IT) AERMACCHI	160	138	163	159	188	170	222	263	245	249
(BE) F.N. MOTEURS	184	140	215	171	149	147	148	182	150	147
(BE) SABCA	70	56	71	70	82	92	107	129	163	137
(FR) MATRA	777	802	840	830	929	965	1,014	-	-	-
(JA) ISHIKAWAJIMA-HARIMA H.I.	438	554	590	640	590	713	804	-	-	-

■ SOURCE: COMPANIES

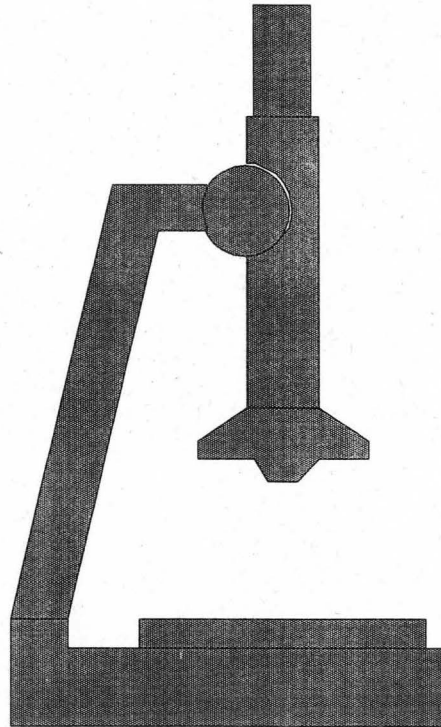
WORKFORCE OF MAJOR AEROSPACE MANUFACTURERS

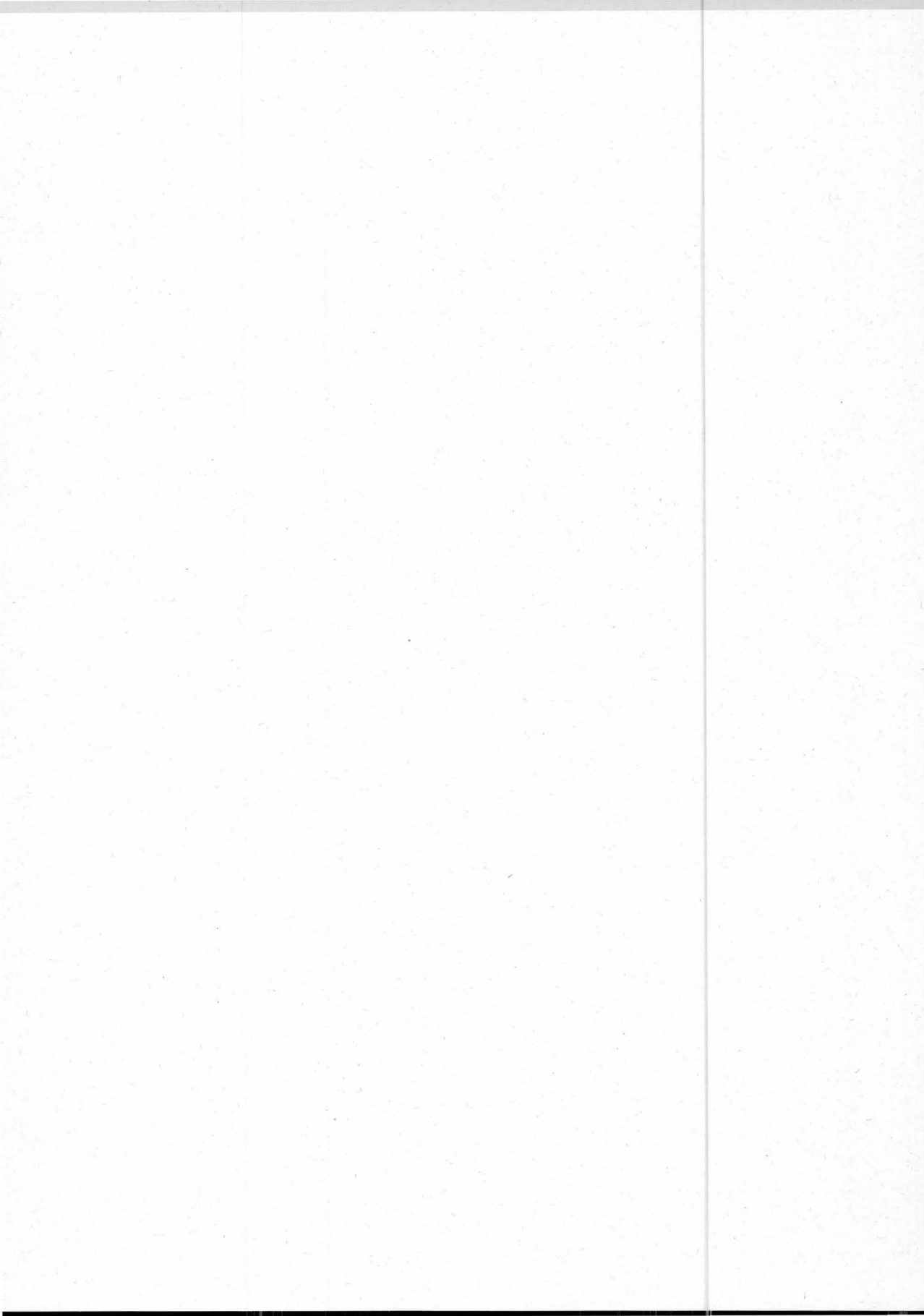
	1983	1984	1985	1986	1987	1988	1989	1990	1991P	1992E
(US) BOEING (GROUP)	84,600	86,600	98,700	118,500	136,100	147,300	159,200	161,700	-	-
(US) MC DONNELL DOUGLAS	62,820	72,690	83,310	92,289	99,300	109,400	115,050	108,800	-	-
(UK) BRITISH AEROSPACE	77,980	75,998	75,645	75,480	86,760	87,623	83,260	81,869	-	-
(US) GENERAL ELECTRIC	-	-	-	92,000	88,200	82,200	76,500	76,000	-	-
(US) LOCKHEED (GROUP)	71,800	81,300	87,800	94,200	97,200	85,600	82,500	73,000	-	-
(UK) ROLLS-ROYCE (GROUP)	42,300	40,900	41,700	41,900	42,000	40,900	55,500	65,900	-	-
(DE) DASA (EXCL.TST,INCL.DA)	49,688	48,551	50,432	52,178	53,284	56,690	60,000	58,664	-	-
(US) GENERAL DYNAMICS	-	-	-	-	-	60,100	57,558	53,500	49,000	-
(IN) HINDUSTAN AERONAUTICS	41,462	42,389	42,993	44,123	44,043	43,663	42,678	41,530	40,694	39,746
(US) MARTIN MARIETTA	29,370	33,093	37,116	36,845	36,597	33,990	33,267	34,500	-	-
(FR) AEROSPATIALE	35,463	35,456	34,889	34,246	32,827	32,626	32,958	33,506	33,000	32,500
(IT) ALENIA	23,765	26,943	27,779	27,956	28,606	29,738	31,648	30,179	-	-
(US) GRUMMAN	28,800	30,900	32,000	33,400	33,700	32,000	28,900	26,100	-	-
(IS) I.A.I.	20,670	21,650	22,070	21,483	20,270	17,291	16,612	16,904	16,976	-
(FR) SNECMA	12,950	13,442	13,862	13,918	13,434	13,482	13,955	14,192	13,900	-
(NL) FOKKER AIRCRAFT B.V.	8,398	9,055	10,053	10,860	11,709	11,690	12,925	13,561	12,400	12,400
(FR) DASSAULT AVIATION	15,799	16,196	16,123	15,783	14,676	13,818	13,385	12,390	11,860	11,400
(US) LTV	9,985	7,364	9,293	9,678	9,662	10,000	10,800	10,500	-	-
(UK) WESTLAND (GROUP)	12,305	11,892	11,613	10,595	9,231	9,216	9,499	9,601	-	-
(ES) CASA	9,836	10,037	10,238	10,591	10,548	10,370	10,138	9,544	9,400	9,100
(IT) AGUSTA	10,421	10,064	9,793	9,703	9,711	9,888	9,826	9,300	-	-
(BR) EMBRAER	6,811	7,645	7,736	8,592	10,157	12,069	12,607	9,007	-	-
(UK) SHORTS (BOMBARDIER)	6,265	6,164	6,587	7,216	7,203	7,679	7,837	7,877	8,366	8,600
(JA) MITSUBISHI H.I.	6,360	6,130	6,270	6,200	6,480	6,470	6,500	6,500	6,480	-
(SW) SAAB AEROSPACE	6,165	6,115	6,443	6,500	6,000	6,489	6,475	6,185	-	-
(UK) DOWTY	7,186	6,912	6,998	7,480	6,376	5,641	5,854	6,056	5,686	-
(JA) KAWASAKI H.I.	3,700	3,700	3,700	3,900	3,900	4,000	4,100	4,900	4,800	-
(US) CESSNA (GENERAL DYNAMICS)	7,300	8,900	8,900	7,800	4,100	3,600	4,100	4,900	5,200	5,400
(IT) FIAT AVIAZIONE	3,485	3,466	3,604	4,528	4,656	4,749	4,651	4,666	4,722	4,854
(FR) S.E.P.	3,408	3,571	3,708	3,886	3,969	4,144	3,999	3,901	3,900	-
(SW) VOLVO	3,125	3,326	3,463	3,587	3,729	3,760	3,804	3,847	4,472	4,404
(FR) TURBOMECA	3,944	3,868	3,828	3,669	3,655	3,558	3,544	3,552	3,612	3,560
(IT) AERMACCHI	2,506	2,454	2,435	2,474	2,550	2,698	2,715	3,297	3,000	2,850
(BE) SABCA	1,752	1,669	1,458	1,598	1,621	1,614	1,677	1,776	1,882	1,711
(BE) F.N. MOTEURS	2,368	2,302	2,308	2,214	1,999	1,648	1,603	1,678	1,240	1,150
(US) PRATT - WHITNEY (UTC)	40,715	42,129	43,891	46,728	46,536	46,000	45,900	-	-	-
(US) NORTHROP (GROUP)	37,200	41,500	46,900	46,800	48,200	44,600	41,000	-	-	-
(US) ROCKWELL	42,300	43,300	45,700	41,100	34,408	32,574	31,517	-	-	-
(US) ROHR (GROUP)	7,700	6,900	7,600	8,000	10,000	11,000	12,000	-	-	-
(FR) MATRA	4,357	4,810	4,846	4,933	5,017	4,747	5,086	-	-	-
(JA) ISHIKAWAJIMA-HARIMA H.I.	3,500	3,500	3,500	3,200	3,500	3,550	3,550	-	-	-

■ SOURCE: COMPANIES

PUBLIC FINANCING OF R&D

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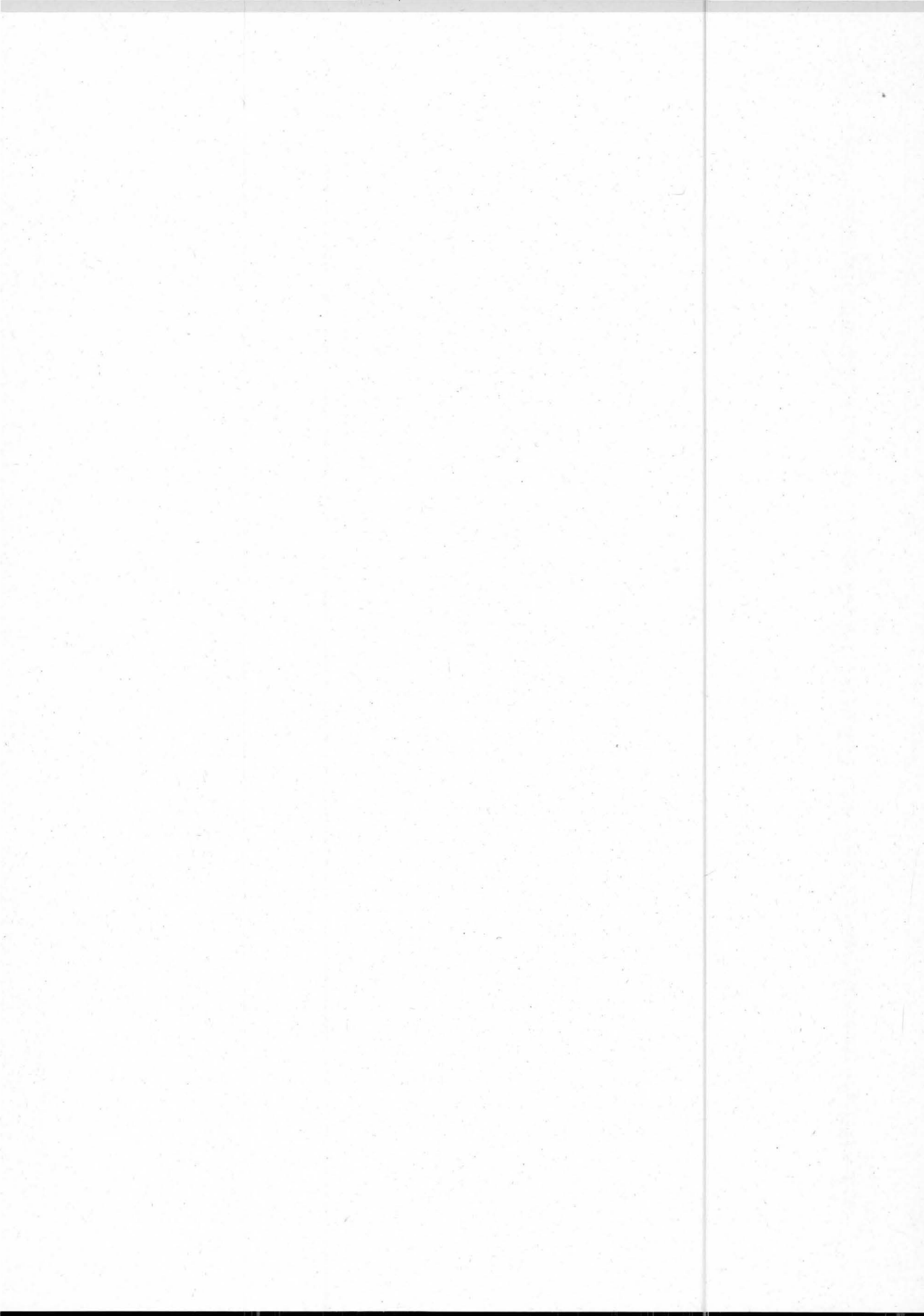


PUBLIC FINANCING OF R&D

Data relating to *public financing of aerospace R&D* are supplied by the *EUROSTAT (Statistical Office of the European Communities)* and include funds for aerospace R&D granted to industry and to research centers, laboratories, universities, etc.

The data relating to space R&D comprise credits allocated to the *European Space Agency (ESA)*.

Although a comparison of statistics from different sources can sometimes produce misleading results, it should be pointed out that the difference between the figures given in the following tables and those given in the Chapter 6 on the *turnover* of the aerospace industry shows of the proportion of public funds granted to non-industrial bodies.



PUBLIC FINANCING OF AEROSPACE R-D

MIOS ECUS

AIRCRAFT	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1980	8	-	109	0	120	0	0	9	0	0	116	362
1981	4	-	168	0	112	0	0	6	0	0	219	508
1982	4	-	172	0	-	0	0	29	0	0	154	-
1983	4	-	166	0	-	0	0	15	0	0	189	-
1984	-	-	184	-	-	0	0	39	0	0	194	-
1985	-	-	343	-	-	0	0	40	0	0	203	-
1986	-	-	288	-	-	73	0	48	0	0	197	-
1987	-	-	356	-	-	8	0	41	0	0	146	-
1988	-	-	346	-	-	83	0	78	0	0	154	-
1989	-	-	379	-	-	0	0	87	0	0	178	-
1990	-	-	432	-	-	0	0	86	0	0	118	-

SPACE	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1980	31	8	290	0	328	0	1	81	36	0	87	862
1981	28	8	292	0	278	0	1	121	40	0	123	890
1982	28	9	340	0	318	0	1	92	42	0	131	961
1983	30	11	338	0	395	0	1	123	41	0	127	1,066
1984	37	12	341	0	509	1	1	216	39	0	134	1,288
1985	43	14	369	30	560	1	2	260	42	0	143	1,463
1986	50	14	453	17	713	0	2	288	53	0	173	1,765
1987	66	15	532	57	725	0	3	438	50	0	185	2,072
1988	71	17	592	85	772	0	3	515	61	0	224	2,341
1989	83	18	645	112	919	0	3	505	54	0	221	2,561
1990	-	20	717	116	1,039	0	4	556	57	0	218	-

TOTAL	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1980	38	-	399	0	448	0	1	90	36	0	203	1,224
1981	32	-	459	0	389	0	1	127	40	0	341	1,398
1982	32	-	511	0	-	0	1	121	42	0	284	-
1983	34	-	504	0	-	0	1	137	41	0	317	-
1984	-	-	524	-	-	1	1	255	39	0	328	-
1985	-	-	712	-	-	1	2	299	42	0	346	-
1986	-	-	741	-	-	73	2	336	53	0	371	-
1987	-	-	888	-	-	9	3	479	50	0	331	-
1988	-	-	938	-	-	83	3	593	61	0	379	-
1989	-	-	1,025	-	-	1	3	592	54	0	399	-
1990	-	-	1,148	-	-	0	4	642	57	0	336	-

■ SOURCE: EUROSTAT

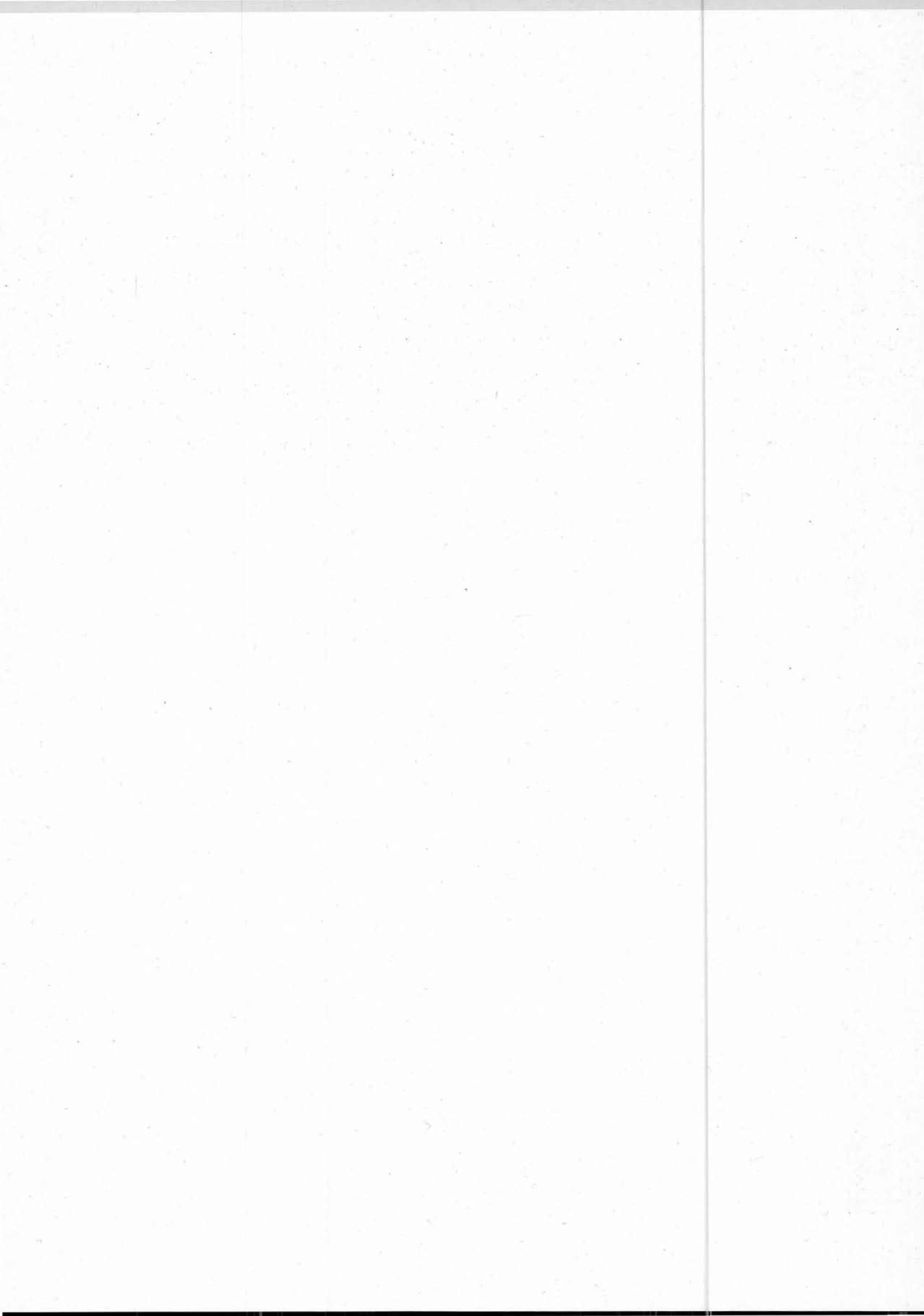
PUBLIC FINANCING OF AEROSPACE R-D

AS % OF PUBLIC FINANCING OF TOTAL R-D

AIRCRAFT	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1980	1.5	-	1.6	0.0	2.3	0.0	0.0	0.7	0.0	0.0	2.8	2.0
1981	0.9	-	2.4	0.0	1.7	0.0	0.0	0.3	0.0	0.0	3.6	2.3
1982	0.8	-	2.1	0.0	-	0.0	0.0	1.3	0.0	0.0	2.3	-
1983	0.7	-	2.0	0.0	-	0.0	0.0	0.5	0.0	0.0	2.8	-
1984	-	-	2.1	-	-	0.0	0.0	1.2	0.0	0.0	2.7	-
1985	-	-	3.6	-	-	0.0	0.0	1.1	0.0	0.0	2.6	-
1986	-	-	2.9	-	-	73.3	0.0	1.1	0.0	0.0	2.9	-
1987	-	-	3.3	-	-	8.1	0.0	0.8	0.0	0.0	2.1	-
1988	-	-	3.2	-	-	73.4	0.0	1.4	0.0	0.0	2.1	-
1989	-	-	3.3	-	-	0.1	0.0	1.5	0.0	0.0	2.5	-
1990	-	-	3.5	-	-	0.0	0.0	1.4	0.0	0.0	1.6	-
SPACE	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1980	6.3	3.6	4.3	0.0	6.2	0.4	0.9	6.2	2.9	0.0	2.1	4.8
1981	5.5	3.2	4.1	0.0	4.1	0.4	1.7	5.8	3.1	0.0	2.0	4.0
1982	5.4	3.4	4.2	0.0	4.3	0.3	1.5	4.1	3.0	0.0	2.0	3.9
1983	5.4	3.4	4.0	0.0	4.8	0.0	1.3	4.4	2.8	0.0	1.9	4.0
1984	6.2	3.3	3.9	0.0	5.6	0.5	1.6	6.4	2.6	0.0	1.8	4.4
1985	6.6	3.2	3.9	3.7	5.6	0.6	1.6	7.1	2.7	0.0	1.8	4.6
1986	7.7	2.7	4.5	2.1	7.0	0.3	1.9	6.5	3.1	0.0	2.6	5.5
1987	9.9	2.6	5.0	5.7	6.8	0.3	2.7	8.8	2.8	0.0	2.7	6.1
1988	10.6	2.3	5.5	6.8	6.7	0.3	3.0	9.0	3.3	0.1	3.1	6.5
1989	10.4	2.3	5.7	6.3	7.6	0.3	2.8	8.7	2.8	0.1	3.1	6.9
1990	-	2.5	5.9	5.4	8.0	0.3	2.7	8.7	2.8	0.1	3.0	-
TOTAL	BE	DK	DE	ES	FR	HE	IR	IT	NL	PO	UK	EC
1980	7.8	-	5.9	0.0	8.5	0.4	0.9	6.9	2.9	0.0	4.9	6.8
1981	6.4	-	6.5	0.0	5.8	0.4	1.7	6.1	3.1	0.0	5.7	6.2
1982	6.2	-	6.3	0.0	-	0.3	1.5	5.3	3.0	0.0	4.3	-
1983	6.1	-	6.0	0.0	-	0.0	1.3	4.9	2.8	0.0	4.6	-
1984	-	-	6.0	-	-	0.5	1.6	7.6	2.6	0.0	4.5	-
1985	-	-	7.5	-	-	0.6	1.6	8.2	2.7	0.0	4.4	-
1986	-	-	7.4	-	-	73.6	1.9	7.6	3.1	0.0	5.5	-
1987	-	-	8.3	-	-	8.5	2.7	9.7	2.8	0.0	4.8	-
1988	-	-	8.7	-	-	73.7	3.0	10.4	3.3	0.1	5.2	-
1989	-	-	9.0	-	-	0.4	2.8	10.2	2.8	0.1	5.5	-
1990	-	-	9.4	-	-	0.3	2.7	10.1	2.8	0.1	4.7	-

■ SOURCE: EUROSTAT

ANNEXES



EXCHANGE RATES

1 ECU =

	BFR	DM	PTA	FF	LIT	HFL	UKL	US \$	CA \$	YEN	SEK
1970	51.112	3.741	71.36	5.678	638.9	3.700	0.4259	1.022	-	368.0	-
1971	50.866	3.646	72.57	5.772	647.4	3.658	0.4286	1.048	-	363.8	-
1972	49.361	3.577	72.00	5.657	654.3	3.600	0.4489	1.122	-	339.7	-
1973	47.801	3.276	71.81	5.468	716.5	3.429	0.5023	1.232	-	333.2	-
1974	45.912	3.087	68.84	5.675	791.7	3.171	0.5135	1.202	1.170	339.7	5.240
1975	45.569	3.049	70.27	5.319	809.5	3.135	0.5600	1.241	1.236	360.7	5.141
1976	43.166	2.815	74.74	5.345	930.2	2.955	0.6216	1.118	1.102	331.2	4.867
1977	40.883	2.648	86.82	5.606	1,006.8	2.800	0.6537	1.141	1.214	305.8	5.119
1978	40.061	2.556	97.42	5.740	1,080.2	2.754	0.6639	1.274	1.454	267.1	5.749
1979	40.165	2.511	91.97	5.830	1,138.4	2.749	0.6463	1.370	1.606	300.5	5.872
1980	40.598	2.524	99.70	5.869	1,189.2	2.760	0.5985	1.392	1.626	315.0	5.881
1981	41.295	2.514	102.68	6.040	1,263.2	2.775	0.5531	1.116	1.338	245.4	5.635
1982	44.712	2.376	107.56	6.431	1,323.8	2.614	0.5605	0.980	1.208	243.5	6.143
1983	45.438	2.271	127.50	6.771	1,349.9	2.537	0.5870	0.890	1.097	211.4	6.821
1984	45.442	2.238	126.57	6.872	1,381.4	2.523	0.5906	0.789	1.021	187.1	6.511
1985	44.914	2.226	129.13	6.795	1,448.0	2.511	0.5890	0.763	1.042	180.6	6.521
1986	43.798	2.128	137.46	6.800	1,461.9	2.401	0.6715	0.984	1.367	165.0	6.996
1987	43.041	2.071	142.16	6.929	1,494.9	2.334	0.7046	1.154	1.530	166.6	7.310
1988	43.429	2.074	137.60	7.036	1,537.3	2.335	0.6644	1.182	1.456	151.5	7.242
1989	43.381	2.070	130.41	7.024	1,510.5	2.335	0.6733	1.102	1.304	151.9	7.099
1990	42.426	2.052	129.41	6.914	1,522.0	2.312	0.7139	1.273	1.485	183.7	7.521
1991	42.231	2.051	128.39	6.975	1,533.1	2.311	0.7006	1.237	1.416	166.3	7.481
1992	42.062	2.042	129.14	6.977	1,568.0	2.301	0.7077	1.255	1.409	160.6	7.462

■ SOURCE: COMMISSION SERVICES

GROSS DOMESTIC PRODUCT AT MARKET PRICES

BILLION ECU AT CURRENT PRICES

	BE	DE	ES	FR	IT	NL	UK	EC 12	USA	CDN	JAPAN
1970	24.7	180.5	37.2	139.8	105.1	32.7	121.2	660.1	986.7	-	199.3
1971	27.2	205.9	41.3	153.2	112.7	37.3	134.3	732.9	1,045.0	-	221.8
1972	31.3	230.3	48.8	174.6	122.0	42.9	143.6	818.5	1,072.5	-	272.0
1973	36.7	280.0	59.0	206.6	135.0	51.3	147.5	947.9	1,091.2	-	337.7
1974	44.8	319.0	75.4	229.6	154.3	63.0	163.0	1,095.1	1,210.5	129.0	395.2
1975	49.8	336.8	86.7	276.0	171.2	70.2	188.6	1,247.0	1,275.3	137.7	411.2
1976	59.7	398.4	98.1	318.2	188.0	85.3	201.1	1,461.4	1,577.2	178.1	502.9
1977	68.1	452.3	107.1	342.1	213.0	98.2	222.9	1,683.6	1,722.9	178.0	607.0
1978	74.6	502.8	116.8	380.3	234.7	107.8	253.3	1,919.4	1,740.2	164.8	765.3
1979	79.4	554.5	144.7	425.6	272.2	114.9	306.2	2,202.8	1,796.9	170.7	737.4
1980	85.0	585.9	154.2	478.5	326.0	122.0	386.5	2,520.8	1,929.3	189.2	762.4
1981	86.6	613.0	167.3	524.0	367.4	127.1	459.7	2,799.5	2,693.5	264.2	1,048.8
1982	87.0	672.5	184.0	563.8	411.8	141.1	496.3	3,121.7	3,183.2	307.7	1,107.1
1983	90.7	737.6	176.3	591.7	469.2	150.2	517.0	3,440.9	3,762.4	366.8	1,326.0
1984	97.5	784.5	200.6	634.8	526.4	158.6	549.0	3,762.6	4,711.9	432.4	1,592.5
1985	105.5	822.2	218.4	691.7	561.3	166.5	602.8	4,088.8	5,192.3	455.2	1,751.8
1986	113.8	907.5	235.2	745.5	613.8	178.5	568.8	4,435.4	4,243.3	366.7	2,000.2
1987	121.1	967.3	254.1	767.9	654.8	184.3	596.0	4,749.9	3,857.3	357.2	2,061.4
1988	127.8	1,017.5	291.9	809.0	704.4	192.5	705.5	5,165.9	4,066.9	410.9	2,410.4
1989	139.0	1,079.9	345.2	870.3	786.5	203.1	760.3	5,609.0	4,658.3	495.2	2,559.5
1990	151.7	1,179.6	387.0	933.9	855.2	219.3	783.7	6,093.6	4,233.2	450.1	2,278.5
1991	159.1	1,271.8	426.4	966.5	920.7	232.4	835.4	6,513.4	4,518.7	483.9	2,679.2
1992	169.0	1,364.4	462.2	*****	966.2	242.7	884.1	6,960.2	4,731.6	516.9	2,928.6

■ SOURCE: COMMISSION SERVICES

GROSS DOMESTIC PRODUCT AT MARKET PRICES

BN ECU AT 1985 PRICES AND EXCHANGE RATES

	BE	DE	ES	FR	IT	NL	UK	EC 12	USA	CDN	JAPAN
1970	73.8	594.6	145.1	467.1	356.9	118.9	451.7	2,260.6	3,443.8	252.7	918.4
1971	76.5	611.7	151.8	489.2	362.7	124.1	461.1	2,334.1	3,555.9	267.0	957.9
1972	80.6	637.6	163.9	508.4	372.4	128.3	477.9	2,436.0	3,736.1	281.9	1,038.2
1973	85.3	667.4	176.6	536.4	400.0	134.0	511.2	2,589.9	3,914.2	304.1	1,120.0
1974	88.7	669.3	186.0	551.0	421.9	139.3	504.0	2,651.6	3,885.5	317.0	1,106.2
1975	87.5	658.7	187.0	548.3	410.9	139.3	499.4	2,664.5	3,845.1	325.2	1,135.0
1976	92.3	694.3	193.1	572.7	437.6	146.5	514.0	2,854.3	4,032.9	345.6	1,189.3
1977	92.7	714.8	198.9	592.9	452.8	149.8	525.4	3,039.0	4,212.5	358.2	1,252.2
1978	95.3	735.3	201.8	613.0	469.4	153.6	544.8	3,220.5	4,427.8	374.5	1,316.2
1979	97.3	765.8	201.5	632.8	497.6	157.1	559.9	3,373.4	4,514.9	388.5	1,384.4
1980	101.5	776.2	204.0	641.8	517.8	158.5	547.7	3,481.8	4,511.9	394.8	1,445.9
1981	100.5	777.5	203.5	649.6	523.6	157.5	540.3	3,525.8	4,614.0	409.2	1,501.8
1982	102.0	772.5	205.9	664.5	528.7	155.3	549.8	3,629.9	4,494.9	396.0	1,544.4
1983	102.3	784.1	209.7	669.3	530.9	157.4	569.4	3,806.3	4,669.4	408.5	1,593.1
1984	104.6	806.2	213.5	679.3	547.1	162.3	581.4	3,944.0	5,004.1	434.8	1,672.9
1985	105.5	822.2	218.4	691.7	561.3	166.5	602.8	4,088.8	5,192.3	455.2	1,751.8
1986	107.0	841.4	225.3	708.5	575.4	169.8	625.9	4,200.2	5,360.1	470.4	1,795.5
1987	109.4	855.6	237.9	722.4	593.0	171.1	655.3	4,322.0	5,546.9	489.3	1,873.9
1988	114.5	887.7	250.4	748.0	617.6	175.8	686.1	4,492.1	5,797.7	510.7	1,980.4
1989	118.9	916.2	262.5	775.6	637.0	182.9	700.9	4,643.2	5,962.1	526.2	2,079.0
1990	123.3	959.7	272.2	797.2	649.5	190.0	706.7	4,775.5	6,017.2	528.5	2,194.7
1991	124.9	991.3	278.9	807.2	656.9	194.3	694.0	4,835.5	5,988.9	523.0	2,295.7
1992	127.5	1,012.4	287.4	825.8	670.3	196.8	707.7	4,939.8	6,115.8	540.5	2,377.1

■ SOURCE: COMMISSION SERVICES

GDP DEFLATOR AT MARKET PRICES

1985 = 100 - IN NATIONAL CURRENCY

	BE	DE	ES	FR	IT	NL	UK	EC 12	USA	CDN	JAPAN
1970	38.1	51.0	14.2	25.0	13.0	40.6	19.4	29.2	38.4	33.6	44.2
1971	40.2	55.1	15.3	26.6	13.9	43.8	21.2	31.4	40.3	34.7	46.7
1972	42.7	58.0	16.6	28.6	14.8	47.9	22.9	33.6	42.2	36.7	49.3
1973	45.8	61.7	18.6	31.0	16.7	52.3	24.6	36.6	45.0	39.9	55.6
1974	51.6	66.1	21.6	34.8	20.0	57.1	28.2	41.3	49.1	45.7	67.2
1975	57.8	70.0	25.2	39.4	23.3	62.9	35.9	46.8	53.9	50.2	72.4
1976	62.2	72.6	29.4	43.7	27.6	68.5	41.3	51.2	57.3	54.5	77.6
1977	66.9	75.3	36.2	47.6	32.7	73.1	47.1	55.4	61.2	57.9	82.1
1978	69.8	78.5	43.7	52.4	37.3	77.0	52.4	59.6	65.6	61.4	86.0
1979	73.0	81.7	51.1	57.7	43.0	80.1	60.0	65.3	71.5	67.7	88.6
1980	75.7	85.6	58.4	64.4	51.7	84.6	71.7	72.4	78.0	74.8	92.0
1981	79.2	89.0	65.4	71.7	61.2	89.2	79.9	79.4	85.4	82.9	94.9
1982	84.9	92.9	74.4	80.3	71.2	94.6	85.9	86.0	90.9	90.1	96.7
1983	89.7	95.9	83.0	88.1	82.4	96.4	90.5	90.4	94.0	94.5	97.4
1984	94.3	97.8	92.1	94.5	91.8	98.2	94.7	95.4	97.4	97.4	98.6
1985	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1986	103.7	103.1	111.1	105.3	107.7	100.5	103.6	105.6	102.1	102.3	101.8
1987	106.1	105.2	117.6	108.4	114.0	100.1	108.8	109.9	105.2	107.2	101.5
1988	107.9	106.8	124.2	112.0	121.1	101.8	116.0	115.0	108.7	112.4	102.1
1989	112.9	109.6	132.8	116.0	128.8	103.3	124.0	120.8	112.8	117.8	103.6
1990	116.2	113.3	142.5	119.2	138.4	106.3	134.4	127.6	117.4	121.4	105.6
1991	119.8	118.2	152.0	122.9	148.4	110.1	143.2	134.7	122.3	125.7	107.5
1992	124.1	123.6	160.8	126.4	156.1	113.0	150.1	140.9	127.2	129.3	109.6

■ SOURCE: COMMISSION SERVICES

Index of Abbreviations

<p><i>EC 10</i> 10 Member States: BE, DK, DE, HE, FR, IR, IT, LU, NL, UK</p> <hr/> <p><i>intra-EC</i> with EC Member States only</p> <hr/> <p><i>EC</i> European Community <i>BE</i> Belgium <i>DK</i> Denmark <i>DE</i> Federal Republic of Germany <i>ES</i> Spain <i>FR</i> France <i>HE</i> Greece <i>IR</i> Ireland <i>IT</i> Italy <i>LX</i> Luxembourg <i>NL</i> Netherlands <i>UK</i> United Kingdom <i>AUS</i> Australia <i>CDN</i> Canada <i>JPN</i> Japan <i>SWE</i> Sweden <i>USA</i> USA</p> <hr/> <p><i>GDP</i> Gross Domestic Product</p> <hr/> <p><i>ICAO</i> International Organization for Civil Aviation <i>AEA</i> Association of European Airlines</p>	<p><i>EC 12</i> EC 10 + Es + Po <i>EUR</i> Western Europe</p> <hr/> <p><i>extra-EC</i> with countries not Member of the EC</p> <hr/> <p><i>ECU</i> European Currency Unit <i>BFR</i> Belgian Franc <i>CDK</i> Danish Crown <i>DM</i> German Mark <i>PTA</i> Peseta <i>FF</i> French Franc <i>DRA</i> Drachma <i>IR£</i> Irish Punt <i>LIT</i> Italian Lira --- <i>HFL</i> Dutch Guilder <i>UK£</i> Pound Sterling <i>AUS\$</i> Australian Dollar <i>CA\$</i> Canadian Dollar <i>YEN</i> Japanese Yen <i>SEK</i> Swedish Crown <i>US\$</i> US Dollar</p> <hr/> <p><i>R&D</i> Research and Development</p> <hr/> <p><i>O.E.C.D.</i> Organization for Economic Cooperation and Development</p>
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Index of Signs Used

<i>Mio</i> Million	- or NA Data not available
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