



EUROPEAN COMMISSION
DIRECTORATE-GENERAL III
INDUSTRY
Industrial affairs II: Capital goods industries
Transport equipment (Aerospace Unit)

1995

The European Aerospace Industry

Trading Position and Figures

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Transport equipment (Aerospace Unit)

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Preface

We have the pleasure to present you with the 1995 edition of the document *"The European Aerospace Industry - Trading Position and Figures"*.

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

Directorate-General III - *Industry* has been compiling and collating these statistics since 1972.

With this edition we have made some alterations to the usual structure and lay-out. We are grateful for the questions and comments that we have received from our readers, and we have taken those into consideration wherever possible. We hope to have improved readability as well as the quality of the information. With this edition some tables have been omitted: 'Public Financing of Aerospace R&D', 'Turnover and Employment of Major Aerospace Manufacturers' and 'Joint European Programmes' - mainly due to difficulties in obtaining up-to-date material.

This publication has been drawn up with the greatest possible care. We continue to welcome your comments, should you find any omissions or errors in the material.

If you wish to receive the next edition, please send the request form (see trailer sheets) to the following address:

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Codes and abbreviations used

Country name	(ISO) Country Code
AUSTRIA	AT
BELGIUM	BE
DENMARK	DK
FINLAND	FI
FRANCE	FR
GERMANY	DE
GREECE	GR
IRELAND	IE
ITALY	IT
LUXEMBOURG	LU
PORTUGAL	PT
SPAIN	ES
SWEDEN	SE
THE NETHERLANDS	NL
UNITED KINGDOM	GB
COMMONWEALTH OF INDEPENDENT STATES	CIS
UNITED STATES OF AMERICA	USA

Currency Name	ISO Currency Code
AUSTRALIAN DOLLAR	AUD
CANADIAN DOLLAR	CAD
DANSK KRONE	DKR
DEUTSCHE MARK	DM
DRACHMI	DRA
ESCUDO	ESC
EUROPEAN CURRENCY UNIT	ECU
FRANC BELGE / BELGISCHE FRANK	BEC
FRANC FRANÇAIS	FF
FRANC LUXEMBOURGEOIS	LUF
IRISH PUNT	IRL
LIRA ITALIANA	LT
MARKKA	FMK
NEDERLANDSE GULDEN	HFL
ÖSTER. SCHILLING	OS
PESETA	PTA
POUND STERLING	UKL
SVENSK KRONA	SKR
US DOLLAR	USD
YEN	YEN

Miscellaneous	
R	Revised
E	Estimate
F	Forecast
na	Not Available /
or -	Not Applicable
EU	European Union. Where nothing else is mentioned it covers all Member States as of 31.12.94 before the most recent enlargement.
R & D	Research and Development

Glossary

AEA Association of European Airlines

Constant (1985) Prices Using the overall GDP deflators (see table in Annex) current prices are adjusted to 1985 level thus facilitating comparisons over time series. Notice, however, that applying a GENERAL deflator only provides an approximation for the specific industrial sector in question.

Current Prices Amounts reported in prices of the current year, i.e. with no adjustment for inflation and exchange rate variations. For comparisons over time series the use of constant prices (see Glossary), where such an adjustment has been carried out, gives a better picture of the true evolution.

GDP Gross Domestic Product

ICAO International Civil Aviation Organization

Long-Haul Commonly used for an aircraft's operational range of more than 7,000 nautical miles.

Medium-Haul Commonly used for an aircraft's operational range between 4,000 and 7,000 nautical miles.

Narrow Body Common definition of a single-aisle airliner. The definition applies to other-purpose airframes, if a passenger version would have a cabin arrangement with only one aisle.

Short-Haul Commonly used for an aircraft's operational range up to 4,000 nautical miles.

Wide Body Common definition of (at least) twin-aisle airliner. The definition applies to other-purpose airframes, if a passenger version would have a cabin arrangement with more than one aisle.

"White Tails" Aircraft produced to stock rather than according to specific order. Hence the white tail, where most aircraft would otherwise have the owner designation.

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Chapter 1

Civil Air Traffic

The data referring to the **world civil air traffic** correspond to scheduled operations of airlines of the 182 ICAO contracting States. The most recent figures were published in the ICAO Journal July/August 1994 issue [49], reviewing new facts in civil aviation during the year 1993, based on the ICAO Council's Annual Report 1993 (ICAO Document 9605) and the "Monde de l'aviation civile", 1993-96 (ICAO Circulaire 250).

The majority of the data for 1993 are rounded estimates, which are subject to changes when the final figures become available.

The ICAO Journal October 1994 issue [56] supplements with forecasts of the medium term of air transport - passenger services and freight services - till year 2003.

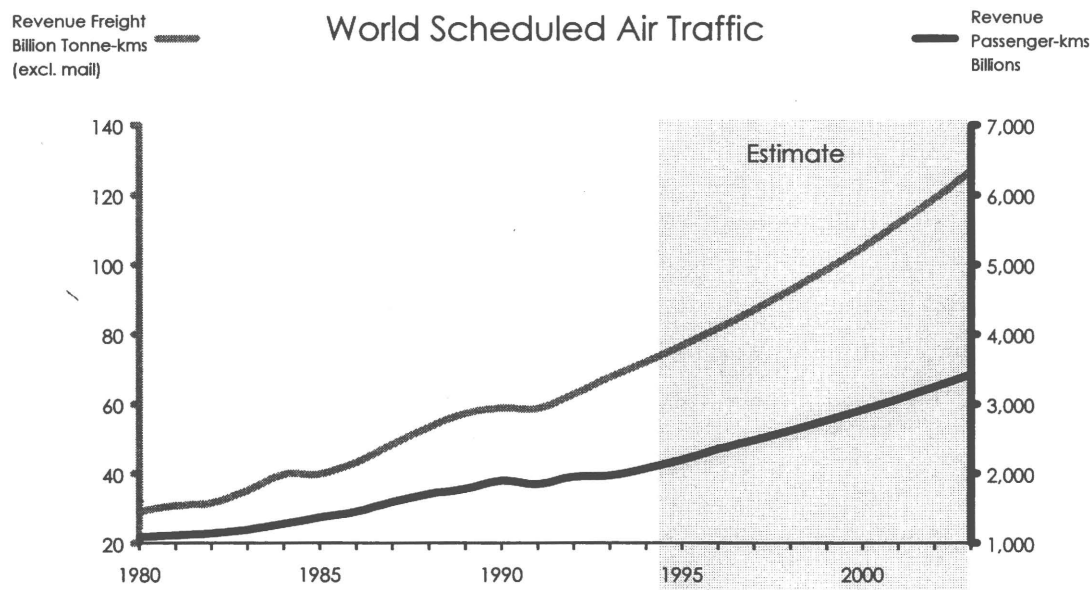


Chart 1.1 *The evolution of passenger and freight traffic 1980 - 2003.*
Source: ICAO [49][56].

World¹⁾ Scheduled Air Traffic

	Passenger Traffic								Cargo Traffic						
	Billion Passengers Carried	Growth Rate %	Billion Revenue Passenger -kms	Growth Rate %	Billion Available Seat-kms	Growth Rate %	Load Factor % (+/- points)	Load Factor % (+/- points)	Million Freight Tons Carried	Growth Rate %	Million Revenue Tonne-kms	Growth Rate %	Freight % of Revenue Tonne-kms	Growth Rate %	Mail % of Revenue Tonne-kms
1980	0.748		1,089		1,735		62.8 %		11.1		32,813		88.8 %		11.2 %
1985	0.899		1,367		2,070		66.0 %		13.7		44,240		90.1 %		9.9 %
1986	0.960	6.8 %	1,452	6.2 %	2,235	8.0 %	65.0 %	-1	14.7	7.3 %	47,730 ^[R]	7.9 %	90.5 %	8.4 %	9.5 % ^[R] 3.2 %
1987	1.028 ^[R]	7.1 %	1,589	9.4 %	2,370	6.0 %	67.0 %	2	16.1	9.5 %	53,020 ^[R]	11.1 %	91.1 % ^[R]	11.9 %	8.9 % ^[R] 3.5 %
1988	1.082	5.3 %	1,705 ^[R]	7.3 %	2,545	7.4 %	67.0 %	0	17.2	6.8 %	58,100 ^[R]	9.6 %	91.7 %	10.2 %	8.3 % 2.8 %
1989	1.119 ^[R]	3.4 %	1,780 ^[R]	4.4 %	2,610	2.6 %	68.2 %	1	18.1	5.2 %	62,270 ^[R]	7.2 %	91.9 %	7.4 %	8.1 % 4.8 %
1990	1.165 ^[R]	4.1 %	1,894 ^[R]	6.4 %	2,784	6.7 %	68.0 %	0	18.2 ^[R]	0.6 %	64,150	3.0 %	91.7 %	2.8 %	8.3 % 5.3 %
1991	1.134 ^[R]	-2.7 %	1,844 ^[R]	-2.6 %	2,795	0.4 %	66.0 %	-2	17.4 ^[R]	-4.4 %	63,730 ^[R]	-0.7 %	92.0 %	-0.3 %	8.0 % -4.1 %
1992	1.167	2.9 %	1,953 ^[R]	5.9 %	2,960	5.9 %	66.0 %	0	17.3	-0.5 %	67,930 ^[R]	6.6 %	92.5 % ^[R]	7.1 %	7.5 % ^[R] 0.2 %
1993	1.171	0.3 %	1,971	0.9 %	2,986	0.9 %	66.0 %	0	17.5	1.3 %	72,910	7.3 %	92.8 %	7.7 %	7.2 % 2.7 %
1994 ^[E]	1.237	5.7 %	2,070	5.0 %					18.3	4.3 %	72,000 ²				
1995 ^[F]	1.304	5.4 %	2,194	6.0 %					19.1	4.3 %	76,700 ²				

1) CIS included

2) Only freight included in estimate / forecast

Table 1.1 Source: ICAO [49][56].

Corrigendum

	The text ...	should read ...
Page 2.19	"The 1994 share is 26.6 % and ..."	"The 1994 share is 25.8 % and ..."
Page 3.62, bottom	"The tables are therefore not directly incomparable ..."	"The tables are therefore not directly comparable ..."
Page 3.64, middle	"..., with 20.8 % of this value represents ..."	"..., with 20.8 % of this value representing ..."
Page 3.68, middle	"..., with 33.1 % of this value represents ..."	"..., with 33.1 % of this value representing ..."
Pages 6.103 - 106	"Bomber / Interceptor"	"Bomber / Interdictor"
Page 7.121, first column, bottom	"... included in the <i>civil transport aircraft</i> fleets presented in Chapters 2 and 3."	"... included in the <i>civil and para-public helicopter</i> fleet presented in Chapter 4."

World Scheduled Passenger Traffic										
Breakdown of Revenue Passenger-kms in % of World Total										
	AEA ¹		CIS ²		USA		Rest of World		World	
	Share %	Growth Rate %	Share %	Growth Rate %	Share %	Growth Rate %	Share %	Growth Rate %	Total Passenger-kms (Billions)	Growth Rate %
1980	16.7 %		14.7 %		37.6 %		31.0 %		1,089	
1981	16.9 %	4.0 %	15.3 %	6.9 %	35.4 %	-3.2 %	21.4 %	6.7 %	1,117	2.6 %
1982	16.7 %	0.8 %	15.1 %	0.5 %	35.8 %	3.4 %	31.1 %	2.5 %	1,142	2.2 %
1983	16.1 %	0.3 %	14.8 %	2.4 %	37.3 %	8.5 %	29.2 %	2.3 %	1,190	4.2 %
1984	15.9 %	6.2 %	14.3 %	4.0 %	37.5 %	7.9 %	22.1 %	9.0 %	1,278	7.4 %
1985	15.8 %	6.4 %	13.7 %	2.3 %	38.9 %	10.9 %	22.9 %	4.8 %	1,367	7.0 %
1986	15.0 %	1.1 %	13.4 %	3.6 %	40.2 %	9.7 %	26.7 %	5.6 %	1,452	6.2 %
1987	15.5 %	12.8 %	12.6 %	3.0 %	40.4 %	10.0 %	15.7 %	9.8 %	1,589	9.4 %
1988	15.4 %	6.8 %	12.5 %	6.5 %	39.8 %	5.7 %	18.9 %	9.9 %	1,705	7.3 %
1989	15.9 %	7.6 %	12.7 %	6.4 %	39.0 %	2.2 %	18.4 %	4.8 %	1,780	4.4 %
1990	16.2 %	8.2 %	12.7 %	6.2 %	38.8 %	5.9 %	17.9 %	6.2 %	1,894	6.4 %
1991	15.6 %	-6.2 %	12.2 %	-6.7 %	39.1 %	-2.0 %	46.1 %	-0.1 %	1,844	-2.6 %
1992	16.7 %	13.9 %	7.2 %	-37.6 %	39.2 %	6.2 %	60.5 %	17.8 %	1,953	5.9 %
1993	17.8 %	7.5 %	5.3 %	-25.6 %	39.4 %	1.4 %	55.5 %	2.6 %	1,971	0.9 %

1) AEA - Association of European Airlines

2) CIS includes as of 1992: Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Table 1.2 Sources: ICAO [49, 56, 57].

The data referring to the **scheduled operations of AEA** (Association of European Airlines) members, according to the AEA Yearbook 1994 Statistical Appendices [57], are broken down between the following groups of routes:

- *Domestic & Territorial:*
routes commencing and terminating within the national frontiers (metropolitan area) of the reporting carrier's country of registration. Routes between a State and territories belonging to it, as well as routes between two such territories.
- *International Short/Medium-Haul:*
international routes originating and terminating within Europe - including Turkey and ex-USSR up to 55°E, Azores, Canary Islands, Madeira and Cyprus;
between Europe and North Africa - Algeria, Egypt, Libya, Morocco, Sudan and Tunisia;
between Europe and the Middle East - Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen and the Democratic Republic of Yemen;
- *Long-haul:*
other international routes.

The airlines included are:

Aer Lingus, Air France, Air Malta, Alitalia, Austrian Airlines, Balkan Bulgarian Airlines, British Airways, British Midland, Czechoslovak Airlines, Cyprus Airways, Finnair, Iberia, Icelandair, Yugoslav Airlines (JAT), KLM, Lufthansa, Luxair, Malev Hungarian Airlines, Olympic Airways, Sabena, SAS, Swissair, TAP-Air Portugal, Turkish Airlines, UTA.

AEA Scheduled Passenger Traffic

	Revenue Passenger-kms						Available Seat-kms						Load Factor %		
	Domestic & Territorial		Short/Medium Haul		Long-Haul		Domestic & Territorial		Short/Medium Haul		Long-Haul		Dom. & Ter.	S/M-Haul	Long-Haul
	Billion Pass.-kms	Growth Rate %	Billion Pass.-kms	Growth Rate %	Billion Pass.-kms	Growth Rate %	Billion Seat-kms	Growth Rate %	Billion Seat-kms	Growth Rate %	Billion Seat-kms	Growth Rate %			
1980	19.3		48.1		114.2		30.2		86.3		185.1		63.9 %	55.8 %	61.7 %
1981	19.8	2.6 %	49.4	2.7 %	119.7	4.8 %	29.9	-1.0 %	84.9	-1.7 %	185.3	0.1 %	66.2 %	58.2 %	64.6 %
1982	20.7	4.5 %	49.2	-0.5 %	120.6	0.7 %	31.3	4.4 %	85.7	1.0 %	185.6	0.2 %	66.3 %	57.4 %	64.9 %
1983	21.7	4.9 %	49.1	-0.2 %	120.1	-0.4 %	33.0	5.5 %	85.6	-0.1 %	184.2	-0.8 %	65.9 %	57.4 %	65.2 %
1984	22.3	2.4 %	53.3	8.6 %	127.1	5.8 %	32.8	-0.6 %	89.5	4.5 %	187.2	1.7 %	67.8 %	59.6 %	67.9 %
1985	22.9	2.8 %	57.2	7.3 %	135.5	6.6 %	34.0	3.8 %	93.7	4.8 %	199.2	6.4 %	67.2 %	61.1 %	68.0 %
1986	23.8	4.2 %	57.0	-0.5 %	137.3	1.3 %	35.3	3.6 %	96.8	3.3 %	208.3	4.5 %	67.5 %	58.8 %	65.9 %
1987	26.5	11.1 %	63.9	12.2 %	155.7	13.4 %	37.4	5.9 %	101.6	4.9 %	221.9	6.6 %	70.9 %	62.9 %	70.1 %
1988	28.4	7.1 %	69.2	8.3 %	165.3	6.2 %	41.2	10.3 %	111.2	9.5 %	235.9	6.3 %	68.8 %	62.2 %	70.1 %
1989	29.7	4.7 %	76.1	10.0 %	177.0	7.1 %	44.0	6.9 %	121.9	9.6 %	249.3	5.7 %	67.4 %	62.4 %	71.0 %
1990	31.2	5.1 %	83.1	9.2 %	191.7	8.3 %	46.1	4.8 %	133.2	9.3 %	272.6	9.3 %	67.6 %	62.4 %	70.3 %
1991	29.6	-5.0 %	75.4	-9.3 %	182.0	-5.1 %	45.7	-0.9 %	130.2	-2.3 %	267.6	-1.8 %	64.8 %	57.9 %	68.0 %
1992	32.8 ^R	10.8 %	87.1 ^R	15.5 %	207.1	13.8 %	50.0 ^R	9.5 %	150.5 ^R	15.6 %	296.9	10.9 %	65.6 ^R	57.9 ^R	69.8 %
1993	34.0	3.6 %	94.1	7.9 %	223.7	8.0 %	51.6	3.2 %	160.0	6.3 %	319.1	7.5 %	65.9 %	58.8 %	70.1 %

Table 1.3 Source: AEA [57].

AEA Scheduled Cargo Traffic¹⁾

	Revenue Tonne-kms						Available Tonne-kms						Load Factor %		
	Domestic & Territorial		Short/Medium Haul		Long-Haul		Domestic & Territorial		Short/Medium Haul		Long-Haul		Dom. & Ter.	S/M-Haul	Long-Haul
	Million Tonne-kms	Growth Rate %	Million Tonne-kms	Growth Rate %	Million Tonne-kms	Growth Rate %	Million Tonne-kms	Growth Rate %	Million Tonne-kms	Growth Rate %	Million Tonne-kms	Growth Rate %			
1980	279		882		7,530		723		2,495		12,355		38.6 %	35.4 %	60.9 %
1981	289	3.5 %	874	-0.9 %	7,917	5.1 %	739	2.2 %	2,349	-5.9 %	12,816	3.7 %	39.0 %	37.2 %	61.8 %
1982	319	10.4 %	892	2.0 %	8,045	1.6 %	770	4.2 %	2,357	0.4 %	13,635	6.4 %	41.4 %	37.8 %	59.0 %
1983	343	7.7 %	949	6.4 %	9,042	12.4 %	773	0.4 %	2,417	2.5 %	14,049	3.0 %	44.4 %	39.2 %	64.4 %
1984	351	2.3 %	1,080	13.9 %	10,385	14.8 %	783	1.3 %	2,594	7.3 %	15,399	9.6 %	44.8 %	41.6 %	67.4 %
1985	362	3.1 %	1,131	4.8 %	10,836	4.3 %	856	9.3 %	2,825	8.9 %	16,837	9.3 %	42.3 %	40.0 %	64.4 %
1986	360	-0.5 %	1,150	1.7 %	11,871	9.6 %	940	9.8 %	2,915	3.2 %	18,349	9.0 %	38.3 %	39.5 %	64.7 %
1987	393	9.2 %	1,163	1.1 %	13,089	10.3 %	1,061	12.8 %	3,105	6.5 %	19,899	8.4 %	37.1 %	37.4 %	65.8 %
1988	409	4.0 %	1,183	1.8 %	14,371	9.8 %	1,221	15.1 %	3,268	5.2 %	22,030	10.7 %	33.5 %	36.2 %	65.2 %
1989	396	-3.1 %	1,269	7.2 %	15,534	8.1 %	1,353	10.8 %	3,738	14.4 %	23,546	6.9 %	29.3 %	33.9 %	66.0 %
1990	450	13.7 %	1,365	7.6 %	16,283	4.8 %	1,420	5.0 %	4,093	9.5 %	25,410	7.9 %	31.7 %	33.4 %	64.1 %
1991	427	-5.2 %	1,219	-10.7 %	15,953	-2.0 %	1,418	-0.1 %	3,947	-3.6 %	25,876	1.8 %	30.1 %	30.9 %	61.7 %
1992	388 ^R	-9.2 %	1,382 ^R	13.4 %	16,908 ^R	6.0 %	1,539 ^R	8.5 %	4,615 ^R	16.9 %	26,928	4.1 %	25.2 % ^R	29.9 % ^R	62.8 % ^R
1993	536	38.0 %	1,903	37.8 %	18,733	10.8 %	1,579	2.6 %	5,203	12.7 %	28,021	4.1 %	33.9 %	36.6 %	66.9 %

1) Freight and mail combined for passenger services and freight services.

Table 1.4 Source: AEA [57].

Chapter 2

Civil Transport Aircraft

The table series 2.1 through 2.6 comprises the situation of **orders, deliveries and backlog of civil jets**.

Figures for the period until 1980 are accumulated since year 1974 when our registrations begin. An aircraft is represented if deliveries took place after 1973. When that is the case an accumulated figure from the beginning of order intake is given. Figures for CIS produced aircraft are available only as of 1993, so previous years are left blank.

The tables relating to the **civil transport aircraft fleet, deliveries, orders and fleet age** are based on material provided by *AEROSPATIALE* [52]. The origin of these statistics is "*L'État des flottes commerciales*", a database on civil transport aircraft covering almost all the civil transport aircraft produced in the western world.

Aircraft used by public authorities are included, while such aircraft may also be included in the statistics relating to military fixed-wing aircraft, which are given in Chapter 6.

We have modified the material provided¹, and as a result, most of these tables show figures quite different from our 1994 edition; in particular the distribution of short-haul versus long-haul jets changed substantially.

¹ Certain aircraft have been re-classified in accordance with more common definitions of short/medium- and long-haul operational possibilities (see glossary for definitions).

3 series of tables are presented:

- Aircraft in service;
- Annual deliveries;
- Order backlog.

Each series is broken down into

Aircraft category / operational possibility

- Short-haul turboprop;
- Short- and medium-haul jet;
- Long-haul jet;
- Total figures.

For each aircraft category, the following tables are given:

- Distribution of all aircraft by geographical area;
- Distribution of EU-built aircraft by geographical area;
- EU-built share in each geographical area.

Each table presents a breakdown ..

- by number of units;
- by number of seats;
- by present value. For each year the values are separately estimated using a linear depreciation on 20 years. The value per seat in US\$ in 1993 is:

for short-haul turboprops	\$ 240,000
for short- and medium-haul jets	\$ 290,000
for long-haul jets.	\$ 335,000

All values are adjusted to 1993 level using annual GDP deflators and converted to ECU using the 1993 exchange rate (tables of GDP deflators and ECU rates are included in the Annex).

Finally each sub-table presents figures for:

Geographical market areas

- EU: 12 member states before the most recent enlargement. Portugal and Spain are included as of 1986; Germany's Neue Länder as of 1990;
- Other Europe (as of 1993): Albania, Austria, Azerbaijan, Bulgaria, Czech Republic, Finland, Hungary, Iceland, Latvia, Lithuania, Malta, Norway, Poland, Romania, Russia, Slovakia, Sweden, Switzerland, Ukraine and ex-Yugoslavia;
- USA;
- Rest of the world.

Table 2.7 gives a list of the aircraft included in the study.

World Civil Jet Aircraft Orders in Units

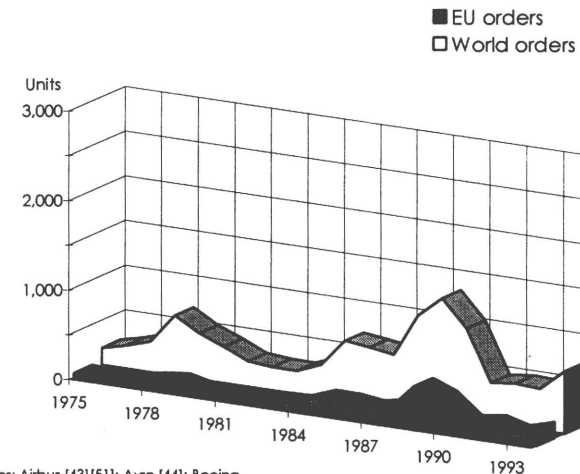
	Design Origin EU											Design Origin US											Total US								
	A300	A310	A319	A320	A321	A330	A340	Total AIRBUS	BAC 111	BAe 146/RJ	CONCORDE	F 28	F 70	F 100	Total EU	B-707+720	B-727	B-737	B-747	B-757	B-767	B-777		Total BOEING	DC-9	DC-10	MD-11	MD-80	MD-90	Total McDD	L 1011
Until 1980	202	48						250	230		14	168			662	962	1,781	854	557	103	131		4,388	974	370			78	1,422	239	6,049
1981	35	4						39		4		14			57		38	121	23	3	7		192	2	8		19		29	5	226
1982	3	11						14	1	2		3			20	5	11	71	14	2	2		105		48		87		135		240
1983		10						10	1	26		24			61	15	1	68	24	26	16		150		2		43		45		195
1984	11	14		16				41	2	9		11		8	71			130	22	2	10		164		6		117		123	5	292
1985	24	25		58				107	6	12		19		26	170			283	42	49	21		395		3		106		109		504
1986	7	16		83				106		26		2		35	169	6		211	81	13	23		334		5	11	120		136		470
1987	29	28		53				110		23					133	11		180	67	40	57		355		2	20	88		110		465
1988	21	22		92		3	2	140		37				8	185			322	49	149	82		602		2	47	239		288		890
1989	54	22		110	20	83	49	338		29				99	466			310	60	209	104		683			21	140		161		844
1990	22	29	3	124	91	25	6	300		26				33	359	11		152	137	97	57	49	503			49	50	51	150		653
1991	40	12		15	3	5	21	96		27				10	133			71	38	51	67	27	254			10	28		38		292
1992	18	13	6	61	13	1	22	134	1	21				14	170			113	25	37	22	42	239			8	30	26	64		303
1993	6	3		13		1	15	38		11			22	29	100			110	2	40	66	29	247			6	10		16		263
1994			42	33	20		30	125		25			18	11	179			70	16	12	22		120			5	9	9	23		143
1981 - 1994	270	209	51	658	147	118	145	1,598	11	278		73	40	273	2,273	48	50	2,212	600	730	556	147	4,343	2	76	177	1,086	86	1,427	10	5,780
Total	472	257	51	658	147	118	145	1,848	241	278	14	241	40	273	2,935	1,010	1,831	3,066	1,157	833	687	147	8,731	976	446	177	1,164	86	2,849	249	11,829

Sources: Airbus [43][51]; Avro [44]; Boeing [5][46][48]; Bombardier [50]; Fokker [3]; general press [4][45].

Table 2.1 The series are retroactively adjusted for cancellations where these have been communicated, and thus represent net orders.

The EU share of world orders over the period 1974 - 1994 reached 35.6 % in 1989. The 1994 share is 26.6 % and the overall value for the period is 19.2 %. A detailed breakdown of orders by aircraft categories is presented in table 2.4.

	Design Origin CIS									Other			Grand Total	
	AN-124	AN-74	IL-62	IL-76	IL-86	IL-96	TU-154M	TU-204	YAK-42	Total CIS	Embraer EMB-145 (Bras)	Canadair RJ (Canada)		Total Other
Until 1980													6 711	
1981													283	
1982													260	
1983													256	
1984													363	
1985													674	
1986													639	
1987													598	
1988													1 075	
1989													1 310	
1990													1 012	
1991										20	20	20	425	
1992										4	4	4	473	
1993	4	5		14	1	2	32	6	7	71	28	28	434	
1994	10	10	1	na	1	3	12	272	16	325	13	33	46	647
1981 - 1994	14	15	1	14	2	5	44	278	23	396	13	85	98	8 449
Total	14	15	1	14	2	5	44	278	23	396	13	85	98	15 160



Sources: Airbus [43][51]; Awo [44]; Boeing [5][46][48]; Bombardier [50]; Fokker [3]; general press [4][45].

Chart 2.1

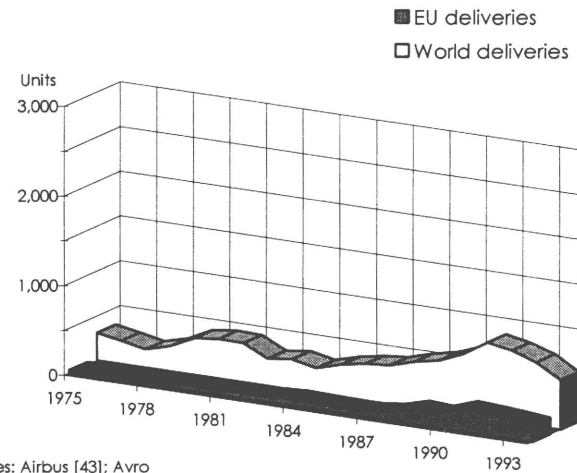
World Civil Jet Aircraft Deliveries in Units

	Design Origin EU										Design Origin US										Total EU	Total US																												
	A300	A310	A319	A320	A321	A330	A340	Total AIRBUS	BAC 111	BAe 146/RJ	CONCORDE	F 28	F 70	F 100	B-707+720	B-727	B-737	B-747	B-757	B-767			B-777	Total BOEING	DC-9	DC-10	MD-11	MD-80	MD-90	Total McDD	L 1011																			
Until 1980	121							121	227		14	161																				523	939	1,692	715	487							3,833	950	339		5	1,294	195	5,322
1981	37							37	2			12																			51	2	92	108	53							255	16	25		62	103	28	386	
1982	46							46	2			10																		58	8	28	95	25	2	20				178	10	11		33	54	14	246			
1983	19	17						36	1	10		16																	63	8	11	82	23	25	55				204		12		51	63	6	273				
1984	19	29						48	2	10		17																	77	8	8	67	16	18	29				146		10		44	54	4	204				
1985	16	26						42		18		12																	72	3		115	24	36	25				203		11		71	82	2	287				
1986	11	19						30	2	23		11																	66	4		141	35	35	27				242		17		85	102		344				
1987	10	21						31	3	23		2																59	9		161	23	40	37				270		10		94	104		374					
1988	17	28		16				61		21																		93	165	24	48	53							290	10		120	130		420					
1989	24	23		58				105	1	36																		167	5		146	45	51	37				284		1		117	118		402					
1990	19	18		58				95		25																		151	4		174	70	77	60				385			3	139	142		527					
1991	25	19		119				163		26																		245	14		215	64	80	62				435			31	139	170		605					
1992	22	24		111				157	1	13																		225	5		218	61	99	63				446			42	85	127		573					
1993	22	22		71		1	22	138		17																		208			152	56	71	51				330			36	42	78		408					
1994	23	2		48	16	9	25	123		26			1	29	179	1		121	40	69	40							179	1		121	40	69	40				271		17	22	39		310						
1981 - 1994	310	248		481	16	10	47	1,112		14	248		80	1	259	1,714		71	139	1,960	559	651	559					1,714	71	139	1,960	559	651	559				3,939	26	107	129	1,104	1,366	54	5,359					
Total	431	248		481	16	10	47	1,233		241	248		14	241	1	259	2,237		1,010	1,831	2,675	1,046	651	559				2,237	1,010	1,831	2,675	1,046	651	559				7,772	976	446	129	1,109	2,660	249	10,681					

Sources: Airbus [43]; Avro [44]; Boeing [46]; general press [4][45].

Table 2.2 CIS deliveries are equal to CIS orders for 1993, since most shipments were made from white-tails.

Design Origin CIS										Other		Grand Total
AN-124	AN-74	IL-62	IL-76	IL-86	IL-96	TU-154M	TU-204	YAK-42	Total CIS	Embraer EMB-145 (Bra)	Canadair RJ (Canada)	
												5,845
												437
												304
												336
												281
												359
												410
												433
												513
												569
												678
												850
												798
4	5		14	1	2	32	6	7	71	3	3	687
4	10	1	na	1	4	5	4	8	37	22	22	526
8	15	1	14	2	6	37	10	15	108	51	51	7,181
8	15	1	14	2	6	37	10	15	108	51	51	13,026



Sources: Airbus [43]; Avro [44]; Boeing [46]; general press [4][45].

Chart 2.2

World Civil Jet Aircraft Backlog in Units

	Design Origin EU											Design Origin US																			
	A300	A310	A319	A320	A321	A330	A340	Total AIRBUS	BAC 111	BAe 146/RJ	CONCORDE	F 28	F 70	F 100	Total EU	B-707	B-727	B-737	B-747	B-757	B-767	B-777	Total BOEING	DC-9	DC-10	MD-11	MD-80	MD-90	Total McDD	L 1011	Total US
1981	79	52						131	1	4		9			145	21	35	152	40	106	138		492	10	14		30		54	21	567
1982	36	63						99		6		2			107	18	18	128	29	106	120		419		51		84		135	7	561
1983	17	56						73		22		10			105	25	8	114	30	107	81		365		41		76		117	1	483
1984	9	41		16				66		21		4		8	99	17		177	36	91	62		383		37		149		186	2	571
1985	17	40		74				131	6	15		11		34	197	14		345	54	104	58		575		29		184		213		788
1986	13	37		157				207	4	18		2		69	300	16		415	100	82	54		667		17	11	219		247		914
1987	32	44		210				286	1	18				69	374	18		434	144	82	74		752		9	31	213		253		1,005
1988	36	38		286		3	2	365	1	34				66	466	18		591	169	183	103		1,064		1	78	332		411		1,475
1989	66	37		338	20	86	51	598		27				140	765	13		755	184	341	170		1,463			99	355		454		1,917
1990	69	48	3	404	111	111	57	803		28				142	973	20		733	251	361	167	49	1,581			145	266	51	462		2,043
1991	84	41	3	300	114	116	78	736		29				96	861	6		589	225	332	172	76	1,400			124	155	51	330		1,730
1992	80	30	9	250	127	117	100	713		37				56	806	1		484	189	270	131	118	1,193			90	100	77	267		1,460
1993	64	11	9	192	127	117	93	613		31			22	32	698	1		442	135	239	146	147	1,110			60	68	77	205		1,315
1994	41	9	51	177	131	108	98	615		30			39	14	698			391	111	182	128	147	959			48	55	86	189		1,148

Table 2.3 Figures are calculated on the basis of the previous tables on orders and deliveries.

Year	Design Origin CIS									Other		Grand Total	
	AN-124	AN-74	IL-62	IL-76	IL-86	IL-96	TU-154M	TU-204	YAK-42	Total CIS	Embraer EMB-145 (Brazil)		Canadair RJ (Canada)
1981													712
1982													668
1983													588
1984													670
1985													985
1986													1,214
1987													1,379
1988													1,941
1989													2,682
1990													3,016
1991											20	20	2,611
1992											21	21	2,287
1993											27	27	2,040
1994	6					-1	7	268	8	288	13	34	2,181

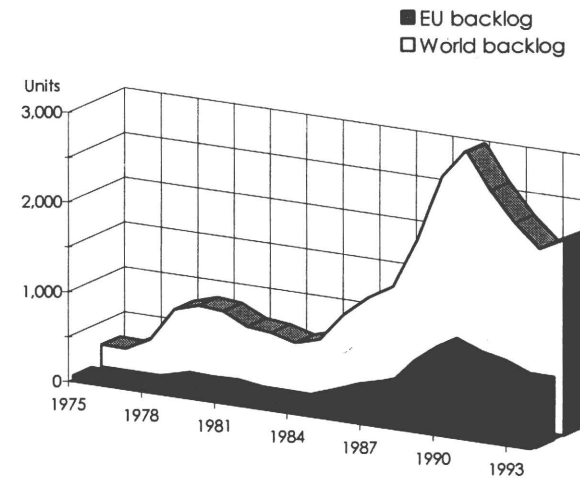


Chart 2.3

Civil Jet Aircraft Orders in Units

	Category Breakdown in % of World Total									Market Share of EU-built Aircraft in % of World Total								
	Short-Medium Haul			Long Haul			Both			Short-Medium Haul			Long Haul			Both		
	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both
Until 1980	64.7 %	5.7 %	70.4 %	12.2 %	17.4 %	29.6 %	76.9 %	23.1 %	9.2 %	65.6 %	13.7 %	1.7 %	0.0 %	0.7 %	8.0 %	16.2 %	9.9 %	
1981	71.0 %	16.3 %	87.3 %	0.0 %	12.7 %	12.7 %	71.0 %	29.0 %	9.0 %	84.8 %	23.1 %	0.0 %	0.0 %	0.0 %	9.0 %	47.6 %	20.1 %	
1982	68.1 %	6.2 %	74.2 %	1.9 %	23.8 %	25.8 %	70.0 %	30.0 %	3.4 %	87.5 %	10.4 %	0.0 %	0.0 %	0.0 %	3.4 %	17.9 %	7.7 %	
1983	73.8 %	10.2 %	84.0 %	5.9 %	10.2 %	16.0 %	79.7 %	20.3 %	27.0 %	38.5 %	28.4 %	0.0 %	0.0 %	0.0 %	27.0 %	19.2 %	23.8 %	
1984	81.3 %	9.6 %	90.9 %	0.0 %	9.1 %	9.1 %	81.3 %	18.7 %	15.6 %	71.4 %	21.5 %	0.0 %	0.0 %	0.0 %	15.6 %	36.8 %	19.6 %	
1985	83.2 %	10.1 %	93.3 %	0.0 %	6.7 %	6.7 %	83.2 %	16.8 %	21.6 %	70.0 %	27.0 %	0.0 %	0.0 %	0.0 %	21.6 %	42.6 %	25.2 %	
1986	76.7 %	7.2 %	83.9 %	0.9 %	15.2 %	16.1 %	77.6 %	22.4 %	29.8 %	50.0 %	31.5 %	0.0 %	0.0 %	0.0 %	29.8 %	16.1 %	26.4 %	
1987	70.6 %	12.7 %	83.3 %	1.8 %	14.9 %	16.7 %	72.4 %	27.6 %	19.8 %	50.0 %	26.7 %	0.0 %	0.0 %	0.0 %	19.8 %	28.1 %	22.2 %	
1988	84.7 %	6.0 %	90.7 %	0.0 %	9.3 %	9.3 %	84.7 %	15.3 %	16.2 %	35.9 %	18.8 %	0.0 %	2.0 %	2.0 %	16.2 %	21.1 %	17.2 %	
1989	75.0 %	15.0 %	90.1 %	0.0 %	9.9 %	9.9 %	75.0 %	25.0 %	28.1 %	60.5 %	35.3 %	0.0 %	60.5 %	37.7 %	28.1 %	52.9 %	35.6 %	
1990	65.7 %	14.2 %	79.9 %	1.1 %	19.0 %	20.1 %	66.8 %	33.2 %	44.2 %	41.8 %	43.6 %	0.0 %	3.2 %	3.0 %	44.2 %	21.9 %	35.5 %	
1991	62.2 %	22.2 %	84.5 %	0.0 %	15.5 %	15.5 %	62.2 %	37.8 %	24.4 %	37.7 %	29.8 %	0.0 %	43.8 %	30.4 %	24.4 %	35.5 %	29.9 %	
1992	72.5 %	15.9 %	88.5 %	0.0 %	11.5 %	11.5 %	72.5 %	27.5 %	35.6 %	33.3 %	35.1 %	0.0 %	66.7 %	40.0 %	35.6 %	35.8 %	35.6 %	
1993	72.1 %	18.6 %	90.7 %	0.0 %	9.3 %	9.3 %	72.1 %	27.9 %	24.0 %	9.4 %	20.3 %	0.0 %	53.6 %	34.9 %	24.0 %	16.8 %	21.6 %	
1994	90.5 %	0.1 %	90.6 %	0.1 %	9.2 %	9.4 %	90.6 %	9.4 %	24.6 %	0.0 %	23.7 %	0.0 %	88.2 %	46.2 %	24.6 %	34.5 %	25.8 %	
1981 - 1994	75.8 %	11.5 %	87.2 %	0.6 %	12.2 %	12.8 %	76.3 %	23.7 %	24.9 %	45.9 %	28.5 %	0.0 %	13.9 %	13.3 %	24.7 %	31.7 %	26.6 %	
Total	70.9 %	8.9 %	79.8 %	5.7 %	14.5 %	20.2 %	76.6 %	23.4 %	18.4 %	50.3 %	22.8 %	1.6 %	6.6 %	5.2 %	17.1 %	25.5 %	19.2 %	

Table 2.4 *The rightmost column gives the overall EU share of orders.
Sources: Airbus [43][51]; Avro [44]; Boeing [5][46][48]; Bombardier [50]; Fokker [3]; general press [4][45].*

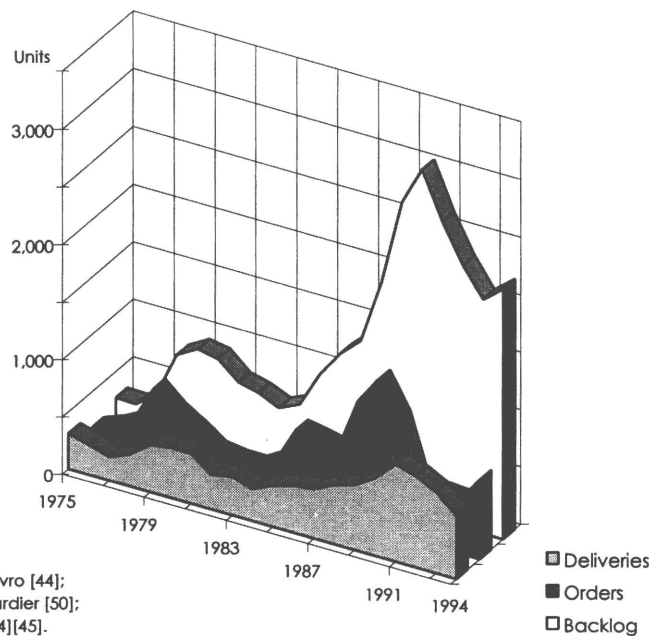
Civil Jet Aircraft Deliveries in Units																	
Category Breakdown in % of World Total									Market Share of EU-built Aircraft in % of World Total								
	Short-Medium Haul			Long Haul			Both		Short-Medium Haul			Long Haul			Both		
	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both
Until 1980	66.8 %	2.1 %	68.9 %	13.7 %	17.5 %	31.1 %	80.5 %	19.5 %	9.9 %	100.0 %	12.6 %	1.8 %	0.0 %	0.8 %	8.5 %	10.6 %	8.9 %
1981	66.8 %	8.5 %	75.3 %	0.5 %	24.3 %	24.7 %	67.3 %	32.7 %	4.8 %	100.0 %	15.5 %	0.0 %	0.0 %	0.0 %	4.8 %	25.9 %	11.7 %
1982	59.2 %	21.7 %	80.9 %	2.6 %	16.4 %	19.1 %	61.8 %	38.2 %	6.7 %	69.7 %	23.6 %	0.0 %	0.0 %	0.0 %	6.7 %	39.7 %	19.1 %
1983	58.3 %	27.1 %	85.4 %	2.4 %	12.2 %	14.6 %	60.7 %	39.3 %	13.8 %	39.6 %	22.0 %	0.0 %	0.0 %	0.0 %	13.8 %	27.3 %	18.8 %
1984	59.1 %	27.4 %	86.5 %	2.8 %	10.7 %	13.5 %	61.9 %	38.1 %	17.5 %	62.3 %	31.7 %	0.0 %	0.0 %	0.0 %	17.5 %	44.9 %	27.4 %
1985	70.2 %	18.7 %	88.9 %	0.8 %	10.3 %	11.1 %	71.0 %	29.0 %	11.9 %	62.7 %	22.6 %	0.0 %	0.0 %	0.0 %	11.9 %	40.4 %	20.1 %
1986	72.4 %	13.9 %	86.3 %	1.0 %	12.7 %	13.7 %	73.4 %	26.6 %	12.1 %	52.6 %	18.6 %	0.0 %	0.0 %	0.0 %	12.1 %	27.5 %	16.1 %
1987	74.6 %	15.7 %	90.3 %	2.1 %	7.6 %	9.7 %	76.7 %	23.3 %	8.7 %	45.6 %	15.1 %	0.0 %	0.0 %	0.0 %	8.7 %	30.7 %	13.6 %
1988	74.3 %	19.1 %	93.4 %	0.0 %	6.6 %	6.6 %	74.3 %	25.7 %	12.6 %	45.9 %	19.4 %	0.0 %	0.0 %	0.0 %	12.6 %	34.1 %	18.1 %
1989	76.3 %	14.8 %	91.0 %	0.9 %	8.1 %	9.0 %	77.2 %	22.8 %	27.6 %	56.0 %	32.2 %	0.0 %	0.0 %	0.0 %	27.6 %	36.2 %	29.3 %
1990	74.3 %	14.3 %	88.6 %	0.6 %	10.8 %	11.4 %	74.9 %	25.1 %	22.6 %	38.1 %	25.1 %	0.0 %	0.0 %	0.0 %	22.6 %	21.8 %	22.3 %
1991	74.7 %	12.5 %	87.2 %	1.6 %	11.2 %	12.8 %	76.4 %	23.6 %	31.7 %	41.5 %	33.1 %	0.0 %	0.0 %	0.0 %	31.7 %	21.9 %	28.8 %
1992	72.9 %	13.6 %	86.5 %	0.6 %	12.9 %	13.5 %	73.5 %	26.5 %	30.7 %	42.2 %	32.5 %	0.0 %	0.0 %	0.0 %	30.7 %	21.7 %	28.1 %
1993	67.4 %	13.7 %	81.1 %	0.0 %	18.9 %	18.9 %	67.4 %	32.6 %	29.5 %	46.4 %	32.3 %	0.0 %	19.6 %	16.4 %	29.5 %	29.0 %	29.3 %
1994	74.6 %	8.7 %	83.3 %	0.4 %	16.3 %	16.7 %	75.0 %	25.0 %	31.2 %	45.3 %	33.5 %	0.0 %	38.5 %	27.2 %	31.2 %	35.8 %	32.4 %
1981 - 1994	71.0 %	15.2 %	86.2 %	1.0 %	12.8 %	13.8 %	72.0 %	28.0 %	21.5 %	50.3 %	26.7 %	0.0 %	5.1 %	4.7 %	21.2 %	30.0 %	23.7 %
Total	69.1 %	9.4 %	78.5 %	6.7 %	14.9 %	21.5 %	75.8 %	24.2 %	16.5 %	55.1 %	21.2 %	1.6 %	2.4 %	2.2 %	15.2 %	23.0 %	17.1 %

Table 2.5 The rightmost column gives the overall EU share of deliveries.
Sources: Airbus [43]; Avro [44]; Boeing [46]; general press [4][45].

Civil Jet Aircraft Backlog in Units

	Category Breakdown in % of World Total									Market Share of EU-built Aircraft in % of World Total								
	Short-Medium Haul			Long Haul			Both			Short-Medium Haul			Long Haul			Both		
	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both	Narrow Body	Wide Body	Both
1981	48.7 %	37.8 %	86.5 %	2.9 %	10.5 %	13.5 %	51.7 %	48.3 %	4.0 %	48.7 %	23.5 %	0.0 %	0.0 %	0.0 %	3.8 %	38.1 %	20.4 %	
1982	51.5 %	32.8 %	84.3 %	2.7 %	13.0 %	15.7 %	54.2 %	45.8 %	2.3 %	45.2 %	19.0 %	0.0 %	0.0 %	0.0 %	2.2 %	32.4 %	16.0 %	
1983	57.3 %	26.2 %	83.5 %	4.3 %	12.2 %	16.5 %	61.6 %	38.4 %	9.5 %	47.4 %	21.4 %	0.0 %	0.0 %	0.0 %	8.8 %	32.3 %	17.9 %	
1984	69.6 %	16.7 %	86.3 %	2.5 %	11.2 %	13.7 %	72.1 %	27.9 %	10.5 %	44.6 %	17.1 %	0.0 %	0.0 %	0.0 %	10.1 %	26.7 %	14.8 %	
1985	78.7 %	11.5 %	90.2 %	1.4 %	8.4 %	9.8 %	80.1 %	19.9 %	18.1 %	49.6 %	22.2 %	0.0 %	0.0 %	0.0 %	17.8 %	28.8 %	20.0 %	
1986	79.7 %	8.4 %	88.1 %	1.3 %	10.5 %	11.9 %	81.1 %	18.9 %	25.9 %	48.1 %	28.0 %	0.0 %	0.0 %	0.0 %	25.5 %	21.6 %	24.7 %	
1987	77.4 %	8.0 %	85.4 %	1.3 %	13.3 %	14.6 %	78.7 %	21.3 %	29.0 %	50.7 %	31.8 %	0.0 %	0.0 %	0.0 %	28.5 %	22.8 %	27.1 %	
1988	82.2 %	4.0 %	86.2 %	0.9 %	12.9 %	13.8 %	83.2 %	16.8 %	25.9 %	42.8 %	27.7 %	0.0 %	0.8 %	0.7 %	25.6 %	18.4 %	24.0 %	
1989	80.0 %	7.1 %	87.1 %	0.5 %	12.5 %	12.9 %	80.5 %	19.5 %	26.6 %	52.6 %	30.6 %	0.0 %	15.3 %	14.7 %	26.4 %	34.6 %	28.5 %	
1990	76.5 %	7.9 %	84.3 %	0.7 %	15.0 %	15.7 %	77.1 %	22.9 %	32.8 %	51.4 %	36.0 %	0.0 %	12.6 %	12.1 %	32.5 %	31.8 %	32.3 %	
1991	74.6 %	8.8 %	83.4 %	0.2 %	16.4 %	16.6 %	74.8 %	25.2 %	32.1 %	49.3 %	36.0 %	0.0 %	18.3 %	18.0 %	32.0 %	34.8 %	33.0 %	
1992	74.8 %	8.6 %	83.4 %	0.0 %	16.6 %	16.6 %	74.8 %	25.2 %	33.5 %	47.7 %	37.0 %	0.0 %	26.4 %	26.3 %	33.4 %	38.2 %	35.2 %	
1993	76.7 %	9.1 %	85.8 %	0.0 %	14.1 %	14.2 %	76.8 %	23.2 %	32.6 %	39.6 %	34.6 %	0.0 %	32.3 %	32.2 %	32.6 %	36.9 %	34.2 %	
1994	81.6 %	6.4 %	88.0 %	0.0 %	12.0 %	12.0 %	81.6 %	18.4 %	29.7 %	36.5 %	31.3 %	0.0 %	37.4 %	37.4 %	29.7 %	36.8 %	32.0 %	
Average	72.1 %	13.8 %	85.9 %	1.3 %	12.8 %	14.1 %	73.4 %	26.6 %	22.3 %	46.7 %	28.3 %	0.0 %	10.2 %	10.1 %	22.1 %	31.0 %	25.7 %	

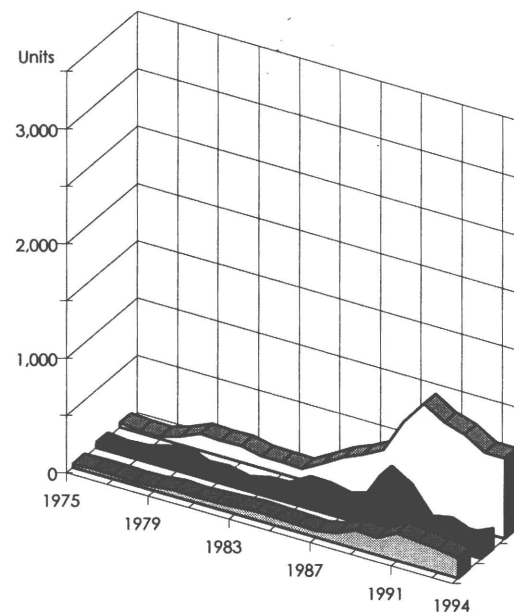
Table 2.6 Figures are prepared on the basis of the previous tables on orders and deliveries. The rightmost column gives the overall EU share of backlog.



Sources: Airbus [43][51]; Avro [44]; Boeing [5][46][48]; Bombardier [50]; Fokker [3]; general press [4][45].

Chart 2.4 *Civil Jet Aircraft World Orders / Deliveries / Backlog*

Chart 2.5 *EU Share of Civil Jet Aircraft Orders / Deliveries / Backlog*



Short-haul Civil Transport Turboprops			Short/medium-haul Civil Transport Jets			Long-haul Civil Transport Jets		
Model	Design origin	No. of seats	Model	Design origin	No. of seats	Model	Design origin	No. of seats
ATR 42	EUR	46	A 300	EUR	260	A 330	EUR	328
ATR 72	EUR	66	A 310	EUR	216	A 340	EUR	295
Avro HS 748 (100/200)	EUR	46	A 319	EUR	130	Concorde	EUR	100
BAe ATP/Jetstream 61	EUR	64	A 320	EUR	150			
BAe Jetstream 31	EUR	19	A 321	EUR	175	B 707	USA	155
BAe Jetstream 41	EUR	28	BAC 111	EUR	92	B 747	USA	407
CASA 212	EUR	19	BAe 146/RJ	EUR	95	B 747 SP	USA	267
CASA CN 235	EUR	38	Caravelle	EUR	100	B 747-300 (SC/SCD/SR)	USA	440
Dornier DO 228	EUR	19	Fokker F 28	EUR	76	B 747-400 (SR)	USA	440
Dornier DO 328	EUR	30	Fokker F 70	EUR	79	B 767	USA	248
Fokker F 27/FH 227	EUR	46	Fokker F 100	EUR	100	B 777	USA	300
Fokker F 50	EUR	50	Mercure	EUR	150	DC 8	USA	190
HP Herald	EUR	50	Trident	EUR	118	DC 10-30/30F/40	USA	259
Mohawk / Nord 262	EUR	27				MD 11	USA	287
Saab 2000	EUR	50	B 720	USA	150	Tristar L1011 (50/200/250/500/500F)	USA	250
Saab SF 340	EUR	35	B 727	USA	151			
Shorts 330	EUR	30	B 737-100/200	USA	115			
Shorts 360	EUR	36	B 737-300	USA	125			
Vickers Viscount	EUR	69	B 737-400	USA	135			
			B 737-500	USA	120			
Beech 1900	USA	19	B 747 SR	USA	530			
Convair CV 580/600/640	USA	51	B 757	USA	189			
Fairchild Metro II/III	USA	19	DC 9	USA	110			
			DC 10-10/10F/15	USA	259			
DHC-6	Other	18	Lockheed Electra	USA	78			
DHC-7 (100)	Other	50	MD 80	USA	144			
DHC-8	Other	36	MD 92	USA	150			
Embraer 110 Bandeirante (P1/P2)	Other	17	Tristar L1011 (1/1F/100/150)	USA	288			
Embraer 120 Brasilia	Other	30						
NAMC YS 11A	Other	61						

Table 2.7 Aircraft included in Aerospatiale's 'L'État des flottes commerciales'. Source: Aerospatiale [52]. As opposed to earlier editions, Boeing 767 and 777 are now included in the long-haul category.

Civil Aircraft Fleet Average Age in Years at Year-end
According to number of aircraft

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Rest of EU Europe	Rest of USA	World	World	
1980	9.1	8.3	10.1	8.1	10.5	10.7	9.8	12.3	9.7	10.0	10.5	8.6	10.1	8.9	10.2	9.3	9.8
1981	9.1	6.7	8.5	8.5	10.6	10.4	8.3	12.4	9.1	10.7	10.9	9.4	9.7	9.0	10.3	9.5	9.9
1982	9.8	6.9	9.3	9.2	11.0	10.8	8.5	13.7	10.1	12.4	11.1	10.1	10.1	9.6	10.9	9.8	10.4
1983	11.1	7.6	10.1	10.1	11.6	11.0	9.3	13.2	10.9	13.6	11.0	8.6	10.6	9.9	11.2	10.2	10.8
1984	10.6	8.0	10.8	10.8	12.4	11.5	9.3	13.0	11.6	12.1	11.3	9.4	11.1	10.5	11.3	10.7	11.1
1985	11.1	8.2	10.9	11.5	13.1	11.5	9.6	13.6	11.1	13.6	11.4	10.6	11.3	10.9	11.5	11.2	11.4
1986	11.5	8.6	10.4	12.5	13.6	11.9	10.6	13.8	10.4	13.7	10.9	11.5	11.7	10.5	11.7	11.6	11.6
1987	11.5	7.9	9.9	13.2	13.8	11.7	11.7	11.0	10.2	11.2	10.8	11.6	11.5	10.7	11.7	12.0	11.7
1988	12.5	8.2	11.4	12.3	13.7	11.4	12.5	13.2	10.2	13.0	11.1	11.4	11.5	10.5	11.8	12.2	11.8
1989	11.5	7.7	11.6	12.6	13.5	11.4	13.5	12.9	10.6	10.7	9.5	10.5	11.3	10.1	11.4	11.9	11.4
1990	11.7	7.0	12.1	12.3	13.3	10.8	12.0	13.2	10.7	10.3	8.5	9.6	10.9	9.6	11.9	12.2	11.7
1991	10.8	6.7	10.3	10.9	11.9	10.9	12.3	10.6	10.5	11.0	7.9	9.8	10.3	8.9	11.6	12.1	11.4
1992	9.9	6.7	10.7	9.9	12.3	10.2	12.1	10.4	10.2	8.7	8.1	9.9	9.9	8.8	11.5	12.0	11.3
1993	11.8	7.2	11.4	11.6	11.6	10.2	11.9	11.1	10.5	7.7	9.0	10.6	10.2	9.5	11.4	12.5	11.4

According to number of seats

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Rest of EU Europe	Rest of USA	World	World	
1980	9.5	7.2	10.8	8.9	9.0	9.6	10.0	12.7	8.4	6.9	8.6	11.0	9.0	9.2	10.0	8.6	9.5
1981	9.5	6.2	9.7	8.8	8.8	9.4	8.6	12.8	7.0	7.2	9.0	11.5	8.5	9.0	10.3	8.8	9.6
1982	10.1	6.6	10.0	9.4	9.0	10.1	8.8	14.0	7.8	9.5	9.5	11.8	9.0	9.7	11.0	9.0	10.2
1983	11.2	7.4	11.4	10.3	9.7	10.2	9.7	14.5	8.4	11.2	9.3	8.9	9.5	9.8	11.3	9.5	10.6
1984	10.6	8.0	12.8	11.0	10.5	10.6	9.8	15.0	9.0	6.3	9.6	9.3	10.0	10.3	11.7	10.0	11.0
1985	11.0	8.2	12.6	11.7	11.4	10.6	10.2	15.9	8.5	7.4	10.0	10.3	10.2	10.6	12.1	10.4	11.4
1986	11.1	8.5	11.3	12.9	11.6	11.3	11.0	16.0	8.7	12.5	9.9	11.3	10.8	10.5	12.4	10.7	11.7
1987	11.0	8.1	10.4	12.8	12.5	11.3	12.1	12.9	9.1	9.8	10.1	11.1	10.9	10.6	12.6	11.2	12.0
1988	12.0	8.7	11.5	11.8	12.5	11.0	12.8	15.8	9.6	13.5	10.4	9.1	11.0	10.5	12.7	11.4	12.1
1989	11.5	8.1	10.6	12.5	12.7	11.1	13.8	15.5	10.0	12.2	8.7	8.0	10.9	9.9	12.4	11.2	11.8
1990	11.6	7.2	10.3	11.5	12.5	10.3	13.4	14.7	10.3	11.7	8.2	6.7	10.3	9.3	12.9	11.4	12.1
1991	10.6	7.1	8.2	10.1	11.4	10.4	13.2	12.8	10.3	14.0	8.1	6.7	9.9	8.5	12.8	11.3	11.9
1992	10.3	7.1	9.1	9.9	11.4	9.6	13.1	12.9	10.0	12.6	8.1	7.0	9.6	8.2	12.3	11.1	11.5
1993	12.1	7.0	7.8	10.9	11.2	9.7	12.6	12.4	10.4	9.6	8.6	7.8	9.7	8.4	12.3	11.1	11.4

Table 2.8 As of 1986 Portugal and Spain are included in 'EU'. For previous years they are included in 'Rest of Europe'. For aircraft with an unspecified age of over 20 years an age of 21 years has been assumed. Source: Aerospatiale [52].

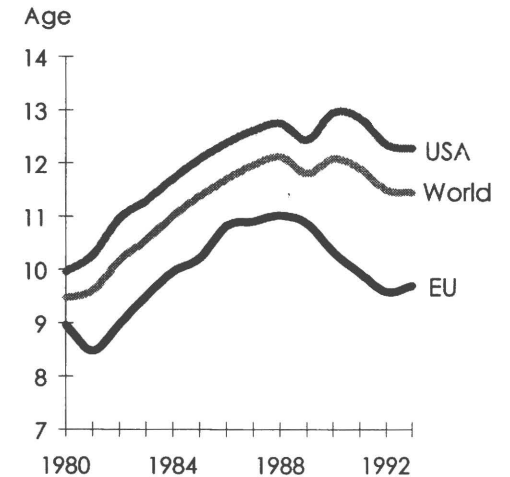


Chart 2.6 Average fleet age according to number of seats.

Civil Transport Aircraft in Service at Year-end

ALL AIRCRAFT CATEGORIES

	Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of fleet in each geographical area				
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
Breakdown by units															
1986	16.0 %	4.4 %	43.5 %	36.0 %	11,241	27.6 %	5.3 %	23.0 %	44.1 %	2,815	43.2 %	29.8 %	13.2 %	30.6 %	25.0 %
1987	15.8 %	4.5 %	43.8 %	35.9 %	12,105	25.5 %	5.5 %	24.2 %	44.7 %	3,049	40.8 %	30.4 %	13.9 %	31.4 %	25.2 %
1988	16.2 %	4.5 %	43.9 %	35.4 %	13,061	25.7 %	5.6 %	25.1 %	43.6 %	3,363	40.9 %	32.1 %	14.7 %	31.7 %	25.7 %
1989	17.6 %	4.5 %	42.6 %	35.2 %	13,527	27.7 %	5.5 %	25.8 %	41.0 %	3,664	42.6 %	33.0 %	16.4 %	31.5 %	27.1 %
1990	17.3 %	4.3 %	43.0 %	35.5 %	15,238	27.5 %	5.2 %	25.7 %	41.5 %	4,335	45.3 %	35.0 %	17.0 %	33.3 %	28.4 %
1991	17.6 %	4.2 %	42.6 %	35.6 %	16,515	27.7 %	5.5 %	25.3 %	41.6 %	4,636	44.1 %	36.3 %	16.7 %	32.8 %	28.1 %
1992	15.9 %	4.4 %	42.7 %	37.0 %	16,299	23.1 %	5.7 %	27.9 %	43.4 %	4,652	41.5 %	36.8 %	18.6 %	33.5 %	28.5 %
1993	16.9 %	4.1 %	41.3 %	37.6 %	16,346	25.1 %	4.8 %	26.3 %	43.7 %	4,825	43.9 %	34.1 %	18.8 %	34.3 %	29.5 %
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	17.0 %	3.8 %	43.3 %	35.9 %	1,423	28.8 %	4.6 %	19.9 %	46.7 %	222	26.5 %	19.2 %	7.2 %	20.3 %	15.6 %
1987	17.4 %	3.8 %	43.3 %	35.5 %	1,534	28.4 %	4.7 %	20.3 %	46.6 %	235	25.1 %	18.7 %	7.2 %	20.1 %	15.3 %
1988	17.1 %	3.9 %	44.0 %	35.0 %	1,629	28.6 %	4.9 %	20.9 %	45.6 %	260	26.6 %	20.1 %	7.6 %	20.7 %	15.9 %
1989	18.6 %	3.9 %	42.2 %	35.3 %	1,674	29.2 %	4.5 %	21.2 %	45.1 %	291	27.2 %	20.2 %	8.7 %	22.2 %	17.4 %
1990	18.3 %	3.7 %	43.5 %	34.6 %	1,866	30.1 %	4.5 %	20.9 %	44.5 %	318	28.0 %	21.1 %	8.2 %	21.9 %	17.0 %
1991	18.6 %	3.7 %	42.8 %	34.9 %	2,026	30.3 %	4.6 %	20.0 %	45.1 %	356	28.6 %	22.1 %	8.2 %	22.7 %	17.6 %
1992	17.4 %	3.8 %	42.6 %	36.2 %	2,068	26.3 %	5.2 %	21.3 %	47.1 %	369	27.0 %	24.6 %	8.9 %	23.2 %	17.8 %
1993	18.0 %	3.6 %	40.0 %	38.4 %	2,119	26.7 %	4.6 %	20.0 %	48.7 %	398	27.8 %	23.9 %	9.4 %	23.9 %	18.8 %
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	17.8 %	3.9 %	40.3 %	38.0 %	195,489	24.4 %	5.1 %	22.3 %	48.3 %	30,322	21.3 %	20.0 %	8.6 %	19.7 %	15.5 %
1987	18.8 %	4.1 %	38.8 %	38.3 %	162,867	24.2 %	4.9 %	23.5 %	47.5 %	26,092	20.6 %	18.8 %	9.7 %	19.9 %	16.0 %
1988	19.0 %	4.3 %	38.8 %	37.9 %	162,650	23.7 %	5.5 %	25.6 %	45.2 %	27,700	21.3 %	21.7 %	11.2 %	20.3 %	17.0 %
1989	20.2 %	4.5 %	37.5 %	37.8 %	197,188	24.5 %	5.3 %	25.2 %	45.0 %	37,193	22.9 %	22.1 %	12.7 %	22.5 %	18.9 %
1990	21.4 %	4.6 %	37.5 %	36.6 %	195,715	28.2 %	5.2 %	23.5 %	43.1 %	38,345	25.8 %	22.0 %	12.3 %	23.1 %	19.6 %
1991	22.0 %	4.9 %	36.4 %	36.7 %	222,632	29.8 %	5.0 %	21.9 %	43.3 %	46,450	28.2 %	21.4 %	12.6 %	24.6 %	20.9 %
1992	20.4 %	4.9 %	37.3 %	37.4 %	229,677	25.6 %	5.9 %	23.8 %	44.7 %	47,795	26.0 %	25.0 %	13.3 %	24.9 %	20.8 %
1993	20.9 %	4.6 %	34.8 %	39.6 %	264,722	26.1 %	4.8 %	22.6 %	46.5 %	58,813	27.7 %	23.3 %	14.4 %	26.1 %	22.2 %

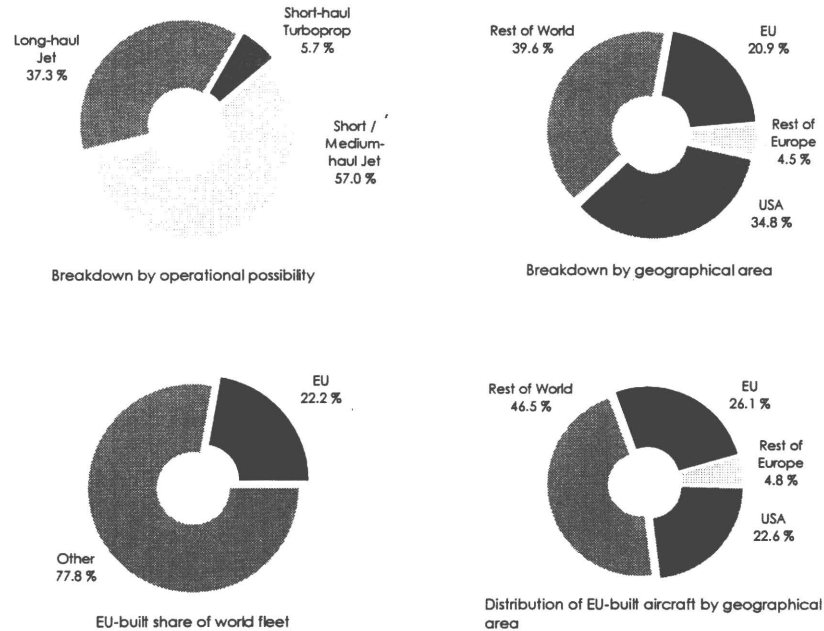


Chart 2.7 All aircraft types in service. Comparisons by value.

Table 2.9 (opposite)

The lefthand section shows the distribution of all aircraft by area with no regard to origin. In 1993 the world's fleet amounted to 16,346 units. 16.9 % of them were registered in the EU, 4.1 % in the rest of Europe, etc.

The middle section shows how the EU-built fleet is distributed around the world, e.g. of the 4,825 units built in the EU, 25.1 % of them were registered within the EU, 4.8 % were registered in the rest of Europe, etc.

The righthand section shows the proportion of the fleet in each area that was built in the EU, e.g. in 1993 EU-built aircraft accounted for 29.5 % of the world's total fleet. Of the EU total fleet, 43.9 % were of EU origin.

These principles apply to all three breakdown categories: by units, by seats, by value.

Source: Aerospatiale [52]

Civil Transport Aircraft Annual Deliveries

ALL AIRCRAFT CATEGORIES

Distribution of all aircraft by geographical area

Distribution of EU-built aircraft by geographical area

EU-built share of deliveries in each geographical area

Breakdown by units

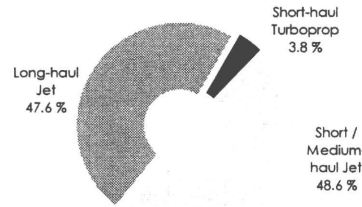
	Distribution of all aircraft by geographical area				Units	Distribution of EU-built aircraft by geographical area				Units	EU-built share of deliveries in each geographical area					
	EU	Rest of Europe	USA	Rest of World		EU	Rest of Europe	USA	Rest of World		EU	Rest of Europe	USA	Rest of World	World	
1986	11.7 %	7.8 %	55.5 %	24.9 %	690	12.4 %	11.2 %	52.6 %	23.7 %	249	38.3 %	51.9 %	34.2 %	34.3 %	36.1 %	1986
1987	20.6 %	5.2 %	51.7 %	22.5 %	773	24.8 %	6.5 %	44.7 %	24.0 %	246	38.4 %	40.0 %	27.5 %	33.9 %	31.8 %	1987
1988	19.3 %	5.5 %	48.4 %	26.8 %	928	21.8 %	8.9 %	39.9 %	29.4 %	316	38.5 %	54.9 %	28.1 %	37.3 %	34.1 %	1988
1989	22.5 %	6.0 %	37.3 %	34.2 %	1,115	27.4 %	7.7 %	26.7 %	38.3 %	405	44.2 %	46.3 %	26.0 %	40.7 %	36.3 %	1989
1990	24.6 %	6.4 %	41.0 %	28.0 %	1,197	28.9 %	8.6 %	32.7 %	29.8 %	440	43.2 %	49.4 %	29.3 %	39.1 %	36.8 %	1990
1991	28.7 %	6.3 %	37.6 %	27.4 %	1,337	35.3 %	4.3 %	32.0 %	28.3 %	487	44.8 %	25.0 %	31.0 %	37.7 %	36.4 %	1991
1992	18.8 %	6.6 %	40.3 %	34.3 %	1,105	17.5 %	7.6 %	40.9 %	34.0 %	394	33.2 %	41.1 %	36.2 %	35.4 %	35.7 %	1992
1993	18.5 %	3.6 %	35.8 %	42.1 %	751	25.4 %	2.6 %	32.3 %	39.6 %	303	55.4 %	29.6 %	36.4 %	38.0 %	40.3 %	1993

Breakdown by seats

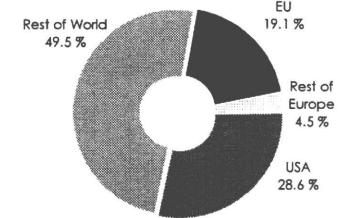
	Distribution of all aircraft by geographical area				Seats x 1,000	Distribution of EU-built aircraft by geographical area				Seats x 1,000	EU-built share of deliveries in each geographical area					
	EU	Rest of Europe	USA	Rest of World		EU	Rest of Europe	USA	Rest of World		EU	Rest of Europe	USA	Rest of World	World	
1986	13.9 %	7.4 %	43.7 %	35.0 %	80	10.4 %	13.5 %	37.0 %	39.1 %	19	18.0 %	44.1 %	20.3 %	26.9 %	24.1 %	1986
1987	21.5 %	4.7 %	45.6 %	28.2 %	87	29.3 %	4.2 %	31.7 %	34.7 %	17	26.1 %	17.1 %	13.3 %	23.6 %	19.1 %	1987
1988	19.5 %	4.9 %	45.1 %	30.6 %	108	24.2 %	8.9 %	36.7 %	30.2 %	25	28.4 %	41.5 %	18.6 %	22.7 %	22.9 %	1988
1989	24.5 %	6.1 %	33.6 %	35.8 %	134	27.0 %	7.1 %	23.9 %	42.1 %	40	32.5 %	34.1 %	21.1 %	34.8 %	29.6 %	1989
1990	27.8 %	5.3 %	33.8 %	33.1 %	150	34.0 %	5.8 %	20.6 %	39.6 %	36	29.4 %	26.6 %	14.6 %	28.7 %	24.0 %	1990
1991	29.1 %	6.9 %	29.8 %	34.2 %	176	36.7 %	3.5 %	19.4 %	40.4 %	48	34.4 %	14.0 %	17.7 %	32.2 %	27.3 %	1991
1992	18.9 %	6.0 %	34.8 %	40.2 %	165	16.9 %	9.0 %	31.4 %	42.8 %	42	22.7 %	38.0 %	22.9 %	27.1 %	25.5 %	1992
1993	19.1 %	2.9 %	29.1 %	48.9 %	122	27.3 %	1.9 %	25.4 %	45.5 %	37	43.8 %	20.0 %	26.8 %	28.6 %	30.7 %	1993

Breakdown by 1993 value - Mio ECU

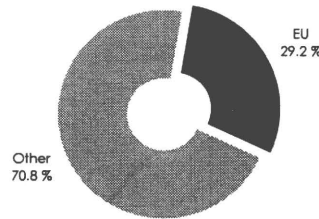
	Distribution of all aircraft by geographical area				Mio ECU	Distribution of EU-built aircraft by geographical area				Mio ECU	EU-built share of deliveries in each geographical area					
	EU	Rest of Europe	USA	Rest of World		EU	Rest of Europe	USA	Rest of World		EU	Rest of Europe	USA	Rest of World	World	
1986	14.5 %	6.8 %	43.5 %	35.2 %	22,461	10.6 %	13.9 %	34.3 %	41.1 %	4,729	15.5 %	42.9 %	16.6 %	24.6 %	21.1 %	1986
1987	21.1 %	4.8 %	44.6 %	29.5 %	19,848	29.7 %	4.7 %	29.4 %	36.1 %	3,367	23.9 %	16.9 %	11.2 %	20.8 %	17.0 %	1987
1988	18.7 %	4.9 %	44.3 %	32.2 %	23,100	24.4 %	9.2 %	36.6 %	29.8 %	4,881	27.6 %	40.2 %	17.5 %	19.5 %	21.1 %	1988
1989	24.4 %	6.1 %	32.7 %	36.7 %	33,483	26.9 %	6.6 %	23.9 %	42.5 %	9,182	30.2 %	29.6 %	20.0 %	31.8 %	27.4 %	1989
1990	27.5 %	5.3 %	33.1 %	34.1 %	34,058	34.4 %	5.3 %	19.9 %	40.4 %	7,607	27.9 %	22.2 %	13.4 %	26.5 %	22.3 %	1990
1991	28.7 %	7.0 %	29.2 %	35.1 %	41,370	37.0 %	3.1 %	18.4 %	41.5 %	10,516	32.8 %	11.4 %	16.0 %	30.0 %	25.4 %	1991
1992	18.8 %	5.8 %	34.3 %	41.1 %	38,197	16.3 %	8.7 %	31.3 %	43.6 %	8,899	20.3 %	35.0 %	21.3 %	24.7 %	23.3 %	1992
1993	19.1 %	2.8 %	28.6 %	49.5 %	31,785	28.4 %	1.8 %	24.3 %	45.4 %	9,266	43.3 %	19.4 %	24.8 %	26.7 %	29.2 %	1993



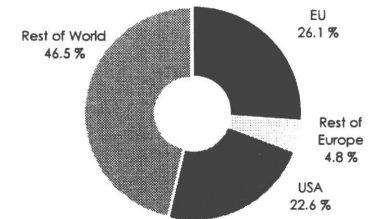
Breakdown by operational possibility



Breakdown by geographical area



EU-built share of world deliveries



Distribution of EU-built aircraft deliveries by geographical area

Chart 2.8 All aircraft types deliveries. Comparisons by value.

Table 2.10 (opposite)

The lefthand section shows the distribution of all deliveries by area with no regard to origin. In 1993 the world's deliveries amounted to 751 units. 18.5 % of them were registered in the EU, 3.6 % in the rest of Europe, etc.

The middle section shows how the EU-built deliveries are distributed around the world, e.g. of the 303 deliveries of aircraft built in the EU, 25.4 % of them were registered within the EU, 2.6 % were registered in the rest of Europe, etc.

The righthand section shows the proportion of the deliveries in each area of aircraft that was built in the EU, e.g. in 1993 EU-built aircraft deliveries accounted for 40.3 % of the world's total deliveries. Of the EU total deliveries, 55.4 % were of EU origin.

These principles apply to all three breakdown categories: by units, by seats, by value.

Source: Aerospatiale [52]

Civil Transport Aircraft Orders in Backlog at Year-end

ALL AIRCRAFT CATEGORIES																
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of backlog in each geographical area						
Breakdown by units																
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World	
1986	18.9 %	5.1 %	47.6 %	28.5 %	1,855	23.3 %	6.1 %	40.3 %	30.3 %	670	44.6 %	43.6 %	30.6 %	38.4 %	36.1 %	1986
1987	23.4 %	5.3 %	44.4 %	27.0 %	2,130	23.6 %	5.7 %	42.1 %	28.5 %	922	43.8 %	47.3 %	41.1 %	45.7 %	43.3 %	1987
1988	23.7 %	6.5 %	44.1 %	25.7 %	2,615	21.8 %	6.4 %	40.4 %	31.4 %	809	28.4 %	30.4 %	28.4 %	37.9 %	30.9 %	1988
1989	30.7 %	5.0 %	42.7 %	21.6 %	4,105	30.1 %	5.3 %	37.6 %	27.0 %	1,520	36.3 %	39.5 %	32.6 %	46.3 %	37.0 %	1989
1990	28.9 %	5.2 %	40.1 %	25.8 %	4,690	32.6 %	6.4 %	29.4 %	31.7 %	1,842	44.3 %	48.1 %	28.7 %	48.3 %	39.3 %	1990
1991	24.6 %	4.5 %	42.0 %	28.9 %	4,198	26.2 %	6.0 %	33.9 %	33.9 %	1,735	44.1 %	54.7 %	33.4 %	48.4 %	41.3 %	1991
1992	12.8 %	5.0 %	50.8 %	31.4 %	3,397	17.1 %	6.5 %	40.6 %	35.8 %	1,448	57.0 %	55.6 %	34.0 %	48.6 %	42.6 %	1992
1993	16.7 %	4.3 %	45.6 %	33.4 %	2,668	22.7 %	7.6 %	30.1 %	39.7 %	1,112	56.6 %	73.7 %	27.5 %	49.4 %	41.7 %	1993
Breakdown by seats																
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World	
1986	20.5 %	4.4 %	45.9 %	29.1 %	254	24.3 %	5.2 %	45.3 %	25.2 %	70	32.4 %	32.1 %	27.0 %	23.6 %	27.3 %	1986
1987	27.7 %	4.5 %	39.9 %	27.9 %	324	28.1 %	4.4 %	44.4 %	23.2 %	115	35.9 %	34.2 %	39.4 %	29.4 %	35.4 %	1987
1988	25.2 %	5.8 %	41.0 %	28.0 %	399	21.2 %	3.8 %	46.8 %	28.2 %	86	18.2 %	14.3 %	24.6 %	21.7 %	21.6 %	1988
1989	30.5 %	4.3 %	40.1 %	25.2 %	640	30.8 %	3.3 %	38.2 %	27.7 %	204	32.1 %	25.0 %	30.3 %	35.0 %	31.8 %	1989
1990	29.0 %	4.6 %	36.7 %	29.7 %	763	33.6 %	5.2 %	29.5 %	31.7 %	259	39.4 %	38.3 %	27.3 %	36.2 %	34.0 %	1990
1991	25.8 %	3.8 %	37.3 %	33.1 %	695	27.9 %	5.2 %	32.8 %	34.1 %	246	38.3 %	49.0 %	31.1 %	36.4 %	35.4 %	1991
1992	15.1 %	3.6 %	46.2 %	35.1 %	580	19.7 %	5.2 %	43.1 %	32.0 %	211	47.7 %	52.4 %	34.0 %	33.2 %	36.4 %	1992
1993	19.5 %	3.1 %	39.6 %	37.8 %	472	26.0 %	5.7 %	30.0 %	38.2 %	171	48.4 %	67.1 %	27.5 %	36.6 %	36.2 %	1993
Breakdown by 1993 value - Mio ECU																
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World	
1986	19.7 %	3.9 %	47.8 %	28.6 %	73,221	23.7 %	4.9 %	47.2 %	24.2 %	17,758	29.2 %	30.0 %	23.9 %	20.6 %	24.3 %	1986
1987	28.4 %	4.4 %	39.0 %	28.2 %	76,037	29.3 %	4.1 %	44.6 %	22.0 %	25,538	34.6 %	31.1 %	38.5 %	26.2 %	33.6 %	1987
1988	23.4 %	5.8 %	41.0 %	29.8 %	86,887	21.7 %	3.5 %	47.5 %	27.2 %	17,658	18.9 %	12.3 %	23.6 %	18.6 %	20.3 %	1988
1989	30.7 %	4.2 %	39.4 %	25.7 %	162,716	31.3 %	3.1 %	38.4 %	27.2 %	49,137	30.8 %	22.7 %	29.5 %	31.9 %	30.2 %	1989
1990	28.9 %	4.6 %	36.3 %	30.2 %	177,000	34.3 %	5.0 %	29.8 %	30.9 %	57,154	38.3 %	35.1 %	26.5 %	33.1 %	32.3 %	1990
1991	25.7 %	3.7 %	36.8 %	33.9 %	166,098	28.2 %	5.0 %	32.8 %	34.0 %	56,280	37.2 %	46.1 %	30.2 %	34.0 %	33.9 %	1991
1992	16.2 %	3.8 %	44.5 %	35.5 %	137,990	20.4 %	5.1 %	42.5 %	32.0 %	46,908	42.9 %	45.2 %	32.5 %	30.6 %	34.0 %	1992
1993	22.8 %	2.9 %	37.2 %	37.1 %	128,693	26.3 %	5.6 %	29.5 %	38.6 %	42,690	38.2 %	64.9 %	26.3 %	34.5 %	33.2 %	1993

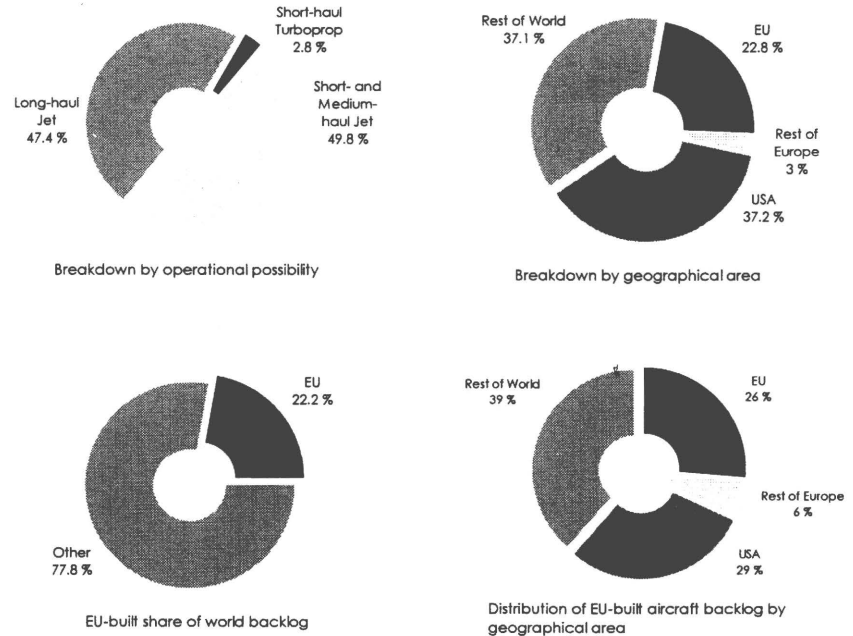


Chart 2.9 All aircraft types order backlog. Comparisons by value.

Table 2.11 (opposite)

The lefthand section shows the distribution of all order backlog by area with no regard to origin. In 1993 the world's order backlog amounted to 2,668 units. 16.7 % of them were to be delivered to the EU, 4.3 % to the rest of Europe, etc.

The middle section shows how the order backlog of EU-built aircraft is distributed around the world, e.g. of the backlog of 1,112 aircraft of EU origin in 1993, 22.7 % of them were to be delivered to the EU, 7.6 % to the rest of Europe, etc.

The righthand section shows the proportion of the EU origin order backlog in each area, e.g. in 1993 EU-built aircraft order backlog accounted for 41.7 % of the world's total order backlog. Of the EU total order backlog, 56.6 % was of EU origin.

These principles apply to all three breakdown categories: by units, by seats, by value.

Source: Aerospatiale [52]

Civil Transport Aircraft in Service at Year-end

Category: SHORT-HAUL TURBOPROP															
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of fleet in each geographical area					
Breakdown by units															
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
1986	15.8 %	4.3 %	35.6 %	44.3 %	3,656	25.9 %	5.0 %	24.1 %	45.0 %	1,756	78.6 %	55.4 %	32.6 %	48.8 %	48.0 %
1987	14.7 %	4.5 %	36.1 %	44.7 %	4,035	22.4 %	5.6 %	26.2 %	45.8 %	1,938	73.2 %	59.3 %	34.8 %	49.2 %	48.0 %
1988	15.3 %	4.5 %	36.1 %	44.1 %	4,398	22.6 %	5.5 %	27.8 %	44.1 %	2,152	72.2 %	60.4 %	37.7 %	48.9 %	48.9 %
1989	17.0 %	4.5 %	36.2 %	42.3 %	4,712	26.0 %	5.8 %	28.8 %	39.4 %	2,292	74.4 %	63.2 %	38.7 %	45.3 %	48.6 %
1990	16.3 %	4.1 %	35.3 %	44.3 %	5,567	24.8 %	5.3 %	28.7 %	41.2 %	2,922	80.0 %	67.0 %	42.7 %	48.8 %	52.5 %
1991	16.6 %	4.2 %	35.5 %	43.7 %	6,015	25.7 %	5.9 %	28.9 %	39.5 %	3,027	77.8 %	70.9 %	41.0 %	45.5 %	50.3 %
1992	14.1 %	4.4 %	35.5 %	46.0 %	5,698	21.2 %	5.7 %	32.1 %	40.9 %	2,982	78.9 %	68.4 %	47.4 %	46.5 %	52.3 %
1993	15.7 %	3.9 %	37.2 %	43.2 %	5,393	23.9 %	4.3 %	31.9 %	39.9 %	2,936	82.6 %	60.8 %	46.7 %	50.3 %	54.4 %
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	16.5 %	4.4 %	33.5 %	45.6 %	116	24.4 %	4.9 %	21.6 %	49.2 %	66	83.3 %	62.7 %	36.5 %	60.9 %	56.5 %
1987	16.1 %	4.8 %	33.8 %	45.4 %	126	22.8 %	5.7 %	23.2 %	48.4 %	71	79.7 %	66.7 %	38.6 %	59.9 %	56.2 %
1988	17.6 %	4.7 %	33.5 %	44.3 %	137	24.1 %	5.5 %	24.1 %	46.3 %	78	78.0 %	67.2 %	41.0 %	59.5 %	56.9 %
1989	19.0 %	4.6 %	33.6 %	42.9 %	147	26.6 %	5.8 %	24.9 %	42.7 %	83	79.6 %	71.6 %	42.0 %	56.4 %	56.7 %
1990	17.9 %	4.5 %	32.6 %	45.0 %	175	25.2 %	5.6 %	25.8 %	43.4 %	105	84.7 %	74.7 %	47.5 %	57.9 %	60.1 %
1991	18.6 %	4.8 %	33.1 %	43.6 %	186	26.4 %	6.5 %	26.4 %	40.8 %	110	83.5 %	79.8 %	46.8 %	55.0 %	58.8 %
1992	16.5 %	5.0 %	33.2 %	45.2 %	180	23.2 %	6.5 %	28.1 %	42.2 %	109	84.6 %	78.0 %	51.1 %	56.3 %	60.3 %
1993	17.6 %	4.1 %	35.1 %	43.2 %	165	24.3 %	4.6 %	29.8 %	41.3 %	105	87.3 %	71.6 %	53.9 %	60.7 %	63.4 %
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	13.6 %	5.5 %	40.2 %	40.7 %	9,381	19.1 %	6.1 %	32.7 %	42.1 %	5,052	75.8 %	60.0 %	43.7 %	55.7 %	53.8 %
1987	14.3 %	5.4 %	40.9 %	39.3 %	9,003	18.6 %	6.5 %	35.3 %	39.6 %	4,922	71.1 %	65.2 %	47.1 %	55.1 %	54.7 %
1988	15.7 %	5.7 %	40.9 %	37.6 %	10,332	19.9 %	6.8 %	36.5 %	36.8 %	5,903	72.2 %	67.8 %	50.9 %	55.9 %	57.1 %
1989	17.6 %	5.8 %	40.5 %	36.1 %	13,500	23.2 %	7.5 %	35.6 %	33.7 %	7,647	74.5 %	73.7 %	49.8 %	52.9 %	56.6 %
1990	17.2 %	6.4 %	40.4 %	36.1 %	15,001	23.3 %	8.5 %	34.1 %	34.1 %	9,002	81.4 %	79.5 %	50.7 %	56.8 %	60.0 %
1991	18.7 %	6.6 %	40.1 %	34.6 %	17,264	25.9 %	9.1 %	34.5 %	30.5 %	10,203	81.7 %	81.5 %	50.9 %	52.1 %	59.1 %
1992	17.2 %	7.2 %	39.3 %	36.2 %	15,937	23.3 %	9.5 %	35.3 %	31.9 %	9,968	84.6 %	81.6 %	56.2 %	55.1 %	62.5 %
1993	19.0 %	5.4 %	46.2 %	29.4 %	14,970	24.5 %	6.3 %	40.1 %	29.1 %	10,359	89.2 %	81.1 %	60.0 %	68.5 %	69.2 %

Table 2.12 Source: Aerospatiale [52].

Civil Transport Aircraft in Service at Year-end

Category: SHORT/MEDIUM-HAUL JET															
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of fleet in each geographical area					
Breakdown by units															
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
1986	15.4 %	4.6 %	52.7 %	27.3 %	5,848	28.3 %	6.0 %	21.9 %	43.9 %	1,023	32.1 %	22.5 %	7.3 %	28.1 %	17.5 %
1987	15.8 %	4.8 %	52.7 %	26.8 %	6,226	28.6 %	5.5 %	21.6 %	44.2 %	1,072	31.3 %	19.8 %	7.1 %	28.5 %	17.2 %
1988	16.6 %	4.8 %	52.5 %	26.1 %	6,736	29.1 %	6.0 %	21.1 %	43.9 %	1,172	30.4 %	21.8 %	7.0 %	29.2 %	17.4 %
1989	18.1 %	5.0 %	50.2 %	26.6 %	6,753	28.9 %	5.2 %	21.3 %	44.6 %	1,335	31.6 %	20.2 %	8.4 %	33.1 %	19.8 %
1990	18.1 %	4.9 %	51.0 %	26.0 %	7,369	32.2 %	5.2 %	19.8 %	42.8 %	1,398	33.8 %	20.2 %	7.4 %	31.2 %	19.0 %
1991	18.3 %	4.8 %	50.1 %	26.8 %	8,083	30.8 %	4.8 %	18.6 %	45.8 %	1,596	33.3 %	19.4 %	7.3 %	33.8 %	19.7 %
1992	16.9 %	5.1 %	49.5 %	28.5 %	8,110	25.8 %	5.6 %	20.5 %	48.1 %	1,657	31.3 %	22.6 %	8.4 %	34.5 %	20.4 %
1993	17.3 %	4.9 %	46.2 %	31.5 %	8,366	25.9 %	5.6 %	18.0 %	50.4 %	1,854	33.3 %	25.1 %	8.6 %	35.5 %	22.2 %
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	15.1 %	3.9 %	52.8 %	28.2 %	838	29.1 %	4.7 %	19.6 %	46.7 %	152	35.0 %	21.8 %	6.8 %	30.1 %	18.2 %
1987	16.1 %	4.0 %	51.9 %	28.1 %	909	29.1 %	4.4 %	19.6 %	46.9 %	160	31.9 %	19.2 %	6.7 %	29.5 %	17.6 %
1988	16.2 %	4.2 %	52.7 %	26.9 %	967	29.0 %	4.7 %	20.1 %	46.2 %	177	32.7 %	20.9 %	7.0 %	31.5 %	18.3 %
1989	17.9 %	4.5 %	50.5 %	27.1 %	957	28.9 %	4.1 %	20.1 %	46.9 %	203	34.2 %	19.2 %	8.4 %	36.8 %	21.2 %
1990	17.8 %	4.4 %	51.0 %	26.8 %	1,055	32.0 %	4.0 %	18.6 %	45.4 %	211	36.1 %	18.4 %	7.3 %	33.9 %	20.0 %
1991	18.1 %	4.3 %	50.2 %	27.4 %	1,164	31.6 %	3.8 %	17.2 %	47.3 %	245	36.9 %	18.7 %	7.2 %	36.4 %	21.1 %
1992	16.7 %	4.6 %	49.4 %	29.2 %	1,173	27.3 %	4.7 %	18.6 %	49.4 %	259	35.9 %	22.4 %	8.3 %	37.3 %	22.0 %
1993	17.0 %	4.5 %	46.4 %	32.1 %	1,207	26.0 %	4.7 %	16.9 %	52.4 %	286	36.1 %	24.5 %	8.6 %	38.7 %	23.7 %
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	15.6 %	4.3 %	50.6 %	29.5 %	116,597	24.8 %	4.9 %	20.4 %	50.0 %	25,039	34.1 %	24.5 %	8.6 %	36.4 %	21.5 %
1987	17.5 %	4.8 %	48.3 %	29.4 %	94,661	24.8 %	4.5 %	20.9 %	49.7 %	20,988	31.4 %	21.0 %	9.6 %	37.5 %	22.2 %
1988	19.0 %	5.1 %	48.3 %	27.5 %	94,323	24.3 %	5.2 %	22.8 %	47.7 %	21,647	29.3 %	23.2 %	10.8 %	39.8 %	22.9 %
1989	19.9 %	5.4 %	47.1 %	27.6 %	115,207	24.6 %	4.8 %	22.6 %	48.1 %	29,423	31.5 %	22.7 %	12.3 %	44.4 %	25.5 %
1990	21.7 %	5.3 %	45.2 %	27.8 %	111,519	29.4 %	4.2 %	20.4 %	46.1 %	29,206	35.5 %	20.4 %	11.8 %	43.4 %	26.2 %
1991	22.5 %	5.5 %	43.9 %	28.1 %	128,563	30.7 %	3.8 %	18.5 %	47.0 %	36,146	38.3 %	19.5 %	11.8 %	47.1 %	28.1 %
1992	20.6 %	5.8 %	44.2 %	29.4 %	129,695	26.0 %	5.0 %	20.9 %	48.2 %	37,741	36.7 %	24.9 %	13.7 %	47.7 %	29.1 %
1993	20.6 %	5.6 %	41.6 %	32.3 %	150,914	24.1 %	4.7 %	19.6 %	51.6 %	46,516	36.1 %	25.8 %	14.6 %	49.3 %	30.8 %

Table 2.13 Source: Aerospatiale [52].

Civil Transport Aircraft in Service at Year-end

Category: LONG-HAUL JET																
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of fleet in each geographical area						
Breakdown by units																
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World		
1986	18.5 %	3.9 %	29.5 %	48.1 %	1,737	94.4 %	0.0 %	0.0 %	5.6 %	36	10.6 %	0.0 %	0.0 %	0.2 %	2.1 %	1986
1987	18.1 %	3.7 %	30.9 %	47.3 %	1,844	94.9 %	0.0 %	0.0 %	5.1 %	39	11.1 %	0.0 %	0.0 %	0.2 %	2.1 %	1987
1988	16.5 %	3.6 %	31.9 %	48.1 %	1,927	94.9 %	0.0 %	0.0 %	5.1 %	39	11.7 %	0.0 %	0.0 %	0.2 %	2.0 %	1988
1989	17.5 %	3.0 %	32.6 %	46.8 %	2,062	94.6 %	0.0 %	0.0 %	5.4 %	37	9.7 %	0.0 %	0.0 %	0.2 %	1.8 %	1989
1990	17.0 %	2.4 %	36.2 %	44.4 %	2,302	100.0 %	0.0 %	0.0 %	0.0 %	15	3.8 %	0.0 %	0.0 %	0.0 %	0.7 %	1990
1991	17.8 %	2.4 %	35.1 %	44.7 %	2,417	100.0 %	0.0 %	0.0 %	0.0 %	13	3.0 %	0.0 %	0.0 %	0.0 %	0.5 %	1991
1992	16.8 %	2.2 %	37.1 %	43.9 %	2,491	100.0 %	0.0 %	0.0 %	0.0 %	13	3.1 %	0.0 %	0.0 %	0.0 %	0.5 %	1992
1993	18.1 %	2.1 %	34.1 %	45.7 %	2,587	88.6 %	0.0 %	0.0 %	11.4 %	35	6.6 %	0.0 %	0.0 %	0.3 %	1.4 %	1993
Breakdown by seats																
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World		
1986	20.5 %	3.4 %	28.9 %	47.2 %	469	94.9 %	0.0 %	0.0 %	5.1 %	4	3.9 %	0.0 %	0.0 %	0.1 %	0.8 %	1986
1987	20.0 %	3.3 %	30.0 %	46.7 %	499	95.3 %	0.0 %	0.0 %	4.7 %	4	4.1 %	0.0 %	0.0 %	0.1 %	0.9 %	1987
1988	18.6 %	3.1 %	30.6 %	47.6 %	524	95.3 %	0.0 %	0.0 %	4.7 %	4	4.2 %	0.0 %	0.0 %	0.1 %	0.8 %	1988
1989	19.7 %	2.6 %	30.6 %	47.2 %	570	95.1 %	0.0 %	0.0 %	4.9 %	4	3.5 %	0.0 %	0.0 %	0.1 %	0.7 %	1989
1990	19.3 %	2.2 %	33.9 %	44.6 %	636	100.0 %	0.0 %	0.0 %	0.0 %	2	1.2 %	0.0 %	0.0 %	0.0 %	0.2 %	1990
1991	19.5 %	2.2 %	32.8 %	45.4 %	676	100.0 %	0.0 %	0.0 %	0.0 %	1	1.0 %	0.0 %	0.0 %	0.0 %	0.2 %	1991
1992	18.7 %	2.1 %	33.8 %	45.5 %	714	100.0 %	0.0 %	0.0 %	0.0 %	1	1.0 %	0.0 %	0.0 %	0.0 %	0.2 %	1992
1993	19.7 %	2.0 %	30.7 %	47.6 %	747	84.8 %	0.0 %	0.0 %	15.2 %	8	4.5 %	0.0 %	0.0 %	0.3 %	1.1 %	1993
Breakdown by 1993 value - Mio ECU																
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World		
1986	22.0 %	3.1 %	23.1 %	51.8 %	69,510	100.0 %	0.0 %	0.0 %	0.0 %	232	1.5 %	0.0 %	0.0 %	0.0 %	0.3 %	1986
1987	21.6 %	3.0 %	23.2 %	52.3 %	59,204	100.0 %	0.0 %	0.0 %	0.0 %	181	1.4 %	0.0 %	0.0 %	0.0 %	0.3 %	1987
1988	19.6 %	2.7 %	22.9 %	54.8 %	57,995	100.0 %	0.0 %	0.0 %	0.0 %	150	1.3 %	0.0 %	0.0 %	0.0 %	0.3 %	1988
1989	21.1 %	2.9 %	20.9 %	55.1 %	68,481	100.0 %	0.0 %	0.0 %	0.0 %	124	0.9 %	0.0 %	0.0 %	0.0 %	0.2 %	1989
1990	21.9 %	3.0 %	24.4 %	50.8 %	69,195	100.0 %	0.0 %	0.0 %	0.0 %	137	0.9 %	0.0 %	0.0 %	0.0 %	0.2 %	1990
1991	21.9 %	3.4 %	23.2 %	51.6 %	76,804	100.0 %	0.0 %	0.0 %	0.0 %	102	0.6 %	0.0 %	0.0 %	0.0 %	0.1 %	1991
1992	20.8 %	3.1 %	26.2 %	49.9 %	84,044	100.0 %	0.0 %	0.0 %	0.0 %	86	0.5 %	0.0 %	0.0 %	0.0 %	0.1 %	1992
1993	21.8 %	2.9 %	22.8 %	52.4 %	98,839	82.4 %	0.0 %	0.0 %	17.6 %	1,939	7.4 %	0.0 %	0.0 %	0.7 %	2.0 %	1993

Table 2.14 Source: Aerospatiale [52].

Civil Transport Aircraft Annual Deliveries

Category: SHORT-HAUL TURBOPROP																
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of deliveries in each geographical area						
Breakdown by units																
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World	
1986	11.0 %	6.0 %	66.3 %	16.7 %	282	15.2 %	9.5 %	60.8 %	14.6 %	158	77.4 %	88.2 %	51.3 %	48.9 %	56.0 %	1986
1987	18.8 %	4.4 %	54.1 %	22.8 %	320	24.3 %	6.6 %	50.8 %	18.2 %	181	73.3 %	85.7 %	53.2 %	45.2 %	56.6 %	1987
1988	15.6 %	4.5 %	47.8 %	32.2 %	379	18.4 %	6.7 %	44.4 %	30.5 %	223	69.5 %	88.2 %	54.7 %	55.7 %	58.8 %	1988
1989	16.9 %	5.6 %	38.7 %	38.7 %	431	27.1 %	9.9 %	30.0 %	33.0 %	203	75.3 %	83.3 %	36.5 %	40.1 %	47.1 %	1989
1990	17.3 %	8.2 %	48.2 %	26.3 %	463	21.9 %	13.2 %	42.3 %	22.6 %	265	72.5 %	92.1 %	50.2 %	49.2 %	57.2 %	1990
1991	21.5 %	4.8 %	53.3 %	20.4 %	437	30.8 %	6.8 %	49.8 %	12.7 %	237	77.7 %	76.2 %	50.6 %	33.7 %	54.2 %	1991
1992	15.6 %	6.2 %	50.2 %	28.0 %	275	20.7 %	8.0 %	47.7 %	23.6 %	174	83.7 %	82.4 %	60.1 %	53.2 %	63.3 %	1992
1993	21.4 %	2.3 %	51.4 %	24.9 %	173	32.7 %	2.7 %	38.1 %	26.5 %	113	100.0 %	75.0 %	48.3 %	69.8 %	65.3 %	1993
Breakdown by seats																
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World	
1986	11.8 %	8.2 %	62.4 %	17.6 %	9	17.0 %	11.3 %	56.6 %	15.1 %	5	90.0 %	85.7 %	56.6 %	53.3 %	62.4 %	1986
1987	20.2 %	4.3 %	51.1 %	24.5 %	9	25.9 %	6.9 %	48.3 %	19.2 %	6	78.9 %	100.0 %	58.3 %	47.8 %	61.7 %	1987
1988	19.5 %	5.1 %	43.2 %	32.2 %	12	22.1 %	7.8 %	39.0 %	31.2 %	8	73.9 %	100.0 %	58.8 %	63.2 %	65.3 %	1988
1989	22.1 %	7.6 %	33.1 %	37.2 %	15	31.3 %	12.5 %	25.0 %	31.3 %	8	78.1 %	90.9 %	41.7 %	46.3 %	55.2 %	1989
1990	19.7 %	11.2 %	41.4 %	27.6 %	15	24.0 %	16.7 %	35.4 %	24.0 %	10	76.7 %	94.1 %	54.0 %	54.8 %	63.2 %	1990
1991	26.2 %	7.4 %	46.3 %	20.1 %	15	34.7 %	9.2 %	42.9 %	13.3 %	10	87.2 %	81.8 %	60.9 %	43.3 %	65.8 %	1991
1992	18.6 %	9.8 %	43.1 %	28.4 %	10	24.0 %	12.0 %	38.7 %	25.3 %	8	94.7 %	90.0 %	65.9 %	65.5 %	73.5 %	1992
1993	24.1 %	1.7 %	48.3 %	25.9 %	6	30.4 %	2.2 %	41.3 %	26.1 %	5	100.0 %	100.0 %	67.9 %	80.0 %	79.3 %	1993
Breakdown by 1993 value - Mio ECU																
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World	
1986	13.5 %	7.9 %	61.1 %	17.5 %	1,624	18.2 %	11.7 %	55.8 %	14.3 %	992	82.4 %	90.0 %	55.8 %	50.0 %	61.1 %	1986
1987	19.3 %	6.0 %	49.3 %	25.3 %	1,598	25.6 %	8.9 %	46.7 %	18.9 %	959	79.3 %	88.9 %	56.8 %	44.7 %	60.0 %	1987
1988	20.0 %	5.5 %	42.5 %	32.0 %	2,004	23.3 %	7.8 %	38.8 %	30.2 %	1,293	75.0 %	90.9 %	58.8 %	60.9 %	64.5 %	1988
1989	21.6 %	7.2 %	33.8 %	37.4 %	2,865	32.0 %	11.1 %	24.8 %	32.0 %	1,577	81.7 %	85.0 %	40.4 %	47.1 %	55.0 %	1989
1990	20.4 %	11.1 %	41.0 %	27.5 %	2,858	24.5 %	16.5 %	34.9 %	24.1 %	1,814	76.5 %	94.6 %	54.0 %	55.4 %	63.5 %	1990
1991	27.2 %	6.0 %	46.3 %	20.6 %	2,836	35.5 %	7.5 %	43.5 %	13.6 %	1,812	83.5 %	80.0 %	60.0 %	42.0 %	63.9 %	1991
1992	19.3 %	8.6 %	43.2 %	28.8 %	1,909	24.0 %	10.3 %	39.4 %	26.3 %	1,375	89.4 %	85.7 %	65.7 %	62.0 %	72.0 %	1992
1993	23.9 %	2.1 %	47.9 %	26.1 %	1,213	30.4 %	2.7 %	40.2 %	26.8 %	956	100.0 %	100.0 %	66.2 %	81.1 %	78.9 %	1993

Table 2.15 Source: Aerospatiale [52].

Civil Transport Aircraft Annual Deliveries

Category: SHORT/MEDIUM-HAUL JET															
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of deliveries in each geographical area					
Breakdown by units															
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
1986	11.4	10.8	52.3	25.4	342	7.7	14.3	38.5	39.6	91	17.9	35.1	19.6	41.4	26.6
1987	24.3	6.3	53.7	15.6	378	26.2	6.2	27.7	40.0	65	18.5	16.7	8.9	44.1	17.2
1988	24.6	7.0	53.0	15.4	460	30.1	14.0	29.0	26.9	93	24.8	40.6	11.1	35.2	20.2
1989	27.5	6.1	39.4	27.0	574	27.7	5.4	23.3	43.6	202	35.4	31.4	20.8	56.8	35.2
1990	29.9	5.1	40.1	24.8	588	39.4	1.7	18.3	40.6	175	39.2	10.0	13.6	48.6	29.8
1991	34.6	5.5	31.9	28.1	709	39.6	2.0	15.2	43.2	250	40.4	12.8	16.8	54.3	35.3
1992	20.8	7.6	38.7	33.0	649	15.0	7.3	35.5	42.3	220	24.4	32.7	31.1	43.5	33.9
1993	14.9	4.8	33.3	47.0	417	13.1	3.0	32.7	51.2	168	35.5	25.0	39.6	43.9	40.3
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	11.2	10.6	50.6	27.6	49	7.9	14.4	29.5	48.2	11	20.0	38.5	16.5	49.6	28.4
1987	25.4	5.7	51.9	17.0	55	31.2	2.8	22.9	43.1	14	24.5	9.7	8.8	50.5	19.9
1988	23.6	6.1	53.7	16.6	69	25.1	9.4	35.7	29.8	17	26.4	38.1	16.4	44.3	24.7
1989	26.5	6.1	39.3	28.1	84	25.9	5.7	23.7	44.8	32	36.8	35.3	22.7	59.9	37.6
1990	29.2	4.6	40.1	26.1	86	37.6	1.9	15.2	45.2	26	39.4	12.5	11.6	52.9	30.5
1991	32.8	4.5	33.1	29.5	103	37.2	2.1	13.4	47.4	38	42.1	17.4	15.0	59.7	37.2
1992	19.9	7.3	38.7	34.1	97	15.3	8.4	29.8	46.5	35	27.5	40.8	27.4	48.6	35.6
1993	15.1	4.1	33.3	47.5	63	13.0	2.3	29.0	55.7	26	35.8	23.1	36.2	48.8	41.6
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	11.2	10.1	52.6	26.1	13,866	8.6	14.5	28.6	48.3	3,737	20.8	38.5	14.7	49.8	27.0
1987	25.5	5.6	52.1	16.7	12,156	31.4	3.1	22.6	42.9	2,408	24.4	10.9	8.6	50.8	19.8
1988	23.8	6.2	54.1	15.9	14,201	24.9	9.8	35.8	29.6	3,588	26.4	39.8	16.7	46.9	25.3
1989	26.6	6.1	39.3	28.1	20,261	25.9	5.7	23.7	44.7	7,606	36.5	35.3	22.7	59.8	37.5
1990	28.3	4.9	40.5	26.4	18,869	37.5	1.8	15.2	45.5	5,793	40.7	11.2	11.5	52.9	30.7
1991	32.4	4.6	33.3	29.6	23,250	37.3	2.2	13.2	47.3	8,704	43.0	18.1	14.9	59.7	37.4
1992	19.7	7.4	38.7	34.2	21,247	14.9	8.5	29.9	46.8	7,525	26.8	40.5	27.3	48.5	35.4
1993	14.5	4.0	33.5	47.9	15,457	12.7	2.3	29.0	56.0	6,447	36.5	23.3	36.1	48.8	41.7

Table 2.16 Source: Aerospatiale [52].

Civil Transport Aircraft Annual Deliveries

Category: LONG-HAUL JET															
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of deliveries in each geographical area					
Breakdown by units															
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
1986	16.7 %	0.0 %	25.8 %	57.6 %	66	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1987	9.3 %	2.7 %	32.0 %	56.0 %	75	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1988	7.9 %	2.2 %	27.0 %	62.9 %	89	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1989	18.2 %	7.3 %	20.9 %	53.6 %	110	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1990	26.0 %	6.2 %	21.9 %	45.9 %	146	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1991	23.6 %	12.6 %	23.0 %	40.8 %	191	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1992	16.6 %	3.9 %	30.9 %	48.6 %	181	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1993	24.8 %	1.9 %	25.5 %	47.8 %	161	81.8 %	0.0 %	0.0 %	18.2 %	22	45.0 %	0.0 %	0.0 %	5.2 %	13.7 %
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	20.6 %	0.0 %	21.5 %	57.8 %	22	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1987	12.9 %	2.6 %	28.4 %	56.0 %	23	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1988	9.1 %	1.8 %	24.1 %	65.0 %	27	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1989	20.9 %	5.6 %	20.1 %	53.4 %	35	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1990	27.8 %	4.6 %	20.3 %	47.3 %	48	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1991	23.2 %	11.0 %	19.7 %	46.1 %	58	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1992	17.4 %	3.3 %	26.9 %	52.5 %	58	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1993	23.4 %	1.5 %	21.9 %	53.1 %	53	81.8 %	0.0 %	0.0 %	18.2 %	7	43.5 %	0.0 %	0.0 %	4.3 %	12.5 %
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	21.3 %	0.0 %	21.4 %	57.3 %	6,972	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1987	12.9 %	2.8 %	28.3 %	55.9 %	6,094	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1988	7.8 %	1.9 %	24.6 %	65.7 %	6,895	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1989	21.0 %	6.0 %	19.7 %	53.3 %	10,357	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1990	28.0 %	4.7 %	20.0 %	47.3 %	12,331	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1991	23.3 %	10.9 %	19.8 %	46.1 %	15,283	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1992	17.3 %	3.2 %	26.9 %	52.5 %	15,042	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1993	23.4 %	1.5 %	21.9 %	53.1 %	15,115	81.7 %	0.0 %	0.0 %	18.3 %	1,862	42.9 %	0.0 %	0.0 %	4.3 %	12.3 %

Table 2.17 Source: Aerospatiale [52].

Civil Transport Aircraft Orders in Backlog at Year-end

Category: SHORT-HAUL TURBOPROP															
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of backlog in each geographical area					
Breakdown by units															
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
1986	17.4 %	5.3 %	25.8 %	51.4 %	449	24.6 %	9.1 %	18.6 %	47.7 %	264	83.3 %	100.0 %	42.2 %	54.5 %	58.8 %
1987	16.5 %	4.5 %	36.3 %	42.6 %	509	20.0 %	6.9 %	25.9 %	47.2 %	320	76.2 %	95.7 %	44.9 %	69.6 %	62.9 %
1988	21.5 %	7.6 %	33.6 %	37.3 %	643	29.6 %	11.9 %	18.8 %	39.7 %	388	83.3 %	93.9 %	33.8 %	64.2 %	60.3 %
1989	28.7 %	6.5 %	37.1 %	27.7 %	773	30.6 %	9.6 %	32.2 %	27.6 %	519	71.6 %	100.0 %	58.2 %	66.8 %	67.1 %
1990	22.3 %	6.6 %	42.3 %	28.8 %	878	26.2 %	9.7 %	29.7 %	34.4 %	535	71.4 %	89.7 %	42.9 %	72.7 %	60.9 %
1991	19.8 %	5.3 %	44.1 %	30.8 %	916	23.2 %	6.8 %	33.6 %	36.4 %	607	77.9 %	83.7 %	50.5 %	78.4 %	66.3 %
1992	11.3 %	7.5 %	44.5 %	36.7 %	761	15.7 %	7.4 %	27.7 %	49.2 %	502	91.9 %	64.9 %	41.0 %	88.5 %	66.0 %
1993	11.5 %	7.3 %	43.8 %	37.5 %	496	16.3 %	10.5 %	21.9 %	51.3 %	343	98.2 %	100.0 %	34.6 %	94.6 %	69.2 %
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	18.3 %	7.3 %	23.2 %	51.2 %	16	25.5 %	11.3 %	17.0 %	46.2 %	11	90.0 %	100.0 %	47.4 %	58.3 %	64.6 %
1987	16.9 %	5.6 %	33.8 %	43.6 %	20	19.9 %	8.1 %	25.7 %	46.3 %	14	81.8 %	100.0 %	53.0 %	74.1 %	69.7 %
1988	25.0 %	9.2 %	28.8 %	36.9 %	26	32.2 %	13.0 %	16.9 %	37.9 %	18	87.7 %	95.8 %	40.0 %	69.8 %	68.1 %
1989	32.4 %	7.3 %	32.7 %	27.6 %	32	34.9 %	9.9 %	28.0 %	27.2 %	23	79.4 %	100.0 %	63.1 %	72.4 %	73.7 %
1990	28.1 %	9.6 %	39.6 %	22.7 %	31	32.0 %	12.8 %	31.1 %	24.2 %	22	79.5 %	93.3 %	54.8 %	74.6 %	70.0 %
1991	23.7 %	7.4 %	36.7 %	32.2 %	34	25.6 %	8.5 %	30.2 %	35.7 %	26	82.5 %	88.0 %	62.9 %	84.4 %	76.3 %
1992	14.6 %	9.1 %	38.3 %	38.0 %	27	18.2 %	8.6 %	27.3 %	45.9 %	21	95.0 %	72.0 %	54.3 %	92.3 %	76.3 %
1993	15.3 %	9.6 %	35.6 %	39.5 %	18	18.5 %	11.6 %	23.3 %	46.6 %	15	100.0 %	100.0 %	54.0 %	97.1 %	82.5 %
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	18.2 %	7.4 %	23.1 %	51.2 %	3,119	25.5 %	11.5 %	17.2 %	45.9 %	2,023	90.9 %	100.0 %	48.2 %	58.1 %	64.9 %
1987	16.9 %	5.3 %	34.1 %	43.7 %	3,218	20.5 %	7.1 %	25.7 %	46.7 %	2,237	84.3 %	93.8 %	52.4 %	74.2 %	69.5 %
1988	25.4 %	9.3 %	28.8 %	36.5 %	4,420	32.8 %	13.0 %	16.7 %	37.5 %	2,996	87.5 %	95.1 %	39.4 %	69.6 %	67.8 %
1989	32.7 %	7.4 %	32.8 %	27.1 %	6,276	35.2 %	10.0 %	28.1 %	26.7 %	4,627	79.4 %	100.0 %	63.0 %	72.7 %	73.7 %
1990	31.4 %	10.1 %	44.5 %	14.0 %	5,177	37.7 %	14.0 %	36.9 %	11.5 %	3,431	79.5 %	91.8 %	55.0 %	54.1 %	66.3 %
1991	23.6 %	6.8 %	37.1 %	32.5 %	6,376	25.4 %	7.8 %	30.7 %	36.1 %	4,860	82.0 %	88.2 %	63.1 %	84.5 %	76.2 %
1992	14.7 %	9.5 %	38.0 %	37.8 %	5,066	18.3 %	8.9 %	27.2 %	45.6 %	3,872	94.7 %	72.1 %	54.7 %	92.2 %	76.4 %
1993	15.7 %	9.7 %	35.9 %	38.7 %	3,595	19.0 %	12.0 %	23.0 %	46.1 %	2,929	98.5 %	100.0 %	52.3 %	96.9 %	81.5 %

Table 2.18 Source: Aerospatiale [52].

Civil Transport Aircraft Orders in Backlog at Year-end

Category: SHORT/MEDIUM-HAUL JET																
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of backlog in each geographical area						
Breakdown by units																
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World	
1986	19.0 %	5.8 %	61.0 %	14.2 %	1,182	22.0 %	4.2 %	54.7 %	19.1 %	404	39.7 %	24.6 %	30.7 %	45.8 %	34.2 %	1986
1987	22.0 %	6.2 %	53.9 %	17.9 %	1,230	20.8 %	5.8 %	53.4 %	20.0 %	534	41.0 %	40.8 %	43.0 %	48.6 %	43.4 %	1987
1988	22.6 %	6.2 %	54.6 %	16.6 %	1,510	11.0 %	1.5 %	62.6 %	24.9 %	401	12.9 %	6.5 %	30.5 %	39.8 %	26.6 %	1988
1989	30.4 %	4.7 %	48.4 %	16.4 %	2,677	27.7 %	3.4 %	40.6 %	28.4 %	917	31.2 %	24.4 %	28.7 %	59.1 %	34.3 %	1989
1990	30.8 %	4.9 %	43.2 %	21.1 %	2,961	34.2 %	5.4 %	29.2 %	31.2 %	1,209	45.3 %	45.1 %	27.6 %	60.3 %	40.8 %	1990
1991	25.0 %	4.8 %	46.2 %	24.1 %	2,449	26.2 %	6.0 %	34.8 %	33.0 %	1,012	43.3 %	52.1 %	31.1 %	56.7 %	41.3 %	1991
1992	11.2 %	5.0 %	59.9 %	24.0 %	1,953	14.7 %	6.6 %	51.7 %	27.1 %	839	56.4 %	56.1 %	37.1 %	48.5 %	43.0 %	1992
1993	16.2 %	4.5 %	53.7 %	25.6 %	1,564	24.4 %	6.8 %	38.0 %	30.8 %	676	65.0 %	65.7 %	30.6 %	52.0 %	43.2 %	1993
Breakdown by seats																
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World	
1986	19.1 %	5.8 %	60.0 %	15.1 %	165	23.9 %	4.1 %	50.6 %	21.5 %	59	44.4 %	25.0 %	30.0 %	50.6 %	35.6 %	1986
1987	21.8 %	5.6 %	53.2 %	19.4 %	176	20.8 %	4.8 %	51.2 %	23.2 %	81	44.0 %	39.4 %	44.4 %	55.1 %	46.1 %	1987
1988	21.4 %	5.7 %	55.2 %	17.6 %	221	12.1 %	1.6 %	58.1 %	28.1 %	63	16.1 %	7.9 %	29.8 %	45.1 %	28.3 %	1988
1989	29.2 %	4.3 %	48.6 %	17.9 %	403	26.5 %	2.9 %	39.8 %	30.8 %	155	35.0 %	26.0 %	31.5 %	66.4 %	38.6 %	1989
1990	29.8 %	4.5 %	42.9 %	22.8 %	461	31.8 %	5.1 %	29.3 %	33.8 %	208	48.3 %	50.7 %	31.0 %	66.8 %	45.2 %	1990
1991	24.8 %	4.3 %	45.2 %	25.6 %	395	25.5 %	5.4 %	34.2 %	34.9 %	186	48.4 %	59.2 %	35.5 %	64.1 %	47.0 %	1991
1992	12.0 %	4.4 %	58.8 %	24.7 %	324	15.3 %	5.4 %	50.9 %	28.4 %	159	62.3 %	59.7 %	42.4 %	56.3 %	49.0 %	1992
1993	17.8 %	4.1 %	51.4 %	26.8 %	259	25.2 %	5.8 %	36.5 %	32.4 %	129	70.7 %	71.4 %	35.4 %	60.1 %	49.8 %	1993
Breakdown by 1993 value - Mio ECU																
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World	
1986	17.7 %	5.3 %	62.9 %	14.1 %	47,564	23.5 %	4.0 %	51.0 %	21.5 %	15,734	43.8 %	25.1 %	26.8 %	50.5 %	33.1 %	1986
1987	21.5 %	5.7 %	53.4 %	19.4 %	39,153	20.5 %	4.9 %	51.4 %	23.2 %	18,048	43.9 %	39.5 %	44.4 %	55.2 %	46.1 %	1987
1988	21.3 %	5.8 %	55.4 %	17.5 %	46,340	12.0 %	1.8 %	58.2 %	28.0 %	13,148	16.0 %	8.6 %	29.8 %	45.4 %	28.4 %	1988
1989	29.2 %	4.3 %	48.7 %	17.8 %	97,213	26.6 %	2.9 %	39.7 %	30.7 %	37,492	35.1 %	25.9 %	31.5 %	66.7 %	38.6 %	1989
1990	29.6 %	4.6 %	43.0 %	22.8 %	101,986	31.8 %	5.1 %	29.3 %	33.8 %	46,295	48.9 %	50.4 %	30.9 %	67.2 %	45.4 %	1990
1991	24.5 %	4.4 %	45.4 %	25.8 %	90,098	25.6 %	5.4 %	34.2 %	34.9 %	42,437	49.2 %	58.0 %	35.5 %	63.8 %	47.1 %	1991
1992	12.4 %	1.4 %	60.5 %	25.7 %	69,560	15.3 %	5.4 %	50.9 %	28.3 %	34,859	61.9 %	194.4 %	42.1 %	55.3 %	50.1 %	1992
1993	17.7 %	4.1 %	51.4 %	26.8 %	64,048	25.2 %	5.8 %	36.5 %	32.4 %	31,904	71.2 %	70.6 %	35.4 %	60.2 %	49.8 %	1993

Table 2.19 Source: Aerospatiale [52].

Civil Transport Aircraft Orders in Backlog at Year-end

Category: LONG-HAUL JET															
Distribution of all aircraft by geographical area					Distribution of EU-built aircraft by geographical area					EU-built share of backlog in each geographical area					
Breakdown by units															
	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	Units	EU	Rest of Europe	USA	Rest of World	World
1986	21.4 % ^[R]	0.4 % ^[R]	20.5 %	57.6 %	224	100.0 % ^[R]	0.0 % ^[R]	0.0 %	0.0 %	2	4.2 % ^[R]	0.0 % ^[R]	0.0 %	0.0 %	0.9 %
1987	36.6 %	3.3 %	24.8 %	35.3 %	391	63.2 %	0.0 %	29.4 %	7.4 %	68	30.1 %	0.0 %	20.6 %	3.6 %	17.4 %
1988	30.3 %	6.3 %	24.5 %	39.0 %	462	85.0 %	0.0 %	15.0 %	0.0 %	20	12.1 %	0.0 %	2.7 %	0.0 %	4.3 %
1989	34.0 %	4.3 %	26.3 %	35.4 %	655	53.6 %	0.0 %	38.1 %	8.3 %	84	20.2 %	0.0 %	18.6 %	3.0 %	12.8 %
1990	29.0 %	4.8 %	27.4 %	38.8 %	851	48.0 %	0.0 %	29.6 %	22.4 %	98	19.0 %	0.0 %	12.4 %	6.7 %	11.5 %
1991	28.6 %	2.9 %	27.3 %	41.3 %	833	42.2 %	1.7 %	27.6 %	28.4 %	116	20.6 %	8.3 %	14.1 %	9.6 %	13.9 %
1992	19.2 %	2.0 %	32.1 %	46.7 %	683	43.0 %	1.9 %	14.0 %	41.1 %	107	35.1 %	14.3 %	6.8 %	13.8 %	15.7 %
1993	22.0 %	1.3 %	26.3 %	50.3 %	608	33.3 %	2.2 %	3.2 %	61.3 %	93	23.1 %	25.0 %	1.9 %	18.6 %	15.3 %
Breakdown by seats															
	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	Seats x 1,000	EU	Rest of Europe	USA	Rest of World	World
1986	24.3 %	0.6 %	19.1 %	56.0 %	73	100.0 % ^[R]	0.0 % ^[R]	0.0 %	0.0 %	0	1.1 % ^[R]	0.0 % ^[R]	0.0 %	0.0 %	0.3 %
1987	37.4 %	2.8 %	22.7 %	37.1 %	129	63.2 %	0.0 %	29.4 %	7.5 %	20	26.3 %	0.0 %	20.2 %	3.1 %	15.6 %
1988	30.8 %	5.2 %	22.3 %	41.7 %	152	84.7 %	0.0 %	15.3 %	0.0 %	6	10.7 %	0.0 %	2.7 %	0.0 %	3.9 %
1989	32.7 %	3.7 %	24.5 %	39.1 %	205	53.4 %	0.0 %	38.2 %	8.4 %	25	19.8 %	0.0 %	18.9 %	2.6 %	12.1 %
1990	27.8 %	4.1 %	25.9 %	42.2 %	271	47.9 %	0.0 %	29.7 %	22.4 %	29	18.4 %	0.0 %	12.3 %	5.7 %	10.7 %
1991	27.4 %	2.5 %	25.7 %	44.4 %	266	42.4 %	1.8 %	27.5 %	28.4 %	34	19.9 %	9.0 %	13.8 %	8.2 %	12.8 %
1992	19.5 %	1.8 %	29.3 %	49.5 %	229	42.9 %	1.9 %	14.2 %	41.0 %	32	30.6 %	14.6 %	6.7 %	11.5 %	13.9 %
1993	22.1 %	1.2 %	24.5 %	52.2 %	196	33.7 %	2.2 %	3.3 %	60.9 %	28	21.5 %	25.0 %	1.9 %	16.5 %	14.1 %
Breakdown by 1993 value - Mio ECU															
	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	Mio ECU	EU	Rest of Europe	USA	Rest of World	World
1986	24.1 %	0.6 %	19.2 %	56.1 %	22,539	0.0 %	0.0 %	0.0 %	0.0 %	0	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1987	37.5 %	2.8 %	22.7 %	37.1 %	33,667	63.3 %	0.0 %	29.4 %	7.3 %	5,252	26.4 %	0.0 %	20.3 %	3.1 %	15.6 %
1988	25.9 %	5.4 %	23.9 %	44.7 %	36,128	84.8 %	0.0 %	15.2 %	0.0 %	1,513	13.7 %	0.0 %	2.7 %	0.0 %	4.2 %
1989	32.9 %	3.7 %	24.7 %	38.7 %	59,226	53.6 %	0.0 %	38.0 %	8.4 %	7,018	19.3 %	0.0 %	18.2 %	2.6 %	11.8 %
1990	27.8 %	4.1 %	25.8 %	42.3 %	69,836	47.9 %	0.0 %	29.6 %	22.5 %	7,428	18.4 %	0.0 %	12.2 %	5.6 %	10.6 %
1991	27.5 %	2.5 %	25.6 %	44.4 %	69,624	42.3 %	1.7 %	27.5 %	28.5 %	8,984	19.9 %	8.8 %	13.9 %	8.3 %	12.9 %
1992	20.4 %	6.0 %	27.3 %	46.2 %	63,363	43.0 %	1.8 %	14.0 %	41.1 %	8,177	27.2 %	3.9 %	6.6 %	11.5 %	12.9 %
1993	28.6 %	1.1 %	22.4 %	47.8 %	61,050	33.4 %	2.2 %	3.3 %	61.2 %	7,857	15.0 %	25.0 %	1.9 %	16.5 %	12.9 %

Table 2.20 Source: Aerospatiale [52].

Non-Western Civil Aircraft Fleet

In Operation by Year of Manufacture

Situation as of January 1995

		by units							by seats - in % of total seats								
		Other Jets					Total Non-Western Units	% of World Total Fleet	Other Jets					Total Seats in Non-Western Aircraft	Average Seat Capacity		
		Helicopters	Pistons / Turboprops	Cargo Jets	Narrow Body	Wide Body			Both	Helicopters	Pistons / Turboprops	Narrow Body	Wide Body			Both	
		1981	10	119	43	120	1	121	293	13.5 %	0.9 %	5.9 %	91.1 %	2.1 %	93.2 %	16,715	57
		1982	6	100	46	68	10	78	230	15.5 %	0.4 %	7.2 %	66.7 %	25.6 %	92.3 %	13,539	59
		1983	4	129	27	70	10	80	240	22.3 %	0.1 %	9.2 %	61.6 %	29.1 %	90.7 %	11,665	49
		1984	8	112	43	43	10	53	216	22.1 %	0.2 %	15.1 %	45.8 %	38.9 %	84.7 %	8,733	40
Cargo Jets																	
	Antonov	1985	5	103	43	32	5	37	188	17.4 %	0.0 %	19.5 %	55.4 %	25.1 %	80.5 %	6,702	36
	Ilyushin	1986	10	88	51	41	10	51	200	16.7 %	0.5 %	10.9 %	55.4 %	33.2 %	88.6 %	10,141	51
	Tupolev	1987	17	53	23	39	7	46	139	12.2 %	1.1 %	8.7 %	61.3 %	28.9 %	90.2 %	8,356	60
Other Jets																	
	Narrow body	1988	10	53	66	37	3	40	169	12.5 %	1.9 %	10.0 %	77.1 %	11.0 %	88.2 %	6,035	36
	Ilyushin	1989	7	65	47	52	12	64	183	12.6 %	0.6 %	10.0 %	59.1 %	30.3 %	89.4 %	10,847	59
	Tupolev	1990	6	108	48	64	7	71	233	13.5 %	1.1 %	13.4 %	66.6 %	18.9 %	85.5 %	12,626	54
	Yakovlev	1991	8	55	44	42	14	56	163	9.0 %	2.0 %	9.3 %	59.7 %	29.1 %	88.7 %	10,323	63
	Wide body	1992	19	22	39	81	5	86	166	10.9 %	3.6 %	1.9 %	83.2 %	10.8 %	93.9 %	14,317	86
	Ilyushin	1993	3	6	15	62	2	64	88	8.2 %	0.9 %	3.0 %	88.7 %	7.0 %	95.6 %	10,062	114
Helicopters		1994	0	2	0	8	1	9	11	1.8 %	0.0 %	2.2 %	82.7 %	15.2 %	97.8 %	1,551	141
	Kamov																
	Mil																
	PZL																
Pistons/turboprops																	
	Antonov																
	Harbin																
	Ilyushin																
	Let																
	PZL																
	Shaanxi																
	Shijiazhuang																
	Xian																

Table 2.21 The table includes aircraft as listed to the left.

Source: BUCHair [54].

Chapter 3

Light- and Business Aircraft

The data on the **business aircraft fleet** are prepared by ITA¹.

There is no definition of what is a "business aircraft". The term relates, however, to the transport of passengers travelling for business reasons. In this study, a business aircraft is defined as follows:

- an aircraft that is not used on scheduled routes;
- an 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 reasons²;
- an aircraft that is not specifically equipped for other activities.

The study is limited to "air taxi" (i.e. commercial transport on request) or to private transport for companies or institutions having an aircraft fleet for

¹ l'Institut du Transport Aérien - Paris, France

² There is *double counting* of some large transport aircraft, that are specially equipped for the V.I.P., and which are also included in the *civil transport aircraft* fleet (Chapter 2).

their own needs (governments, businesses, etc.).

Piston aircraft are excluded, as they are by nature 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 10 units or less were in service for business transport (approximately 3 % of the total market).

The price of the business jets and turboprops is the standard price, i.e. 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 and the last year of manufacturing;
- for aircraft still in production and put into first service before 1988, 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 the aircraft in the first year of production.
- for aircraft built from 1988 on, the price of new aircraft is used.

The aircraft included in the study are listed on the following pages.

The data on the EU **light aircraft fleet** (table 3.20) are compiled by Bureau Veritas.

Light aircraft are broken down by category as follows:

- *single-engine* aircraft with maximum take-off weight (MTOW) ≤ 5.7 tonnes;
- *twin-engine* aircraft with MTOW ≤ 5.7 tonnes;
- twin-engine *executive jet* with MTOW between 5.7 and 15 tonnes.

The percentage market share of EU-designed aircraft does not include US-designed aircraft built under licence in Europe.

Data for Belgium (1988-91), Denmark (1988, 1990), Germany (1992-93), Greece (1986), Portugal (1993) and Spain (1986-90) are partly estimated.

Data on **business aircraft deliveries** (table 3.21) has been compiled using INTERAVIA/AEROSPACE WORLD as the source until 1992; for 1993 the source is ITA.

Business Aircraft

Design Origin US

Turboprops				Jets			
Manufacturer and Model	No. of Seats	Years	Value in 1993 Mio. ECU	Manufacturer and Model	No. of Seats	Years	Value in 1993 Mio. ECU
Beech				Boeing			
Beech 18	10	1946 - 66	0.043	B-707/720		1957 - 79	1.879
King Air 90	1+9	1964 ...	0.897	B-727		1963 - 84	2.989
King Air 100	1+10	1969 - 83	0.598	B-737		1967 ...	4.868
King Air 200	1+10	1973 ...	1.793	B-747SP/300/400		1969 ...	54.654
King Air 300	1+10	1984 ...	2.647	B-757/767			40.991
Beech 1900	2+19	1982 ...	2.818	McDD			
Cessna				DC-8		1959 ...	4.270
C-421, 208	1+7	1967 - 85	0.213	DC-9 / MD80		1965 - 81	4.270
C-425, 441	1+10	1980 ...	0.939	DC-10		1970 - 83	6.832
Convair				Beech			
CV 580, 640	56	1960 - 69	0.640	Beechjet (Diamond II)	2+7/9	1985 ...	3.416
Fairchild				Cessna			
F-27 / FH-227	40	1958 - 68	0.478	Citation I	2+5/7	1972 - 85	1.110
Merlin II	2+6	1967 - 68	0.196	Citation II	2+10	1978 ...	2.647
Merlin III	2+9	1970 - 83	0.555	Citation III/V/VI/VII	2+13	1982 ...	4.697
Merlin IV	2+15	1971 ...	1.324	Gates Learjet			
Gulfstream/Rockwell				Learjet 23, 24, 25	2+6	1964 - 85	0.769
Turbo Commander	11	1966 - 69	0.085	Learjet 35, 36	2+10	1974 ...	2.477
Com 681, 690	9	1970 - 79	0.248	Learjet 55	2+10	1980 ...	4.014
Com 900, 980, 840	1+7/10	1980 - 85	0.854	Gulfstream			
Com 1000	1+7/10	1981 - 85	1.153	G.II	10/19	1966 - 80	4.270
Gulfstream I	12/26	1959 - 69	0.470	G.III/IV	3+19	1979 ...	13.664
Gosse	7/11	1933 - 45	0.128	Lockheed			
Piper				Jetstar 6, 8, 731	2+10	1960 - 73	0.854
P-31T-1	1+8	1974 ...	0.384	Jetstar II	2+10	1976 - 80	2.050
P-31T-2, 2XL	1+10	1981 ...	0.769	Rockwell			
P-42, 400	11	1980 ...	1.494	Jet Commander	2+8	1965 - 68	0.256
				Saber 40	2+8	1964 - 74	0.444
				Saber 60, 65, 75, 80	2+10	1967 - 78	1.452

Table 3.1 Aircraft included in ITA study. Source ITA [59].

Business Aircraft							
Design Origin Europe							
Turboprops				Jets			
Manufacturer and Model	No. of Seats	Years	Value in 1993 Mio. ECU	Manufacturer and Model	No. of Seats	Years	Value in 1993 Mio. ECU
Aerospatiale				Airbus			
TBM-700	6-8	1990 ...	1.025	A300-600		1984 ...	46.968
British Aerospace				A310-300		1982 ...	56.789
Jetstream 31	2+18	1967 ...	2.562	A340-200		1992 ...	95.645
HS-748	40/50	1961 ...	1.879	Aerospatiale			
Short				Corvette 100	6/12	1972 - 79	0.427
Skyvan	19	1966 ...	0.299	British Aerospace			
Fokker				BAC 111	79	1963 - 82	1.153
F-27 / F-50	40/60	1957 - 85	1.452	HS-125-400/600	7/8	1962 - 76	0.598
Pilatus				HS-125-700	8/10	1977 - 84	2.989
Porter	8/11	1965 ...	0.171	HS-125-800	2+8	1984 ...	7.088
				Dassault-Breguet			
				Falcon 10/100	2+7	1973 ...	2.306
				Falcon 20/200	2+9	1965 - 88	3.416
				Falcon 50	2+10	1978 ...	9.394
				Falcon 900	2+12/14	1986 ...	18.019
				Fokker			
				F-28 / F-100		1967 ...	5.551
				MBB			
				Hansa Jet	9/15	1966 - 73	0.256
				Socata			
				Paris Jet	4	1958 - 64	0.128

Table 3.2 Source ITA [59].

Business Aircraft							
Design				Origin Other			
Turboprops				Jets			
Manufacturer and Model	No. of Seats	Years	Value in 1993 Mio. ECU	Manufacturer and Model	No. of Seats	Years	Value in 1993 Mio. ECU
De Havilland (CA)				Canadair (CA)			
Twin Otter	22	1965 ...	0.598	CL-600	2+19	1980 - 83	5.295
Dash 7	54	1977 ...	3.074	CL-601	2+19	1982 ...	12.553
Turbo Beaver	8	1948 - 68	0.038	IAI (IL)			
Embraer (BR)				Westwind 1, 2			
EMB-110	2+18	1973 - 89	1.025	Astra	2+10	1985 ...	4.919
EMB 120, 121	2+9	1979 ...	5.722	Mitsubishi (JP)			
Mitsubishi (JP)				Diamond			
MU-2	9	1967 - 85	0.316	9/11		1981 - 85	1.708
Marquise	11	1979 - 85	0.811				

Table 3.3 Source ITA [59].

The table series 3.4 through 3.19 present the following information:

There is a series for each aircraft category (V.I.P. jets, jets other than V.I.P., turboprops) and a total for all categories.

Each of the 4 series is divided in two parts: one giving all figures in number of aircrafts (units), the other giving all figures in value (Mio. ECU).

The two parts both comprise two tables: one where figures are broken down by larger geographical zones (EU, North America, Africa, ..), and one where the EU fleet is broken down by member state.

All tables have three sections: one presenting the geographical breakdown of a total, the second giving the market share / penetration of EU built aircraft within the geographical zones, and finally the third section shows how EU built aircraft are distributed over all zones.

The larger geographical zones are composed as follows:

EU 12

All member states 1986 - 93;

Other Europe

Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Finland, Greenland, Hungary, Iceland, Liechtenstein, Malta, Monaco, Norway, Poland, Russia, Slovenia, Sweden, Switzerland, Turkey, ex-Yugoslavia;

North America

Bermuda, Canada, USA;

Central America

Aruba, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Costa Rica, Cuba, Dominican Republic, French Antilles, Guatemala, Honduras, Jamaica, Mexico, Netherlands Antilles, Panama, Trinidad & Tobago;

South America

Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, French Guiana, Paraguay, Peru, Uruguay, Venezuela;

Africa

Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African

Republic, Comoros, Congo, Djibouti, Egypt, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Libya, Malagasy, Malawi, Mauritania, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome, Senegal, Seychelles, Somalia, South Africa, Sudan, Swaziland, Tanzania, Tchad, Togo, Uganda, Zaire, Zambia, Zimbabwe;

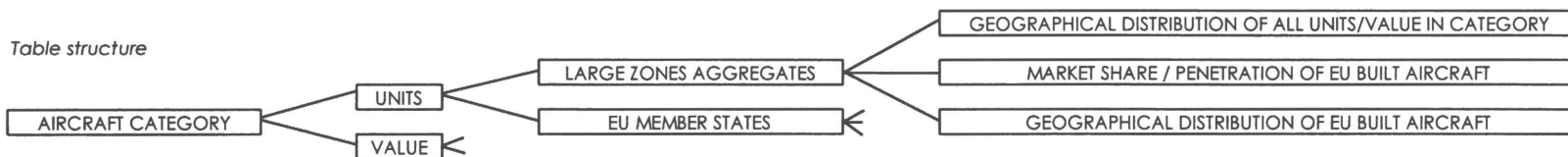
Asia

Abu Dhabi, Bahrein, Bangladesh, Brunei, Burma, China, Dhubai, Hong-Kong, India, Indonesia, Irak, Islamic Republic of Iran, Israel, Japan, Jordan, Kuwait, Lebanon, Malaysia, Maldives, Myanmar, Oman, Pakistan, Philippines, Quatar, Republic of Korea, Saudi Arabia, Sharjah, Singapore, Sri Lanka, Syrian Arab Republic, Taiwan, Thailand, Turkmenistan, United Arab Emirates, Yemen;

Australasia

Australia, French Polynesia, New Caledonia, New Zealand, Papua New Guinea, Tahiti.

Table structure



Business Aircraft Fleet (Units at Year-end)

All Aircraft Categories

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Units
1986	6.5 %	2.1 %	76.7 %	2.8 %	5.1 %	2.7 %	2.8 %	1.2 %	13,597
1987	7.6 %	2.2 %	74.7 %	2.8 %	5.5 %	2.8 %	2.9 %	1.5 %	13,798
1988	8.5 %	2.6 %	72.1 %	3.1 %	6.1 %	2.9 %	2.9 %	1.7 %	14,067
1989	9.2 %	2.7 %	70.4 %	3.5 %	6.6 %	2.9 %	3.1 %	1.8 %	14,374
1990	10.2 %	2.7 %	68.2 %	3.7 %	7.3 %	3.1 %	3.1 %	1.6 %	14,789
1991	10.3 %	2.9 %	66.7 %	4.1 %	7.9 %	3.3 %	3.3 %	1.6 %	14,957
1992	10.4 %	2.8 % ^R	65.3 %	4.7 %	8.5 %	3.5 %	3.3 %	1.5 %	15,246
1993	9.9 %	2.9 %	64.9 %	4.9 %	8.9 %	3.6 %	3.5 %	1.5 %	15,546

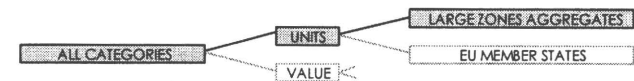
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	27.8 %	14.8 %	9.6 %	11.5 %	2.7 %	23.7 %	20.8 %	13.2 %	11.3 %
1987	26.3 %	14.8 %	9.9 %	11.2 %	2.9 %	23.2 %	20.6 %	15.8 %	11.7 %
1988	26.0 %	16.4 %	10.2 %	10.5 %	2.6 %	21.5 %	18.8 %	14.0 %	11.9 %
1989	26.8 %	16.9 %	10.3 %	9.2 %	2.8 %	20.3 %	19.1 %	11.9 %	12.1 %
1990	27.0 %	18.3 % ^R	10.4 %	8.8 %	3.0 %	18.4 %	19.4 %	11.2 %	12.2 %
1991	27.9 % ^R	18.0 % ^R	10.4 %	9.9 %	3.4 %	16.8 %	18.8 %	9.0 %	12.3 %
1992	27.6 % ^R	18.8 % ^R	10.5 %	11.5 %	3.9 %	17.5 %	19.3 %	8.7 %	12.5 %
1993	29.9 %	16.9 %	11.0 %	12.7 %	4.5 %	19.7 %	20.0 %	9.9 %	13.1 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built Units
1986	16.0 %	2.8 %	64.9 %	2.8 %	1.2 %	5.6 %	5.2 %	1.4 %	1,540
1987	17.1 %	2.8 %	63.4 %	2.7 %	1.4 %	5.4 %	5.2 %	2.0 %	1,615
1988	18.6 %	3.5 %	61.9 %	2.7 %	1.3 %	5.2 %	4.7 %	2.0 %	1,674
1989	20.4 %	3.7 %	60.2 %	2.7 %	1.6 %	4.9 %	4.8 %	1.7 %	1,734
1990	22.5 %	4.0 %	58.0 %	2.7 %	1.8 %	4.6 %	4.9 %	1.5 %	1,811
1991	23.4 % ^R	4.2 % ^R	56.3 % ^R	3.3 % ^R	2.2 %	4.5 %	5.1 % ^R	1.1 %	1,841
1992	23.0 %	4.2 %	54.7 %	4.4 %	2.6 %	4.8 %	5.1 %	1.0 %	1,907
1993	22.5 %	3.7 %	54.3 %	4.7 %	3.0 %	5.3 %	5.3 %	1.1 %	2,044

Table 3.4 (this page)

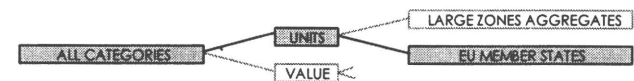


Top section: The world total fleet of business aircraft in 1993 is 15,546 units. The part of the fleet that is registered within the EU represents 9.9 % of this volume.

Middle section: The overall share of EU built aircraft of the world's total fleet represents 13.1 % of the fleet in 1993. EU built aircraft account for 29.9 % of the EU fleet.

Bottom section: The total number of EU built aircraft is 2,044 units, distributed with 22.5 % in the EU zone, 54.3 % in North America, etc.

Table 3.5 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59].

Business Aircraft Fleet (Units at Year-end)

All Aircraft Categories

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Units
1986	2.2 %	21.1 %	5.1 %	3.8 %	24.5 %	24.5 %	0.2 %	1.3 %	13.9 %	0.1 %	2.9 %	0.2 %	890
1987	2.0 %	20.7 %	5.4 %	4.6 %	24.3 %	23.0 %	0.1 %	1.2 %	16.1 %	0.2 %	2.1 %	0.3 %	1,051
1988	2.3 %	18.8 %	4.9 %	4.9 %	26.3 %	22.4 %	0.1 %	1.1 %	16.3 %	0.2 %	2.3 %	0.6 %	1,199
1989	2.3 %	17.5 %	4.0 %	5.1 %	30.4 %	19.5 %	0.1 %	1.0 %	16.9 %	0.2 %	2.4 %	0.7 %	1,316
1990	2.1 %	18.0 %	3.6 %	5.0 %	32.7 %	18.2 %	0.1 %	1.2 %	15.8 %	0.2 %	2.6 %	0.6 %	1,509
1991	2.2 %	19.6 % ^[R]	3.6 %	5.2 %	31.9 % ^[R]	17.7 % ^[R]	0.1 %	1.0 %	15.5 % ^[R]	0.2 %	2.4 %	0.6 % ^[R]	1,544
1992	2.4 %	21.3 % ^[R]	3.6 %	5.6 %	31.5 % ^[R]	16.6 %	0.2 % ^[R]	0.6 %	14.9 %	0.2 %	2.3 %	0.8 %	1,588
1993	2.3 %	22.7 %	3.9 %	5.9 %	31.6 %	16.3 %	0.3 %	0.7 %	13.1 %	0.2 %	2.3 %	0.9 %	1,534

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	0.0 %	16.0 %	8.9 %	26.5 %	36.7 %	33.5 %	0.0 %	25.0 %	32.3 %	100.0 %	26.9 %	0.0 %	27.8 %
1987	0.0 %	14.7 %	8.8 %	37.5 %	35.3 %	31.0 %	0.0 %	23.1 %	26.6 %	100.0 %	27.3 %	0.0 %	26.3 %
1988	3.7 %	16.0 %	8.5 %	40.7 %	32.7 %	33.6 %	0.0 %	7.7 %	22.1 %	50.0 %	25.0 %	14.3 %	26.0 %
1989	10.0 %	16.1 %	11.3 %	38.8 %	32.0 %	33.5 %	0.0 %	7.7 %	23.9 %	66.7 %	25.8 %	33.3 %	26.8 %
1990	9.4 %	14.4 %	9.3 %	35.5 %	32.9 %	37.6 %	0.0 %	5.6 %	22.2 %	66.7 %	23.1 %	33.3 %	27.0 %
1991	8.8 %	13.5 %	7.3 %	37.5 %	35.2 % ^[R]	41.4 % ^[R]	0.0 %	0.0 %	20.8 %	66.7 %	27.0 %	50.0 %	27.9 %
1992	7.9 %	11.5 %	8.8 %	37.1 %	35.0 % ^[R]	43.6 % ^[R]	33.3 % ^[R]	10.0 %	22.0 %	66.7 %	22.2 %	38.5 %	27.6 %
1993	5.7 %	11.8 %	8.3 %	35.6 %	38.6 %	49.6 %	50.0 %	10.0 %	24.4 %	33.3 %	22.9 %	50.0 %	29.9 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Units
1986	0.0 %	12.1 %	1.6 %	3.6 %	32.4 %	29.6 %	0.0 %	1.2 %	16.2 %	0.4 %	2.8 %	0.0 %	247
1987	0.0 %	11.6 %	1.8 %	6.5 %	32.6 %	27.2 %	0.0 %	1.1 %	16.3 %	0.7 %	2.2 %	0.0 %	276
1988	0.3 %	11.5 %	1.6 %	7.7 %	33.0 %	28.8 %	0.0 %	0.3 %	13.8 %	0.3 %	2.2 %	0.3 %	312
1989	0.8 %	10.5 %	1.7 %	7.4 %	36.3 %	24.4 %	0.0 %	0.3 %	15.0 %	0.6 %	2.3 %	0.8 %	353
1990	0.7 %	9.6 %	1.2 %	6.6 %	39.8 %	25.3 %	0.0 %	0.2 %	13.0 %	0.5 %	2.2 %	0.7 %	407
1991	0.7 %	9.5 %	0.9 %	7.0 %	40.1 %	26.2 %	0.0 %	0.0 %	11.6 %	0.5 %	2.3 %	1.2 %	431
1992	0.7 %	8.9 %	1.1 %	7.5 %	39.9 %	26.2 %	0.2 %	0.2 %	11.8 %	0.5 %	1.8 %	1.1 %	439
1993	0.4 %	8.9 %	1.1 %	7.0 %	40.7 %	27.0 %	0.4 %	0.2 %	10.7 %	0.2 %	1.7 %	1.5 %	459

Business Aircraft Fleet (Value in Mio ECU at Year-end)

All Aircraft Categories

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Value
1986	7.0 %	2.5 %	74.8 %	2.2 %	4.2 %	3.1 %	4.9 %	1.2 %	25,941
1987	7.7 %	2.4 %	73.6 %	2.1 %	4.3 %	3.1 %	5.3 %	1.5 %	23,554
1988	8.8 %	3.3 %	71.6 %	2.2 %	4.3 %	3.2 %	5.0 %	1.7 %	24,552
1989	9.6 %	3.5 %	69.6 %	2.4 %	4.5 %	3.2 %	5.5 %	1.8 %	29,683
1990	11.1 %	3.5 %	67.4 %	2.5 %	5.1 %	3.3 %	5.4 %	1.6 %	29,442
1991	11.6 %	3.7 %	65.7 %	2.8 %	5.5 %	3.5 %	5.7 %	1.5 %	31,054
1992	11.4 %	3.7 %	64.7 %	3.5 %	5.9 %	3.7 %	5.8 %	1.4 %	31,928
1993	10.7 %	3.7 %	63.7 %	3.7 %	6.0 %	3.6 %	7.3 %	1.4 %	38,581

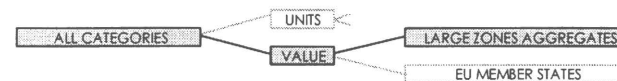
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	47.8 %	31.5 %	21.3 %	23.9 %	4.1 %	33.4 %	26.2 %	34.4 %	23.5 %
1987	45.6 %	35.3 %	21.8 %	23.2 %	5.0 %	33.7 %	31.2 %	38.9 %	24.4 %
1988	47.8 %	39.3 %	23.8 %	21.3 %	5.0 %	32.7 %	30.0 %	38.4 %	26.4 %
1989	48.9 %	35.8 %	23.2 %	19.5 %	6.0 %	33.7 %	30.7 %	41.0 %	26.3 %
1990	46.5 %	36.2 %	22.8 %	16.8 %	8.1 %	32.3 %	33.0 %	38.7 %	26.1 %
1991	47.9 %	35.8 %	22.7 %	19.0 %	9.5 %	33.0 %	32.1 %	31.8 %	26.3 %
1992	48.4 %	31.6 %	22.3 %	23.9 %	10.6 %	33.5 %	30.8 %	30.8 %	26.0 %
1993	48.2 %	27.3 %	21.6 %	23.7 %	10.6 %	34.0 %	32.9 %	30.4 %	25.4 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built value
1986	14.2 %	3.4 %	67.7 %	2.3 %	0.7 %	4.4 %	5.5 %	1.8 %	6,095
1987	14.3 %	3.5 %	65.8 %	2.0 %	0.9 %	4.2 %	6.8 %	2.5 %	5,746
1988	16.0 %	4.9 %	64.5 %	1.8 %	0.8 %	3.9 %	5.7 %	2.5 %	6,479
1989	17.8 %	4.8 %	61.4 %	1.8 %	1.0 %	4.1 %	6.4 %	2.9 %	7,807
1990	19.7 %	4.9 %	58.8 %	1.6 %	1.6 %	4.1 %	6.8 %	2.4 %	7,684
1991	21.2 %	5.0 %	56.7 %	2.0 %	2.0 %	4.3 %	6.9 %	1.8 %	8,165
1992	21.2 %	4.5 %	55.6 %	3.2 %	2.4 %	4.7 %	6.8 %	1.7 %	8,307
1993	20.3 %	4.0 %	53.9 %	3.4 %	2.5 %	4.8 %	9.5 %	1.6 %	9,817

Table 3.6 (this page)

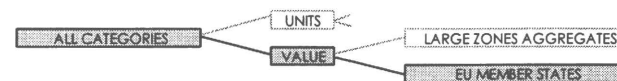


Top section: The total value of the world's fleet of business aircraft in 1993 is 38,581 Mio. ECU. The part of the fleet that is registered within the EU represents 10.7 % of this value.

Middle section: The overall share of EU built aircraft of the world's total fleet represents 25.4 % of the fleet's value in 1993. EU built aircraft account for 48.2 % of the EU fleet's value.

Bottom section: The total value of EU built aircraft is 9,817 Mio. ECU, distributed with 20.3 % in the EU zone, 53.9 % in North America, etc.

Table 3.7 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59]

Business Aircraft Fleet (Value in Mio ECU at Year-end)

All Aircraft Categories

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Value
1986	2.5 %	17.9 %	3.5 %	3.0 %	25.6 %	23.3 %	0.2 %	1.2 %	19.0 %	0.5 %	3.3 %	0.1 %	1,811
1987	2.1 %	17.2 %	3.5 %	4.4 %	24.2 %	21.5 %	0.1 %	1.7 %	21.6 %	1.1 %	2.6 %	0.1 %	1,806
1988	2.5 %	14.9 %	2.9 %	4.7 %	26.2 %	21.9 %	0.1 %	1.8 %	21.3 %	0.8 %	2.6 %	0.4 %	2,167
1989	2.7 %	13.2 %	2.4 %	4.2 %	28.3 %	20.1 %	0.1 %	1.5 %	23.4 %	0.8 %	2.6 %	0.6 %	2,837
1990	2.3 %	13.8 %	2.2 %	3.9 %	29.7 %	21.1 %	0.0 %	2.4 %	21.0 %	0.6 %	2.5 %	0.5 %	3,254
1991	1.8 %	14.9 %	2.0 %	4.6 %	29.1 %	22.0 %	0.0 %	2.2 %	19.8 %	0.6 %	2.2 %	0.8 %	3,615
1992	1.9 %	16.8 %	2.4 %	5.3 %	28.5 %	20.7 %	0.5 %	1.5 %	19.1 %	0.6 %	2.0 %	0.9 %	3,627
1993	1.8 %	18.1 %	2.8 %	5.7 %	26.6 %	22.0 %	0.6 %	1.5 %	16.7 %	0.2 %	2.7 %	1.3 %	4,127

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	0.0 %	33.9 %	17.1 %	42.9 %	60.0 %	44.5 %	0.0 %	25.0 %	60.0 %	100.0 %	59.4 %	0.0 %	47.8 %
1987	0.0 %	31.5 %	13.8 %	60.9 %	61.3 %	40.5 %	0.0 %	13.0 %	48.6 %	100.0 %	63.9 %	0.0 %	45.6 %
1988	8.4 %	36.7 %	13.6 %	68.2 %	63.2 %	42.9 %	0.0 %	7.5 %	46.7 %	96.0 %	61.2 %	56.5 %	47.8 %
1989	23.8 %	34.4 %	17.1 %	66.7 %	62.0 %	40.9 %	0.0 %	7.5 %	49.4 %	96.7 %	63.4 %	79.5 %	48.9 %
1990	22.2 %	28.0 %	13.6 %	58.5 %	60.7 %	46.1 %	0.0 %	3.9 %	44.2 %	96.4 %	58.7 %	78.1 %	46.5 %
1991	20.1 %	27.5 %	10.1 %	63.1 %	61.6 %	52.1 %	0.0 %	0.0 %	42.1 %	96.2 %	60.5 %	93.7 %	47.9 %
1992	19.0 %	24.1 %	26.2 %	65.5 %	60.9 %	53.5 %	91.8 %	11.9 %	45.1 %	95.9 %	51.4 %	83.4 %	48.4 %
1993	17.6 %	24.4 %	25.6 %	64.5 %	58.8 %	58.8 %	81.8 %	11.5 %	45.6 %	39.6 %	34.9 %	89.4 %	48.2 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Value
1986	0.0 %	12.7 %	1.3 %	2.7 %	32.1 %	21.6 %	0.0 %	0.6 %	23.9 %	1.0 %	4.1 %	0.0 %	865
1987	0.0 %	11.9 %	1.1 %	5.9 %	32.6 %	19.1 %	0.0 %	0.5 %	23.0 %	2.4 %	3.7 %	0.0 %	824
1988	0.4 %	11.5 %	0.8 %	6.6 %	34.6 %	19.6 %	0.0 %	0.3 %	20.8 %	1.6 %	3.3 %	0.4 %	1,036
1989	1.3 %	9.3 %	0.8 %	5.7 %	35.9 %	16.8 %	0.0 %	0.2 %	23.7 %	1.7 %	3.4 %	1.0 %	1,386
1990	1.1 %	8.3 %	0.6 %	5.0 %	38.7 %	20.9 %	0.0 %	0.2 %	19.9 %	1.3 %	3.1 %	0.8 %	1,514
1991	0.8 %	8.5 %	0.4 %	6.1 %	37.4 %	23.9 %	0.0 %	0.0 %	17.4 %	1.2 %	2.7 %	1.6 %	1,733
1992	0.7 %	8.4 %	1.3 %	7.2 %	35.8 %	22.8 %	0.9 %	0.4 %	17.8 %	1.1 %	2.1 %	1.6 %	1,757
1993	0.6 %	9.2 %	1.5 %	7.6 %	32.5 %	26.8 %	1.1 %	0.4 %	15.8 %	0.2 %	1.9 %	2.4 %	1,989

Business Aircraft Fleet (Units at Year-end)

Aircraft Category: V.I.P. Jets

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Units
1986	4.5 %	3.7 %	50.7 %	5.2 %	0.7 %	11.2 %	23.1 %	0.7 %	134
1987	5.1 %	2.9 %	46.7 %	5.1 %	0.7 %	12.4 %	24.8 %	2.2 %	137
1988	3.8 %	3.1 %	50.4 %	4.6 %	0.8 %	10.7 %	25.2 %	1.5 %	131
1989	3.8 %	3.0 %	50.8 %	4.5 %	0.8 %	9.8 %	25.0 %	2.3 %	132
1990	5.3 %	3.0 %	49.6 %	3.8 %	0.8 %	10.5 %	25.6 %	1.5 %	133
1991	5.1 %	2.9 %	47.8 %	3.7 %	0.7 %	10.3 %	27.2 %	2.2 %	136
1992	4.9 %	2.8 %	44.8 %	4.2 %	0.7 %	9.8 %	29.4 %	3.5 %	143
1993	4.3 %	3.7 %	44.7 %	4.3 %	0.6 %	9.3 %	29.2 %	3.7 %	161

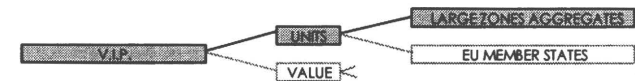
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	0.0 %	20.0 %	1.5 %	0.0 %	0.0 %	20.0 %	0.0 %	0.0 %	3.7 %
1987	14.3 %	0.0 %	1.6 %	0.0 %	0.0 %	17.6 %	5.9 %	0.0 %	5.1 %
1988	20.0 %	0.0 %	1.5 %	0.0 %	0.0 %	0.0 %	6.1 %	0.0 %	3.1 %
1989	0.0 %	0.0 %	1.5 %	0.0 %	0.0 %	0.0 %	6.1 %	0.0 %	2.3 %
1990	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	5.9 %	0.0 %	1.5 %
1991	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	5.4 %	0.0 %	1.5 %
1992	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	4.8 %	0.0 %	1.4 %
1993	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	10.6 %	0.0 %	3.1 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built Units
1986	0.0 %	20.0 %	20.0 %	0.0 %	0.0 %	60.0 %	0.0 %	0.0 %	5
1987	14.3 %	0.0 %	14.3 %	0.0 %	0.0 %	42.9 %	28.6 %	0.0 %	7
1988	25.0 %	0.0 %	25.0 %	0.0 %	0.0 %	0.0 %	50.0 %	0.0 %	4
1989	0.0 %	0.0 %	33.3 %	0.0 %	0.0 %	0.0 %	66.7 %	0.0 %	3
1990	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	2
1991	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	2
1992	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	2
1993	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	5

Table 3.8 (this page)

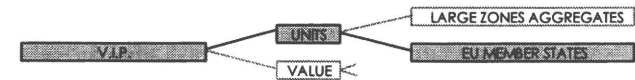


Top section: The world total fleet of V.I.P. jets in 1993 is 161 units. The part of the fleet that is registered within the EU represents 4.3 % of this volume.

Middle section: The overall share of EU built V.I.P. jets represents 3.1 % of the world fleet in this category in 1993. In the EU fleet of V.I.P. jets, none are EU built (0.0 %).

Bottom section: The total number of EU built V.I.P. jets is 5 units, all of them registered in Asia (100.0 %).

Table 3.9 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59]

Business Aircraft Fleet (Units at Year-end)

Aircraft Category: V.I.P. Jets

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Units
1986	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	6
1987	0.0 %	0.0 %	0.0 %	0.0 %	14.3 %	85.7 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	7
1988	0.0 %	0.0 %	0.0 %	0.0 %	20.0 %	80.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	5
1989	0.0 %	0.0 %	0.0 %	0.0 %	20.0 %	80.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	5
1990	0.0 %	0.0 %	0.0 %	0.0 %	14.3 %	85.7 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	7
1991	0.0 %	0.0 %	0.0 %	0.0 %	42.9 %	57.1 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	7
1992	0.0 %	0.0 %	0.0 %	0.0 %	57.1 %	28.6 %	14.3 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	7
1993	0.0 %	0.0 %	0.0 %	0.0 %	28.6 %	57.1 %	14.3 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	7

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
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 %	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 %	14.3 %
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 %	20.0 %
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 %	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 %	0.0 %
1991	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1992	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
1993	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Units
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 %	1
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 %	1
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 %	
1991	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	
1992	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	
1993	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	

Business Aircraft Fleet (Value in Mio ECU at Year-end)

Aircraft Category: V.I.P. Jets

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Value
1986	4.2 %	3.3 %	45.9 %	5.8 %	1.2 %	7.7 %	31.2 %	0.7 %	565
1987	3.8 %	2.5 %	36.2 %	4.9 %	1.0 %	7.2 %	42.6 %	1.8 %	571
1988	3.0 %	2.4 %	37.8 %	4.2 %	0.9 %	6.4 %	44.1 %	1.2 %	508
1989	2.8 %	2.5 %	37.2 %	4.0 %	0.9 %	5.9 %	45.0 %	1.7 %	611
1990	3.5 %	2.4 %	35.5 %	3.3 %	0.9 %	6.3 %	47.2 %	1.0 %	561
1991	3.3 %	2.2 %	33.4 %	3.0 %	0.8 %	5.8 %	50.4 %	1.2 %	594
1992	2.9 %	1.8 %	28.4 %	3.3 %	0.7 %	5.0 %	55.5 %	2.4 %	642
1993	1.7 %	4.0 %	19.9 %	1.9 %	0.3 %	2.8 %	67.8 %	1.7 %	1,501

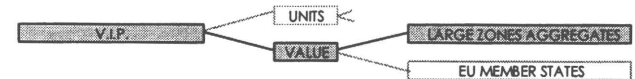
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	0.0 %	9.3 %	0.7 %	0.0 %	0.0 %	12.0 %	0.0 %	0.0 %	1.5 %
1987	7.0 %	0.0 %	0.7 %	0.0 %	0.0 %	11.2 %	37.4 %	0.0 %	17.3 %
1988	9.6 %	0.0 %	0.8 %	0.0 %	0.0 %	0.0 %	39.4 %	0.0 %	18.0 %
1989	0.0 %	0.0 %	0.7 %	0.0 %	0.0 %	0.0 %	35.0 %	0.0 %	16.0 %
1990	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	31.7 %	0.0 %	15.0 %
1991	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	28.7 %	0.0 %	14.5 %
1992	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	23.3 %	0.0 %	13.0 %
1993	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	33.6 %	0.0 %	22.8 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built Value
1986	0.0 %	20.0 %	20.0 %	0.0 %	0.0 %	60.0 %	0.0 %	0.0 %	9
1987	1.5 %	0.0 %	1.5 %	0.0 %	0.0 %	4.6 %	92.3 %	0.0 %	99
1988	1.6 %	0.0 %	1.6 %	0.0 %	0.0 %	0.0 %	96.8 %	0.0 %	91
1989	0.0 %	0.0 %	1.6 %	0.0 %	0.0 %	0.0 %	98.4 %	0.0 %	98
1990	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	84
1991	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	86
1992	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	83
1993	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	100.0 %	0.0 %	342

Table 3.10 (this page)

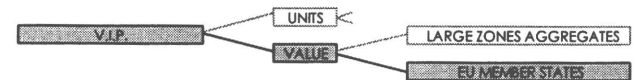


Top section: The total value of the world's fleet of V.I.P. jets in 1993 is 1,501 Mio. ECU. The part of the fleet that is registered within the EU represents 1.7 % of this value.

Middle section: The overall share of EU built V.I.P. jets represents 22.8 % of the world fleet's value in 1993. EU built V.I.P. jets are not represented in the EU zone (0.0 %).

Bottom section: The total value of EU built V.I.P. jets is 342 Mio. ECU, all found in Asia (100.0 %).

Table 3.11 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59].

Business Aircraft Fleet (Value in Mio ECU at Year-end)

Aircraft Category: V.I.P. Jets

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Value
1986	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24
1987	0.0%	0.0%	0.0%	0.0%	7.0%	93.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22
1988	0.0%	0.0%	0.0%	0.0%	9.6%	90.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15
1989	0.0%	0.0%	0.0%	0.0%	20.2%	79.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17
1990	0.0%	0.0%	0.0%	0.0%	15.1%	84.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20
1991	0.0%	0.0%	0.0%	0.0%	46.1%	53.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19
1992	0.0%	0.0%	0.0%	0.0%	58.3%	27.1%	14.6%	0.0%	0.0%	0.0%	0.0%	0.0%	18
1993	0.0%	0.0%	0.0%	0.0%	24.1%	63.8%	12.1%	0.0%	0.0%	0.0%	0.0%	0.0%	25

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
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%	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%	7.0%
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%	9.6%
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%	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%	0.0%
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1992	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1993	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Value
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%	2
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%	1
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%	
1991	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
1992	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
1993	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Business Aircraft Fleet (Units) at Year-end

Aircraft Category: Jets other than V.I.P.

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Units
1986	7.2 %	2.2 %	77.9 %	3.2 %	3.2 %	2.1 %	3.2 %	1.1 %	5,853
1987	8.1 %	2.3 %	76.3 %	3.3 %	3.6 %	2.2 %	3.0 %	1.3 %	6,046
1988	9.1 %	2.8 %	73.8 %	3.7 %	4.0 %	2.3 %	2.9 %	1.4 %	6,248
1989	9.7 %	3.0 %	72.0 %	4.2 %	4.5 %	2.3 %	2.9 %	1.3 %	6,477
1990	11.0 %	3.1 %	69.6 %	4.6 %	5.1 %	2.4 %	2.9 %	1.2 %	6,777
1991	11.4 %	3.3 %	68.0 %	5.1 %	5.5 %	2.4 %	3.1 %	1.1 %	6,926
1992	11.3 %	3.3 %	66.6 %	6.2 %	5.9 %	2.5 %	3.1 %	1.1 %	7,169
1993	10.5 %	3.2 %	66.8 %	6.5 %	6.2 %	2.6 %	3.1 %	1.0 %	7,429

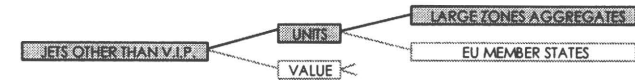
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	53.0 %	27.7 %	21.2 %	21.6 %	7.6 %	54.4 %	37.8 %	33.9 %	24.6 %
1987	51.3 %	28.3 %	21.5 %	20.7 %	7.9 %	52.6 %	39.1 %	40.8 %	25.0 %
1988	49.9 %	30.9 %	21.8 %	18.6 %	6.7 %	49.3 %	36.3 %	37.9 %	25.1 %
1989	50.8 %	29.7 %	21.8 %	15.8 %	7.5 %	47.3 %	37.2 %	33.7 %	25.1 %
1990	50.1 %	31.5 %	21.6 %	14.3 %	8.1 %	42.6 %	38.2 %	31.3 %	25.1 %
1991	50.4 %	32.8 %	21.4 %	16.1 %	9.1 %	41.1 %	36.7 %	26.0 %	25.1 %
1992	48.9 %	31.7 %	21.2 %	18.1 %	10.6 %	41.7 %	36.8 %	25.0 %	24.9 %
1993	50.4 %	28.5 %	20.9 %	19.4 %	11.3 %	44.0 %	36.9 %	28.0 %	24.7 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built Units
1986	15.6 %	2.5 %	67.2 %	2.8 %	1.0 %	4.7 %	4.9 %	1.5 %	1,440
1987	16.5 %	2.6 %	65.6 %	2.7 %	1.1 %	4.6 %	4.8 %	2.1 %	1,512
1988	18.0 %	3.4 %	63.9 %	2.7 %	1.1 %	4.6 %	4.1 %	2.1 %	1,571
1989	19.7 %	3.6 %	62.3 %	2.6 %	1.4 %	4.3 %	4.4 %	1.8 %	1,627
1990	21.8 %	3.9 %	59.9 %	2.6 %	1.6 %	4.0 %	4.5 %	1.5 %	1,704
1991	22.8 %	4.4 %	57.9 %	3.3 %	2.0 %	3.9 %	4.6 %	1.2 %	1,738
1992	22.2 %	4.3 %	56.7 %	4.5 %	2.5 %	4.2 %	4.5 %	1.1 %	1,787
1993	21.5 %	3.7 %	56.5 %	5.1 %	2.8 %	4.6 %	4.7 %	1.1 %	1,838

Table 3.12 (this page)

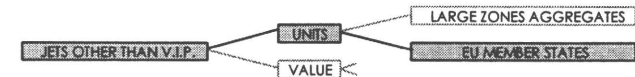


Top section: The world total fleet of jets (other than V.I.P.s) in 1993 is 7,429 units. 10.5 % of those are registered within the EU.

Middle section: The overall share of EU built jets represents 24.7 % of the world fleet in this category in 1993. In the EU fleet of jets, 50.4 % are EU built.

Bottom section: The total number of EU built jets is 1,838 units, 21.5 % of them registered in the EU, 56.5 % in North America, etc.

Table 3.13 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59].

Notice that V.I.P. jets are not included in these tables. The tables are therefore not directly incomparable with the tables in previous editions where V.I.P.s and all other jets were put together. In consequence no revision marks ^R have been put.

Business Aircraft Fleet (Units at Year-end)

Aircraft Category: Jets other than V.I.P.

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Units
1986	1.2 %	15.4 %	3.5 %	4.0 %	24.1 %	23.4 %	0.2 %	1.9 %	22.5 %	0.2 %	3.5 %	0.0 %	423
1987	1.6 %	15.6 %	3.3 %	5.5 %	22.4 %	22.8 %	0.0 %	1.8 %	24.4 %	0.4 %	2.1 %	0.0 %	487
1988	1.6 %	13.6 %	3.2 %	5.8 %	22.4 %	24.7 %	0.0 %	1.6 %	24.3 %	0.2 %	2.3 %	0.4 %	567
1989	1.7 %	12.2 %	3.2 %	6.0 %	23.5 %	22.4 %	0.0 %	1.4 %	26.2 %	0.3 %	2.4 %	0.6 %	630
1990	1.7 %	13.1 %	2.8 %	5.2 %	25.7 %	21.7 %	0.0 %	1.9 %	24.5 %	0.3 %	2.6 %	0.5 %	743
1991	1.8 %	13.8 %	2.8 %	5.7 %	25.1 %	22.5 %	0.0 %	1.4 %	23.5 %	0.3 %	2.5 %	0.6 %	788
1992	2.1 %	15.0 %	2.8 %	6.0 %	24.8 %	21.9 %	0.1 %	0.9 %	22.9 %	0.2 %	2.2 %	1.0 %	812
1993	1.9 %	16.0 %	3.2 %	6.1 %	24.9 %	22.2 %	0.3 %	0.9 %	20.4 %	0.3 %	2.7 %	1.1 %	783

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	0.0 %	30.8 %	26.7 %	52.9 %	74.5 %	65.7 %	0.0 %	37.5 %	42.1 %	100.0 %	40.0 %	0.0 %	53.0 %
1987	0.0 %	28.9 %	31.3 %	66.7 %	77.1 %	61.3 %	0.0 %	33.3 %	36.1 %	100.0 %	50.0 %	0.0 %	51.3 %
1988	11.1 %	33.8 %	27.8 %	72.7 %	77.2 %	56.4 %	0.0 %	11.1 %	29.7 %	100.0 %	46.2 %	50.0 %	49.9 %
1989	27.3 %	32.5 %	25.0 %	68.4 %	81.1 %	55.3 %	0.0 %	11.1 %	30.3 %	100.0 %	46.7 %	75.0 %	50.8 %
1990	23.1 %	27.8 %	19.0 %	69.2 %	80.1 %	58.4 %	0.0 %	7.1 %	27.5 %	100.0 %	42.1 %	75.0 %	50.1 %
1991	21.4 %	27.5 %	18.2 %	66.7 %	82.3 %	58.8 %	0.0 %	0.0 %	25.4 %	100.0 %	45.0 %	100.0 %	50.4 %
1992	17.6 %	23.8 %	21.7 %	65.3 %	79.6 %	57.9 %	100.0 %	14.3 %	26.3 %	100.0 %	38.9 %	62.5 %	48.9 %
1993	13.3 %	24.0 %	20.0 %	62.5 %	77.9 %	63.8 %	100.0 %	14.3 %	29.4 %	50.0 %	33.3 %	77.8 %	50.4 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Units
1986	0.0 %	8.9 %	1.8 %	4.0 %	33.9 %	29.0 %	0.0 %	1.3 %	17.9 %	0.4 %	2.7 %	0.0 %	224
1987	0.0 %	8.8 %	2.0 %	7.2 %	33.6 %	27.2 %	0.0 %	1.2 %	17.2 %	0.8 %	2.0 %	0.0 %	250
1988	0.4 %	9.2 %	1.8 %	8.5 %	34.6 %	27.9 %	0.0 %	0.4 %	14.5 %	0.4 %	2.1 %	0.4 %	283
1989	0.9 %	7.8 %	1.6 %	8.1 %	37.5 %	24.4 %	0.0 %	0.3 %	15.6 %	0.6 %	2.2 %	0.9 %	320
1990	0.8 %	7.3 %	1.1 %	7.3 %	41.1 %	25.3 %	0.0 %	0.3 %	13.4 %	0.5 %	2.2 %	0.8 %	372
1991	0.8 %	7.6 %	1.0 %	7.6 %	41.1 %	26.2 %	0.0 %	0.0 %	11.8 %	0.5 %	2.3 %	1.3 %	397
1992	0.8 %	7.3 %	1.3 %	8.1 %	40.3 %	25.9 %	0.3 %	0.3 %	12.3 %	0.5 %	1.8 %	1.3 %	397
1993	0.5 %	7.6 %	1.3 %	7.6 %	38.5 %	28.1 %	0.5 %	0.3 %	11.9 %	0.3 %	1.8 %	1.8 %	395

Business Aircraft Fleet (Value in Mio ECU at Year-end)

Aircraft Category: Jets other than V.I.P.

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Value
1986	7.1 %	2.8 %	76.4 %	2.2 %	2.3 %	2.9 %	5.2 %	1.2 %	17,803
1987	7.6 %	2.6 %	76.1 %	2.0 %	2.4 %	2.8 %	5.0 %	1.5 %	16,589
1988	8.9 %	3.6 %	73.7 %	2.2 %	2.5 %	2.9 %	4.6 %	1.7 %	17,953
1989	9.6 %	3.9 %	71.7 %	2.4 %	2.7 %	2.8 %	5.1 %	1.8 %	22,083
1990	11.3 %	3.9 %	69.5 %	2.5 %	3.3 %	3.0 %	5.0 %	1.5 %	22,110
1991	12.2 %	4.1 %	67.6 %	2.8 %	3.7 %	3.0 %	5.3 %	1.3 %	23,352
1992	11.7 %	4.0 %	66.9 %	3.7 %	4.1 %	3.2 %	5.1 %	1.3 %	24,391
1993	11.2 %	3.9 %	66.9 %	4.1 %	4.4 %	3.2 %	5.2 %	1.1 %	28,855

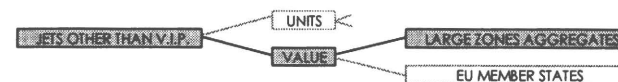
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	65.0 %	40.5 %	30.1 %	35.1 %	10.3 %	48.6 %	35.2 %	51.3 %	33.6 %
1987	62.8 %	46.4 %	29.8 %	33.9 %	12.2 %	49.3 %	35.0 %	56.0 %	33.6 %
1988	62.5 %	47.6 %	31.4 %	29.3 %	11.3 %	46.8 %	32.8 %	54.2 %	35.1 %
1989	63.2 %	42.3 %	30.1 %	26.3 %	13.2 %	48.7 %	34.7 %	57.2 %	34.5 %
1990	59.2 %	43.1 %	29.3 %	21.9 %	16.4 %	46.9 %	38.7 %	55.0 %	34.0 %
1991	59.9 %	42.2 %	29.2 %	24.6 %	18.7 %	49.7 %	38.3 %	47.8 %	34.3 %
1992	60.8 %	37.2 %	28.2 %	29.6 %	19.4 %	49.1 %	37.7 %	46.3 %	33.4 %
1993	59.8 %	33.8 %	27.1 %	28.7 %	19.2 %	50.0 %	37.9 %	47.8 %	32.3 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built Value
1986	13.7 %	3.3 %	68.5 %	2.3 %	0.7 %	4.1 %	5.5 %	1.8 %	5,978
1987	14.2 %	3.5 %	67.5 %	2.1 %	0.9 %	4.1 %	5.2 %	2.5 %	5,568
1988	15.8 %	4.9 %	66.0 %	1.8 %	0.8 %	3.8 %	4.3 %	2.5 %	6,297
1989	17.7 %	4.8 %	62.7 %	1.8 %	1.0 %	4.0 %	5.2 %	2.9 %	7,615
1990	19.7 %	4.9 %	59.9 %	1.6 %	1.6 %	4.1 %	5.7 %	2.5 %	7,520
1991	21.3 %	5.0 %	57.6 %	2.0 %	2.0 %	4.3 %	5.9 %	1.8 %	8,002
1992	21.2 %	4.5 %	56.4 %	3.3 %	2.4 %	4.7 %	5.8 %	1.7 %	8,155
1993	20.8 %	4.1 %	56.2 %	3.6 %	2.6 %	5.0 %	6.1 %	1.7 %	9,321

Table 3.14 (this page)

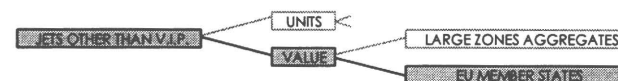


Top section: The total value of the world's fleet of small jets in 1993 is 28,855 Mio. ECU. The part of the fleet that is registered within the EU represents 11.2 % of this value.

Middle section: The overall share of EU built small jets represents 32.3 % of the world fleet's value in 1993. EU built jets account for 59.8 % of the EU fleet in this category.

Bottom section: The total value of EU built jets is 9,321 Mio. ECU, with 20.8 % of this value represents aircraft registered in the EU, 56.2 % registered in North America, etc.

Table 3.15 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59]

Business Aircraft Fleet (Value in Mio ECU at Year-end)

Aircraft Category: Jets other than V.I.P.

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Value
1986	0.6 %	14.4 %	2.9 %	3.2 %	27.1 %	20.6 %	0.2 %	1.4 %	25.2 %	0.7 %	3.8 %	0.0 %	1,259
1987	0.7 %	13.9 %	2.2 %	5.4 %	24.5 %	18.9 %	0.0 %	2.1 %	27.8 %	1.6 %	2.8 %	0.0 %	1,255
1988	1.5 %	11.8 %	1.8 %	5.5 %	25.6 %	20.9 %	0.0 %	2.3 %	26.4 %	1.0 %	2.8 %	0.4 %	1,592
1989	2.0 %	9.9 %	1.7 %	4.9 %	25.9 %	20.2 %	0.0 %	1.8 %	28.9 %	1.1 %	2.8 %	0.8 %	2,130
1990	1.6 %	11.1 %	1.7 %	4.3 %	26.8 %	22.0 %	0.0 %	2.9 %	25.8 %	0.8 %	2.5 %	0.5 %	2,498
1991	1.0 %	12.0 %	1.5 %	5.0 %	26.3 %	23.8 %	0.0 %	2.7 %	23.7 %	0.7 %	2.2 %	1.0 %	2,841
1992	1.1 %	13.6 %	1.9 %	5.8 %	25.6 %	22.8 %	0.5 %	1.8 %	23.1 %	0.7 %	1.9 %	1.1 %	2,845
1993	1.1 %	14.9 %	2.4 %	6.2 %	23.6 %	24.4 %	0.7 %	1.8 %	20.4 %	0.2 %	2.8 %	1.6 %	3,243

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	0.0 %	46.6 %	29.6 %	57.4 %	81.1 %	64.8 %	0.0 %	31.3 %	65.2 %	100.0 %	74.4 %	0.0 %	65.0 %
1987	0.0 %	45.3 %	31.0 %	71.3 %	86.2 %	60.9 %	0.0 %	15.0 %	54.1 %	100.0 %	84.1 %	0.0 %	62.8 %
1988	18.7 %	53.5 %	29.3 %	78.7 %	87.3 %	55.2 %	0.0 %	8.3 %	51.4 %	100.0 %	76.8 %	71.1 %	62.5 %
1989	43.5 %	51.6 %	25.6 %	76.6 %	89.9 %	50.8 %	0.0 %	8.4 %	53.1 %	100.0 %	79.3 %	88.6 %	63.2 %
1990	40.2 %	39.4 %	18.5 %	70.6 %	87.3 %	55.2 %	0.0 %	4.2 %	46.7 %	100.0 %	74.6 %	88.2 %	59.2 %
1991	44.5 %	38.9 %	16.7 %	73.2 %	86.6 %	59.3 %	0.0 %	0.0 %	44.8 %	100.0 %	75.9 %	100.0 %	59.9 %
1992	40.7 %	35.8 %	41.0 %	76.4 %	85.8 %	59.5 %	119.7 %	12.5 %	47.4 %	100.0 %	67.5 %	87.5 %	60.8 %
1993	37.4 %	35.7 %	38.4 %	74.7 %	82.2 %	64.7 %	100.0 %	12.2 %	47.6 %	44.4 %	41.3 %	92.7 %	59.8 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Value
1986	0.0 %	10.3 %	1.3 %	2.8 %	33.8 %	20.5 %	0.0 %	0.7 %	25.2 %	1.1 %	4.3 %	0.0 %	819
1987	0.0 %	10.0 %	1.1 %	6.2 %	33.7 %	18.3 %	0.0 %	0.5 %	24.0 %	2.5 %	3.8 %	0.0 %	789
1988	0.5 %	10.1 %	0.9 %	6.9 %	35.8 %	18.5 %	0.0 %	0.3 %	21.7 %	1.6 %	3.4 %	0.5 %	995
1989	1.4 %	8.1 %	0.7 %	5.9 %	36.9 %	16.3 %	0.0 %	0.2 %	24.3 %	1.7 %	3.5 %	1.1 %	1,346
1990	1.1 %	7.3 %	0.5 %	5.1 %	39.5 %	20.5 %	0.0 %	0.2 %	20.4 %	1.4 %	3.2 %	0.8 %	1,480
1991	0.8 %	7.8 %	0.4 %	6.2 %	38.0 %	23.5 %	0.0 %	0.0 %	17.7 %	1.2 %	2.8 %	1.7 %	1,703
1992	0.7 %	8.0 %	1.3 %	7.3 %	36.2 %	22.3 %	0.9 %	0.4 %	18.0 %	1.1 %	2.1 %	1.6 %	1,730
1993	0.7 %	8.9 %	1.5 %	7.8 %	32.4 %	26.4 %	1.1 %	0.4 %	16.2 %	0.2 %	2.0 %	2.5 %	1,938

Business Aircraft Fleet (Units at Year-end)

Aircraft Category: Turboprops

Geographical Breakdown in % of World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Austral- asia	Total Units
1986	6.1 %	2.0 %	76.3 %	2.4 %	6.7 %	2.9 %	2.2 %	1.4 %	7,610
1987	7.3 %	2.1 %	73.8 %	2.5 %	7.1 %	3.0 %	2.5 %	1.6 %	7,615
1988	8.2 %	2.4 %	71.2 %	2.6 %	7.9 %	3.2 %	2.6 %	2.0 %	7,688
1989	8.8 %	2.4 %	69.4 %	2.8 %	8.4 %	3.3 %	2.8 %	2.1 %	7,765
1990	9.6 %	2.3 %	67.4 %	2.9 %	9.4 %	3.6 %	2.9 %	2.0 %	7,879
1991	9.5 %	2.4 %	65.8 %	3.1 %	10.1 %	4.0 %	3.0 %	2.0 %	7,895
1992	9.7 %	2.4 %	64.4 %	3.4 %	10.9 %	4.2 %	3.1 %	1.9 %	7,934
1993	9.4 %	2.6 %	63.5 %	3.4 %	11.6 %	4.3 %	3.3 %	1.9 %	7,956

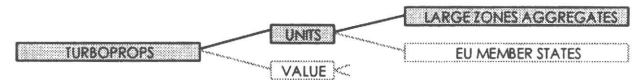
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Austral- asia	World
1986	5.0 %	3.9 %	0.6 %	1.6 %	1.0 %	6.7 %	5.9 %	1.0 %	1.2 %
1987	4.5 %	3.7 %	0.6 %	1.6 %	0.9 %	6.5 %	5.3 %	0.8 %	1.3 %
1988	4.5 %	2.8 %	0.6 %	1.5 %	0.8 %	6.1 %	5.4 %	0.6 %	1.3 %
1989	4.8 %	3.8 %	0.5 %	1.4 %	0.8 %	5.8 %	5.1 %	0.6 %	1.3 %
1990	4.6 %	3.3 %	0.5 %	1.3 %	0.7 %	5.3 %	4.9 %	0.6 %	1.3 %
1991	4.5 %	na	0.6 %	1.2 %	0.6 %	5.0 %	4.6 %	0.6 %	na
1992	5.5 %	2.7 %	0.6 %	1.1 %	0.6 %	5.1 %	6.1 %	0.7 %	1.5 %
1993	8.6 %	3.9 %	1.4 %	1.1 %	1.1 %	6.9 %	6.8 %	1.3 %	2.5 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Austral- asia	EU-built Units
1986	24.2 %	6.3 %	33.7 %	3.2 %	5.3 %	15.8 %	10.5 %	1.1 %	95
1987	26.0 %	6.3 %	32.3 %	3.1 %	5.2 %	15.6 %	10.4 %	1.0 %	96
1988	28.3 %	5.1 %	31.3 %	3.0 %	5.1 %	15.2 %	11.1 %	1.0 %	99
1989	31.7 %	6.7 %	27.9 %	2.9 %	4.8 %	14.4 %	10.6 %	1.0 %	104
1990	33.3 %	5.7 %	27.6 %	2.9 %	4.8 %	14.3 %	10.5 %	1.0 %	105
1991	na	na	na	na	na	na	na	na	na
1992	35.6 %	4.2 %	25.4 %	2.5 %	4.2 %	14.4 %	12.7 %	0.8 %	118
1993	31.8 %	4.0 %	35.8 %	1.5 %	5.0 %	11.9 %	9.0 %	1.0 %	201

Table 3.16 (this page)

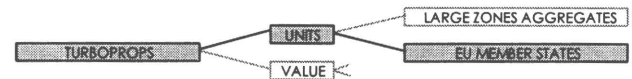


Top section: The world total fleet of turboprops in 1993 is 7,956 units. 9.4 % of those are registered within the EU.

Middle section: The overall share of EU built turboprops represents 2.5 % of the world fleet in this category in 1993. In the EU fleet of turboprops, 8.6 % are EU built.

Bottom section: The total number of EU built turboprops is 201 units, 31.8 % of them registered in the EU, 35.8 % in North America, etc.

Table 3.17 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59].

Business Aircraft Fleet (Units at Year-end)

Aircraft Category: Turboprops

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Units
1986	3.3 %	26.7 %	6.5 %	3.7 %	25.2 %	24.5 %	0.2 %	0.9 %	6.3 %	0.0 %	2.4 %	0.4 %	461
1987	2.3 %	25.5 %	7.4 %	3.8 %	26.0 %	22.4 %	0.2 %	0.7 %	9.0 %	0.0 %	2.2 %	0.5 %	557
1988	2.9 %	23.6 %	6.5 %	4.1 %	29.8 %	19.8 %	0.2 %	0.6 %	9.1 %	0.2 %	2.4 %	0.8 %	627
1989	2.8 %	22.5 %	4.8 %	4.3 %	36.9 %	16.4 %	0.1 %	0.6 %	8.4 %	0.1 %	2.3 %	0.7 %	681
1990	2.5 %	22.9 %	4.3 %	4.9 %	39.7 %	14.1 %	0.1 %	0.5 %	7.5 %	0.1 %	2.6 %	0.7 %	759
1991	2.7 %	25.9 %	4.4 %	4.7 %	38.9 %	12.3 %	0.1 %	0.7 %	7.3 %	0.1 %	2.3 %	0.7 %	749
1992	2.7 %	28.2 %	4.4 %	5.2 %	38.4 %	10.9 %	0.1 %	0.4 %	6.5 %	0.1 %	2.3 %	0.7 %	769
1993	2.7 %	30.0 %	4.7 %	5.6 %	38.6 %	9.7 %	0.1 %	0.4 %	5.5 %	0.1 %	1.9 %	0.7 %	744

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	0.0 %	8.1 %	0.0 %	0.0 %	3.4 %	7.1 %	0.0 %	0.0 %	0.0 %	0.0 %	9.1 %	0.0 %	5.0 %
1987	0.0 %	7.0 %	0.0 %	0.0 %	3.4 %	5.6 %	0.0 %	0.0 %	4.0 %	0.0 %	8.3 %	0.0 %	4.5 %
1988	0.0 %	6.8 %	0.0 %	0.0 %	2.1 %	8.9 %	0.0 %	0.0 %	3.5 %	0.0 %	6.7 %	0.0 %	4.5 %
1989	0.0 %	7.8 %	3.0 %	0.0 %	3.2 %	7.1 %	0.0 %	0.0 %	5.3 %	0.0 %	6.3 %	0.0 %	4.8 %
1990	0.0 %	6.9 %	3.0 %	0.0 %	3.0 %	8.4 %	0.0 %	0.0 %	5.3 %	0.0 %	5.0 %	0.0 %	4.6 %
1991	0.0 %	5.7 %	0.0 %	0.0 %	3.4 %	9.8 %	0.0 %	0.0 %	5.5 %	0.0 %	5.9 %	0.0 %	4.5 %
1992	0.0 %	4.6 %	0.0 %	2.5 %	5.1 %	14.3 %	0.0 %	0.0 %	6.0 %	0.0 %	5.6 %	0.0 %	5.5 %
1993	0.0 %	4.9 %	0.0 %	4.8 %	12.2 %	18.1 %	0.0 %	0.0 %	4.9 %	0.0 %	7.1 %	0.0 %	8.6 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Units
1986	0.0 %	43.5 %	0.0 %	0.0 %	17.4 %	34.8 %	0.0 %	0.0 %	0.0 %	0.0 %	4.3 %	0.0 %	23
1987	0.0 %	40.0 %	0.0 %	0.0 %	20.0 %	28.0 %	0.0 %	0.0 %	8.0 %	0.0 %	4.0 %	0.0 %	25
1988	0.0 %	35.7 %	0.0 %	0.0 %	14.3 %	39.3 %	0.0 %	0.0 %	7.1 %	0.0 %	3.6 %	0.0 %	28
1989	0.0 %	36.4 %	3.0 %	0.0 %	24.2 %	24.2 %	0.0 %	0.0 %	9.1 %	0.0 %	3.0 %	0.0 %	33
1990	0.0 %	34.3 %	2.9 %	0.0 %	25.7 %	25.7 %	0.0 %	0.0 %	8.6 %	0.0 %	2.9 %	0.0 %	35
1991	0.0 %	32.4 %	0.0 %	0.0 %	29.4 %	26.5 %	0.0 %	0.0 %	8.8 %	0.0 %	2.9 %	0.0 %	34
1992	0.0 %	23.8 %	0.0 %	2.4 %	35.7 %	28.6 %	0.0 %	0.0 %	7.1 %	0.0 %	2.4 %	0.0 %	42
1993	0.0 %	17.2 %	0.0 %	3.1 %	54.7 %	20.3 %	0.0 %	0.0 %	3.1 %	0.0 %	1.6 %	0.0 %	64

Business Aircraft Fleet (Value in Mio ECU at Year-end)

Aircraft Category: Turboprops

Geographical Breakdown in % World Total

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	Total Value
1986	7.0 %	2.0 %	73.0 %	2.1 %	8.9 %	3.3 %	2.3 %	1.4 %	7,574
1987	8.3 %	2.1 %	70.2 %	2.1 %	9.6 %	3.5 %	2.6 %	1.6 %	6,394
1988	9.2 %	2.3 %	68.0 %	2.2 %	9.8 %	3.7 %	2.9 %	1.9 %	6,091
1989	9.9 %	2.3 %	65.8 %	2.4 %	10.5 %	4.0 %	3.1 %	2.1 %	6,989
1990	10.9 %	2.5 %	63.5 %	2.3 %	11.4 %	4.3 %	3.0 %	2.1 %	6,771
1991	10.6 %	2.6 %	62.1 %	2.6 %	11.9 %	4.9 %	3.1 %	2.1 %	7,108
1992	11.1 %	2.6 %	60.5 %	2.9 %	12.4 %	5.2 %	3.3 %	2.0 %	6,896
1993	10.4 %	2.9 %	60.3 %	2.7 %	12.6 %	5.3 %	3.7 %	2.1 %	8,225

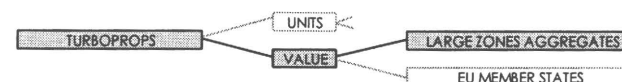
EU-built Aircraft - Market Share in Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	World
1986	8.8 %	4.5 %	0.4 %	1.4 %	0.4 %	6.6 %	4.5 %	1.1 %	1.4 %
1987	6.3 %	3.8 %	0.4 %	1.3 %	0.3 %	5.6 %	3.5 %	0.8 %	1.2 %
1988	7.1 %	3.4 %	0.5 %	1.3 %	0.3 %	5.4 %	4.5 %	0.7 %	1.5 %
1989	5.7 %	4.8 %	0.5 %	0.9 %	0.2 %	4.8 %	3.9 %	0.7 %	1.4 %
1990	4.7 %	3.9 %	0.4 %	0.8 %	0.2 %	3.9 %	3.4 %	0.6 %	1.2 %
1991	4.0 %	4.7 %	0.4 %	0.6 %	0.1 %	3.2 %	2.9 %	0.6 %	1.1 %
1992	3.5 %	2.5 %	0.4 %	0.5 %	0.1 %	2.7 %	4.1 %	0.6 %	1.0 %
1993	6.0 %	3.1 %	1.2 %	0.4 %	0.2 %	3.1 %	5.6 %	1.4 %	1.9 %

EU-built Aircraft - Distribution among Geographical Zones

	EU 12	Other Europe	North America	Central America	South America	Africa	Asia	Australasia	EU-built Value
1986	43.2 %	6.3 %	22.3 %	2.1 %	2.2 %	15.6 %	7.3 %	1.0 %	108
1987	42.1 %	6.4 %	22.8 %	2.1 %	2.3 %	15.7 %	7.4 %	1.1 %	80
1988	44.2 %	5.2 %	23.3 %	1.8 %	2.0 %	13.7 %	8.8 %	0.9 %	90
1989	42.0 %	8.3 %	22.0 %	1.6 %	1.8 %	14.4 %	8.8 %	1.1 %	95
1990	43.1 %	8.3 %	21.4 %	1.5 %	1.7 %	14.2 %	8.6 %	1.1 %	80
1991	39.3 %	11.2 %	22.1 %	1.4 %	1.6 %	14.6 %	8.5 %	1.2 %	77
1992	38.8 %	6.4 %	23.0 %	1.3 %	1.6 %	14.2 %	13.5 %	1.2 %	69
1993	33.1 %	4.6 %	39.3 %	0.6 %	1.3 %	8.7 %	10.8 %	1.6 %	155

Table 3.18 (this page)



Top section: The total value of the world's fleet of turboprops in 1993 is 8,225 Mio. ECU. The part of the fleet that is registered within the EU represents 10.4 % of this value.

Middle section: The overall share of EU built turboprops represents 1.9 % of the world fleet's value in 1993. EU built turboprops account for 6.0 % of the EU fleet in this category.

Bottom section: The total value of EU built turboprops is 155 Mio. ECU, with 33.1 % of this value represents aircraft registered in the EU, 39.3 % registered in North America, etc.

Table 3.19 (opposite page)



The above principles apply, except here only the EU part of the fleet is considered with a further breakdown by member states.

Source: ITA [59].

Business Aircraft Fleet (Value in Mio ECU at Year-end)

Aircraft Category: Turboprops

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Value
1986	6.9 %	27.2 %	5.1 %	2.6 %	23.1 %	26.2 %	0.2 %	0.8 %	5.2 %	0.0 %	2.4 %	0.3 %	529
1987	5.6 %	25.8 %	6.6 %	2.2 %	24.2 %	24.6 %	0.2 %	0.8 %	7.6 %	0.0 %	2.2 %	0.3 %	530
1988	5.3 %	24.2 %	6.0 %	2.4 %	28.2 %	22.7 %	0.2 %	0.7 %	7.7 %	0.1 %	2.1 %	0.3 %	560
1989	5.1 %	23.7 %	4.5 %	2.2 %	35.9 %	18.3 %	0.2 %	0.7 %	6.8 %	0.1 %	2.2 %	0.3 %	690
1990	4.5 %	23.6 %	4.0 %	3.0 %	39.8 %	16.4 %	0.2 %	0.7 %	5.2 %	0.1 %	2.3 %	0.2 %	737
1991	4.7 %	26.1 %	3.8 %	3.0 %	39.2 %	14.3 %	0.2 %	0.4 %	5.8 %	0.1 %	2.1 %	0.3 %	754
1992	4.8 %	28.9 %	4.1 %	3.6 %	38.3 %	12.7 %	0.2 %	0.4 %	4.6 %	0.1 %	2.3 %	0.2 %	763
1993	4.5 %	30.8 %	4.4 %	3.9 %	38.3 %	11.6 %	0.2 %	0.4 %	3.5 %	0.1 %	2.0 %	0.2 %	859

EU-built Aircraft - Market Share in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	0.0 %	17.9 %	0.0 %	0.0 %	1.0 %	14.1 %	0.0 %	0.0 %	0.0 %	0.0 %	2.4 %	0.0 %	8.8 %
1987	0.0 %	13.8 %	0.0 %	0.0 %	0.9 %	9.8 %	0.0 %	0.0 %	1.2 %	0.0 %	2.1 %	0.0 %	6.3 %
1988	0.0 %	13.5 %	0.0 %	0.0 %	0.6 %	15.5 %	0.0 %	0.0 %	1.1 %	0.0 %	2.0 %	0.0 %	7.1 %
1989	0.0 %	12.3 %	7.2 %	0.0 %	0.7 %	11.5 %	0.0 %	0.0 %	1.5 %	0.0 %	1.5 %	0.0 %	5.7 %
1990	0.0 %	9.9 %	6.7 %	0.0 %	0.6 %	10.7 %	0.0 %	0.0 %	1.4 %	0.0 %	1.1 %	0.0 %	4.7 %
1991	0.0 %	7.6 %	0.0 %	0.0 %	0.6 %	11.9 %	0.0 %	0.0 %	1.2 %	0.0 %	1.1 %	0.0 %	4.0 %
1992	0.0 %	3.8 %	0.0 %	0.6 %	0.8 %	15.7 %	0.0 %	0.0 %	1.3 %	0.0 %	0.9 %	0.0 %	3.5 %
1993	0.0 %	3.6 %	0.0 %	3.6 %	5.7 %	21.2 %	0.0 %	0.0 %	1.1 %	0.0 %	1.0 %	0.0 %	6.0 %

EU-built Aircraft - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Value
1986	0.0 %	55.0 %	0.0 %	0.0 %	2.5 %	41.8 %	0.0 %	0.0 %	0.0 %	0.0 %	0.6 %	0.0 %	47
1987	0.0 %	56.3 %	0.0 %	0.0 %	3.6 %	37.9 %	0.0 %	0.0 %	1.5 %	0.0 %	0.7 %	0.0 %	34
1988	0.0 %	46.1 %	0.0 %	0.0 %	2.4 %	49.7 %	0.0 %	0.0 %	1.2 %	0.0 %	0.6 %	0.0 %	40
1989	0.0 %	50.6 %	5.6 %	0.0 %	4.7 %	36.8 %	0.0 %	0.0 %	1.7 %	0.0 %	0.6 %	0.0 %	40
1990	0.0 %	49.8 %	5.8 %	0.0 %	4.8 %	37.5 %	0.0 %	0.0 %	1.6 %	0.0 %	0.5 %	0.0 %	34
1991	0.0 %	49.4 %	0.0 %	0.0 %	5.6 %	42.7 %	0.0 %	0.0 %	1.7 %	0.0 %	0.6 %	0.0 %	30
1992	0.0 %	31.3 %	0.0 %	0.6 %	8.7 %	57.1 %	0.0 %	0.0 %	1.7 %	0.0 %	0.6 %	0.0 %	27
1993	0.0 %	18.7 %	0.0 %	2.3 %	36.7 %	41.3 %	0.0 %	0.0 %	0.7 %	0.0 %	0.3 %	0.0 %	51

EU Light Aircraft Fleet by Propulsion Type

	Units												Market Share of EU-designed ¹ Aircraft (%)													
	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
Single-Engine																										
1985	625	5,470	702	224	4,728	4,771	107	239	1,221	43	393	212	18,735	38.1	38.4	26.1	28.1	67.8	48.6	36.4	56.5	55.4	30.2	14.5	24.5	48.5
1986	599	5,488	679	433	4,846	4,745	106	249	1,235	43	408	232	19,063	37.9	38.6	22.2	28.2	72.8	48.0	26.4	54.2	54.6	51.2	15.2	27.6	49.4
1987	635	5,578	685	657	4,913	5,081	109	196	1,239	43	439	237	19,812	38.7	39.4	19.7	28.2	71.2	45.8	16.5	46.9	54.5	51.2	15.3	27.8	48.1
1988	659	5,739	725	842	4,932	4,246	105	273	1,246	50	435	251	19,503	38.2	31.3	20.4	28.1	71.6	34.4	19.0	34.8	52.2	48.0	15.6	27.1	42.8
1989	730	5,902	819	875	5,037	4,587	110	290	1,296	53	467	272	20,438	38.2	30.8	21.1	28.1	70.7	37.0	21.8	14.1	48.1	41.5	16.1	26.8	42.2
1990	824	6,663	737	1,053	5,263	5,038	113	326	1,319	54	513	295	22,198	38.2	44.0	21.2	28.1	69.3	37.1	38.9	29.8	47.9	37.0	18.1	25.1	45.8
1991	881	6,554	703	1,114	5,420	4,890	142	294	1,367	54	513	332	22,264	38.3	32.3	16.2	29.4	75.6	36.2	19.7	38.8	49.0	27.8	17.7	26.5	43.9
1992	857	6,838	705	1,160	5,492	5,120	145	250	1,390	54	536	384	22,931	40.3	35.9	16.3	37.3	76.5	37.1	19.3	39.6	47.7	27.8	17.0	16.9	45.4
1993	691	6,997	710	1,207	5,417	5,125	169	254	1,374	54	547	379	22,924	56.4	36.7	23.0	35.6	64.4	38.3	30.2	39.8	49.2	27.8	16.6	20.8	43.7
Twin-Engine																										
1985	51	652	183	31	561	958	10	28	234	7	63	31	2,809	7.8	8.6	16.4	9.7	7.5	19.5	90.0	14.3	26.1	0.0	6.3	0.0	14.2
1986	76	674	190	64	619	776	10	37	262	9	82	33	2,832	7.9	8.2	10.0	9.4	6.1	14.9	80.0	18.9	24.8	11.1	8.5	15.2	11.8
1987	67	718	195	98	623	784	11	31	265	8	71	34	2,905	3.0	7.7	11.3	9.2	5.8	13.1	63.6	19.4	24.9	0.0	8.5	14.7	10.9
1988	71	738	185	137	691	756	6	38	273	8	89	35	3,027	5.6	7.6	9.7	9.5	5.5	11.8	0.0	18.4	24.5	0.0	10.1	14.3	10.1
1989	75	722	173	194	719	798	6	38	282	9	89	36	3,141	6.7	7.8	8.1	9.8	5.6	11.7	0.0	23.7	24.1	11.1	10.1	13.9	10.2
1990	94	719	155	222	780	863	21	41	288	11	92	37	3,323	6.4	9.6	8.4	9.5	5.1	11.9	42.9	17.1	24.3	27.3	9.8	10.8	10.7
1991	94	882	174	203	795	788	34	41	285	14	104	37	3,451	6.4	7.1	13.8	13.3	6.2	10.8	26.5	14.6	24.6	28.6	9.6	5.4	10.3
1992	82	887	167	209	789	756	35	35	239	13	96	42	3,350	0.0	8.1	13.2	12.9	6.5	11.6	25.7	14.3	30.1	30.8	11.5	9.5	10.9
1993	3	902	164	214	719	703	37	37	255	11	83	41	3,169	66.7	7.5	11.0	14.0	3.5	12.2	10.8	16.2	27.8	36.4	13.3	12.2	10.4
Executive Jet																										
1985	3	48	14	0	65	72	0	3	64	1	13	1	284	33.3	43.8	28.6	0.0	73.8	77.8	0.0	66.7	57.8	100.0	30.8	0.0	61.3
1986	6	48	10	6	71	70	0	3	80	0	5	0	299	0.0	29.2	40.0	83.3	81.7	75.7	0.0	66.7	51.3	0.0	60.0	0.0	60.2
1987	4	70	10	13	73	75	0	2	86	1	7	0	341	0.0	27.1	40.0	76.9	80.8	69.3	0.0	50.0	47.7	100.0	57.1	0.0	56.0
1988	5	62	16	21	87	79	0	3	109	1	7	1	391	0.0	41.9	50.0	81.0	80.5	75.9	0.0	66.7	39.4	100.0	57.1	0.0	59.1
1989	5	56	21	25	98	73	0	2	123	0	8	3	414	0.0	39.3	52.4	80.0	80.6	65.8	0.0	0.0	50.4	0.0	50.0	100.0	60.1
1990	5	150	14	30	132	86	0	3	127	0	9	3	559	0.0	42.0	28.6	80.0	84.1	64.0	0.0	0.0	30.7	0.0	44.4	100.0	54.2
1991	5	86	24	67	129	89	0	4	139	0	9	3	555	0.0	30.2	16.7	46.3	86.0	66.3	0.0	0.0	37.4	0.0	44.4	100.0	52.3
1992	10	108	28	39	126	90	0	2	158	0	9	4	574	20.0	38.0	28.6	71.8	87.3	72.2	0.0	0.0	20.9	0.0	44.4	75.0	51.2
1993	8	104	14	29	126	93	1	2	92	0	9	4	482	12.5	37.5	28.6	75.9	83.3	75.3	100.0	0.0	30.4	0.0	33.3	100.0	57.5

1) US-designed aircraft built under licence in Europe not included.

Table 3.20

Source: Bureau Veritas [110].

EU Light Aircraft Fleet 1993 Categories Breakdown by Design Origin in % of Total Units

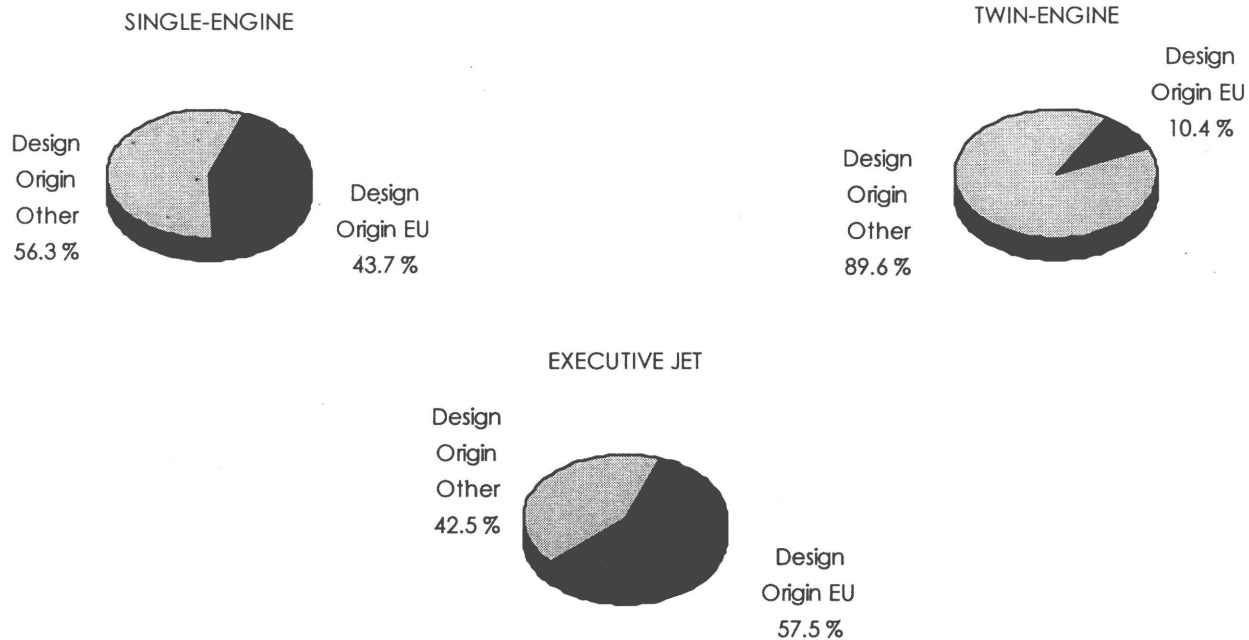


Chart 3.1

Source: Bureau Veritas [110].

JETS

Beechcraft	Beechjet 400/400A
British Aerospace	BAe 125-800, 1000
Canadair	CL 601 3R • Challenger 601-1A/601-3A
Cessna Aircraft	525 Citation Jet • 550 Citation II/SII • 560 Citation V • 650 Citation III/VI/VII
Dassault Aviation	Falcon 100, 20/200, 50, 900
Gulfstream Aerospace	Gulfstream III, IV
Israel Aircraft Industries	IAI 1125 Astra/SP, Westwind 1/2
Learjet	Learjet 31/31A, 35A, 36/36A, 55/55B/55C, 60
Raytheon Corporate Jets	Hawker 800, 1000

TURBOPROPS

Agusta	SF600 Canguro
Beechcraft	1900E Executive • 2000 Starship 1 • King Air C90/F90 • Super King Air 200/200CT, 300/300LW, 350
Cessna Aircraft	208 Caravan I • 208B Caravan IB • 425 Conquest I • 441 Conquest II
Embraer	EMB-810D (Piper Seneca II)
Fairchild Aircraft	SA227AT/TT/23 Merlin
Parfenavia¹	AP 68TP-600 Viator
Pilatus Aircraft¹	PC-6/B2-H4 Turbo Porter
Pilatus Britten-Norman	BN-2T Turbine Islander
Piper Aircraft	PA-31T-500 Cheyenne IA • PA-31T-620 Cheyenne IIXL • PA-42-1000 Cheyenne 400 • PA-42-720 Cheyenne IIIA
Reims Aviation	406 Caravan II
Rinaldo Plaggio	P166-DL3 • P180 Avanti
TBM (Socata/Mooney)	TBM700

PISTON ENGINES

Beechcraft	Baron 58/58P • Bonanza A36/A36AT, B36TC, F33A/F33C
Cessna Aircraft	402C Businessliner • 414A Chancellor • 421C Golden Eagle • T303 Crusader
Lake Aircraft	LA-250 Renegade
Parfenavia¹	P68C/P68C-TC
Pilatus Britten-Norman	BN-2B Islander
Piper Aircraft²	PA-28-161 Warrior • PA-28-181 Archer II • PA-28-236 Dakota • PA-28R-201 Arrow IV/Turbo Arrow IV • PA-31-350 Chieftain • PA-32-301 Saratoga/SP • PA-34-220T Seneca III • PA-46-310P Malibu • PA-46- 350P Malibu Mirage

1) Figures for Parfenavia and Pilatus are not available for 1992 and 1993.

2) PA-28 series included as of 1992

World Deliveries of Light- and Business Aircraft													
JETS				TURBOPROPS ¹				PISTON ENGINES ¹					
	Design Origin EU	Design Origin US	Design Origin Other	Units	Design Origin EU	Design Origin US	Design Origin Other	Units	Design Origin EU	Design Origin US	Design Origin Other	Units	Total Units
1986	25.0 %	58.7 %	16.3 %	208	3.0 %	92.0 %	5.0 %	199	5.2 %	94.8 %	0.0 %	402	809
1987	35.6 %	53.4 %	11.0 %	219	4.4 %	94.7 %	0.9 %	225	5.9 %	94.1 %	0.0 %	375	819
1988	28.6 %	59.8 %	11.6 %	259	6.0 %	92.7 %	1.3 %	233	4.0 %	96.0 %	0.0 %	350	842
1989	27.8 %	61.1 %	11.1 %	252	5.7 %	91.7 %	2.6 %	228	2.9 %	97.1 %	0.0 %	414	894
1990	23.2 %	61.6 %	15.1 %	271	6.4 %	90.7 %	3.0 %	236	4.6 %	95.4 %	0.0 %	372	879
1991	19.5 %	69.7 %	10.9 %	267	15.6 %	81.1 %	3.3 %	212	4.0 %	96.0 %	0.0 %	297	776
1992	^R 8.3 %	79.5 %	12.2 %	229	21.2 %	78.8 %	0.0 %	193	4.2 %	95.8 %	0.0 %	307	729
1993	16.3 %	73.3 %	10.4 %	270	14.4 %	85.6 %	0.0 %	187	2.1 %	97.9 %	0.0 %	241	698

1) Distribution between TBP and Pistons changed for years 1986 - 91 due to correction in classification of aircraft.

Table 3.21 *The aircraft included are listed on the previous page.
Sources: 1986-91: Interavia/Aerospace World [95, 96]; 1992-93: ITA [97].*

Chapter 4

Civil and Para-public Helicopters

The figures on the **civil and para-public¹ helicopter** fleet are provided by EUROCOPTER INTERNATIONAL [86]. The figures have been established according to official sources, mainly the annual registration listings published by official authorities worldwide: FAA, CAA, DGAC, JCAB, etc. For countries where no listing is available, commercial publications such as Air Britten or databases of local Eurocopter Commercial network have been used.

The study includes helicopters in service, i.e. helicopters that are registered to a final customer. "White tails" are thus excluded. Para-public helicopters are included when they have a civil registration².

¹ Aircraft used by public authorities such as Coast Guards, Militia, Gendarmeries, Bundesgrenzschutz, Fishery Surveillance.

² Civil registered helicopters used by public authorities and/or held in military inventories may be double counted as they would also appear in Chapter 7 - Military Helicopters.

The analysis covers the following

Geographical areas

- *EU*
including all States with full membership in 1993;
- *Other Europe*
including Austria, Cyprus, Finland, Greenland, Iceland, Liechtenstein, Malta, Monaco, Norway, Sweden, Switzerland, Turkey;
- *USA*;
- *Rest of the world*
excluding C.I.S.

A distinction is made between 'design origin EU' and 'EU-built', the latter including as well aircraft whose conceptual origin is outside the EU, but which is built under licence agreements in the EU. In previous editions of this book this has been unclear, leading to possible mis-interpretations of the figures, which we hope to clarify herewith.

As the source of information has changed from the previous edition, so has the method of reporting number of units as well as calculating prices for the aircraft in service. **Some of the**

tables presented here are therefore not directly comparable with the previous edition.

The value of aircraft is now computed as follows:

- for *aircraft still in production*, the value is obtained by weighting the official 1994 price for a standard non equipped helicopter as they are published by the various manufacturers, with a coefficient taking into account the average equipments mounted on each aircraft. The coefficients are empirical, and different for three categories of helicopters:

piston engine helicopters	1.05
light single engine helicopters	1.15
twin engine helicopters	1.2

- for *aircraft no longer in production*, all values are extracted from 'The Blue Book'³. The final value is obtained by applying the same coefficient as for aircraft still in production to the resale price for a standard aircraft with a mid

³ The Official Helicopters Blue Book; Heli Value Inc., Lincolnshire, Illinois, USA.

potential delivered in the middle of its production period. However, a special 1.05 coefficient has been applied to some dedicated aircraft such as the Lama⁴ or the B-204 due to their limited applications.

Following the above calculations the fleet is then valorized as follows:

- for aircraft delivered before 1985, an average value has been computed and weighted by the usual coefficients.⁵
- for aircraft delivered between 1985 and 1991, the weighted value given by The Blue Book for a mid potential aircraft year by year;
- for aircraft delivered in 1992 - 1993, the weighted value of a new aircraft as published by the manufacturers has been used.

⁴ Example of value calculation for the Lama: the price given by The Blue Book for a mid standard potential aircraft delivered in 1979 is \$0.508 Mio. Application of the coefficient yields $1.05 \times 0.508 = 0.533$, which is then rounded to \$0.535 Mio.

⁵ A detailed analysis of The Blue Book indicates that the value of all helicopters delivered before 1985 is stabilized around an average value with a variation of at most 6 %.

All prices are converted to ECU using the following exchange rates:

1 US\$ = 5.80 FF = 1.65 DM;
1 ECU = 1.15 US\$.

On the following page a list of helicopters covered by the study and their calculated values in 1994 prices is given. The manufacturers involved are listed below.

Manufacturers

Agusta	IT
Agusta-Bell	US
Bell	US
Bell / Soloy	US
Boeing-Vertol	US
Brantly	US
Enström	US
Eurocopter	Int'l
Hiller	US
Kamov	RU
McDonnell Douglas	US
Mil	RU
PZL	PL
Robinson	US
Rogerson (Fairchild)	US
Schweizer	US
Sikorsky	US
Westland	GB

Civil Helicopters - Average Prices 1994

Design Origin EU				Design Origin Other							
Manufacturer and Model	No. of Seats (Standard)	Year(s) of Production	Value 1994 Mio ECU	Manufacturer and Model	No. of Seats (Standard)	Year(s) of Production	Value 1994 Mio ECU	Manufacturer and Model	No. of Seats (Standard)	Year(s) of Production	Value 1994 Mio ECU
Agusta				Eurocopter (continued)				Kamov			
A 109 A Max	7	1987	2.348	<i>Ecureuil</i>				Ka-32	18	1980	2.000
A 109 A+	7	1975 - 85	0.626	AS350 B	6	1978 - 92	0.443	MI			
A 109 C	7	1989	2.304	AS350 B1	6	1986 - 90	0.635	Mi 26	90	1981	5.652
A 109 K2	7	1991	2.957	AS350 B2	6	1990	1.009	Mi 8	30	1963	1.304
Eurocopter				AS350 BA	6	1992	0.857	Mi MTV/Mi 17	30	1976	2.174
Alouette II (SA318)	5	1957 - 80	0.078	AS350 D	6	1978 - 87	0.343	PZL			
Alouette III (SA316)	7	1964 - 84	0.274	AS355 F1	6	1983 - 89	0.530	Sokol	14	1989	3.043
Alouette III (SA319)	7	1973 - 76	0.252	AS355 F2	6	1986	1.530				
Gazelle (SA314G)	5	1972 - 80	0.209	AS355 F2R	6	1990 - 92	0.974				
Lama (SA315)	5	1971 - 87	0.465	AS355 N	6	1989	1.713				
Puma (SA330)	21	1976 - 80	1.565	<i>Super Puma</i>							
BO 105				AS332 C	19	1981	8.391				
CBS	5	1977	1.591	AS332 L1	22	1985	9.183				
CBS 5	5	1993	1.691	AS332 L2	22	1992	10.539				
LS	5	1986	1.861	Westland							
BK 117				W30 ¹	19	1982 - 89	4.609				
B1/B2	8	1987	2.817	Wessex 60	19	1960 - 68	0.113				
C1	8	1992	3.109								
<i>Dauphin</i>											
AS365 C	10	1978 - 81	0.870								
AS365 N1	13	1987 - 89	2.713								
AS365 N2	13	1990	4.157								
SA360	10	1976 - 84	0.409								

1) 1987 quotation for new aircraft. No other quotation available

Table 4.1 Source: Eurocopter [86].

Civil Helicopters - Average Prices 1994

Design Origin USA

Manufacturer and Model	No. of Seats (Standard)	Year(s) of Production	Value 1994 Mio ECU	Manufacturer and Model	No. of Seats (Standard)	Year(s) of Production	Value 1994 Mio ECU	Manufacturer and Model	No. of Seats (Standard)	Year(s) of Production	Value 1994 Mio ECU
Agusta - Bell				Bell / Soloy				Robinson			
AB-204B	10	1961 - 75	0.696	B-47 Turbine	3	1978 - 83	0.126	R-22	2	1979 - 81	0.039
AB-205A-1	15	1964 - 78	0.857	Boeing - Vertol				R-22 Alpha	2	1983 - 85	0.057
AB-206	5	1966	0.657	BV-234	47	1981 - 86	6.522	R-22 Beta	2	1985	0.100
AB-212	15	1972	4.130	Braniff				R-22HP	2	1981 - 83	0.052
AB-412	15	1983	4.304	305		1965 - 81	0.026	R-44 Astro	4	1993	0.213
AB-47	3	1954 - 78	0.074	B2B		1959 - 81	0.017	Rogerson			
Bell				Enström				Schweitzer			
B-47G-2	3	1947 - 63	0.052	F-280F	3	1980	0.213	FH-1100	5	1966 - 72	0.130
B-204B	10	1963 - 67	0.696	F-28A	3	1968 - 76	0.030	330	3	1993	0.374
B-205A-1	15	1967 - 81	0.857	F-28C	3	1976 - 82	0.061	269A	2	1959 - 66	0.035
B-206 L3	7	1975 - 92	0.613	F-28F	3	1981	0.196	269B	2	1964 - 69	0.043
B-206 L4	7	1993	0.996	Hiller				300C	2	1970	0.078
B-206 LT Twin Ranger	7	1994	1.548	UH-12D	3	1957 - 62	0.026	Sikorsky			
B-206A	5	1966 - 71	0.161	UH-12E	3	1959 - 83	0.065	S-55	12	1952 - 61	0.052
B-206B	5	1967 - 77	0.230	UH-12E4	4	1962 - 83	0.057	S-58	14	1955 - 68	0.113
B-206B-3	5	1977	0.657	UH-12E4T	4	1975 - 83	0.135	S-58T	18	1971 - 77	0.626
B-212	14	1970	4.130	UH-12ET	3	1975 - 83	0.122	S-61N	28	1963 - 79	2.217
B-214 B	16	1976 - 92	1.226	McDonnell Douglas				S-76A+	10	1989 - 90	2.348
B-214 ST	20	1982 - 90	2.835	369/500	5	1969 - 74	0.165	S-76A/Mk II	10	1979 - 86	1.226
B-222 B	8	1982 - 85	0.939	500 C	5	1969 - 77	0.204	S-76B	10	1985	4.383
B-222 UT	8	1983 - 89	1.043	500 D	5	1976 - 82	0.274	S-76C	10	1991	4.113
B-230	8	1992	3.513	500 E	5	1983	0.635				
B-412	14	1981	4.304	520 N	5	1991	0.735				
B-47G-3B/B1/B2	3	1963 - 73	0.074	530 FF	5	1985	0.865				
B-47G-4/4A	3	1964 - 71	0.065	MD900	8	1994	3.130				
B-47G-5/5A	3	1964 - 73	0.061								
B-47J-2	4	1957 - 66	0.043								

Table 4.2 Source: Eurocopter[86].

Civil and Para-public Helicopter Fleet in Units at Year-end																	
Europe										North America							
EU					Other Europe					USA				Canada			
Design Origin US				Design Origin CIS, registered in Germany	Units	Design Origin US				Design Origin CIS	Units	Design Origin US			Design Origin EU	Design Origin US	Units
Design Origin EU	US built	US licence	EU built under			Design Origin EU	US built	US licence	EU built under			Design Origin EU	US built	US licence			
1960	22.7 %	29.0 %	48.3 %	-	176	-	-	-	-	-	-	-	-	-	-	-	
1965	33.0 %	36.9 %	30.0 %	-	406	-	-	-	-	-	0.6 %	99.2 %	0.2 %	1,854	-	-	
1970	27.6 %	40.0 %	32.4 %	-	598	-	-	-	-	-	1.1 %	98.9 %	0.0 %	2,980	-	-	
1975	32.7 %	45.3 %	22.0 %	-	1,023	-	-	-	-	-	3.3 %	96.7 %	0.0 %	4,803	-	-	
1980	36.4 %	40.7 %	22.9 %	-	1,477	-	-	-	-	-	6.3 %	93.7 %	0.0 %	7,259	-	-	
1981	37.6 % ^R	42.0 % ^R	20.4 % ^R	-	1,617 ^R	-	-	-	-	-	7.4 %	92.5 %	0.0 %	7,735	-	-	
1982	38.4 %	41.3 %	20.3 %	-	1,709	-	-	-	-	-	8.5 %	91.5 %	0.0 %	7,947	-	-	
1983	40.5 %	39.6 %	19.9 %	-	1,775	-	-	-	-	-	8.7 %	91.3 %	0.0 %	8,192	-	-	
1984	42.2 %	38.5 %	19.3 %	-	1,829	-	-	-	-	-	9.1 %	90.9 %	0.0 %	8,469	-	-	
1985	43.5 %	38.0 %	18.5 %	-	1,840	27.4 %	43.2 %	17.9 %	11.6 %	588	9.7 %	90.3 %	0.0 %	8,540	9.0 %	91.0 %	1,086
1986	43.8 %	38.9 %	17.2 %	-	1,918	28.7 %	43.1 %	17.0 %	11.2 %	606	10.6 %	89.4 %	0.0 %	8,577	9.5 %	90.5 %	1,081
1987	44.1 %	39.6 %	16.3 %	-	2,067	29.9 %	42.8 %	15.1 %	12.2 %	696	11.0 %	89.0 %	0.0 %	8,409	10.3 %	89.7 %	1,107
1988	42.7 %	42.5 %	14.8 %	-	2,308	30.2 %	44.5 %	13.9 %	11.5 %	722	11.2 %	88.8 %	0.0 %	8,210	10.8 %	89.2 %	1,151
1989	41.0 %	45.3 %	13.7 %	-	2,610	30.4 %	45.8 %	12.8 %	10.9 %	759	11.1 %	88.9 %	0.1 %	8,323	10.8 %	89.2 %	1,189
1990	39.3 %	47.8 %	12.1 %	0.8 %	2,913	32.4 %	46.9 %	12.8 %	7.8 %	803	11.3 %	88.7 %	0.0 %	8,522	11.7 %	88.3 %	1,268
1991	39.6 %	49.6 %	10.5 %	0.3 %	3,062	31.7 %	46.9 %	11.4 %	10.1 %	862	11.2 %	88.7 %	0.1 %	8,669	12.6 %	87.4 %	1,314
1992	38.5 %	50.0 %	9.9 %	1.5 %	3,233	32.5 %	48.7 %	11.2 %	7.6 %	885	11.2 %	88.7 %	0.1 %	8,735	13.6 %	86.4 %	1,397
1993	39.3 %	50.2 %	9.4 %	1.2 %	3,205	32.9 %	48.6 %	10.0 %	8.6 %	904	11.3 %	88.5 %	0.1 %	8,974	12.9 %	87.1 %	1,474

Table 4.3 Source: Eurocopter [86].

Civil and Para-public Helicopter Fleet in Units at Year-end

Distribution of Fleet within EU

	BE	DE	DK	ES	FR	GB	HE	IE	IT	LU	NL	PT	Total
1960	10	14	0	0	82	35	0	0	32	0	3	0	176
1965	2	75	6	16	148	96	2	2	49	0	7	3	406
1970	13	121	11	31	155	173	4	6	66	0	17	1	598
1975	26	247	22	59	227	305	8	6	85	0	29	9	1,023
1980	26	334	37	68	383	433	18	13	133	0	26	6	1,477
1981	28	356	44	76	407	472	19	15	158	0	31	11	1,617
1982	26	368	41	83	451	484	23	14	181	0	31	7	1,709
1983	28	383	36	91	467	489	22	13	201	0	36	9	1,775
1984	25	399	34	92	487	488	25	14	218	0	39	8	1,829
1985	24	400	37	86	475	504	25	16	224	0	41	8	1,840
1986	27	425	37	99	496	514	25	15	227	0	42	11	1,918
1987	25	436	40	119	555	534	31	16	264	0	33	14	2,067
1988	27	430	43	131	628	627	31	22	315	0	32	22	2,308
1989	31	433	42	163	701	747	41	25	367	0	35	25	2,610
1990	35	479	46	194	791	823	42	31	406	0	37	29	2,913
1991	41	536	50	235	838	805	44	36	404	0	38	35	3,062
1992	44	641	49	249	880	771	40	34	445	0	41	39	3,233
1993	51	669	54	268	836	719	51	37	436	2	46	36	3,205

Table 4.4

Source: Eurocopter [86].

Civil and Para-public Helicopter Fleet in Units at Year-end													
Share of EU-built ¹ Aircraft in % of Total													
	BE	DE	DK	ES	FR	GB	HE	IE	IT	LU	NL	PT	Total
1960	0.0 %	21.4 %	-	-	72.0 %	85.7 %	-	-	93.8 %	-	100.0 %	-	71.0 %
1965	50.0 %	56.0 %	0.0 %	68.8 %	80.4 %	33.3 %	100.0 %	0.0 %	83.7 %	-	71.4 %	100.0 %	63.1 %
1970	53.8 %	47.1 %	18.2 %	71.0 %	81.9 %	39.3 %	100.0 %	33.3 %	89.4 %	-	64.7 %	0.0 %	60.0 %
1975	53.8 %	55.5 %	9.1 %	59.3 %	82.4 %	31.5 %	87.5 %	33.3 %	69.4 %	-	69.0 %	11.1 %	54.7 %
1980	46.2 %	61.7 %	5.4 %	63.2 %	80.9 %	42.0 %	50.0 %	7.7 %	72.9 %	-	53.8 %	0.0 %	59.3 %
1981	42.9 %	61.2 %	4.5 %	64.5 %	81.3 %	38.3 %	47.4 %	6.7 %	72.8 %	-	54.8 %	27.3 %	58.0 %
1982	42.3 %	59.5 %	7.3 %	60.2 %	80.7 %	40.7 %	43.5 %	7.1 %	73.5 %	-	48.4 %	0.0 %	58.7 %
1983	39.3 %	57.7 %	11.1 %	61.5 %	82.0 %	43.1 %	50.0 %	15.4 %	76.1 %	-	52.8 %	11.1 %	60.4 %
1984	44.0 %	58.4 %	14.7 %	64.1 %	81.9 %	44.3 %	44.0 %	14.3 %	77.1 %	-	51.3 %	12.5 %	61.5 %
1985	54.2 %	58.3 %	18.9 %	66.3 %	83.8 %	43.8 %	36.0 %	43.8 %	77.7 %	-	51.2 %	12.5 %	62.0 %
1986	51.9 %	56.0 %	18.9 %	67.7 %	82.7 %	43.0 %	28.0 %	40.0 %	79.3 %	-	45.2 %	18.2 %	61.1 %
1987	56.0 %	56.9 %	17.5 %	70.6 %	79.8 %	39.9 %	25.8 %	37.5 %	78.4 %	-	42.4 %	28.6 %	60.4 %
1988	51.9 %	58.8 %	16.3 %	71.0 %	73.4 %	35.9 %	25.8 %	36.4 %	74.6 %	-	34.4 %	59.1 %	57.5 %
1989	48.4 %	56.1 %	19.0 %	68.1 %	70.9 %	31.7 %	29.3 %	36.0 %	72.5 %	-	34.3 %	68.0 %	54.7 %
1990	45.7 %	50.7 %	19.6 %	62.9 %	67.8 %	29.4 %	31.0 %	29.0 %	69.0 %	-	32.4 %	58.6 %	51.5 %
1991	34.1 %	46.8 %	18.0 %	60.4 %	66.3 %	30.1 %	27.3 %	22.2 %	66.8 %	-	26.3 %	54.3 %	50.1 %
1992	31.8 %	40.4 %	22.4 %	60.6 %	65.3 %	30.4 %	22.5 %	11.8 %	63.6 %	-	29.3 %	35.9 %	48.4 %
1993	29.4 %	41.4 %	22.2 %	58.2 %	66.1 %	30.5 %	27.5 %	21.6 %	64.2 %	0.0 %	34.8 %	27.8 %	48.7 %

1) EU-built includes aircraft whose design originate in the EU and US-designed aircraft built under licence in the EU

Table 4.5 Source: Eurocopter [86]

WORLD FLEET IN UNITS

Geographical Breakdown - % of World Total

	EU	Rest of Europe	USA	Rest of World	Total Units
1986	12.1 %	3.8 %	54.0 %	30.1 %	15,880
1987	12.8 %	4.3 %	51.9 %	31.0 %	16,200
1988	13.9 %	4.4 %	49.5 %	32.2 %	16,587
1989	15.1 %	4.4 %	48.1 %	32.4 %	17,308
1990	16.1 %	4.4 %	47.2 %	32.3 %	18,070
1991	16.4 %	4.6 %	46.4 %	32.6 %	18,691
1992	16.9 %	4.6 %	45.6 %	32.8 %	19,138
1993	16.3 %	4.6 %	45.7 %	33.4 %	19,640

Design Origin EU - Market Shares in Zones

	EU	Rest of Europe	USA	Rest of World	World
1986	43.8 %	28.7 %	10.6 %	19.6 %	18.0 %
1987	44.1 %	29.9 %	11.0 %	20.7 %	18.9 %
1988	42.7 %	30.2 %	11.2 %	21.0 %	19.5 %
1989	41.0 %	30.4 %	11.1 %	21.6 %	19.8 %
1990	39.3 %	32.4 %	11.3 %	22.6 %	20.2 %
1991	39.6 %	31.7 %	11.2 %	23.4 %	20.7 %
1992	38.5 %	32.5 %	11.2 %	23.7 %	20.8 %
1993	39.3 %	32.9 %	11.3 %	23.1 %	20.8 %

Design Origin EU - Distribution among Zones

	EU	Rest of Europe	USA	Rest of World	Total Units
1986	29.4 %	6.1 %	31.7 %	32.8 %	2,858
1987	29.8 %	6.8 %	30.1 %	33.3 %	3,062
1988	30.5 %	6.7 %	28.4 %	34.4 %	3,234
1989	31.2 %	6.7 %	26.9 %	35.1 %	3,427
1990	31.4 %	7.1 %	26.3 %	35.2 %	3,650
1991	31.4 %	7.1 %	25.2 %	36.4 %	3,869
1992	31.3 %	7.2 %	24.7 %	36.8 %	3,981
1993	30.8 %	7.3 %	24.9 %	37.0 %	4,085

Table 4.6 (left)

Table 4.7 (opposite page)

Source: Eurocopter [86].

EU FLEET IN UNITS

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Units
1986	1.4 %	22.2 %	1.9 %	5.2 %	25.9 %	26.8 %	1.3 %	0.8 %	11.8 %	0.0 %	2.2 %	0.6 %	1,918
1987	1.2 %	21.1 %	1.9 %	5.8 %	26.9 %	25.8 %	1.5 %	0.8 %	12.8 %	0.0 %	1.6 %	0.7 %	2,067
1988	1.2 %	18.6 %	1.9 %	5.7 %	27.2 %	27.2 %	1.3 %	1.0 %	13.6 %	0.0 %	1.4 %	1.0 %	2,308
1989	1.2 %	16.6 %	1.6 %	6.2 %	26.9 %	28.6 %	1.6 %	1.0 %	14.1 %	0.0 %	1.3 %	1.0 %	2,610
1990	1.2 %	16.4 %	1.6 %	6.7 %	27.2 %	28.3 %	1.4 %	1.1 %	13.9 %	0.0 %	1.3 %	1.0 %	2,913
1991	1.3 %	17.5 %	1.6 %	7.7 %	27.4 %	26.3 %	1.4 %	1.2 %	13.2 %	0.0 %	1.2 %	1.1 %	3,062
1992	1.4 %	19.8 %	1.5 %	7.7 %	27.2 %	23.8 %	1.2 %	1.1 %	13.8 %	0.0 %	1.3 %	1.2 %	3,233
1993	1.6 %	20.9 %	1.7 %	8.4 %	26.1 %	22.4 %	1.6 %	1.2 %	13.6 %	0.1 %	1.4 %	1.1 %	3,205

Design Origin EU - Market Shares in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	40.7 %	44.0 %	10.8 %	44.4 %	66.1 %	26.3 %	24.0 %	20.0 %	45.4 %	0.0 %	42.9 %	18.2 %	43.8 %
1987	44.0 %	45.0 %	10.0 %	47.9 %	63.8 %	24.9 %	19.4 %	18.8 %	49.6 %	0.0 %	39.4 %	28.6 %	44.1 %
1988	40.7 %	47.2 %	11.6 %	50.4 %	59.1 %	23.1 %	19.4 %	18.2 %	48.3 %	0.0 %	31.3 %	59.1 %	42.7 %
1989	38.7 %	44.8 %	11.9 %	48.5 %	57.9 %	21.4 %	24.4 %	20.0 %	46.6 %	0.0 %	31.4 %	68.0 %	41.0 %
1990	34.3 %	40.5 %	13.0 %	45.4 %	55.6 %	21.1 %	26.2 %	16.1 %	46.1 %	0.0 %	32.4 %	58.6 %	39.3 %
1991	24.4 %	38.2 %	14.0 %	46.8 %	55.8 %	21.9 %	25.0 %	11.1 %	47.8 %	0.0 %	26.3 %	54.3 %	39.6 %
1992	25.0 %	33.5 %	18.4 %	47.8 %	54.9 %	22.4 %	20.0 %	5.9 %	44.7 %	0.0 %	29.3 %	35.9 %	38.5 %
1993	19.6 %	35.0 %	18.5 %	45.9 %	56.6 %	23.2 %	23.5 %	10.8 %	46.3 %	0.0 %	32.6 %	27.8 %	39.3 %

Design Origin EU - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Units
1986	1.3 %	22.2 %	0.5 %	5.2 %	39.0 %	16.1 %	0.7 %	0.4 %	12.2 %	0.0 %	2.1 %	0.2 %	841
1987	1.2 %	21.5 %	0.4 %	6.3 %	38.8 %	14.6 %	0.7 %	0.3 %	14.4 %	0.0 %	1.4 %	0.4 %	912
1988	1.1 %	20.6 %	0.5 %	6.7 %	37.6 %	14.7 %	0.6 %	0.4 %	15.4 %	0.0 %	1.0 %	1.3 %	986
1989	1.1 %	18.1 %	0.5 %	7.4 %	37.9 %	15.0 %	0.9 %	0.5 %	16.0 %	0.0 %	1.0 %	1.6 %	1,070
1990	1.0 %	16.9 %	0.5 %	7.7 %	38.4 %	15.2 %	1.0 %	0.4 %	16.3 %	0.0 %	1.0 %	1.5 %	1,146
1991	0.8 %	16.9 %	0.6 %	9.1 %	38.6 %	14.5 %	0.9 %	0.3 %	15.9 %	0.0 %	0.8 %	1.6 %	1,213
1992	0.9 %	17.3 %	0.7 %	9.6 %	38.8 %	13.9 %	0.6 %	0.2 %	16.0 %	0.0 %	1.0 %	1.1 %	1,245
1993	0.8 %	18.6 %	0.8 %	9.8 %	37.5 %	13.3 %	1.0 %	0.3 %	16.0 %	0.0 %	1.2 %	0.8 %	1,260

WORLD FLEET IN VALUE

Geographical Breakdown - % of World Total

	EU	Rest of Europe	USA	Rest of World	Total Value Mio ECU
1986	18.2 %	5.5 %	42.1 %	34.3 %	6,995
1987	18.1 %	5.8 %	40.8 %	35.2 %	6,324
1988	19.0 %	5.9 %	38.7 %	36.4 %	6,593
1989	19.1 %	5.3 %	39.9 %	35.8 %	7,528
1990	19.7 %	5.5 %	38.6 %	36.2 %	6,937
1991	20.2 %	5.3 %	36.9 %	37.6 %	7,599
1992	20.8 %	5.7 %	36.4 %	37.1 %	7,682
1993	21.2 %	5.8 %	36.3 %	36.7 %	9,029

Design Origin EU - Market Shares in Zones

	EU	Rest of Europe	USA	Rest of World	World
1986	60.4 %	43.5 %	23.8 %	33.8 %	35.0 %
1987	61.2 %	44.6 %	26.4 %	36.3 %	37.3 %
1988	62.0 %	47.1 %	28.7 %	36.5 %	38.9 %
1989	61.3 %	49.6 %	28.2 %	37.4 %	38.9 %
1990	61.7 %	52.7 %	28.3 %	38.2 %	39.8 %
1991	61.0 %	56.1 %	28.7 %	40.2 %	41.0 %
1992	57.8 %	59.4 %	29.0 %	40.9 %	41.1 %
1993	57.5 %	61.8 %	29.2 %	39.8 %	41.0 %

Design Origin EU - Distribution among Zones

	EU	Rest of Europe	USA	Rest of World	Value Mio ECU
1986	31.4 %	6.8 %	28.7 %	33.1 %	2,448
1987	29.8 %	7.0 %	28.9 %	34.3 %	2,359
1988	30.3 %	7.1 %	28.5 %	34.2 %	2,565
1989	30.0 %	6.7 %	28.9 %	34.4 %	2,928
1990	30.0 %	7.3 %	25.8 %	36.9 %	2,761
1991	30.5 %	7.3 %	27.4 %	34.7 %	3,116
1992	29.3 %	8.2 %	25.6 %	36.9 %	3,157
1993	29.7 %	8.7 %	25.9 %	35.7 %	3,702

Table 4.8 (left)

Table 4.9 (opposite page)

Source: Eurocopter [86].

EU FLEET IN VALUE

Member State Breakdown in % of EU 12 Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total Value Mio ECU
1986	0.9 %	16.2 %	3.6 %	4.8 %	14.2 %	44.1 %	1.3 %	0.9 %	8.8 %	0.0 %	5.1 %	0.1 %	1,273
1987	0.8 %	17.0 %	3.6 %	4.8 %	14.6 %	42.1 %	1.1 %	0.9 %	11.3 %	0.0 %	3.5 %	0.3 %	1,145
1988	0.7 %	17.6 %	3.2 %	6.0 %	15.5 %	40.6 %	1.0 %	1.1 %	11.3 %	0.0 %	2.6 %	0.3 %	1,253
1989	0.6 %	16.9 %	3.2 %	6.4 %	16.7 %	37.8 %	1.1 %	0.9 %	13.3 %	0.0 %	2.7 %	0.4 %	1,438
1990	0.5 %	16.2 %	2.7 %	6.8 %	17.3 %	38.5 %	1.0 %	0.8 %	13.0 %	0.0 %	2.6 %	0.5 %	1,367
1991	0.6 %	17.5 %	3.0 %	7.2 %	17.4 %	35.7 %	0.7 %	0.7 %	14.3 %	0.0 %	2.4 %	0.6 %	1,535
1992	0.7 %	19.1 %	2.8 %	7.4 %	15.8 %	30.4 %	0.6 %	1.2 %	18.0 %	0.4 %	2.7 %	0.9 %	1,598
1993	0.7 %	21.1 %	2.7 %	7.6 %	14.8 %	28.7 %	0.8 %	1.2 %	18.6 %	0.4 %	2.5 %	0.9 %	1,914

Design Origin EU - Market Shares in Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU 12
1986	78.8 %	62.7 %	35.4 %	79.4 %	86.6 %	55.1 %	19.9 %	14.5 %	64.1 %	0.0 %	35.1 %	55.9 %	60.4 %
1987	78.6 %	61.9 %	29.2 %	78.7 %	85.9 %	55.1 %	29.8 %	14.4 %	68.1 %	0.0 %	34.8 %	52.7 %	61.2 %
1988	82.2 %	63.7 %	29.9 %	74.5 %	81.5 %	55.8 %	38.3 %	17.8 %	72.4 %	0.0 %	20.7 %	64.7 %	62.0 %
1989	89.6 %	61.2 %	28.6 %	69.5 %	76.2 %	57.7 %	47.5 %	24.7 %	65.5 %	0.0 %	27.2 %	73.7 %	61.3 %
1990	78.6 %	59.8 %	31.4 %	65.0 %	75.1 %	58.9 %	50.8 %	16.4 %	67.6 %	0.0 %	34.2 %	48.2 %	61.7 %
1991	66.4 %	54.5 %	42.1 %	61.4 %	76.6 %	60.8 %	73.9 %	8.2 %	62.9 %	0.0 %	24.7 %	43.7 %	61.0 %
1992	59.6 %	50.9 %	43.1 %	64.0 %	78.9 %	62.7 %	54.7 %	25.0 %	44.8 %	0.0 %	42.5 %	38.2 %	57.8 %
1993	44.1 %	52.1 %	55.0 %	59.7 %	78.5 %	62.2 %	71.4 %	30.8 %	43.8 %	0.0 %	48.7 %	39.0 %	57.5 %

Design Origin EU - Distribution among Member States

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	EU-built Value Mio ECU
1986	1.1 %	16.8 %	2.1 %	6.3 %	20.3 %	40.3 %	0.4 %	0.2 %	9.4 %	0.0 %	3.0 %	0.1 %	769
1987	1.0 %	17.2 %	1.7 %	6.1 %	20.5 %	37.8 %	0.5 %	0.2 %	12.5 %	0.0 %	2.0 %	0.2 %	703
1988	0.9 %	18.0 %	1.6 %	7.2 %	20.4 %	36.5 %	0.6 %	0.3 %	13.2 %	0.0 %	0.9 %	0.3 %	777
1989	0.8 %	16.9 %	1.5 %	7.3 %	20.8 %	35.6 %	0.9 %	0.4 %	14.2 %	0.0 %	1.2 %	0.5 %	879
1990	0.7 %	15.7 %	1.4 %	7.2 %	21.1 %	36.8 %	0.9 %	0.2 %	14.3 %	0.0 %	1.4 %	0.4 %	828
1991	0.7 %	15.6 %	2.0 %	7.3 %	21.8 %	35.6 %	0.8 %	0.1 %	14.7 %	0.0 %	1.0 %	0.4 %	950
1992	0.7 %	16.9 %	2.1 %	8.2 %	21.6 %	33.0 %	0.5 %	0.5 %	13.9 %	0.0 %	2.0 %	0.6 %	925
1993	0.6 %	19.1 %	2.6 %	7.9 %	20.2 %	31.0 %	1.0 %	0.6 %	14.2 %	0.0 %	2.1 %	0.6 %	1,100

Civil and Para-public Helicopters

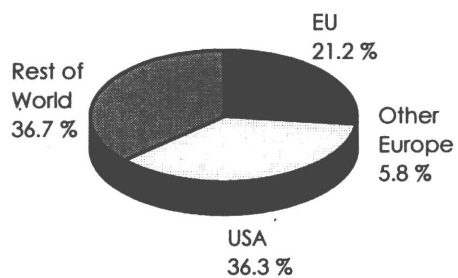
World Deliveries in Units

		Design Origin EU %	Design Origin US %	Design Origin Other %	Total Units
1986	R	49.0 %	50.7 %	0.4 %	527
1987	R	46.7 %	53.3 %	0.0 %	512
1988	R	36.3 %	63.6 %	0.2 %	623
1989	R	29.4 %	70.6 %	0.0 %	765
1990	R	29.3 %	70.7 %	0.0 %	1,020
1991	R	26.2 %	73.7 %	0.1 %	972
1992	R	29.0 %	70.9 %	0.2 %	645
1993		28.9 %	70.7 %	0.4 %	478

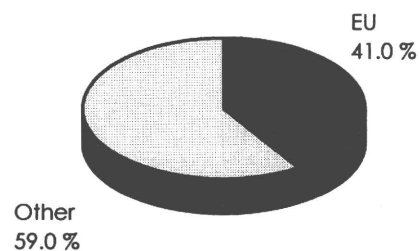
Table 4.10

Source: Eurocopter [86].

**Geographical Breakdown
% of World Total
in 1993 Values**



**Design Origin EU
Market Share of World Fleet
in 1993 Values**



**Design Origin EU
Distribution among Zones
in 1993 Values**

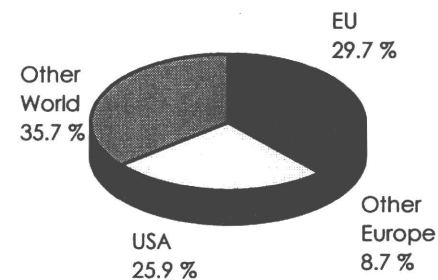


Chart 4.1 Source: Eurocopter [86].

Chapter 5

Civil Turbine Engines

Data relating to civil turbine engines are extracted from JP Airlines Fleet - (BUCHair database) situation January 1995 [54]. This database holds information on the current fleet, i.e. aircraft in service as of January 1995, by year of manufacture of aircraft. It contains, for each aircraft, the number and type of engine it is equipped with.

The following tables show the engines in operation broken down by category of engine, manufacturer and year of manufacture of aircraft.

Engines are grouped according to type - fan/jet or prop/shaft - and for fan/jets according to max take-off static thrust as follows:

Engine categories

- Turbofan/jet <= 10,000 lbs
- Turbofan/jet 10,001 - 20,000 lbs
- Turbofan/jet 20,001 - 35,000 lbs
- Turbofan/jet 35,001 - 50,000 lbs
- Turbofan/jet > 50,000 lbs
- Turboprop and Turboshaft

The basis for the classification of engines is Jane's All the World's Aircraft [55].

The tables show the aircraft manufacturing years from 1981 to 1994, and include the following manufacturers:

Manufacturers

Allison	US
CFM International	Int'l
DEMC	CN
Garrett	US
General Electric	US
IAE	Int'l
KKBM	SU
Klimov	SU
PNPP	SU
Pratt & Whitney	US
Pratt & Whitney Canada	CA
PZL	PL
Rolls-Royce	GB
Textron Lycoming	US
Turbomeca	FR
Williams	US
ZMDB Progress	UA

Manufacturer reflects the company which originated the design or has significantly re-designed / developed the engine, and does not necessarily indicate production/assembly origin.

The following engines are included:

Turbofan/jet <= 10,000 lbs

Garrett

ATF3

TFE731

General Electric

CF34

CF700

CJ610

Pratt & Whitney Canada

JT15D

PW305

Textron Lycoming

ALF 502L

ALF 502R

LF 502

LF 507

Williams

FJ44

Turbofan/jet 10,001 - 20,000 lbs

CFM International

CFM56-3

Pratt & Whitney

JT8D-17

JT8D-200

Rolls-Royce

Spey 511

Tay

ZMDB Progress

D-36

Turbofan/jet 20,001 - 35,000 lbs*CFM International*

CFM56-5

IAE

V2500

KKBM

NK-8

PNPP

D-30

Turbofan/jet 35,001 - 50,000 lbs*General Electric*

CF6A

PNPP

PS

Pratt & Whitney

JT9D

JT9D-7R

PW2000

Rolls-Royce

RB211-22/535

Turbofan/jet > 50,000 lbs*General Electric*

CF6

Pratt & Whitney

PW4000

Rolls-Royce

RB211-524

Trent

Turboprop and Turboshaft*Allison*

AN 250

AN 501

GMA 2100

DEMC

HS5/6

WJ 5A

Garrett

TPE331-10

TPF351

General Electric

CT64

CT7

Klimov

TV3

TV7

Pratt & Whitney Canada

PT6A

PT6B

PT6T

PW100

PZL

GTD

PZL-10W

PZL-F6A

TVD

Rolls-Royce

Dart

Gem

Gnome

Textron Lycoming

LTS 101

Turbomeca

Arriel

Arrius

Artouste

Astazou

Makila

Turmo

ZMDB Progress

AI-20

AI-24

D-136

D-18T

Civil Turbine Engines Inventory as of January 1995

Manufacturers' share of engines in operation by year of manufacture of aircraft

	Turbofan/jet <= 10,000 lbs					Turbofan/jet 10,001 - 20,000 lbs					
	Breakdown by units					Breakdown by units					
	Garrett	General Electric	Pratt & Whitney Canada	Textron Lycoming	Williams	Total Units	CFM International	Pratt & Whitney	Rolls-Royce	ZMDB Progress	Total Units
1981	55.6 %	5.8 %	34.2 %	4.4 %	0.0 %	275	0.0 %	89.9 %	1.7 %	8.5 %	710
1982	56.1 %	0.0 %	28.9 %	15.0 %	0.0 %	187	0.0 %	94.5 %	2.5 %	3.0 %	403
1983	36.1 %	8.4 %	18.5 %	37.0 %	0.0 %	119	0.0 %	89.0 %	11.0 %	0.0 %	272
1984	30.1 %	14.0 %	22.4 %	33.6 %	0.0 %	143	7.9 %	82.1 %	5.0 %	5.0 %	279
1985	24.1 %	9.6 %	15.7 %	50.6 %	0.0 %	166	40.9 %	51.0 %	3.5 %	4.5 %	396
1986	30.3 %	11.6 %	14.2 %	43.9 %	0.0 %	155	47.4 %	43.4 %	3.6 %	5.5 %	548
1987	26.0 %	1.0 %	13.0 %	60.0 %	0.0 %	200	46.7 %	40.7 %	5.3 %	7.2 %	599
1988	21.0 %	2.9 %	11.4 %	64.8 %	0.0 %	210	47.7 %	38.9 %	6.1 %	7.3 %	684
1989	31.8 %	2.0 %	11.4 %	54.8 %	0.0 %	299	45.5 %	38.2 %	7.9 %	8.4 %	629
1990	27.6 %	4.7 %	10.1 %	57.6 %	0.0 %	257	42.2 %	33.2 %	11.1 %	13.6 %	868
1991	21.9 %	1.6 %	20.3 %	56.3 %	0.0 %	256	52.8 %	31.6 %	13.8 %	1.8 %	868
1992	19.3 %	15.1 %	25.2 %	40.3 %	0.0 %	119	54.1 %	22.1 %	14.6 %	9.2 %	861
1993	15.6 %	27.8 %	12.2 %	42.2 %	2.2 %	180	54.0 %	11.9 %	18.7 %	15.4 %	589
1994	4.0 %	24.0 %	6.0 %	64.0 %	2.0 %	100	74.4 %	12.0 %	12.6 %	0.9 %	317
	Breakdown by thrust					Breakdown by thrust					
	Garrett	General Electric	Pratt & Whitney Canada	Textron Lycoming	Williams	Total Thrust Mio lbs	CFM International	Pratt & Whitney	Rolls-Royce	ZMDB Progress	Total Thrust Mio lbs
1981	61.8 %	6.9 %	22.6 %	8.7 %	0.0 %	1.040	0.0 %	90.9 %	1.3 %	7.7 %	11.160
1982	56.4 %	0.0 %	17.3 %	26.3 %	0.0 %	0.782	0.0 %	95.4 %	1.9 %	2.7 %	6.442
1983	30.2 %	9.1 %	9.2 %	51.5 %	0.0 %	0.598	0.0 %	91.5 %	8.5 %	0.0 %	4.447
1984	24.2 %	21.6 %	10.4 %	43.8 %	0.0 %	0.767	9.3 %	82.8 %	3.7 %	4.2 %	4.751
1985	18.0 %	11.8 %	7.0 %	63.2 %	0.0 %	0.931	43.7 %	50.4 %	2.4 %	3.5 %	7.414
1986	22.3 %	18.5 %	6.1 %	53.1 %	0.0 %	0.897	50.0 %	43.4 %	2.5 %	4.1 %	10.409
1987	19.1 %	1.6 %	6.0 %	73.3 %	0.0 %	1.146	49.7 %	41.2 %	3.7 %	5.5 %	11.278
1988	14.7 %	4.4 %	5.0 %	75.8 %	0.0 %	1.255	49.9 %	40.2 %	4.5 %	5.5 %	13.068
1989	23.6 %	3.3 %	5.3 %	67.8 %	0.0 %	1.692	47.7 %	40.0 %	6.0 %	6.3 %	11.997
1990	19.7 %	7.3 %	4.7 %	68.3 %	0.0 %	1.516	45.2 %	35.6 %	8.8 %	10.4 %	16.190
1991	16.6 %	2.6 %	9.9 %	71.0 %	0.0 %	1.420	55.1 %	32.9 %	10.6 %	1.4 %	16.636
1992	13.6 %	23.3 %	15.8 %	47.3 %	0.0 %	0.711	57.7 %	23.5 %	11.7 %	7.0 %	16.140
1993	9.7 %	38.2 %	7.9 %	43.6 %	0.6 %	1.208	59.4 %	13.1 %	15.4 %	12.2 %	10.715
1994	2.4 %	31.1 %	4.4 %	61.5 %	0.5 %	0.710	77.1 %	12.4 %	9.8 %	0.7 %	6.124

Table 5.1

Source: BUCHair [54].

Civil Turbine Engines Inventory as of January 1995

Manufacturers' share of engines in operation by year of manufacture of aircraft														
Turbofan/jet 20,001 - 35,000 lbs					Turbofan/jet 35,001 - 50,000 lbs					Turbofan/jet > 50,000 lbs				
Breakdown by units					Breakdown by units					Breakdown by units				
	CFM International	IAE	KKBM	PNPP	Total Units	General Electric	PNPP	Pratt & Whitney	Rolls-Royce	Total Units	General Electric	Pratt & Whitney	Rolls-Royce	Total Units
1981	0.0%	0.0%	35.0%	65.0%	483	1.4%	0.0%	6.1%	1.2%	154	53.6%	0.0%	46.4%	302
1982	0.0%	0.0%	41.6%	58.4%	428	2.6%	0.0%	7.2%	2.1%	166	63.7%	0.0%	36.3%	168
1983	0.0%	0.0%	35.2%	64.8%	352	8.1%	0.0%	12.1%	3.1%	275	61.5%	1.8%	36.7%	109
1984	0.0%	0.0%	20.6%	79.4%	310	4.9%	0.0%	13.1%	1.7%	208	65.7%	0.0%	34.3%	35
1985	0.0%	0.0%	8.4%	91.6%	274	5.1%	0.0%	9.9%	3.0%	204	58.6%	9.2%	32.2%	87
1986	0.0%	0.0%	11.2%	88.8%	356	3.9%	0.0%	9.6%	2.3%	194	73.4%	1.4%	25.2%	143
1987	3.6%	0.9%	12.6%	82.9%	222	2.3%	0.0%	8.5%	3.1%	172	67.8%	13.4%	18.8%	149
1988	10.7%	0.0%	2.7%	86.7%	300	1.6%	0.0%	8.3%	3.7%	192	86.1%	10.4%	3.5%	231
1989	12.3%	14.1%	9.1%	64.5%	440	0.1%	0.7%	3.0%	5.2%	122	47.5%	35.8%	16.7%	324
1990	29.4%	6.0%	7.0%	57.7%	402	0.4%	0.3%	5.9%	5.2%	176	46.7%	32.7%	20.6%	505
1991	35.6%	11.2%	8.1%	45.1%	590	1.1%	1.1%	5.9%	5.2%	198	50.4%	37.0%	12.7%	552
1992	32.6%	13.3%	3.3%	50.7%	601	0.2%	0.4%	9.3%	8.2%	198	48.5%	41.2%	10.4%	617
1993	37.3%	17.0%	2.2%	43.6%	365	0.0%	3.9%	8.1%	10.6%	174	48.0%	44.4%	7.6%	523
1994	57.6%	33.2%	0.0%	9.2%	229	0.0%	0.9%	3.7%	27.0%	136	51.1%	40.0%	8.9%	315

Breakdown by thrust					Breakdown by thrust					Breakdown by thrust				
	CFM International	IAE	KKBM	PNPP	Total Thrust Mio lbs	General Electric	PNPP	Pratt & Whitney	Rolls-Royce	Total Thrust Mio lbs	General Electric	Pratt & Whitney	Rolls-Royce	Total Thrust Mio lbs
1981	0.0%	0.0%	33.9%	66.1%	11,527	5.1%	0.0%	21.1%	3.7%	7,072	56.2%	0.0%	43.8%	16,425
1982	0.0%	0.0%	40.5%	59.5%	10,183	10.4%	0.0%	28.1%	7.3%	7,435	64.9%	0.0%	35.1%	9,030
1983	0.0%	0.0%	34.2%	65.8%	8,400	24.4%	0.0%	36.8%	8.0%	13,076	62.5%	1.8%	35.7%	5,822
1984	0.0%	0.0%	19.9%	80.1%	7,447	21.2%	0.0%	55.3%	6.4%	9,765	69.0%	0.0%	31.0%	2,012
1985	0.0%	0.0%	8.0%	92.0%	6,619	19.2%	0.0%	35.7%	9.9%	9,375	63.2%	8.2%	28.6%	5,090
1986	0.0%	0.0%	10.8%	89.2%	8,589	13.4%	0.0%	31.1%	6.9%	8,810	76.3%	1.2%	22.5%	8,329
1987	3.3%	0.8%	12.2%	83.7%	5,330	8.5%	0.0%	30.7%	10.1%	7,779	68.6%	13.1%	18.2%	7,987
1988	9.8%	0.0%	2.6%	87.6%	7,194	5.0%	0.0%	25.8%	10.3%	8,687	86.5%	10.2%	3.3%	12,428
1989	11.5%	13.2%	8.9%	66.4%	10,365	0.4%	1.5%	7.2%	12.9%	5,029	45.8%	36.6%	17.6%	17,795
1990	27.6%	5.6%	6.9%	59.9%	9,398	0.8%	0.4%	10.4%	9.2%	7,408	45.2%	33.0%	21.8%	28,058
1991	34.1%	10.6%	8.1%	47.2%	13,671	2.0%	1.5%	9.2%	8.5%	8,186	48.2%	38.2%	13.5%	30,503
1992	32.2%	12.4%	3.3%	52.1%	14,189	0.2%	0.3%	10.0%	8.9%	8,271	46.2%	42.7%	11.2%	34,058
1993	40.9%	15.7%	2.0%	41.5%	9,302	0.0%	2.9%	7.3%	9.6%	7,132	46.0%	45.7%	8.2%	28,750
1994	60.7%	31.3%	0.0%	8.1%	6,304	0.0%	0.6%	3.3%	20.9%	5,790	48.8%	41.8%	9.4%	17,573

Table 5.2

Source: BUCHair [54].

Civil Turbine Engines Inventory as of January 1995

Manufacturers' share of engines in operation by year of manufacture of aircraft

Turbofan/jet Total

Breakdown by units

	CFM International	Garrett	General Electric	IAE	KKBM	PNPP	Pratt & Whitney	Pratt & Whitney Canada	Rolls- Royce	Textron Lycoming	Williams	ZMDB Progress	Total Units
1981	0.0 %	8.0 %	10.6 %	0.0 %	8.8 %	16.3 %	38.8 %	4.9 %	9.0 %	0.6 %	0.0 %	3.1 %	1,924
1982	0.0 %	7.8 %	10.6 %	0.0 %	13.2 %	18.5 %	35.7 %	4.0 %	7.4 %	2.1 %	0.0 %	0.9 %	1,352
1983	0.0 %	3.8 %	15.4 %	0.0 %	11.0 %	20.2 %	34.3 %	2.0 %	9.4 %	3.9 %	0.0 %	0.0 %	1,127
1984	2.3 %	4.4 %	9.7 %	0.0 %	6.6 %	25.2 %	37.6 %	3.3 %	4.5 %	4.9 %	0.0 %	1.4 %	975
1985	14.4 %	3.5 %	11.1 %	0.0 %	2.0 %	22.3 %	28.6 %	2.3 %	6.7 %	7.5 %	0.0 %	1.6 %	1,127
1986	18.6 %	3.4 %	12.2 %	0.0 %	2.9 %	22.6 %	25.6 %	1.6 %	6.0 %	4.9 %	0.0 %	2.1 %	1,396
1987	21.5 %	3.9 %	9.8 %	0.1 %	2.1 %	13.7 %	27.6 %	1.9 %	7.3 %	8.9 %	0.0 %	3.2 %	1,342
1988	22.1 %	2.7 %	14.0 %	0.0 %	0.5 %	16.1 %	25.2 %	1.5 %	6.3 %	8.4 %	0.0 %	3.1 %	1,617
1989	18.7 %	5.2 %	8.9 %	3.4 %	2.2 %	16.2 %	21.8 %	1.9 %	9.6 %	9.0 %	0.0 %	2.9 %	1,814
1990	21.9 %	3.2 %	11.5 %	1.1 %	1.3 %	10.7 %	24.5 %	1.2 %	12.6 %	6.7 %	0.0 %	5.3 %	2,208
1991	27.1 %	2.3 %	12.1 %	2.7 %	1.9 %	11.4 %	23.0 %	2.1 %	10.9 %	5.8 %	0.0 %	0.6 %	2,464
1992	27.6 %	1.0 %	13.3 %	3.3 %	0.8 %	12.9 %	22.8 %	1.3 %	11.7 %	2.0 %	0.0 %	3.3 %	2,396
1993	24.8 %	1.5 %	16.4 %	3.4 %	0.4 %	10.3 %	19.9 %	1.2 %	12.7 %	4.2 %	0.2 %	5.0 %	1,831
1994	33.5 %	0.4 %	16.9 %	6.9 %	0.0 %	2.3 %	16.4 %	0.5 %	16.8 %	5.8 %	0.2 %	0.3 %	1,097

Breakdown by thrust

	CFM International	Garrett	General Electric	IAE	KKBM	PNPP	Pratt & Whitney	Pratt & Whitney Canada	Rolls- Royce	Textron Lycoming	Williams	ZMDB Progress	Total Thrust Mio lbs
1981	0.0 %	1.4 %	22.4 %	0.0 %	8.2 %	16.1 %	31.9 %	0.5 %	17.5 %	0.2 %	0.0 %	1.8 %	47,423
1982	0.0 %	1.3 %	23.3 %	0.0 %	12.1 %	17.8 %	31.8 %	0.4 %	13.3 %	0.6 %	0.0 %	0.5 %	34,072
1983	0.0 %	0.6 %	25.7 %	0.0 %	8.9 %	17.1 %	34.4 %	0.2 %	12.3 %	1.0 %	0.0 %	0.0 %	32,342
1984	1.8 %	0.7 %	16.4 %	0.0 %	6.0 %	24.1 %	42.2 %	0.3 %	6.3 %	1.4 %	0.0 %	0.8 %	24,742
1985	11.0 %	0.6 %	20.8 %	0.0 %	1.8 %	20.7 %	31.7 %	0.2 %	10.4 %	2.0 %	0.0 %	0.9 %	29,428
1986	14.0 %	0.5 %	23.8 %	0.0 %	2.5 %	20.7 %	26.9 %	0.1 %	8.9 %	1.3 %	0.0 %	1.2 %	37,033
1987	17.2 %	0.7 %	20.4 %	0.1 %	1.9 %	13.3 %	31.4 %	0.2 %	10.3 %	2.5 %	0.0 %	1.8 %	33,520
1988	16.9 %	0.4 %	27.8 %	0.0 %	0.4 %	14.8 %	28.1 %	0.1 %	7.5 %	2.2 %	0.0 %	1.7 %	42,632
1989	14.7 %	0.9 %	17.7 %	2.9 %	2.0 %	15.4 %	27.6 %	0.2 %	14.5 %	2.4 %	0.0 %	1.6 %	46,878
1990	15.8 %	0.5 %	20.9 %	0.8 %	1.0 %	9.2 %	29.9 %	0.1 %	17.3 %	1.7 %	0.0 %	2.7 %	62,571
1991	19.6 %	0.3 %	22.0 %	2.1 %	1.6 %	10.0 %	29.4 %	0.2 %	13.0 %	1.4 %	0.0 %	0.3 %	70,416
1992	18.9 %	0.1 %	21.8 %	2.4 %	0.6 %	10.3 %	30.8 %	0.2 %	12.9 %	0.5 %	0.0 %	1.5 %	73,368
1993	17.8 %	0.2 %	24.0 %	2.6 %	0.3 %	8.6 %	30.1 %	0.2 %	13.1 %	0.9 %	0.0 %	2.3 %	57,106
1994	23.4 %	0.0 %	24.1 %	5.4 %	0.0 %	1.8 %	24.3 %	0.1 %	19.5 %	1.2 %	0.0 %	0.1 %	36,501

Table 5.3

Source: BUCHair [54].

Civil Turbine Engines Inventory as of January 1995

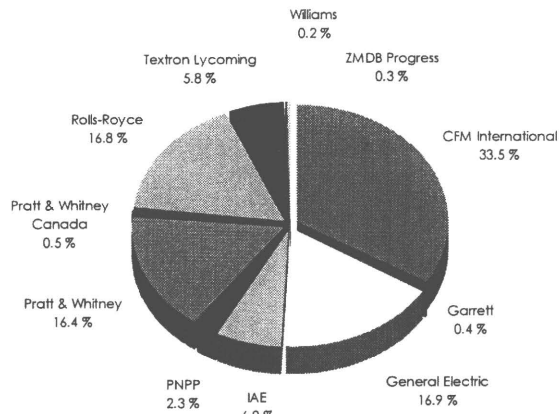
Manufacturers' share of engines in operation by year of manufacture of aircraft

Turboprop and Turboshaft												
Breakdown by units												
	Allison	DEMC	Garrett	General Electric	Klimov	Pratt & Whitney Canada	PZL	Rolls-Royce	Textron Lycoming	Turbomeca	ZMDB Progress	Total Units
1981	26.5 %	0.1 %	14.1 %	0.4 %	0.0 %	40.4 %	1.1 %	2.5 %	2.0 %	6.8 %	6.1 %	1,628
1982	30.5 %	0.0 %	14.6 %	0.8 %	0.0 %	30.6 %	1.1 %	4.1 %	1.5 %	11.9 %	4.9 %	1,233
1983	20.8 %	0.4 %	21.7 %	0.4 %	0.0 %	23.1 %	1.1 %	3.5 %	2.7 %	14.9 %	11.3 %	904
1984	15.9 %	3.5 %	14.6 %	3.8 %	0.0 %	33.8 %	5.2 %	5.0 %	3.5 %	10.6 %	4.0 %	848
1985	12.7 %	2.1 %	20.8 %	6.7 %	0.9 %	33.6 %	3.2 %	1.7 %	4.5 %	10.2 %	3.6 %	932
1986	7.3 %	1.2 %	20.0 %	6.7 %	0.0 %	37.7 %	6.7 %	2.7 %	6.4 %	6.3 %	5.0 %	1,038
1987	7.7 %	1.7 %	20.7 %	6.9 %	0.4 %	41.1 %	6.0 %	1.7 %	3.0 %	6.3 %	4.5 %	1,072
1988	7.0 %	2.1 %	15.7 %	6.2 %	0.0 %	52.4 %	1.6 %	0.3 %	2.1 %	4.1 %	8.3 %	1,222
1989	9.4 %	2.8 %	10.9 %	6.6 %	0.0 %	56.8 %	3.0 %	0.0 %	2.5 %	4.8 %	3.3 %	1,213
1990	11.2 %	1.7 %	10.4 %	9.0 %	1.5 %	51.3 %	2.4 %	0.2 %	3.5 %	5.9 %	2.9 %	1,312
1991	11.8 %	1.7 %	9.6 %	9.1 %	2.3 %	46.4 %	1.1 %	0.0 %	1.5 %	11.6 %	4.8 %	1,291
1992	9.4 %	0.0 %	10.4 %	11.3 %	5.8 %	52.0 %	0.2 %	0.0 %	0.0 %	8.2 %	2.7 %	903
1993	5.9 %	1.3 %	14.4 %	9.1 %	1.7 %	58.4 %	0.0 %	0.0 %	1.3 %	7.2 %	0.7 %	596
1994	4.4 %	0.0 %	15.7 %	4.8 %	1.4 %	67.6 %	0.0 %	0.0 %	0.0 %	6.1 %	0.0 %	293

Breakdown by thrust												
	Allison	DEMC	Garrett	General Electric	Klimov	Pratt & Whitney Canada	PZL	Rolls-Royce	Textron Lycoming	Turbomeca	ZMDB Progress	Total Power Mio kW
1981	17.0 %	0.0 %	14.1 %	1.2 %	0.0 %	38.0 %	0.5 %	5.5 %	1.5 %	5.5 %	16.6 %	1,144
1982	18.6 %	0.0 %	14.3 %	1.5 %	0.0 %	29.9 %	0.5 %	8.8 %	1.1 %	12.3 %	13.0 %	0,879
1983	12.9 %	0.1 %	17.6 %	0.7 %	0.0 %	18.8 %	0.4 %	6.5 %	1.6 %	16.6 %	24.8 %	0,780
1984	7.0 %	3.9 %	13.5 %	6.5 %	0.0 %	32.8 %	2.3 %	10.2 %	2.4 %	11.5 %	10.0 %	0,644
1985	6.7 %	4.3 %	14.1 %	8.4 %	1.4 %	24.3 %	1.0 %	2.6 %	2.2 %	7.2 %	27.9 %	0,965
1986	1.7 %	1.6 %	9.5 %	5.9 %	0.0 %	23.4 %	1.5 %	2.1 %	2.2 %	2.2 %	50.0 %	1,537
1987	2.4 %	1.7 %	7.1 %	4.4 %	0.3 %	18.8 %	1.2 %	0.8 %	0.7 %	1.9 %	60.5 %	2,176
1988	0.7 %	0.9 %	3.1 %	2.3 %	0.0 %	14.9 %	0.2 %	0.1 %	0.3 %	0.6 %	76.9 %	4,332
1989	2.2 %	3.1 %	5.2 %	5.9 %	0.0 %	40.3 %	0.8 %	0.0 %	0.9 %	1.8 %	39.9 %	1,774
1990	3.8 %	2.6 %	7.4 %	11.7 %	2.5 %	55.6 %	1.5 %	0.2 %	1.8 %	3.6 %	9.2 %	1,309
1991	3.2 %	1.9 %	3.8 %	6.5 %	2.1 %	28.4 %	0.4 %	0.0 %	0.4 %	3.9 %	49.4 %	2,360
1992	2.5 %	0.0 %	3.4 %	6.8 %	4.4 %	27.2 %	0.1 %	0.0 %	0.0 %	2.2 %	53.5 %	1,956
1993	1.5 %	2.1 %	7.6 %	8.9 %	2.2 %	47.7 %	0.0 %	0.0 %	0.5 %	3.3 %	26.2 %	0,790
1994	12.5 %	0.0 %	8.8 %	5.0 %	1.8 %	67.5 %	0.0 %	0.0 %	0.0 %	4.4 %	0.0 %	0,365

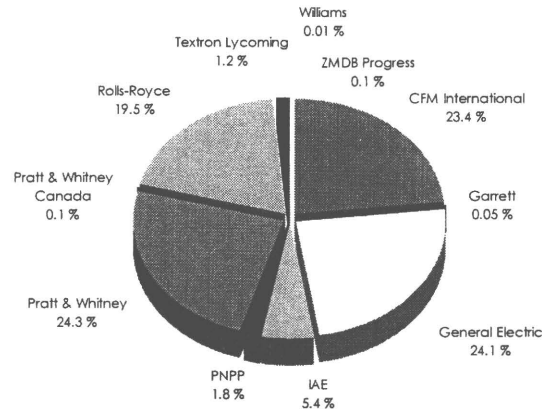
Table 5.4

Source: BUCHair [54].



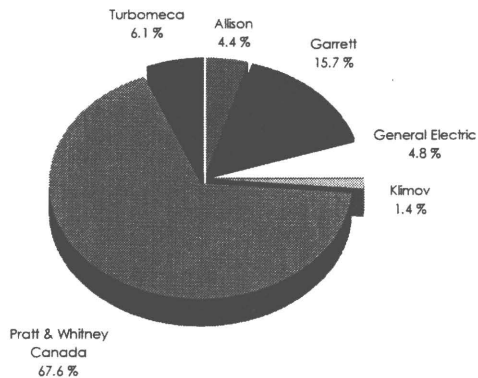
TURBOFAN/JET

Unit Shares by Aircraft Manufactured in 1994



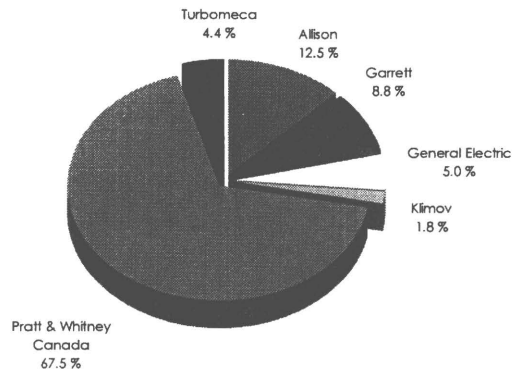
TURBOFAN/JET

Thrust Shares by Aircraft Manufactured in 1994



TURBOPROP & TURBOSHAF

Unit Shares by Aircraft Manufactured in 1994



TURBOPROP & TURBOSHAF

Power Shares by Aircraft Manufactured in 1994

Chart 5.1

Overall shares by manufacturer of engines on aircraft in service manufactured in 1994. The shares should only be taken as indicative of market shares.

Source: BUCHair [54].

Chapter 6

Military Fixed-Wing Aircraft

Data relating to **military fixed-wing aircraft** are provided by Walters Research Company [60]. They cover the number of military aircraft in service in the world. Assessment of fleets excludes aircraft in long term storage unless replacement outstanding. Former 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 design origin 'Other'.

The criteria used to define a *military aircraft* is that it is known to be included in military inventories. It is therefore possible that Government operated (commercial) aircraft flown and maintained by the air force are double counted as they may be included in the *civil transport aircraft* fleets presented in Chapters 2 and 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 - V.I.P./Liaison/Communication

Notice that military helicopters are not included here (as they were in previous editions), but are put separately in Chapter 7.

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 broken down according to design origin:

- EU;
- USA;
- 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 where they are operated:

- *EU* including all States with full membership in 1993;
- *Other Europe* including Austria, Croatia, Cyprus, Finland, Iceland, Krajina, Malta, Norway, Serbia, Serbian Bosnia, Slovenia, Sweden, Switzerland, Turkey;
- *USA*;
- *Canada*;
- *Latin America and Caribbean* including Argentina, Bahamas, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, Venezuela;
- *Middle East and North Africa* including Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria,

Tunisia, United Arab Emirates,
Yemen;

- *Africa South of Sahara*
including Angola, Benin, Botswana,
Burkina Faso, Burundi, Cameroon,
Cape Verdi, Central African
Republic, Congo, Congo Kinhasa,
Djibouti, Equatorial Guinea,
Ethiopia, Gabon, Gambia, Ghana,
Guinea Bisseau, Guinea Republic,
Ivory Coast, Kenya, Liberia,
Madagascar, Malawi, Mali,
Mauritania, Mozambique, Namibia,
Niger, Nigeria, Rwanda, Senegal,
Seychelles, Sierra Leone, Somalia,
Swaziland, Tanzania, Tchad, Togo,
Uganda, Zambia, Zimbabwe;
- *Republic of South Africa;*
- *Asia*
including Afghanistan, Bangladesh,
Brunei, Cambodia, India, Indonesia,
Japan, Korea Democratic People's
Republic, Laos, Malaysia, Mongolia,
Myanmar, Nepal, Pakistan,
Philippines, Republic of Korea,
Singapore, Sri Lanka, Taiwan,
Thailand, Vietnam;
- *Australasia*
including Australia, Fiji, New
Zealand, Papua New Guinea.

This chapter first presents indicative prices for a selection of aircraft followed by average unit replacement values for all aircraft in service at year-end (next two pages).

Then a summary of the world fleet is given for 1993, with a breakdown of the fleet by aircraft category, design origin and geographical area.

Following that are two elaborate series on the fleet distribution on aircraft categories - the first series presents a summary with no regard to design origin, the second breaks down the total into the three design origin groups.

Military Fixed-Wing Aircraft

INDICATIVE PRICES 1993

Design Origin EU		Design Origin US		Design Origin Other	
Manufacturer and Model	Indicative price range Mio. ECU	Manufacturer and Model	Indicative price range Mio. ECU	Manufacturer and Model	Indicative price range Mio. ECU
Aermacchi		Grumman		Aero	
MB-339	12.46 - 21.35	A-6E Intruder	33.86 - 37.72	L-59 Albatros	3.30 - 4.13
Aerospatiale		E-2C Hawkeye	73.37 - 221.75	Embraer	
Epsilon TB-30	0.87 - 1.12	F-14 Tomcat	42.99 - 61.25	EMB-312 Tucano	1.74 - 12.65
Amx International		Lockheed		Israel Aircraft Industries	
AMX	5.24 - 16.23	F-16 Fighting Falcon	17.71 - 25.3	Kfir	14.97 - 20.14
British Aerospace		C-130 Hercules	24.22 - 25.38	Pilatus	
Hawk	15.18 - 26.31	P-3C Orion	43.57 - 124.86	PC-7 Mk.II Turbo Trainer	1.52 - 3.74
Casa		McDonnell Douglas		PC-9	3.06 - 12.65
C-101 Aviojet	6.53 - 9.13	F-15E Eagle	63.25 - 87.29	Saab	
C-212 Aviocar	1.42 - 7.59	F/A-18 Hornet	50.23 - 66.02	JAS-39 Gripen	23.72 - 52.37
Dassault				Mikoyan	
Mirage 2000	28.57 - 41.29			MiG-29	26.31 - 42.12
Mirage 2000E	18.28 - 21.49				
Alpha Jet	7.19 - 12.88				
Panavia					
Tornado	53.76 - 79.28				
Slai-Marchetti					
S-211	3.05 - 4.13				
SF-260RTP	0.76 - 1.02				
Shorts					
Sherpa C-23B	7.6				

Table 6.1 Source: Walters Research [60].

Military Fixed-Wing Aircraft Fleet										
AVERAGE UNIT REPLACEMENT VALUE OF MILITARY AIRCRAFT IN SERVICE IN THE EU										
Mio. ECU										
Design Origin EU										
Interceptor / Air Superiority	Fighter / Attack	Attack	Bomber / Interceptor	AEW / Maritime Patrol / Electronics	Advanced Trainer / Light Attack	Elementary / Basic Trainer	Transport - Tactical / Strategic / Tanker	Transport - V.I.P. / Liaison / Communications		
1986	37.78	25.26	29.97	42.66	42.01	10.98	1.49	16.43	2.42	
1987	39.83	26.58	36.16	45.78	46.60	11.41	1.52	18.27	2.69	
1988	42.41	30.72	39.29	47.89	47.77	11.79	1.75	19.36	3.38	
1989	44.49	31.51	40.29	49.51	55.77	11.99	1.80	20.86	3.47	
1990	39.70	28.12	31.29	44.18	49.77	10.70	1.39	18.61	2.69	
1991	45.30	32.09	35.71	50.41	56.79	12.21	1.59	21.24	3.07	
1992	42.71	31.75	40.97	54.76	57.57	12.39	1.66	21.60	4.23	
1993	49.43	13.37	23.67	66.52	54.95	12.45	2.70	24.80	4.41	
Design Origin US										
Interceptor / Air Superiority	Fighter / Attack	Attack	Bomber / Interceptor	AEW / Maritime Patrol / Electronics	Advanced Trainer / Light Attack	Elementary / Basic Trainer	Transport - Tactical / Strategic / Tanker	Transport - V.I.P. / Liaison / Communications		
1986	44.21	28.99	30.48	-	68.74	10.41	1.14	23.57	1.89	
1987	46.31	30.20	32.32	-	76.56	10.63	1.15	24.30	1.94	
1988	49.47	31.24	32.86	-	78.22	11.24	1.33	27.23	2.10	
1989	50.81	32.09	36.78	-	79.34	11.55	1.36	27.70	2.16	
1990	44.90	28.36	32.50	-	70.12	8.78	1.17	24.48	1.64	
1991	50.62	31.97	36.64	-	79.05	9.90	1.32	27.60	1.85	
1992	46.25	32.82	35.61	-	80.52	10.79	1.47	28.80	2.83	
1993	52.12	21.51	5.66	-	84.22	11.45	2.70	24.80	2.91	
Design Origin Other										
Interceptor / Air Superiority	Fighter / Attack	Attack	Bomber / Interceptor	AEW / Maritime Patrol / Electronics	Advanced Trainer / Light Attack	Elementary / Basic Trainer	Transport - Tactical / Strategic / Tanker	Transport - V.I.P. / Liaison / Communications		
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		
1991	39.18	39.55	-	-	-	1.28	10.91	3.74		
1992	39.64	28.90	-	-	-	1.50	12.39	3.77		
1993	34.22	36.45	-	-	-	1.81	12.56	4.37		

Table 6.2

Programme unit costs have been used in estimating average unit replacement values. The 1993 estimates are based on evidence of actual movements during the year. This method yields more indicative unit procurement costs for fleet replacements than the use of estimated flyaway costs of individual aircraft.

Source: Walters Research [60].

1993

Military Fixed-Wing Aircraft Fleet in Units at Year-end

SUMMARY OF FLEET

TOTAL FIGURES

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
Interceptor / Air Superiority	436	16	1,192	0	48	641	0	0	415	0	2,748
Fighter / Attack	1,817	1,505	1,830	207	639	2,805	569	59	3,652	71	13,154
Attack	441	210	1,140	0	234	484	60	0	621	14	3,204
Bomber / Interceptor	671	0	412	0	28	128	0	0	127	19	1,385
AEW / Maritime Patrol / Electronics	217	59	803	18	94	26	6	0	258	28	1,509
Advanced Trainer / Light Attack	835	460	1,225	204	720	647	227	200	560	55	5,133
Elementary / Basic Trainer	1,084	437	1,152	0	1,170	821	273	60	1,452	88	6,537
Transport - Tactical / Strategic / Tanker	562	130	1,890	63	638	484	283	41	896	74	5,061
Transport - V.I.P. / Liaison / Communication	713	329	743	46	897	463	300	24	963	57	4,535

Design Origin EU

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
Interceptor / Air Superiority	393	0	0	0	12	77	0	0	106	0	588
Fighter / Attack	803	135	0	0	242	482	18	59	2	226	1,967
Attack	353	1	0	0	13	22	15	0	119	0	523
Bomber / Interceptor	671	0	0	0	28	48	0	0	47	0	794
AEW / Maritime Patrol / Electronics	172	0	0	0	0	0	2	0	17	0	191
Advanced Trainer / Light Attack	699	71	0	0	370	228	118	200	57	49	1,792
Elementary / Basic Trainer	667	66	0	0	56	378	141	0	194	0	1,502
Transport - Tactical / Strategic / Tanker	374	29	2	7	117	83	91	0	201	21	925
Transport - V.I.P. / Liaison / Communication	472	38	0	0	50	85	179	3	95	8	930

Table 6.3

Source: Walters Research [60].

1993

Military Fixed-Wing Aircraft Fleet in Units at Year-end

SUMMARY OF FLEET

Design Origin US

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
Interceptor / Air Superiority	19	0	1,192	0	0	249	0	0	183	0	1,643
Fighter / Attack	1,014	806	1,830	207	134	811	11	0	1,435	71	6,319
Attack	88	0	1,140	0	120	187	0	0	179	14	1,728
Bomber / Interceptor	0	0	412	0	0	0	0	0	0	19	431
AEW / Maritime Patrol / Electronics	45	59	803	18	67	23	0	0	199	28	1,242
Advanced Trainer / Light Attack	136	95	1,215	60	311	10	0	0	200	6	2,033
Elementary / Basic Trainer	115	137	1,152	0	486	70	29	0	288	0	2,277
Transport - Tactical / Strategic / Tanker	179	65	1,888	36	225	260	60	41	322	36	3,112
Transport - V.I.P. / Liaison / Communication	79	158	435	20	547	231	86	21	406	44	2,027

Design Origin Other

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
Interceptor / Air Superiority	24	16	0	0	36	315	0	0	126	0	517
Fighter / Attack	0	564	0	0	263	1,512	540	0	1,992	0	4,871
Attack	0	209	0	0	101	255	45	0	323	0	933
Bomber / Interceptor	0	0	0	0	0	80	0	0	80	0	160
AEW / Maritime Patrol / Electronics	0	0	0	0	27	3	4	0	42	0	0
Advanced Trainer / Light Attack	0	294	10	144	39	409	109	0	303	0	1,308
Elementary / Basic Trainer	302	234	0	0	628	373	103	60	971	88	2,759
Transport - Tactical / Strategic / Tanker	9	36	0	20	296	141	132	0	373	17	1,024
Transport - V.I.P. / Liaison / Communication	162	133	308	26	300	147	35	0	462	4	1,577

Table 6.4

Source: Walters Research [60].

1993

Distribution of Military Fixed-Wing Aircraft on Categories Breakdown by Design Origin

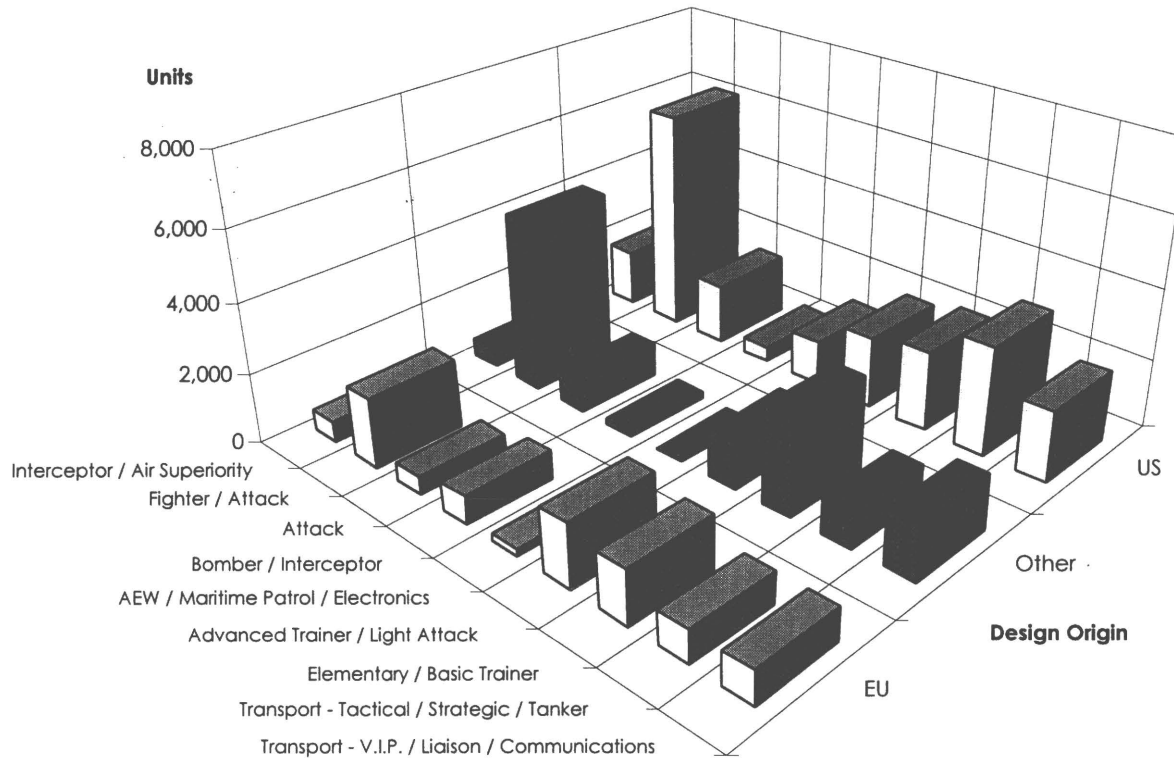


Chart 6.1

Military Fixed-Wing Aircraft Fleet in Units at Year-end											
INTERCEPTOR / AIR SUPERIORITY											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	335	16	1,308	0	14	524	0	0	302	0	2,499
1992	350	15	1,313	0	14	593	0	0	308	0	2,593
1993	436	16	1,192	0	48	641	0	0	415	0	2,748
FIGHTER / ATTACK											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	2,153	1,505	3,032	214	643	3,121	488	72	3,258	72	14,558
1992	1,944	1,500	2,938	213	644	2,999	443	55	3,149	71	13,956
1993	1,817	1,505	1,830	207	639	2,805	569	59	3,653	71	13,155
ATTACK											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	490	266	2,176	0	134	544	39	0	725	21	4,395
1992	467	254	1,722	0	164	526	39	0	744	20	3,936
1993	441	210	1,140	0	234	484	60	0	621	14	3,204

Table 6.5
Source: Walters Research
[60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end

BOMBER / INTERDICTOR

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	751	0	737	0	21	115	0	0	92	22	1,738
1992	749	0	691	0	20	149	0	0	75	22	1,706
1993	671	0	412	0	28	128	0	0	127	19	1,385

AEW / MARITIME PATROL / ELECTRONICS

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	195	46	1,154	18	68	16	4	0	253	25	1,779
1992	186	46	1,062	19	63	16	4	0	249	25	1,670
1993	217	59	803	18	94	26	6	0	258	28	1,509

ADVANCED TRAINER / LIGHT ATTACK

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	879	460	1,061	143	551	649	194	209	528	89	4,763
1992	826	457	1,021	143	548	660	213	208	554	81	4,711
1993	835	460	1,225	204	720	647	227	200	560	55	5,133

Table 6.6
Source: Walters Research
[60]

Military Fixed-Wing Aircraft Fleet in Units at Year-end

ELEMENTARY/BASIC TRAINER											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	1,284	488	1,123	20	1,084	1,000	283	49	1,458	130	6,919
1992	1,237	471	1,072	20	1,095	943	271	49	1,414	99	6,671
1993	1,084	437	1,152	0	1,170	821	273	60	1,453	88	6,538

TRANSPORT - TACTICAL/STRATEGIC/TANKER											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	593	123	2,131	62	629	505	315	57	717	91	5,223
1992	592	136	2,137	56	608	518	304	51	719	88	5,209
1993	562	130	1,890	63	638	484	283	41	896	74	5,061

TRANSPORT - V.I.P./LIAISON/COMMUNICATION											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	720	230	757	25	883	367	381	87	772	44	4,266
1992	711	235	784	25	879	362	368	35	772	26	4,197
1993	713	329	734	46	897	463	300	24	963	56	4,525

Table 6.7
Source: Walters Research
[60]

Military Fixed-Wing Aircraft Fleet in Units at Year-end

INTERCEPTOR / AIR SUPERIORITY

Design Origin EU

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	296	0	0	0	0	77	0	0	46	0	419
1992	312	0	0	0	0	77	0	0	46	0	435
1993	393	0	0	0	12	77	0	0	106	0	588

Design Origin US

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	19	0	1,308	0	0	213	0	0	175	0	1,715
1992	18	0	1,313	0	0	241	0	0	181	0	1,753
1993	19	0	1,192	0	0	249	0	0	183	0	1,643

Design Origin Other

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	20	16	0	0	14	234	0	0	81	0	365
1992	20	15	0	0	14	275	0	0	81	0	405
1993	24	16	0	0	36	315	0	0	126	0	517

Table 6.8
Source: Walters Research [60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end											
FIGHTER / ATTACK											
Design Origin EU											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	871	174	0	0	252	459	38	72	187	0	2,053
1992	768	174	0	0	255	383	35	55	185	0	1,855
1993	803	135	0	0	242	482	18	59	226	0	1,965
Design Origin US											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	1,239	779	3,032	214	131	927	8	0	1,209	72	7,611
1992	1,133	779	2,938	213	132	1,006	8	0	1,209	71	7,489
1993	1,014	806	1,830	207	134	811	11	0	1,435	71	6,319
Design Origin Other											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	43	552	0	0	260	1,735	442	0	1,862	0	4,894
1992	43	547	0	0	257	1,610	400	0	1,755	0	4,612
1993	0	564	0	0	263	1,512	540	0	1,992	0	4,871

Table 6.9
Source: Walters Research
[60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end

ATTACK

Design Origin EU

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	396	0	225	0	8	22	15	0	111	0	777
1992	376	0	217	0	8	19	15	0	111	0	746
1993	353	1	217	0	13	22	15	0	119	0	740

Design Origin US

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	94	0	1,951	0	35	115	0	0	178	21	2,394
1992	91	0	1,505	0	65	120	0	0	199	20	2,000
1993	88	0	1,140	0	120	187	0	0	179	14	1,728

Design Origin Other

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	0	266	0	0	91	407	24	0	436	0	1,224
1992	0	254	0	0	91	387	24	0	434	0	1,190
1993	0	209	0	0	101	275	45	0	323	0	953

*Table 6.10
Source: Walters Research
[60].*

Military Fixed-Wing Aircraft Fleet in Units at Year-end											
BOMBER / INTERDICTOR											
Design Origin EU											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	751	0	0	0	21	45	0	0	37	0	854
1992	749	0	0	0	20	45	0	0	20	0	834
1993	671	0	0	0	28	48	0	0	47	0	794
Design Origin US											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	0	0	737	0	0	0	0	0	0	22	759
1992	0	0	691	0	0	0	0	0	0	22	713
1993	0	0	412	0	0	0	0	0	0	19	431
Design Origin Other											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	0	0	0	0	0	70	0	0	55	0	125
1992	0	0	0	0	0	104	0	0	55	0	159
1993	0	0	0	0	0	80	0	0	80	0	160

Table 6.11
Source: Walters Research
[60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end

AEW / MARITIME PATROL / ELECTRONICS

Design Origin EU											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	149	0	41	0	0	0	3	0	22	0	215
1992	140	0	41	0	0	0	3	0	22	0	206
1993	172	0	0	0	0	0	2	0	17	0	191

Design Origin US											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	46	46	1,113	18	41	16	0	0	193	25	1,498
1992	46	46	1,021	19	36	16	0	0	194	25	1,403
1993	45	59	803	18	67	23	0	0	199	28	1,242

Design Origin Other											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	0	0	0	0	27	0	1	0	38	0	66
1992	0	0	0	0	27	0	1	0	33	0	61
1993	0	0	0	0	27	3	4	0	42	0	76

Table 6.12
Source: Walters Research [60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end											
ADVANCED TRAINER / LIGHT ATTACK											
Design Origin EU											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	743	64	4	0	220	217	107	209	25	89	1,678
1992	690	64	16	0	216	222	114	208	39	81	1,650
1993	699	71	0	0	370	228	118	200	57	49	1,792
Design Origin US											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	136	105	1,057	64	280	0	0	0	203	0	1,845
1992	136	105	1,005	64	286	0	0	0	183	0	1,779
1993	136	95	1,215	60	311	10	0	0	200	6	2,033
Design Origin Other											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	0	291	0	79	51	432	87	0	300	0	1,240
1992	0	288	0	79	46	438	99	0	332	0	1,282
1993	0	294	10	144	39	409	109	0	303	0	1,308

Table 6.13
Source: Walters Research
[60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end

ELEMENTARY/BASIC TRAINER

Design Origin EU

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	818	101	0	0	43	363	144	0	215	0	1,684
1992	750	108	0	0	45	364	142	0	210	0	1,619
1993	667	66	0	0	56	378	141	0	194	0	1,502

Design Origin US

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	187	168	1,118	20	386	90	40	49	253	0	2,311
1992	165	168	1,072	20	395	70	38	49	239	0	2,216
1993	115	137	1,152	0	486	70	29	0	288	0	2,277

Design Origin Other

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	279	219	5	0	655	547	99	0	990	130	2,924
1992	322	195	0	0	655	509	91	0	965	99	2,836
1993	302	234	0	0	628	373	103	60	971	88	2,759

Table 6.14
Source: Walters Research
[60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end											
TRANSPORT - TACTICAL/STRATEGIC/TANKER											
Design Origin EU											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	396	34	37	0	136	86	89	8	154	28	968
1992	401	37	46	0	133	85	92	8	159	25	986
1993	374	29	2	7	117	83	91	0	201	21	925
Design Origin US											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	170	64	2,083	42	219	273	106	49	231	44	3,281
1992	175	68	2,086	44	203	290	97	43	235	44	3,285
1993	179	65	1,888	36	225	260	60	41	322	36	3,112
Design Origin Other											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	27	25	11	20	274	146	120	0	332	19	974
1992	16	31	5	12	272	143	115	0	325	19	938
1993	9	36	0	20	296	141	132	0	373	17	1,024

Table 6.15
Source: Walters Research
[60].

Military Fixed-Wing Aircraft Fleet in Units at Year-end

TRANSPORT - V.I.P./LIAISON/COMMUNICATION

Design Origin EU

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	527	35	4	0	56	74	195	39	77	5	1,012
1992	519	40	5	0	56	71	194	7	76	5	973
1993	472	38	0	0	50	85	179	3	95	8	930

Design Origin US

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	123	94	742	2	605	227	160	27	415	0	2,395
1992	125	89	766	2	617	225	148	28	417	0	2,417
1993	79	154	732	20	647	231	86	21	406	44	2,420

Design Origin Other

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	70	101	11	23	222	66	26	21	280	39	859
1992	67	106	13	23	206	66	26	0	279	21	807
1993	162	133	13	26	200	147	35	0	462	4	1,182

Table 6.16
Source: Walters Research
[60].

Chapter 7

Military Helicopters

Data relating to **military helicopters** are provided by Walters Research Company [60] and Eurocopter [85]. They cover the number of military helicopters in service in the world. Discrepancies can be observed between the two different sources. It has not been possible to align the two systems, so we let them stand as they are with their differences.

Assessment of fleets excludes aircraft in long term storage unless replacement outstanding. Former 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 design origin 'Other'.

The criteria used to define a *military aircraft* is that it is known to be included in military inventories. It is therefore possible that Government operated (commercial) aircraft flown and maintained by the air force are double counted as they may be included in the *civil transport aircraft* fleets presented in Chapters 2 and 3.

Military helicopters are broken down according to design origin:

- EU;
- USA;
- CIS (where information available);
- Other.

A distinction is made between 'design origin EU' and 'EU-built', the latter including as well aircraft whose conceptual origin is outside the EU, but which is built under licence agreements in the EU. In previous editions of this book this has been unclear, leading to possible mis-interpretations of the figures, which we hope to clarify herewith.

Military helicopters are broken down into the following geographical areas where they are operated:

- *EU* including all States with full membership in 1993;
- *Other Europe* including Austria, Croatia, Cyprus, Finland, Iceland, Krajina, Malta, Norway, Serbia, Serbian Bosnia,

Slovenia, Sweden, Switzerland, Turkey;

- *USA*;
- *Canada*;
- *Latin America and Caribbean* including Argentina, Bahamas, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, Venezuela;
- *Middle East and North Africa* including Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen;
- *Africa South of Sahara* including Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Congo, Congo Kinhasa, Djibouti, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea Bisseau, Guinea Republic, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Mali,

Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia, Swaziland, Tanzania, Tchad, Togo, Uganda, Zambia, Zimbabwe;

- *Republic of South Africa;*
- *Asia*
including Afghanistan, Bangladesh, Brunei, Cambodia, India, Indonesia, Japan, Korea Democratic People's Republic, Laos, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam;
- *Australasia*
including Australia, Fiji, New Zealand, Papua New Guinea.

This chapter first presents indicative prices for a selection of aircraft followed by average unit replacement values for all aircraft in service at year-end. Notice that these lists are not meant to be exhaustive, but merely indicative, and they include only aircraft that are still on the market, where such information has been available.

Military Helicopters			
INDICATIVE PRICES 1993			
Design Origin EU		Design Origin US	
Manufacturer and Model	Indicative price range Mio. ECU	Manufacturer and Model	Indicative price range Mio. ECU
Agusta		Bell	
A-129	6.08 - 8.95	AH-1 Cobra	8.51 - 14.94
AB-412SP	8.39	Boeing	
EHI		CH-47C Chinook	33.79 - 40.90
EH 101 Merlin	58.25	McDonnell Douglas	
Eurocopter		AH-64 Apache	28.97 - 41.75
B0-105	1.62 - 2.89	Sikorsky	
Cougar 532-UK	1.60 - 1.73	CH-53E Super Stallion	17.41 - 31.25
Dauphin AS365	3.65 - 11.22	UH-60 Blackhawk	8.29 - 20.24
Ecureuil AS350	0.83 - 2.06	SH-60 Sea Hawk	18.95 - 65.02
Super Puma AS332	18.09 - 30.36		
Tiger	20.87 - 29.73		
Westland			
Super Lynx	5.82 - 13.08		

Table 7.1 Source: Walters Research [60].

Military Helicopter Fleet			
AVERAGE UNIT REPLACEMENT VALUE OF UNITS IN SERVICE IN THE EU (Mio. ECU)			
	Design Origin EU	Design Origin US	Design Origin Other
1986	2.56	6.14	-
1987	2.69	6.54	-
1988	2.89	7.42	-
1989	2.93	7.51	-
1990	2.61	6.64	5.28
1991	2.98	7.49	5.98
1992	4.59	9.72	6.54
1993	6.87	11.73	6.78

Table 7.2 Source: Walters Research [60].

Military Helicopter Fleet in Units at Year-end

TOTAL FIGURES

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	4,255	1,076	9,379	173	1,393	2,604	681	126	3,270	193	23,150
1992	4,194	1,105	8,989	166	1,383	2,574	668	107	3,334	187	22,707
1993	4,141	1,048	9,646	111	1,523	2,798	572	164	3,793	188	23,984

Design Origin EUROPE

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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	96	0	396	673	320	143	635	38	5,129
1990	2,466	398	96	0	439	664	322	127	641	38	5,191
1991	2,494	409	96	1	454	626	319	126	659	36	5,220
1992	2,513	415	95	1	443	608	318	107	654	35	5,189
1993	2,373	411	95	0	400	681	299	164	695	31	5,149

Table 7.3

Source: Walters Research [60].

World Military Helicopter Fleet in Units at Year-end											
Design Origin US											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	1,682	584	9,283	172	744	1,447	171	0	2,109	157	16,349
1992	1,640	605	8,894	165	747	1,434	163	0	2,150	152	15,950
1993	1,739	548	9,551	111	900	1,499	137	0	2,423	157	17,065
Design Origin Other											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
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
1991	79	83	0	0	195	531	191	0	502	0	1,581
1992	41	85	0	0	193	532	187	0	530	0	1,568
1993	29	89	0	0	225	618	136	0	675	0	1,772

Table 7.4

Source: Walters Research [60].

Military Helicopter Fleet in Units at Year-end

	Europe										Total Units	North America					Total Units	
	EU					Other Europe						USA			Canada			
	Design Origin US			Design Origin CIS, registered in Germany	Units	Design Origin US			Design Origin CIS	Units		Design Origin US			Design Origin US	Units		Total Units
	Design Origin EU	US built	EU built under US licence			US built	EU built under US licence	US built				US licence	US built	US licence				
1960	35.3 %	23.3 %	41.4 %	-	1,742	27.6 %	56.1 %	0.0 %	16.3 %	123	1,865	100.0 %	0.0 %	4,423	100.0 %	43	4,466	6,331
1965	41.3 %	20.4 %	38.3 %	-	2,477	32.9 %	47.7 %	0.0 %	19.4 %	216	2,693	100.0 %	0.0 %	6,185	100.0 %	90	6,275	8,968
1970	37.2 %	22.9 %	39.9 %	-	3,334	22.9 %	49.1 %	0.0 %	28.0 %	407	3,741	100.0 %	0.0 %	15,874	100.0 %	87	15,961	19,702
1975	43.6 %	19.2 %	37.2 %	-	3,637	29.5 %	15.5 %	25.9 %	29.1 %	746	4,383	100.0 %	0.0 %	15,338	100.0 %	183	15,521	19,904
1980	55.9 %	18.2 %	26.0 %	-	3,559	26.4 %	8.4 %	13.5 %	51.7 %	1,662	5,221	100.0 %	0.0 %	8,749	100.0 %	173	8,922	14,143
1981	57.0 %	18.0 %	25.0 %	-	3,665	29.3 %	8.1 %	13.0 %	49.5 %	1,670	5,335	100.0 %	0.0 %	8,190	100.0 %	182	8,372	13,707
1982	58.1 %	17.6 %	24.3 %	-	3,743	32.1 %	8.7 %	12.7 %	46.4 %	1,703	5,446	100.0 %	0.0 %	7,640	100.0 %	186	7,826	13,272
1983	60.1 %	16.6 %	23.2 %	-	3,863	31.5 %	11.9 %	12.5 %	44.1 %	1,734	5,597	100.0 %	0.0 %	7,760	100.0 %	186	7,946	13,543
1984	61.2 %	16.6 %	22.2 %	-	3,894	31.4 %	14.9 %	10.1 %	43.6 %	1,744	5,638	100.0 %	0.0 %	7,848	100.0 %	186	8,034	13,672
1985	61.3 %	16.2 %	22.5 %	-	3,917	28.5 %	13.3 %	11.4 %	46.8 %	1,812	5,729	100.0 %	0.0 %	7,658	100.0 %	185	7,843	13,572
1986	61.5 %	15.7 %	22.8 %	-	3,977	28.5 %	25.4 %	0.0 %	46.0 %	1,835	5,812	100.0 %	0.0 %	7,646	100.0 %	185	7,831	13,643
1987	61.0 %	15.9 %	23.2 %	-	3,961	26.7 %	26.1 %	0.0 %	47.2 %	1,791	5,752	100.0 %	0.0 %	7,924	100.0 %	184	8,108	13,860
1988	58.3 %	15.6 %	26.1 %	-	4,018	25.9 %	14.8 %	12.0 %	47.3 %	1,845	5,863	100.0 %	0.0 %	8,019	100.0 %	183	8,202	14,065
1989	59.0 %	15.5 %	25.5 %	-	4,059	26.6 %	14.7 %	10.7 %	47.9 %	1,880	5,939	99.9 %	0.1 %	7,817	100.0 %	183	8,000	13,939
1990	58.7 %	15.5 %	24.6 %	1.2 %	4,052	27.1 %	15.3 %	11.1 %	46.5 %	1,859	5,911	99.9 %	0.1 %	7,783	100.0 %	183	7,966	13,877
1991	58.6 %	15.4 %	24.8 %	1.2 %	4,088	27.7 %	15.8 %	10.4 %	46.1 %	1,890	5,978	99.9 %	0.1 %	7,957	100.0 %	176	8,133	14,111
1992	60.0 %	15.9 %	22.8 %	1.2 %	4,045	26.8 %	21.3 %	15.2 %	36.6 %	1,974	6,019	100.0 %	0.0 %	7,625	100.0 %	175	7,800	13,819
1993	59.3 %	15.4 %	24.1 %	1.2 %	4,065	26.0 %	18.5 %	11.0 %	44.6 %	1,955	6,020	99.8 %	0.2 %	7,287	100.0 %	175	7,462	13,482

Table 7.5

Source: Eurocopter [85].

EU Military Helicopter Fleet in Units at Year-end													
Distribution of Fleet within EU													
	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT	Total
1960	10	243	14	27	801	491	7	0	98	0	49	2	1,742
1965	43	490	25	39	758	764	7	3	227	0	90	31	2,477
1970	80	765	17	75	734	1,030	55	3	352	0	98	125	3,334
1975	79	714	32	196	805	987	64	8	548	0	91	113	3,637
1980	80	701	35	253	812	847	141	9	495	0	124	62	3,559
1981	80	742	33	303	829	864	126	11	493	0	122	62	3,665
1982	80	831	29	311	847	824	122	11	506	0	120	62	3,743
1983	79	915	29	310	860	848	116	10	514	0	120	62	3,863
1984	79	932	29	312	903	818	116	10	515	0	118	62	3,894
1985	78	922	28	308	922	831	128	10	509	0	117	64	3,917
1986	74	913	28	305	937	831	142	15	528	0	117	87	3,977
1987	73	915	29	311	953	826	140	15	543	0	117	39	3,961
1988	69	913	28	322	929	858	140	15	584	0	118	42	4,018
1989	68	913	29	323	954	862	140	15	596	0	118	41	4,059
1990	68	968	41	325	926	829	140	15	583	0	116	41	4,052
1991	68	968	41	324	935	826	140	15	612	0	116	43	4,088
1992	60	926	41	288	950	823	160	15	623	0	114	45	4,045
1993	73	926	40	286	957	793	170	15	641	0	119	45	4,065

Table 7.6 Source: Eurocopter [85].

Military Helicopter Fleet in Units at Year-end

Share of EU-built¹ Aircraft in % of Total

	BE	DE	DK	ES	FR	GB	GR	IE	IT	LU	NL	PT
1960	100.0 %	67.1 %	35.7 %	44.4 %	73.0 %	92.9 %	0.0 %	-	96.9 %	-	16.3 %	100.0 %
1965	88.4 %	60.8 %	32.0 %	56.4 %	75.6 %	93.7 %	0.0 %	100.0 %	96.0 %	-	71.1 %	100.0 %
1970	96.3 %	33.9 %	47.1 %	57.3 %	83.4 %	98.3 %	0.0 %	100.0 %	96.3 %	-	92.9 %	100.0 %
1975	96.2 %	39.2 %	25.0 %	28.1 %	95.8 %	98.8 %	25.0 %	100.0 %	99.3 %	-	100.0 %	100.0 %
1980	96.3 %	43.9 %	37.1 %	37.5 %	100.0 %	99.9 %	51.1 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1981	96.3 %	47.0 %	36.4 %	42.6 %	100.0 %	98.6 %	54.8 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1982	96.3 %	52.7 %	27.6 %	49.5 %	100.0 %	96.2 %	57.4 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1983	96.2 %	57.0 %	27.6 %	52.6 %	100.0 %	96.3 %	58.6 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1984	96.2 %	57.8 %	27.6 %	52.9 %	100.0 %	96.0 %	58.6 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1985	94.9 %	57.4 %	25.0 %	53.2 %	100.0 %	95.8 %	70.3 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1986	100.0 %	57.1 %	25.0 %	52.8 %	100.0 %	95.7 %	77.5 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1987	100.0 %	57.2 %	27.6 %	52.4 %	100.0 %	95.8 %	77.1 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1988	100.0 %	57.2 %	25.0 %	53.4 %	100.0 %	96.2 %	77.1 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1989	100.0 %	57.2 %	24.1 %	53.6 %	100.0 %	96.2 %	77.1 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1990	100.0 %	54.4 %	46.3 %	53.8 %	100.0 %	96.0 %	77.1 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1991	100.0 %	54.4 %	46.3 %	53.1 %	100.0 %	96.0 %	77.1 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1992	100.0 %	53.1 %	46.3 %	39.9 %	100.0 %	96.0 %	80.0 %	100.0 %	100.0 %	-	100.0 %	100.0 %
1993	100.0 %	53.1 %	47.5 %	51.4 %	100.0 %	95.8 %	75.3 %	100.0 %	100.0 %	-	94.1 %	100.0 %

1) EU-built includes aircraft whose design originate in the EU and US-designed aircraft built under licence in the EU

Table 7.7

Source: Eurocopter [85].

Chapter 8

Military Turbine Engines

Data relating to **military turbine engines**, provided by Walters Research Company [61], cover the number of turbine aircraft engines in military service in the world. Former 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 design origin 'Other'.

As opposed to previous editions the data does *not* include an allowance for spare engines that may be in circulation. The reason for this is the lack of evidence and the possible introduction of errors due to unsubstantiated facts on spare engine holding. Each country has its own policy on spares holding taking into consideration the aircraft age, usage rates, types of engine, logistic support and budgets - policies for which accurate documentation is not available.

The engine statistics reflect the aircraft in service and the number of engines per type of aircraft as well as the fact that some engines, although having the same name, have different thrusts for different types of aircraft. Several engines border on 7 Ton maximum take-off thrust, for example the Snecma M53 classed in previous years as a turbofan,

but which could also be classed as a turbojet due to some design characteristics. For reasons of backwards compatibility such cases continue their previous classification.

Military engines are broken down according to category of engines, take-off thrust¹ categories, design origin, manufacturer and geographical areas.

The various categories are listed below.

Engine categories

- Turbofan > 14 Tons
- Turbofan 7 - 14 Tons
- Turbofan 3 - 7 Tons
- Turbofan <= 3 Tons
- Turbojet 7 - 14 Tons
- Turbojet 3 - 7 Tons
- Turbojet <= 3 Tons
- Turboprop
- Turboshaft

¹ Maximum thrust, including reheat where applicable

Design origin

- EU;
- USA;
- Other.

Design origin reflects country of original design (or significant re-design) and not necessarily the country of production and/or assembly.

Manufacturers

- CFM International Int'l
- General Electric US
- Pratt & Whitney US
- Rolls-Royce GB
- SNECMA FR
- Turbomeca FR
- Turbo-Union Int'l
- Other

Manufacturer reflects the company which originated the design (or has significantly re-designed /developed the engine) and does not necessarily indicate production/assembly origin.

Geographical areas

- *EU*
including all States with full membership in 1993;
- *Other Europe*
including Austria, Croatia, Cyprus, Finland, Iceland, Krajina, Malta, Norway, Serbia, Serbian Bosnia, Slovenia, Sweden, Switzerland, Turkey;
- *USA*;
- *Canada*;
- *Latin America and Caribbean*
including Argentina, Bahamas, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, Venezuela;
- *Middle East and North Africa*
including Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen;

- *Africa South of Sahara*
including Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verdi, Central African Republic, Congo, Congo Kinhasa, Djibouti, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea Bisseau, Guinea Republic, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia, Swaziland, Tanzania, Tchad, Togo, Uganda, Zambia, Zimbabwe;
- *Republic of South Africa*;
- *Asia*
including Afghanistan, Bangladesh, Brunei, Cambodia, India, Indonesia, Japan, Korea Democratic People's Republic, Laos, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam;
- *Australasia*
including Australia, Fiji, New Zealand, Papua New Guinea.

A list of military engines included in the study is given opposite.

Turbine Aircraft Engines in Military Service

TURBOFANS			TURBOJETS		
Design origin EU	Design origin USA	Design origin Other	Design origin EU	Design origin USA	Design origin Other
CFM Int'l	AVCO LYCOMING	IHI	ROLLS-ROYCE	ALLISON	IHI
CFM-56 ¹	ALF502	F-3	Avon	J33	J-3
ROLLS-ROYCE	GARRETT	IVCHENKO	Nene	FAIRCHILD	INSTYTUT LOTNICTYVA
Conway	ATF3	AI-25	Orpheus	J44	SO-3
M54H	TFE731	KUZNETOV	Viper	GENERAL ELECTRIC	KLIMOV
Pegasus	GENERAL ELECTRIC	NK-8	SNECMA	CJ610	VK-1
RB-211	CF6	P&W CANADA	Atar	CJ805	KOLIEŠOV
Spey	CF34 (TF34)	JT15D	TURBOMECA	J47	VD-7
Tay	CF700	SOLOVIEV	Maborde	J79	LYULKA
R-R / TURBOMECA	F101, F110	D20		J85	AL-7F
Adour	F 118, F404	D30		PRATT & WHITNEY	AL-21F
SNECMA	TF39	TUMANSKY		J52	MIKULIN
M53	PRATT & WHITNEY	R29		J57	AM-3
M88	F100	R33		J58	MOTORLET
SNECMA / TURBOMECA	JT3D (TF33)			J75	M701
Larzac	JT8D			JT12 (J60)	TUMANSKY
TURBOMECA	JT9D			TELEDYNE	RD9
Aubisque	TF30			J69	R13
TURBO-UNION				WRIGHT	RU19
RB-199				J65	R25
					R31
TURBOPROPS			TURBOSHAFTS		
Design origin EU	Design origin USA	Design origin Other	Design origin EU	Design origin USA	Design origin Other
NAPIER	ALLISON	IVCHENKO	NAPIER	AVCO LYCOMING	GLUSHENKOV
Eland	250	AI-20	Gazelle	LTC4	GTD-3
ROLLS-ROYCE	501 (T56)	AI-24	ROLLS-ROYCE	LTS101	TVD-10
Dart	AVCO LYCOMING	P&W CANADA	Gem	T53	ISOTOV
Tyne	T53	PT-6A	Gnome	T55	GTD-350
TURBOMECA	LTP101	WALTER	Nimbus	GENERAL ELECTRIC	TV-2
Astazou	GARRETT	M601	TURBOMECA	T58	TV-3
Bastan	TPE331 (T76)		Arriel	T64	LOTAREV
	GENERAL ELECTRIC		Artouste	T700	D-136
	CT7		Astazou	PRATT & WHITNEY	P&W CANADA
	T64		Makila	T73	PT-6T
			Turmo		SOLOVIEV
					D-25

1) Joint EU / USA design

Military Turbine Engines Inventory

TURBOFAN - MAXIMUM THRUST ABOVE 14 TONS

Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	14	0	456	0	0	28	0	0	0	0	498
1986	24	0	525	0	0	28	0	0	0	0	577
1987	24	0	599	0	4	32	0	0	0	0	659
1988	24	0	697	0	4	32	0	0	0	0	757
1989	28	0	714	0	7	32	0	0	0	0	781
1990	31	0	723	0	7	32	0	0	0	0	793
1991	39	0	727	0	7	32	0	0	16	0	821
1992	39	0	743	5	10	32	0	0	13	0	842
1993	43	0	760	14	2	47	2	0	14	0	882

Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	17.9 %	0.0 %	0.0 %	0.0 %	0.0 %	2.4 %
1986	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	17.9 %	0.0 %	0.0 %	0.0 %	0.0 %	3.5 %
1987	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	28.1 %	0.0 %	0.0 %	0.0 %	0.0 %	3.5 %
1988	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	28.1 %	0.0 %	0.0 %	0.0 %	0.0 %	2.9 %
1989	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	28.1 %	0.0 %	0.0 %	0.0 %	0.0 %	3.6 %
1990	100.0 %	0.0 %	0.0 %	0.0 %	0.0 %	28.1 %	0.0 %	0.0 %	0.0 %	0.0 %	3.9 %
1991	79.5 %	0.0 %	0.0 %	0.0 %	0.0 %	28.1 %	0.0 %	0.0 %	0.0 %	0.0 %	3.7 %
1992	79.5 %	0.0 %	0.0 %	0.0 %	0.0 %	28.1 %	0.0 %	0.0 %	0.0 %	0.0 %	3.9 %
1993	62.8 %	0.0 %	0.0 %	0.0 %	0.0 %	6.4 %	0.0 %	0.0 %	0.0 %	0.0 %	3.4 %

Table 8.1

Source: Walters Research [61].

Military Turbine Engines Inventory											
TURBOFAN - MAXIMUM THRUST BETWEEN 7 AND 14 TONS											
Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	1,663	364	7,698	119	137	1,077	51	0	481	61	11,651
1986	1,809	381	8,087	260	146	1,083	51	10	703	133	12,663
1987	1,956	426	9,150	298	158	1,389	98	20	861	158	14,514
1988	2,149	488	9,507	348	166	1,481	94	20	1,123	228	15,604
1989	2,251	516	10,053	348	202	1,547	86	20	1,232	265	16,520
1990	2,454	547	10,485	340	205	1,701	81	20	1,284	265	17,382
1991	2,450	567	10,567	340	212	1,682	79	20	1,366	260	17,543
1992	2,411	608	10,646	340	212	2,028	75	20	1,337	258	17,935
1993	2,851	686	9,903	304	208	2,106	18	16	1,392	288	17,772
Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	81.8 %	0.0 %	10.8 %	0.0 %	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 %
1991	75.1 %	0.0 %	5.0 %	0.0 %	4.7 %	9.5 %	0.0 %	0.0 %	5.7 %	0.0 %	15.8 %
1992	74.2 %	0.0 %	3.2 %	0.0 %	4.7 %	7.9 %	0.0 %	0.0 %	6.1 %	0.0 %	14.1 %
1993	72.3 %	0.0 %	1.7 %	0.0 %	7.7 %	9.4 %	0.0 %	0.0 %	9.6 %	0.0 %	14.5 %
Design Origin EU / US - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	0.9 %	0.0 %	7.1 %	0.0 %	0.0 %	0.3 %	0.0 %	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 %
1991	2.6 %	0.0 %	11.9 %	0.0 %	0.0 %	2.7 %	0.0 %	0.0 %	0.2 %	0.0 %	8.0 %
1992	2.8 %	0.0 %	13.0 %	0.0 %	0.0 %	2.2 %	0.0 %	0.0 %	0.4 %	0.0 %	8.6 %
1993	2.9 %	0.0 %	15.6 %	0.0 %	0.0 %	0.9 %	0.0 %	0.0 %	0.0 %	0.0 %	9.3 %

Table 8.2
Source: Walters
Research [61].

Military Turbine Engines Inventory

TURBOFAN - MAXIMUM THRUST BETWEEN 3 AND 7 TONS

Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	807	0	931	23	120	119	96	15	387	13	2,511
1986	806	0	921	23	130	124	95	15	413	13	2,540
1987	768	0	905	26	134	126	101	15	447	13	2,535
1988	751	5	959	40	127	124	98	15	481	13	2,613
1989	761	5	962	40	128	135	100	15	525	13	2,684
1990	808	5	945	40	118	136	103	15	551	8	2,729
1991	811	5	931	40	129	136	106	0	561	8	2,727
1992	770	8	861	40	138	129	112	0	575	8	2,641
1993	776	24	875	0	152	82	96	0	340	4	2,349
Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	92.5 %	0.0 %	0.4 %	0.0 %	54.2 %	73.9 %	78.1 %	100.0 %	84.2 %	38.5 %	40.0 %
1986	91.8 %	0.0 %	0.7 %	0.0 %	54.6 %	74.2 %	76.8 %	100.0 %	84.3 %	38.5 %	40.7 %
1987	90.6 %	0.0 %	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 %
1991	90.2 %	100.0 %	1.8 %	0.0 %	65.1 %	81.6 %	75.5 %	0.0 %	80.2 %	0.0 %	42.4 %
1992	90.8 %	100.0 %	2.0 %	0.0 %	64.5 %	80.6 %	76.8 %	0.0 %	78.2 %	0.0 %	43.4 %
1993	87.9 %	25.0 %	3.4 %	0.0 %	83.6 %	87.8 %	58.3 %	0.0 %	70.6 %	0.0 %	51.6 %

Table 8.3

Source: Walters Research [61].

Military Turbine Engines Inventory											
TURBOFAN - MAXIMUM THRUST BELOW 3 TONS											
Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	970	139	125	18	138	295	171	0	138	5	1,999
1986	971	86	125	18	164	290	151	0	159	8	1,972
1987	968	86	129	15	175	330	163	0	202	8	2,076
1988	975	135	130	15	191	380	167	0	245	8	2,246
1989	990	136	130	0	215	539	170	0	309	20	2,509
1990	993	141	136	0	227	547	169	0	366	20	2,599
1991	992	143	131	0	235	535	174	0	403	20	2,633
1992	956	140	150	0	232	546	193	8	462	20	2,707
1993	891	93	61	0	238	575	186	6	566	15	2,631
Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	80.9 %	87.7 %	0.0 %	0.0 %	0.0 %	49.7 %	48.0 %	0.0 %	11.7 %	0.0 %	59.3 %
1986	80.2 %	80.1 %	0.0 %	0.0 %	0.0 %	52.8 %	52.8 %	0.0 %	10.2 %	0.0 %	56.6 %
1987	79.9 %	80.1 %	0.0 %	0.0 %	0.0 %	47.7 %	48.1 %	0.0 %	8.0 %	0.0 %	53.9 %
1988	79.0 %	87.4 %	0.9 %	0.0 %	0.0 %	46.9 %	48.1 %	0.0 %	6.6 %	0.0 %	54.6 %
1989	77.2 %	86.3 %	0.9 %	0.0 %	0.0 %	32.4 %	44.9 %	0.0 %	5.0 %	0.0 %	48.7 %
1990	76.7 %	86.8 %	1.8 %	0.0 %	0.0 %	31.1 %	45.0 %	0.0 %	4.2 %	0.0 %	47.4 %
1991	76.4 %	86.9 %	1.8 %	0.0 %	0.0 %	31.8 %	45.0 %	0.0 %	3.8 %	0.0 %	47.1 %
1992	74.7 %	87.8 %	5.3 %	0.0 %	0.0 %	31.9 %	42.8 %	0.0 %	6.6 %	0.0 %	45.4 %
1993	71.2 %	76.3 %	5.0 %	0.0 %	0.0 %	36.3 %	51.6 %	0.0 %	34.6 %	0.0 %	46.6 %

Table 8.4

Source: Walters Research [61].

Military Turbine Engines Inventory

TURBOJET - MAXIMUM THRUST BETWEEN 7 AND 14 TONS

Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	1,126	971	5,237	0	259	3,460	293	69	2,210	0	13,625
1986	1,084	1,017	4,775	0	259	3,346	268	68	2,102	0	12,919
1987	993	1,084	3,992	0	259	3,357	265	65	2,120	0	12,135
1988	962	974	3,349	0	239	3,441	284	65	2,112	0	11,426
1989	911	928	2,595	0	257	3,380	287	79	2,219	0	10,656
1990	901	923	1,969	0	269	3,311	284	84	2,270	0	10,011
1991	929	964	1,230	0	269	3,108	320	90	2,326	0	9,236
1992	870	920	639	0	287	2,898	281	69	2,242	0	8,206
1993	869	914	550	0	287	2,348	521	29	3,283	0	8,801

Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	16.1 %	6.8 %	0.0 %	0.0 %	3.2 %	12.4 %	0.0 %	100.0 %	0.0 %	0.0 %	9.3 %
1986	17.3 %	6.7 %	0.0 %	0.0 %	3.2 %	10.8 %	0.0 %	100.0 %	0.0 %	0.0 %	9.5 %
1987	16.4 %	4.9 %	0.0 %	0.0 %	3.2 %	10.8 %	0.0 %	100.0 %	0.0 %	0.0 %	9.1 %
1988	15.1 %	5.6 %	0.0 %	0.0 %	3.4 %	10.5 %	0.0 %	100.0 %	0.0 %	0.0 %	9.2 %
1989	15.6 %	5.3 %	0.0 %	0.0 %	3.0 %	11.0 %	0.0 %	100.0 %	0.0 %	0.0 %	9.8 %
1990	15.5 %	5.3 %	0.0 %	0.0 %	2.9 %	10.7 %	0.0 %	100.0 %	0.0 %	0.0 %	10.2 %
1991	14.8 %	5.0 %	0.0 %	0.0 %	2.9 %	10.2 %	0.0 %	100.0 %	0.0 %	0.0 %	10.6 %
1992	14.9 %	5.3 %	0.0 %	0.0 %	4.2 %	8.2 %	0.0 %	100.0 %	0.0 %	0.0 %	10.7 %
1993	14.7 %	5.3 %	0.0 %	0.0 %	4.2 %	8.6 %	1.7 %	100.0 %	4.4 %	0.0 %	6.5 %

Table 8.5

Source: Walters Research [61].

Military Turbine Engines Inventory											
TURBOJET - MAXIMUM THRUST BETWEEN 3 AND 7 TONS											
Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	1,736	183	4,228	8	614	1,188	74	70	410	122	8,633
1986	1,524	182	3,965	8	616	1,091	67	70	468	113	8,104
1987	1,348	182	3,650	0	601	1,062	64	70	481	87	7,545
1988	1,150	182	3,455	0	595	1,002	62	64	417	36	6,963
1989	1,078	182	2,917	0	361	882	61	50	359	26	5,916
1990	1,054	181	2,692	0	348	853	61	30	350	26	5,595
1991	936	179	2,273	0	341	769	59	30	349	26	4,962
1992	751	179	1,846	0	327	727	56	30	331	25	4,272
1993	732	166	1,651	60	346	588	26	30	337	26	3,962
Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	77.6 %	52.4 %	0.0 %	0.0 %	23.2 %	24.1 %	18.5 %	100.0 %	69.7 %	77.0 %	38.9 %
1986	77.1 %	52.4 %	0.0 %	0.0 %	23.2 %	25.8 %	17.6 %	100.0 %	43.7 %	75.2 %	35.7 %
1987	80.2 %	52.4 %	0.0 %	0.0 %	23.0 %	23.8 %	19.9 %	100.0 %	42.3 %	67.8 %	35.4 %
1988	81.3 %	52.4 %	0.0 %	0.0 %	22.9 %	23.7 %	19.6 %	100.0 %	42.6 %	22.2 %	34.3 %
1989	81.3 %	52.4 %	0.0 %	0.0 %	29.0 %	25.6 %	19.7 %	100.0 %	49.0 %	0.0 %	36.9 %
1990	81.3 %	52.4 %	0.0 %	0.0 %	28.7 %	26.4 %	19.7 %	100.0 %	50.4 %	0.0 %	38.0 %
1991	81.3 %	52.4 %	0.0 %	0.0 %	28.5 %	29.2 %	20.3 %	100.0 %	51.5 %	0.0 %	39.7 %
1992	81.3 %	52.4 %	0.0 %	0.0 %	28.3 %	30.9 %	19.6 %	100.0 %	45.1 %	0.0 %	40.4 %
1993	81.3 %	52.4 %	0.0 %	0.0 %	28.3 %	47.6 %	34.6 %	100.0 %	45.4 %	0.0 %	40.5 %

Table 8.6

Source: Walters Research [61].

Military Turbine Engines Inventory

TURBOJET - MAXIMUM THRUST BELOW 3 TONS

Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	1,653	1,494	3,546	312	1,190	1,415	244	279	2,990	67	13,190
1986	1,481	1,357	3,445	311	1,193	1,375	216	278	2,922	65	12,643
1987	1,478	1,329	3,298	311	1,178	1,334	190	277	2,851	65	12,311
1988	1,395	1,397	3,205	307	1,231	1,272	176	281	2,776	63	12,103
1989	1,304	1,426	3,112	307	1,212	1,203	174	281	2,663	62	11,744
1990	1,314	1,400	3,090	307	1,193	1,201	177	278	2,565	59	11,584
1991	1,220	1,443	3,019	307	1,190	1,097	170	274	2,392	62	11,174
1992	1,084	1,402	2,829	305	1,211	1,091	171	273	2,324	56	10,746
1993	972	1,228	2,557	306	1,135	1,020	134	400	2,206	49	10,007

Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	57.4 %	44.5 %	0.0 %	0.0 %	30.4 %	26.5 %	67.9 %	100.0 %	18.6 %	100.0 %	25.8 %
1986	53.4 %	41.6 %	0.0 %	0.0 %	30.4 %	27.4 %	69.2 %	100.0 %	16.9 %	100.0 %	24.4 %
1987	53.9 %	39.9 %	0.0 %	0.0 %	30.3 %	27.4 %	78.1 %	100.0 %	17.3 %	100.0 %	24.6 %
1988	53.9 %	43.6 %	0.0 %	0.0 %	28.1 %	27.8 %	81.7 %	100.0 %	16.4 %	100.0 %	24.6 %
1989	52.9 %	42.4 %	0.0 %	0.0 %	26.3 %	29.5 %	81.4 %	100.0 %	14.9 %	100.0 %	24.0 %
1990	51.1 %	38.1 %	0.0 %	0.0 %	26.6 %	29.5 %	79.8 %	100.0 %	12.9 %	100.0 %	23.3 %
1991	52.8 %	36.8 %	0.0 %	0.0 %	26.6 %	26.7 %	79.8 %	100.0 %	13.1 %	100.0 %	23.2 %
1992	50.8 %	35.3 %	0.0 %	0.0 %	26.0 %	26.8 %	81.4 %	100.0 %	13.1 %	100.0 %	22.6 %
1993	61.3 %	36.5 %	0.0 %	0.0 %	25.1 %	34.9 %	83.6 %	100.0 %	13.1 %	100.0 %	25.3 %

Table 8.7

Source: Walters Research [61].

Military Turbine Engines Inventory											
TURBOPROP											
Total Units in Service at Year-end											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	1,568	453	6,497	195	1,741	1,329	585	65	2,010	306	14,749
1986	1,557	453	6,611	196	1,863	1,331	616	62	2,255	282	15,226
1987	1,591	400	6,518	196	1,989	1,390	620	60	2,347	295	15,406
1988	1,638	413	6,388	196	2,098	1,498	620	60	2,567	327	15,805
1989	1,737	417	6,319	197	2,052	1,487	618	62	2,697	346	15,932
1990	1,829	409	6,360	204	2,092	1,517	640	62	2,801	367	16,281
1991	1,859	429	6,398	216	2,089	1,549	641	57	2,858	386	16,482
1992	1,902	463	6,212	204	2,185	1,610	632	57	2,992	358	16,615
1993	2,047	452	5,820	178	2,218	1,642	667	92	3,018	349	16,483
Design Origin EU - % Share of Total											
	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
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 %
1991	35.6 %	15.6 %	0.5 %	5.8 %	11.4 %	5.1 %	7.1 %	35.1 %	10.8 %	13.3 %	9.0 %
1992	34.0 %	14.5 %	0.5 %	6.2 %	10.9 %	4.7 %	7.2 %	35.1 %	10.4 %	12.5 %	8.8 %
1993	36.4 %	12.8 %	0.1 %	0.0 %	9.4 %	2.7 %	7.8 %	0.0 %	9.0 %	10.9 %	8.6 %

Table 8.8

Source: Walters Research [61].

Military Turbine Engines Inventory

TURBOSHAF

Total Units in Service at Year-end

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total Units
1985	5,486	989	14,252	279	1,241	3,398	826	278	3,186	218	30,153
1986	5,435	1,006	14,794	279	1,391	3,482	872	276	3,410	217	31,162
1987	5,295	1,094	14,730	276	1,420	3,766	1,011	269	3,520	210	31,591
1988	5,362	1,134	14,795	275	1,409	3,757	1,042	262	3,729	205	31,970
1989	5,367	1,130	14,830	270	1,580	3,760	1,013	262	3,763	237	32,212
1990	5,595	1,149	15,326	270	1,709	3,775	998	212	3,962	289	33,285
1991	5,674	1,176	14,661	262	1,761	3,743	990	211	4,067	238	32,783
1992	5,640	1,217	14,331	252	1,763	3,756	971	177	4,161	233	32,501
1993	5,656	1,226	14,408	169	1,972	4,107	831	267	4,871	241	33,748

Design Origin EU - % Share of Total

	EU	Other Europe	USA	Canada	Latin America and Caribbean	Middle East and North Africa	Africa South of Sahara	Republic of South Africa	Asia	Australasia	Total
1985	51.9 %	41.3 %	0.0 %	0.0 %	22.2 %	24.7 %	45.7 %	100.0 %	17.7 %	18.7 %	19.5 %
1986	52.1 %	40.3 %	0.0 %	0.0 %	23.2 %	25.1 %	44.8 %	100.0 %	17.2 %	18.3 %	19.2 %
1987	51.4 %	37.2 %	0.0 %	0.0 %	23.1 %	24.9 %	37.6 %	100.0 %	17.5 %	18.7 %	18.9 %
1988	51.1 %	37.1 %	0.0 %	0.0 %	23.5 %	23.3 %	34.5 %	100.0 %	17.3 %	15.9 %	18.5 %
1989	50.6 %	36.6 %	0.0 %	0.0 %	23.2 %	22.5 %	34.0 %	100.0 %	18.1 %	14.2 %	18.4 %
1990	49.7 %	36.5 %	0.0 %	0.0 %	24.9 %	22.4 %	35.0 %	100.0 %	18.0 %	11.6 %	18.2 %
1991	49.9 %	37.6 %	0.0 %	0.0 %	24.9 %	21.7 %	35.1 %	100.0 %	18.2 %	13.7 %	18.7 %
1992	50.3 %	37.8 %	0.0 %	0.0 %	24.1 %	21.0 %	35.5 %	100.0 %	17.9 %	13.6 %	18.7 %
1993	47.3 %	34.4 %	1.3 %	0.0 %	27.9 %	18.8 %	41.5 %	100.0 %	16.3 %	13.7 %	17.9 %

Table 8.9

Source: Walters Research [61].

Military Turbine Engines Inventory

Manufacturers' Share of Engines in Operation by Year-end

	TURBOFAN MAXIMUM THRUST ABOVE 14 TONS				TURBOFAN MAXIMUM THRUST BETWEEN 7 AND 14 TONS							Total Units
	General Electric	Pratt & Whitney	Rolls- Royce	Total Units	CFM Int'l	General Electric	Pratt & Whitney	Rolls- Royce	Snecma	Turbo Union	Other	
1985	86 %	10 %	2 %	498	5 %	4 %	63 %	11 %	0 %	8 %	8 %	11,651
1986	86 %	10 %	4 %	577	6 %	4 %	62 %	10 %	1 %	8 %	8 %	12,663
1987	86 %	8 %	4 %	659	6 %	10 %	56 %	9 %	1 %	8 %	9 %	14,514
1988	87 %	8 %	3 %	757	7 %	12 %	54 %	8 %	1 %	8 %	10 %	15,604
1989	87 %	8 %	4 %	781	7 %	14 %	51 %	8 %	1 %	8 %	11 %	16,520
1990	87 %	8 %	4 %	793	8 %	15 %	50 %	7 %	2 %	9 %	11 %	17,382
1991	86 %	8 %	4 %	821	8 %	17 %	49 %	5 %	2 %	9 %	10 %	17,543
1992	85 %	13 %	4 %	842	9 %	18 %	49 %	4 %	2 %	9 %	11 %	17,935
1993	85 %	12 %	3 %	882	9 %	23 %	43 %	3 %	2 %	10 %	10 %	17,772

Manufacturers' Share of Engines in Operation by Year-end

	TURBOFAN MAXIMUM THRUST BETWEEN 3 AND 7 TONS				TURBOFAN MAXIMUM THRUST BELOW 3 TONS				Total Units	
	General Electric	Pratt & Whitney	Rolls- Royce	Other	General Electric	Rolls- Royce	Snecma	Other		
1985	35 %	4 %	48 %	13 %	2,511	6 %	16 %	38 %	41 %	1,999
1986	34 %	4 %	50 %	13 %	2,540	6 %	16 %	40 %	38 %	1,972
1987	33 %	4 %	50 %	13 %	2,535	6 %	16 %	38 %	41 %	2,076
1988	34 %	4 %	50 %	13 %	2,613	5 %	17 %	34 %	45 %	2,246
1989	34 %	4 %	50 %	13 %	2,684	4 %	15 %	31 %	49 %	2,509
1990	33 %	3 %	51 %	13 %	2,729	4 %	16 %	30 %	50 %	2,599
1991	33 %	3 %	51 %	13 %	2,727	4 %	16 %	29 %	51 %	2,633
1992	32 %	4 %	52 %	13 %	2,641	5 %	16 %	27 %	52 %	2,707
1993	32 %	4 %	52 %	13 %	2,349	1 %	20 %	26 %	52 %	2,631

Table 8.10 Source: Walters Research [61].

Military Turbine Engines Inventory Manufacturers' Share of Engines in Operation by Year-end

	TURBOJET MAXIMUM THRUST BETWEEN 7 AND 14 TONS						TURBOJET MAXIMUM THRUST BETWEEN 3 AND 7 TONS					TURBOJET MAXIMUM THRUST BELOW 3 TONS				
	General Electric	Pratt & Whitney	Rolls-Royce	Snecma	Other	Total Units	Pratt & Whitney	Rolls-Royce	Snecma	Other	Total Units	General Electric	Pratt & Whitney	Rolls-Royce	Other	Total Units
1985	52 %	4 %	3 %	6 %	35 %	13,625	67 %	13 %	16 %	4 %	8,633	63 %	2 %	14 %	21 %	13,190
1986	51 %	3 %	3 %	6 %	36 %	12,919	66 %	13 %	16 %	5 %	8,104	64 %	2 %	15 %	19 %	12,643
1987	49 %	3 %	2 %	7 %	39 %	12,135	65 %	13 %	16 %	6 %	7,545	65 %	1 %	15 %	19 %	12,311
1988	48 %	1 %	2 %	7 %	42 %	11,426	66 %	13 %	15 %	6 %	6,963	65 %	1 %	15 %	19 %	12,103
1989	45 %	1 %	2 %	8 %	44 %	10,656	65 %	13 %	16 %	6 %	5,916	66 %	1 %	15 %	18 %	11,744
1990	42 %	1 %	2 %	8 %	47 %	10,011	63 %	13 %	17 %	6 %	5,595	67 %	1 %	14 %	18 %	11,584
1991	39 %	1 %	2 %	8 %	49 %	9,236	61 %	13 %	17 %	9 %	4,962	68 %	1 %	15 %	16 %	11,174
1992	37 %	1 %	3 %	8 %	51 %	8,206	58 %	13 %	18 %	11 %	4,272	69 %	1 %	14 %	16 %	10,746
1993	35 %	0 %	0 %	8 %	58 %	8,801	56 %	13 %	19 %	12 %	3,962	74 %	0 %	13 %	14 %	10,007

Table 8.11 Source: Walters Research [61]

1993

Distribution of Military Turbine Engines on Categories
Breakdown by Design Origin

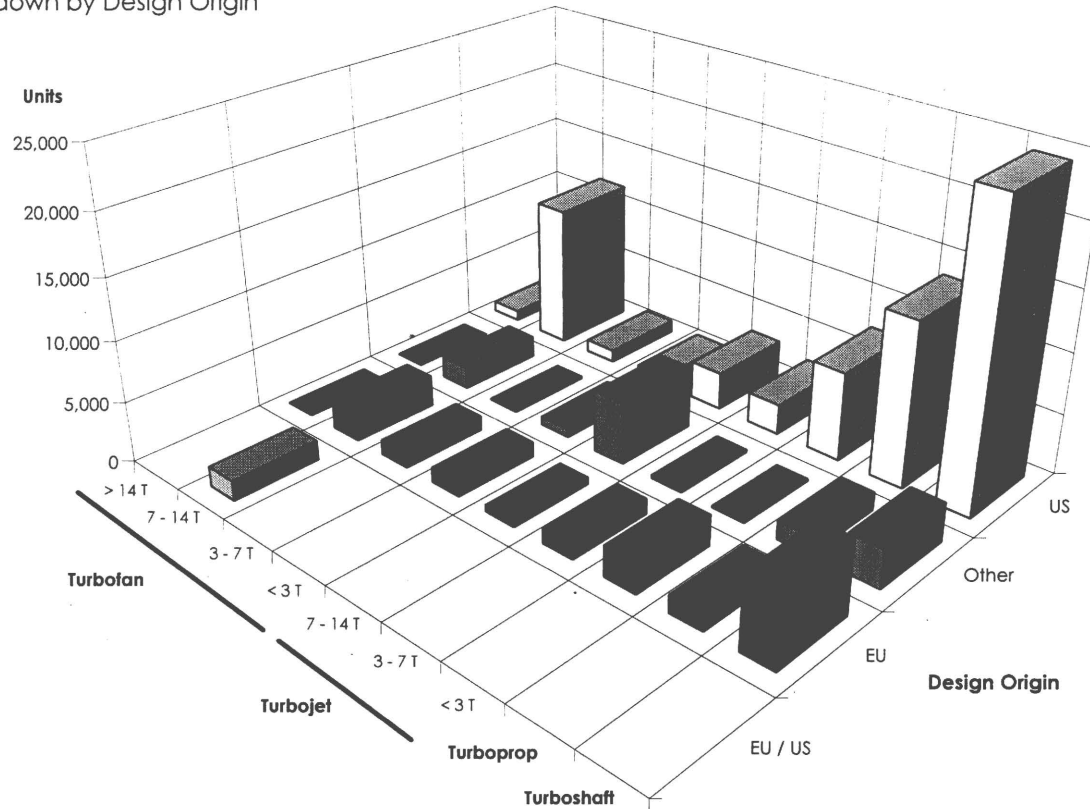


Chart 8.1

Source: Walters Research [61].

Chapter 9

Civil Aircraft Products Foreign Trade

The figures on **EU foreign trade in civil aircraft products** are obtained using the COMBINED NOMENCLATURE (CN) tables supplied by Eurostat¹. EU imports and exports are consolidated at EU level, excluding internal trade between member states.

Total EU civil aircraft products foreign trade is compared with total US civil trade.

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 with the content as specified below 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
- Hydropneumatic 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
- Bearing housings, not incorporating ball or roller bearings; plain shaft bearings

¹ The Statistical Office of The European Union

Equipment (continued)

- 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
- Profile shapes, cut to size, of vulcanized rubber other than hard rubber

Other material (continued)

- 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 lifting, handling, loading or unloading machinery (for example, lifts, skip hoists, elevators and conveyors, etc.)

Other material (continued)

- 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

EU Civil Aircraft Products Foreign Trade

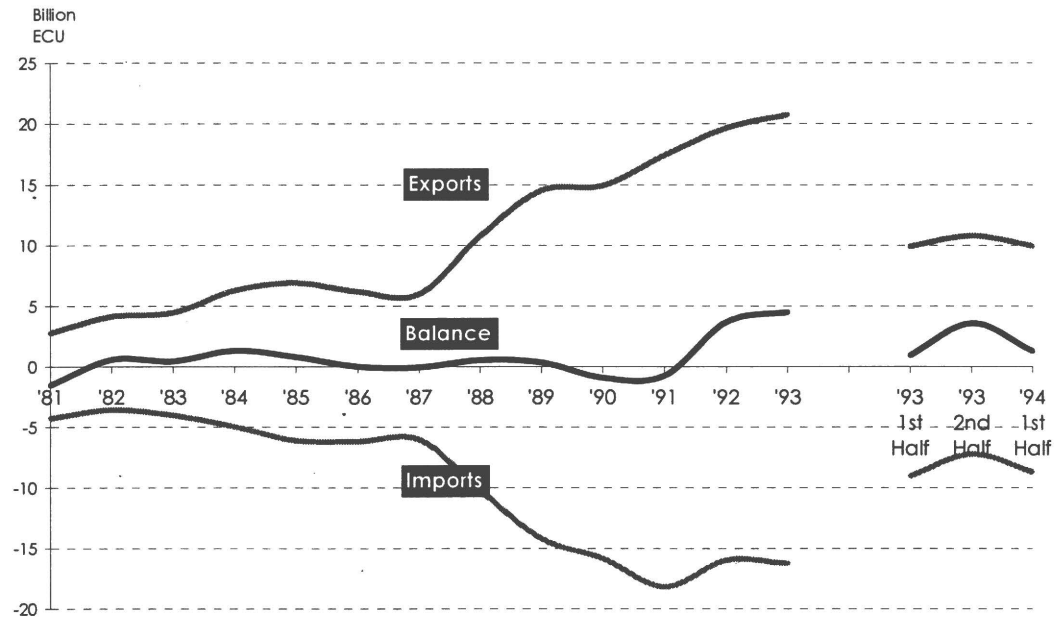


Chart 9.1

Source: Eurostat [77].

EU Civil Aircraft Products Foreign Trade

Total Figures, Compared with US Civil Trade (Million ECU)

	IMPORT						EXPORT						TRADE BALANCE					
	Airframes	Engines	Equipment	Other Material	Total EU	US Civil Trade	Airframes	Engines	Equipment	Other Material	Total EU	US Civil Trade	Airframes	Engines	Equipment	Other Material	Total EU	US Civil Trade
1981	2,492	1,326	346	134	4,298	-	2,116	352	195	105	2,767	-	-376	-975	-151	-29	-1,531	-
1982	1,454	1,567	415	139	3,575	-	3,031	757	218	146	4,151	-	1,577	-810	-198	7	576	-
1983	1,491	1,879	499	153	4,022	3,288	2,791	1,285	247	145	4,468	11,902	1,300	-594	-252	-8	445	8,614
1984	1,721	2,504	556	192	4,974	4,800	3,962	1,875	296	164	6,297	12,242	2,240	-629	-260	-28	1,323	7,442
1985	2,660	2,644	573	234	6,111	6,531	3,704	2,649	356	205	6,914	16,960	1,044	5	-217	-30	803	10,429
1986	2,817	2,555	579	225	6,176	6,501	2,956	2,655	387	189	6,187	15,089	139	100	-193	-36	11	8,588
1987	2,633	2,648	560	194	6,035	5,552	2,651	2,806	361	169	5,988	13,657	18	159	-199	-25	-47	8,105
1988	5,754	2,970	589	933	10,246	6,430	6,228	2,901	477	1,183	10,790	17,164	474	-68	-111	250	544	10,734
1989	8,763	3,592	694	1,147	14,196	6,535	8,959	3,684	537	1,360	14,540	23,252	196	92	-157	213	344	16,717
1990	10,064	3,869	755	1,175	15,863	6,480	8,072	4,788	622	1,462	14,944	24,750	-1,992	919	-133	287	-919	18,271
1991	11,947	4,125	780	1,312	18,164	7,479	10,386	4,910	565	1,554	17,415	28,686	-1,561	785	-215	243	-749	21,207
1992	9,965	3,815	820	1,377	15,978	7,487 ^R	12,096	5,286	592	1,693	19,667	28,429	2,131	1,471	-228	316	3,690	20,942 ^R
1993	10,288	3,874	669	1,437	16,268	7,367	13,551	4,811	612	1,785	20,758	27,174	3,263	937	-57	349	4,491	19,807
1993 1 st Half	6,087	1,881	340	724	9,033	-	6,403	2,371	297	883	9,954	-	316	490	-42	159	922	-
1993 2 nd Half	4,201	1,993	329	712	7,235	-	7,148	2,440	314	902	10,804	-	2,947	447	-15	190	3,569	-
1994 1 st Half	5,430	2,123	311	843	8,707	-	6,166	2,529	299	982	9,978	16,763 ^E	737	406	-11	140	1,271	-

Table 9.1 Sources: Eurostat [77]; A.I.A.A. [64, 66].

EU Civil Aircraft Products Trade with USA															
(Million ECU)															
IMPORT					EXPORT					TRADE BALANCE					
	Airframes	Engines	Equipment	Other Material	Total	Airframes	Engines	Equipment	Other Material	Total	Airframes	Engines	Equipment	Other Material	Total
1981	2,323	1,236	310	119	3,988	708	205	60	24	997	-1,615	-1,031	-250	-95	-2,991
1982	1,297	1,459	375	124	3,255	727	454	66	34	1,281	-570	-1,005	-309	-89	-1,973
1983	1,282	1,702	447	132	3,563	609	803	76	29	1,517	-673	-899	-372	-103	-2,047
1984	1,484	2,124	492	163	4,262	879	1,201	95	39	2,214	-605	-923	-397	-124	-2,048
1985	2,338	2,226	512	208	5,285	1,507	1,852	126	60	3,544	-832	-374	-387	-148	-1,741
1986	2,604	2,196	518	204	5,522	806	1,844	140	62	2,852	-1,798	-352	-378	-143	-2,671
1987	2,236	2,252	505	166	5,159	1,035	1,823	137	52	3,047	-1,202	-429	-367	-114	-2,112
1988	3,826	2,574	489	370	7,259	2,008	1,965	147	263	4,382	-1,818	-609	-343	-107	-2,877
1989	6,846	3,081	595	459	10,981	2,635	2,556	164	315	5,669	-4,211	-524	-431	-145	-5,312
1990	8,134	3,363	637	465	12,599	2,340	3,481	209	310	6,340	-5,794	118	-428	-155	-6,259
1991	9,415	3,599	657	513	14,184	2,804	3,671	202	327	7,004	-6,611	71	-454	-186	-7,180
1992	6,625	3,242	671	525	11,063	3,049	3,978	181	337	7,545	-3,577	736	-489	-188	-3,518
1993	5,101	3,171	475	538	9,284	3,049	3,978	181	337	7,545	-2,052	807	-293	-201	-1,740
1993 1 st Half	2,799	1,533	245	274	4,851	1,494	2,020	90	165	3,769	-1,305	487	-155	-109	-1,083
1993 2 nd Half	2,302	1,637	230	264	4,433	1,555	1,958	92	172	3,776	-747	320	-138	-92	-657
1994 1 st Half	2,392	1,707	224	294	4,617	1,974	1,657	92	163	3,886	-418	-50	-133	-131	-731

Table 9.2 Source: Eurostat [77].

EU Civil Aircraft Products Trade with Japan

(Million ECU)

	IMPORT					EXPORT					TRADE BALANCE				
	Airframes	Engines	Equipment	Other Material	Total	Airframes	Engines	Equipment	Other Material	Total	Airframes	Engines	Equipment	Other Material	Total
1981	1	0	1	3	5	76	6	2	1	85	75	6	2	-2	81
1982	10	1	1	2	14	100	7	3	1	111	90	6	2	-1	96
1983	29	0	1	4	35	181	4	2	1	188	152	3	2	-4	153
1984	9	0	1	8	18	18	6	2	1	27	8	5	2	-7	8
1985	2	3	1	5	10	135	12	3	7	158	134	9	2	3	147
1986	3	2	3	4	12	119	18	4	4	145	116	17	1	-1	133
1987	4	3	3	4	14	46	49	4	3	102	42	46	1	0	88
1988	57	4	3	83	147	166	42	6	30	245	109	38	3	-52	97
1989	34	10	5	97	146	223	41	7	35	306	188	32	3	-62	161
1990	13	2	6	90	111	365	46	22	41	474	352	44	16	-49	363
1991	19	1	10	103	133	699	24	18	42	784	680	23	8	-61	651
1992	31	2	13	107	153	335	38	17	44	434	305	36	4	-64	281
1993	24	14	19	107	164	379	29	17	47	472	355	15	-2	-60	307
1993 1 st Half	11	12	11	52	87	218	13	8	23	262	206	0	-3	-28	175
1993 2 nd Half	12	2	8	55	78	161	16	9	23	209	149	15	1	-32	132
1994 1 st Half	59	2	6	85	151	51	20	9	27	107	-8	19	3	-58	-44

Table 9.3

Source: Eurostat [77].

Chapter 10

Turnover and Public Support

TURNOVER

The annual survey, conducted by DG III together with the industrial associations of 7 EU Member States - A.I.A. (IT), A.T.E.C.M.A. (ES), B.D.L.I. (DE), G.E.B.E.C.O.M.A. (BE), G.I.F.A.S. (FR), N.A.I. (NL) and S.B.A.C. (GB) - , enables the turnover of the European aerospace industry¹ to be broken down by *category of customer, destination (civil / military) and sector*. Participants to this survey are the aerospace companies whose turnover concerns (partly or entirely) one or more of the 3 groups of aerospace products below:

a) Complete aerospace systems:

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

¹ Revisions or retrospective corrections of historical series can occur. Data for Spain relating to the years 1984 - 86 have been estimated by linear regression to the turnover of the major Spanish aerospace company, Casa.

b) Propulsion devices / Engines

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 situation of the EU aerospace industry is compared with USA, Japan and Canada. A distinction is made between the following:

- **Overall non-consolidated turnover** including transactions between national aerospace companies. It does not show the output of the aerospace sector as such, since it includes intermediate exchanges at national level.
- **Turnover consolidated at national level** excluding transactions between national aerospace companies, and hence representing the output of the

aerospace sector as such for the individual Member States.

The difference between *overall non-consolidated 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 sub-sectors (e.g. contracting between airframe manufacturers for certain sub-assemblies).

- **Turnover consolidated at EU level** representing the output of the EU as a whole, since it does not include intra-EU transactions between aerospace companies².

The difference between *turnover consolidated at national level* and *turnover consolidated at EU level* represents the sale of aerospace goods and services between

² Standardization problems of the accounting methods remain and may affect turnover consolidated at the EU level.

companies located in different EU Member States.

In the case of USA, Japan and Canada turnover is *consolidated*, thus doesn't compare with the EU *overall non-consolidated* level.

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 Manufacturers:** sales or services (including R&D) to other aerospace companies (generally sub-contracting);
- **Final Users:** sales or services (including R&D), i.e., neither to the State nor to other aerospace companies.

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

- **R&D** contracts;
- 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

- **procurement.**

In the case of "*Aerospace Manufacturers*" and "*Final Users*", turnover is broken down between:

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

Turnover corresponding to international co-operation programmes (e.g. Airbus, ATR) is entered under the heading "*Final Users*". Only the part of these programmes that concerns the national industry (i.e. after deduction of the share of the turnover which concerns other countries) is included in the total turnover of a Member State. 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.

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

PUBLIC SUPPORT

The tables 10.24 through 10.26 show how the turnover relating to public customers is generated through

- **R&D Contracts**

and

- sales to **public market**, comprising post-delivery modifications (repairs and maintenance of material sold, where these operations are carried out by the company itself and not by the customer), national procurement and final military users in other EU member states.

The overall figures for EU are compared to the US, and for EU details are given for product groups.

EU Aerospace Turnover at Current Prices

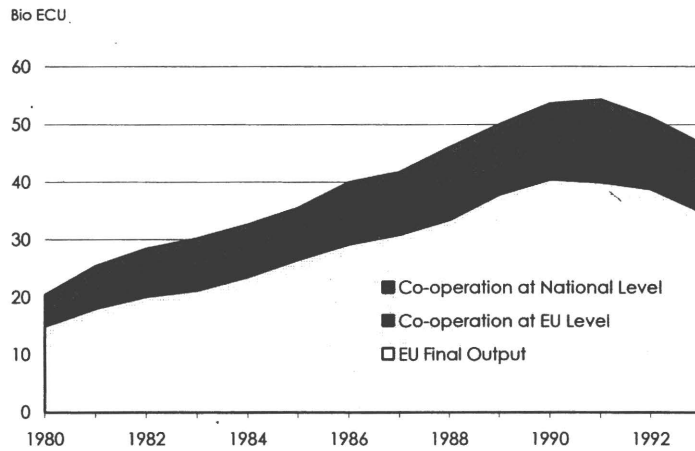


Chart 10.1

EU Aerospace Turnover at Constant 1985 Prices

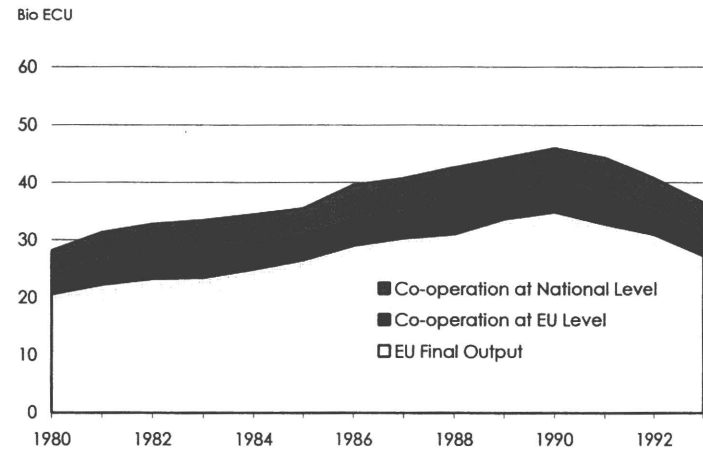


Chart 10.2

EU Overall Non-Consolidated Aerospace Turnover

In Current Prices

	BE		DE		ES		FR		GB		IT		NL		EU	
	Mio ECU	Share %	Mio ECU	Share %	Mio ECU	Share %	Mio ECU	Share %	Mio ECU	Share %	Mio ECU	Share %	Mio ECU	Share %	Mio ECU	
1980	333	1.6 %	3,359	16.5 %	185	0.9 %	7,270	35.6 %	7,646	37.5 %	1,230	6.0 %	372	1.8 %	20,394	100.0 %
1981	429	1.7 %	4,114	16.2 %	262	1.0 %	8,821	34.7 %	9,581	37.7 %	1,757	6.9 %	445	1.8 %	25,409	100.0 %
1982	413	1.5 %	5,084	17.9 %	356	1.3 %	9,813	34.5 %	10,080	35.5 %	2,181	7.7 %	492	1.7 %	28,419	100.0 %
1983	344	1.1 %	5,380	17.8 %	348	1.2 %	10,826	35.9 %	10,015	33.2 %	2,661	8.8 %	605	2.0 %	30,178	100.0 %
1984	287	0.9 %	5,628	17.3 %	407	1.2 %	11,729	36.0 %	11,210	34.4 %	2,767	8.5 %	594	1.8 %	32,622	100.0 %
1985	361	1.0 %	6,524	18.4 %	440	1.2 %	12,555	35.3 %	12,034	33.9 %	3,070	8.6 %	533	1.5 %	35,519	100.0 %
1986	338	0.8 %	9,780	24.5 %	377	0.9 %	13,168	33.0 %	12,252	30.7 %	3,421	8.6 %	584	1.5 %	39,920	100.0 %
1987	339	0.8 %	10,079	24.2 %	426	1.0 %	13,145	31.5 %	13,600	32.6 %	3,649	8.8 %	452	1.1 %	41,691	100.0 %
1988	329	0.7 %	11,190	24.3 %	649	1.4 %	14,267	31.0 %	14,769	32.1 %	3,960	8.6 %	880	1.9 %	46,044	100.0 %
1989	363	0.7 %	11,895	23.8 %	806	1.6 %	15,782	31.6 %	15,486	31.0 %	4,422	8.9 %	1,199	2.4 %	49,953	100.0 %
1990	437	0.8 %	12,364	23.1 %	961	1.8 %	17,147	32.0 %	16,403	30.6 %	4,940	9.2 %	1,385	2.6 %	53,637	100.0 %
1991	R 560	1.0 %	13,053	24.0 %	907	1.7 %	17,367	32.0 %	15,677	28.9 %	5,087	9.4 %	1,650	3.0 %	54,299	100.0 %
1992	R 386	0.8 %	10,866 ¹	21.2 %	914	1.8 %	R 17,545	34.3 %	R 14,641 ²	28.6 %	5,014	9.8 %	1,795	3.5 %	51,161	100.0 %
1993	478	1.0 %	9,621	20.6 %	904	1.9 %	16,503 ³	35.3 %	13,198	28.3 %	4,291	9.2 %	1,700	3.6 %	46,695	100.0 %

1) Maintenance by Deutsche Lufthansa, ca 1.240 Mio ECU, not included

2) Maintenance by airlines, ca 640 Mio ECU, not included

3) Maintenance by airlines, ca 175 Mio ECU, not included

Table 10.1 Source: Industrial Associations / DG III Annual Survey [83].

EU Overall Non-Consolidated Aerospace Turnover

In Constant 1985 Prices

	BE		DE		ES		FR		GB		IT		NL		EU	
	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %
1980	398		4,455		244		9,750		10,852		1,968		483		28,150	
1981	497	25.0 %	5,219	17.2 %	319	30.7 %	10,920	12.0 %	11,275	3.9 %	2,513	27.7 %	551	14.1 %	31,295	11.2 %
1982	484	-2.8 %	5,834	11.8 %	399	25.0 %	11,580	6.0 %	11,179	-0.8 %	2,789	11.0 %	542	-1.7 %	32,807	4.8 %
1983	388	-19.7 %	5,716	-2.0 %	414	3.8 %	12,259	5.9 %	11,041	-1.2 %	3,014	8.1 %	634	17.0 %	33,466	2.0 %
1984	308	-20.6 %	5,773	1.0 %	434	4.8 %	12,552	2.4 %	11,908	7.8 %	2,872	-4.7 %	608	-4.1 %	34,454	3.0 %
1985	361	17.3 %	6,524	13.0 %	440	1.6 %	12,555	0.0 %	12,034	1.1 %	3,070	6.9 %	533	-12.3 %	35,519	3.1 %
1986	317	-12.2 %	9,059	38.9 %	361	-18.1 %	12,526	-0.2 %	13,537	12.5 %	3,201	4.3 %	558	4.7 %	39,559	11.4 %
1987	306	-3.5 %	8,923	-1.5 %	399	10.6 %	12,378	-1.2 %	15,022	11.0 %	3,296	3.0 %	422	-24.4 %	40,746	3.0 %
1988	295	-3.7 %	9,772	9.5 %	556	39.5 %	13,262	7.1 %	14,500	-3.5 %	3,449	4.6 %	812	92.3 %	42,646	4.7 %
1989	310	5.2 %	10,119	3.6 %	612	10.0 %	14,211	7.2 %	14,381	-0.8 %	3,562	3.3 %	1,093	34.6 %	44,288	3.9 %
1990	353	14.0 %	10,103	-0.2 %	675	10.2 %	14,748	3.8 %	15,176	5.5 %	3,725	4.6 %	1,221	11.8 %	46,002	3.9 %
1991	R 439	24.3 %	10,259	1.5 %	590	-12.5 %	14,608	-0.9 %	13,375	-11.9 %	3,591	-3.6 %	1,417	16.0 %	44,280	-3.7 %
1992	R 288	-34.4 %	8,062 ¹	-21.4 %	576	-2.4 %	R 14,180	-2.9 %	R 12,603 ²	-5.8 %	3,526	-1.8 %	1,478	4.4 %	40,714	-8.1 %
1993	333	15.6 %	6,631	-17.8 %	613	6.3 %	12,627 ³	-11.0 %	11,621	-7.8 %	3,335	-5.4 %	1,317	-10.9 %	36,476	-10.4 %
1980 - 93		-13.0 %		4.1 %		8.4 %		2.2 %		0.8 %		4.4 %		10.9 %		2.2 %

1) Maintenance by Deutsche Lufthansa, ca 1,000 Mio ECU, not included

2) Maintenance by airlines, ca 440 Mio ECU, not included

3) Maintenance by airlines, ca 135 Mio ECU, not included

Table 10.2 Source: Industrial Associations / DG III Annual Survey [83].

Final Aerospace Turnover Consolidated at National Level

In Current Prices

	BE		DE		ES		FR		GB		IT		NL		EU		USA		CANADA		JAPAN	
	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100
1980	320	2	2,710	16	184	1	5,992	35	6,648	39	1,028	6	371	2	17,253	100	34,041	197	1,353	8	1,273	7
1981	426	2	3,317	16	262	1	7,245	34	8,153	38	1,526	7	441	2	21,370	100	49,118	230	2,078	10	1,685	8
1982	409	2	4,112	17	354	1	7,982	33	8,706	36	1,866	8	486	2	23,915	100	59,945	251	2,292	10	2,540	11
1983	339	1	4,272	17	346	1	8,904	35	8,895	35	2,220	9	595	2	25,572	100	72,021	282	2,353	9	2,914	11
1984	284	1	4,515	16	397	1	9,967	36	9,890	35	2,332	8	584	2	27,969	100	84,171	301	R 3,264	12	3,642	13
1985	360	1	5,319	17	425	1	10,782	35	10,661	35	2,611	9	533	2	30,691	100	103,325	337	R 3,998	13	4,652	15
1986	336	1	7,901	23	359	1	10,966	32	10,905	32	2,851	8	584	2	33,902	100	86,465	255	R 3,587	11	R 4,815	14
1987	337	1	8,292	23	360	1	10,924	31	11,924	34	3,028	9	452	1	35,317	100	77,089	218	R 3,730	11	R 5,225	15
1988	328	1	9,117	23	609	2	11,852	30	12,864	33	3,286	8	880	2	38,936	100	77,449	199	R 4,406	11	5,831	15
1989	363	1	9,929	23	789	2	13,317	31	13,340	31	3,675	9	1,199	3	42,612	100	88,029	207	R 5,653	13	6,653	16
1990	436	1	10,168	22	931	2	14,592	32	14,513	31	4,106	9	1,385	3	46,131	100	85,161	185	R 5,381	12	5,834	13
1991	R 559	1	11,127	24	886	2	14,758	32	13,978	30	3,640	8	1,650	4	46,596	100	R 88,447	190	R 6,161	13	6,879	15
1992	R 382	1	9,148 ¹	21	897	2	R 15,092	34	R 12,719 ²	29	3,780	9	1,795	4	43,813	100	R 80,539	184	R 5,479	13	R 7,458	17
1993	477	1	8,257	21	892	2	13,614 ³	34	11,439	29	3,229	8	1,680	4	39,589	100	78,587	199	5,409	14	9,339	24

1) Maintenance by Deutsche Lufthansa, ca 1,240 Mio ECU, not included

2) Maintenance by airlines, ca 640 Mio ECU, not included

3) Maintenance by airlines, ca 175 Mio ECU, not included

Table 10.3 Source: Industrial Associations / DG III Annual Survey [83].

Final Aerospace Turnover Consolidated at National Level

In Constant 1985 Prices

	BE		DE		ES		FR		GB		IT		NL		EU		USA		CANADA		JAPAN	
	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %
1980	382		3,594		244		8,036		9,434		1,646		482		23,818		80,870		2,819		2,467	
1981	493	29.3 %	4,209	17.1 %	319	30.7 %	8,970	11.6 %	9,595	1.7 %	2,182	32.6 %	546	13.3 %	26,314	10.5 %	85,241	5.4 %	3,218	14.2 %	2,452	-0.6 %
1982	479	-2.9 %	4,719	12.1 %	396	24.4 %	9,420	5.0 %	9,655	0.6 %	2,387	9.4 %	535	-2.1 %	27,590	4.9 %	85,989	0.9 %	2,949	-8.4 %	3,610	47.2 %
1983	383	-20.1 %	4,539	-3.8 %	412	3.9 %	10,082	7.0 %	9,806	1.6 %	2,515	5.4 %	624	16.7 %	28,361	2.8 %	90,340	5.1 %	2,620	-11.2 %	3,543	-1.9 %
1984	305	-20.3 %	4,631	2.0 %	423	2.6 %	10,666	5.8 %	10,506	7.1 %	2,421	-3.8 %	597	-4.2 %	29,550	4.2 %	90,091	-0.3 %	R 3,283	25.3 %	3,832	8.2 %
1985	360	18.0 %	5,319	14.9 %	425	0.5 %	10,782	1.1 %	10,661	1.5 %	2,611	7.8 %	533	-10.7 %	30,691	3.9 %	103,325	14.7 %	R 3,998	21.8 %	4,652	21.4 %
1986	316	-12.3 %	7,318	37.6 %	344	-19.0 %	10,431	-3.3 %	12,048	13.0 %	2,668	2.2 %	558	4.7 %	33,684	9.8 %	108,798	5.3 %	R 4,597	15.0 %	R 4,322	-7.1 %
1987	304	-3.8 %	7,341	0.3 %	337	-2.1 %	10,286	-1.4 %	13,170	9.3 %	2,735	2.5 %	422	-24.4 %	34,595	2.7 %	110,330	1.4 %	R 5,110	11.2 %	R 4,735	9.6 %
1988	293	-3.5 %	7,961	8.4 %	523	55.0 %	11,017	7.1 %	12,630	-4.1 %	2,862	4.7 %	812	92.3 %	36,098	4.3 %	109,404	-0.8 %	R 5,487	7.4 %	4,786	1.1 %
1989	310	5.5 %	8,447	6.1 %	599	14.7 %	11,991	8.8 %	12,388	-1.9 %	2,960	3.4 %	1,093	34.6 %	37,788	4.7 %	110,994	1.5 %	R 6,012	9.6 %	5,378	12.4 %
1990	353	14.0 %	8,309	-1.6 %	653	9.0 %	12,551	4.7 %	13,427	8.4 %	3,096	4.6 %	1,221	11.8 %	39,611	4.8 %	119,120	7.3 %	R 6,319	5.1 %	5,577	3.7 %
1991	R 438	24.1 %	8,745	5.3 %	577	-11.7 %	12,414	-1.1 %	11,926	-11.2 %	2,569	-17.0 %	1,417	16.0 %	38,085	-3.9 %	R 115,924	-2.7 %	R 6,753	6.9 %	5,846	4.8 %
1992	R 286	-34.8 %	6,788 ¹	-22.4 %	566	-1.9 %	R 12,198	-1.7 %	R 10,948 ²	-8.2 %	2,658	3.5 %	1,478	4.4 %	34,921	-8.3 %	R 107,454	-7.3 %	R 6,557	-2.9 %	R 6,155	5.3 %
1993	332	16.3 %	5,691	-16.2 %	605	7.0 %	10,416 ³	-14.6 %	10,072	-8.0 %	2,509	-5.6 %	1,302	-11.9 %	30,928	-11.4 %	92,764	-13.7 %	6,165	-6.0 %	6,021	-2.2 %
1980 - 93		0.7 %		4.6 %		8.7 %		2.2 %		0.8 %		3.8 %		10.8 %		2.2 %		1.3 %		6.8 %		7.8 %

1) Maintenance by Deutsche Lufthansa, ca 1,000 Mio ECU, not included

2) Maintenance by airlines, ca 440 Mio ECU, not included

3) Maintenance by airlines, ca 135 Mio ECU, not included

Table 10.4 Source: Industrial Associations / DG III Annual Survey [83].

Final Aerospace Turnover Consolidated at Community Level

In Current Prices

	BE		DE		ES		FR		GB		IT		NL		EU		USA		CANADA		JAPAN	
	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100	Mio ECU	Index EU = 100
1980	263	2	1,880	13	160	1	5,437	37	6,018	40	760	5	365	2	14,884	100	34,041	229	1,353	9	1,273	9
1981	349	2	2,191	12	235	1	6,556	36	7,045	39	1,307	7	373	2	18,057	100	49,118	272	2,078	12	1,685	9
1982	338	2	2,782	14	334	2	7,303	36	7,328	36	1,623	8	408	2	20,115	100	59,945	298	2,292	11	2,540	13
1983	271	1	2,850	13	336	2	7,950	38	7,514	36	1,698	8	518	2	21,137	100	72,021	341	2,353	11	2,914	14
1984	205	1	3,009	13	376	2	9,082	39	8,561	36	1,744	7	528	2	23,504	100	84,171	358	R 3,264	14	3,642	15
1985	260	1	3,863	15	403	2	10,278	39	9,382	35	1,830	7	533	2	26,550	100	103,325	389	R 3,998	15	4,652	18
1986	227	1	6,224	21	342	1	10,264	35	9,550	33	1,977	7	584	2	29,168	100	86,465	296	R 3,587	12	R 4,815	17
1987	224	1	6,843	22	342	1	10,212	33	10,737	35	2,093	7	432	1	30,883	100	77,089	250	R 3,730	12	R 5,225	17
1988	246	1	7,338	22	582	2	10,740	32	11,368	34	2,260	7	858	3	33,392	100	77,449	232	R 4,406	13	5,831	17
1989	223	1	8,220	22	757	2	12,895	34	12,036	32	2,558	7	1,157	3	37,846	100	88,029	233	R 5,653	15	6,653	18
1990	244	1	8,242	20	873	2	13,903	34	12,994	32	2,867	7	1,336	3	40,459	100	85,161	210	R 5,381	13	5,834	14
1991	R 351	1	9,119	23	814	2	13,540	34	11,859	30	2,704	7	1,602	4	39,989	100	R 88,447	221	R 6,161	15	6,879	17
1992	R 236	1	7,716 ¹	20	826	2	R 13,956	36	R 11,489 ²	30	2,811	7	1,751	5	38,785	100	R 80,539	208	R 5,479	14	R 7,458	19
1993	308	1	6,878	20	585	2	12,589 ³	36	10,429	30	2,399	7	1,651	5	34,839	100	78,587	226	5,409	16	9,339	27

1) Maintenance by Deutsche Lufthansa, ca 1,240 Mio ECU, not included

2) Maintenance by airlines, ca 640 Mio ECU, not included

3) Maintenance by airlines, ca 175 Mio ECU, not included

Table 10.5 Source: Industrial Associations / DG III Annual Survey [83].

Final Aerospace Turnover Consolidated at Community Level

In Constant 1985 Prices

	BE		DE		ES		FR		GB		IT		NL		EU		USA		CANADA		JAPAN	
	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %	Mio ECU	Growth Rate %
1980	314		2,494		212		7,292		8,541		1,216		475		20,543		80,870		2,819		2,467	
1981	405	29.2 %	2,780	11.5 %	286	35.0 %	8,117	11.3 %	8,290	-2.9 %	1,869	53.7 %	462	-2.7 %	22,209	8.1 %	85,241	5.4 %	3,218	14.2 %	2,452	-0.6 %
1982	396	-2.2 %	3,192	14.8 %	374	30.8 %	8,618	6.2 %	8,128	-2.0 %	2,075	11.0 %	449	-2.9 %	23,232	4.6 %	85,989	0.9 %	2,949	-8.4 %	3,610	47.2 %
1983	306	-22.7 %	3,028	-5.2 %	399	6.8 %	9,002	4.5 %	8,284	1.9 %	1,923	-7.3 %	543	21.1 %	23,486	1.1 %	90,340	5.1 %	2,620	-11.2 %	3,543	-1.9 %
1984	220	-28.1 %	3,087	2.0 %	400	0.2 %	9,719	8.0 %	9,094	9.8 %	1,811	-5.9 %	540	-0.6 %	24,870	5.9 %	90,091	-0.3 %	R 3,283	25.3 %	3,832	8.2 %
1985	260	18.2 %	3,863	25.1 %	403	0.7 %	10,278	5.8 %	9,382	3.2 %	1,830	1.1 %	533	-1.2 %	26,550	6.8 %	103,325	14.7 %	R 3,998	21.8 %	4,652	21.4 %
1986	213	-18.0 %	5,766	49.3 %	327	-18.8 %	9,763	-5.0 %	10,551	12.5 %	1,850	1.1 %	558	4.6 %	29,028	9.3 %	108,798	5.3 %	R 4,597	15.0 %	R 4,322	-7.1 %
1987	202	-5.3 %	6,059	5.1 %	320	-2.2 %	9,615	-1.5 %	11,860	12.4 %	1,890	2.2 %	403	-27.7 %	30,349	4.6 %	110,330	1.4 %	R 5,110	11.2 %	R 4,735	9.6 %
1988	220	9.0 %	6,408	5.8 %	500	56.0 %	9,983	3.8 %	11,161	-5.9 %	1,968	4.1 %	791	96.2 %	31,032	2.2 %	109,404	-0.8 %	R 5,487	7.4 %	4,786	1.1 %
1989	190	-13.5 %	6,994	9.1 %	575	15.0 %	11,611	16.3 %	11,177	0.1 %	2,061	4.7 %	1,055	33.3 %	33,662	8.5 %	110,994	1.5 %	R 6,012	9.6 %	5,378	12.4 %
1990	198	3.8 %	6,735	-3.7 %	613	6.7 %	11,958	3.0 %	12,022	7.6 %	2,162	4.9 %	1,178	11.7 %	34,865	3.6 %	119,120	7.3 %	R 6,319	5.1 %	5,577	3.7 %
1991	R 275	39.3 %	7,167	6.4 %	530	-13.6 %	11,390	-4.8 %	10,118	-15.8 %	1,909	-11.7 %	1,376	16.7 %	32,764	-6.0 %	R 115,924	-2.7 %	R 6,753	6.9 %	5,846	4.8 %
1992	R 176	-36.0 %	5,725 ¹	-20.1 %	521	-1.7 %	R 11,280	-1.0 %	R 9,890 ²	-2.3 %	1,977	3.6 %	1,442	4.8 %	31,010	-5.4 %	R 107,454	-7.3 %	R 6,557	-2.9 %	R 6,155	5.3 %
1993	215	21.8 %	4,740	-17.2 %	397	-23.8 %	9,632 ³	-14.6 %	9,183	-7.1 %	1,865	-5.7 %	1,279	-11.3 %	27,311	-11.9 %	92,764	-13.7 %	6,165	-6.0 %	6,021	-2.2 %
1980 - 93		-0.4 %		6.4 %		7.0 %		2.5 %		0.9 %		4.3 %		10.9 %		2.4 %		1.3 %		6.8 %		7.8 %

1) Maintenance by Deutsche Lufthansa, ca 1,000 Mio ECU, not included

2) Maintenance by airlines, ca 440 Mio ECU, not included

3) Maintenance by airlines, ca 135 Mio ECU, not included

Table 10.6 Source: Industrial Associations / DG III Annual Survey [83].

EU and USA Aerospace Turnover
at Constant 1985 Prices

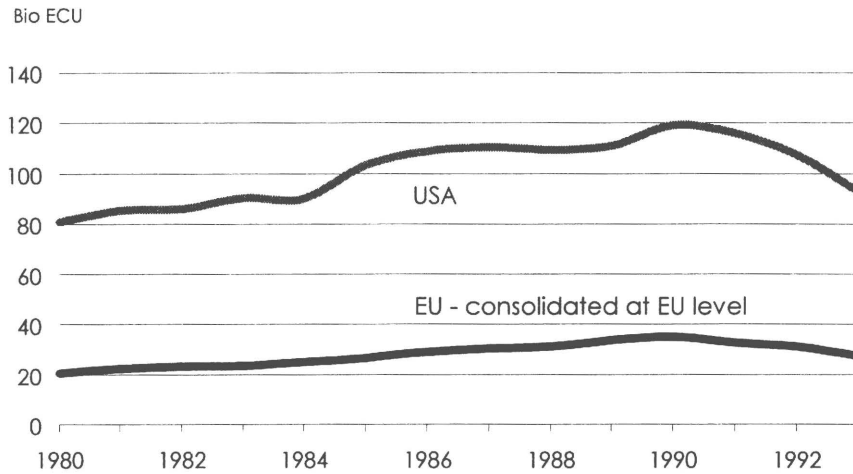


Chart 10.3

EU Turnover Breakdown by Country
1993 Current Prices
Consolidated at National Level

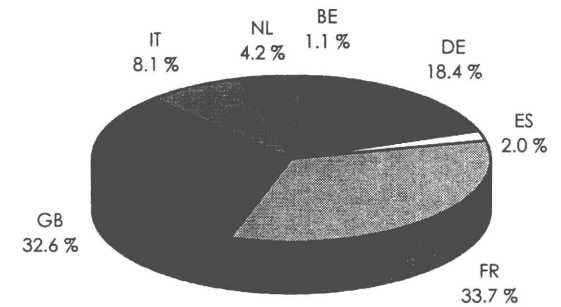
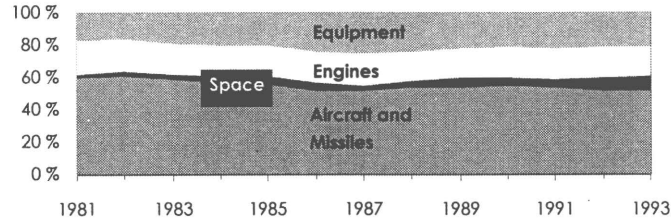


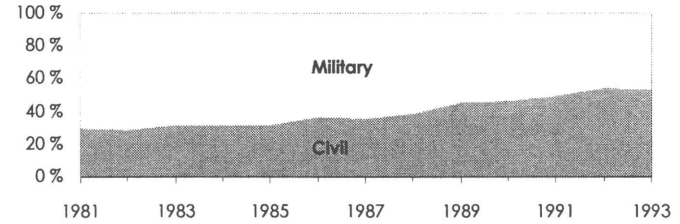
Chart 10.4

EU Turnover Breakdown by Sector
Consolidated at EU level



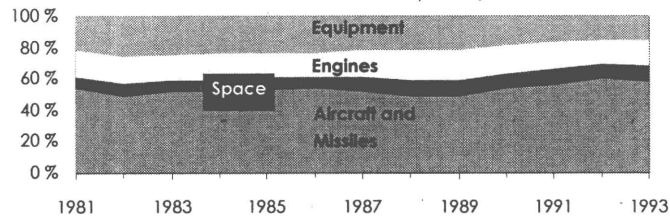
(a)

EU Turnover Breakdown by Destination
Consolidated at EU level



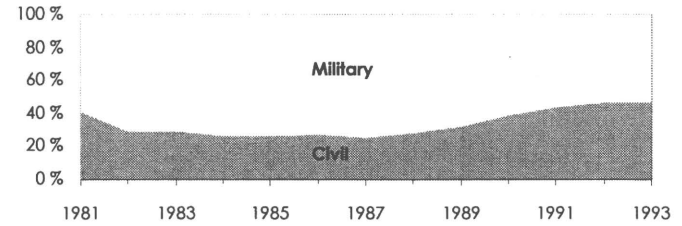
(b)

USA Turnover Breakdown by Sector



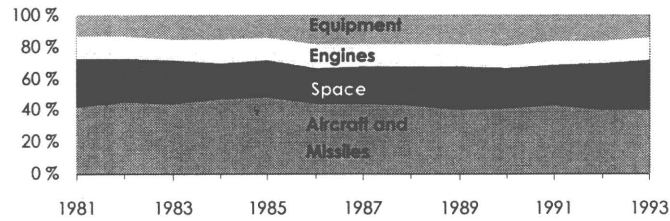
(c)

USA Turnover Breakdown by Destination



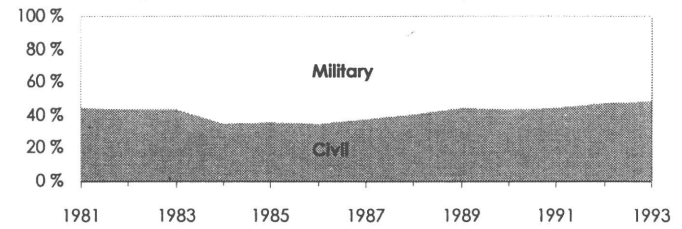
(d)

Japan Turnover Breakdown by Sector



(e)

Japan Turnover Breakdown by Destination



(f)

Chart 10.5

Comparative Breakdown of Aerospace Turnover

By Sector and by Destination in % of Total

	EU Overall Non-Consolidated						EU Final Consolidated at EU Level					
	Sector				Destination		Sector				Destination	
	Aircraft and Missiles	Space	Engines	Equipment	Civil	Military	Aircraft and Missiles	Space	Engines	Equipment	Civil	Military
1981	53.5 %	2.9 %	19.8 %	23.8 %	29.8 %	70.2 %	59.6 %	2.9 %	20.0 %	17.5 %	29.5 %	70.5 %
1982	54.1 %	3.7 %	19.9 %	22.3 %	30.1 %	69.9 %	60.8 %	2.7 %	20.4 %	16.1 %	28.4 %	71.6 %
1983	54.0 %	3.8 %	17.4 %	24.9 %	32.5 %	67.5 %	59.0 %	3.2 %	18.6 %	19.2 %	31.4 %	68.6 %
1984	53.0 %	4.0 %	17.9 %	25.1 %	31.9 %	68.1 %	57.4 %	3.7 %	18.8 %	20.1 %	31.4 %	68.6 %
1985	51.4 %	5.4 %	18.7 %	24.5 %	33.5 %	66.5 %	56.3 %	4.9 %	19.2 %	19.6 %	31.7 %	68.3 %
1986	46.9 %	5.5 %	18.0 %	29.7 %	36.8 %	63.2 %	52.3 %	4.9 %	19.2 %	23.6 %	36.9 %	63.1 %
1987	46.9 %	4.6 %	17.8 %	30.6 %	36.9 %	63.1 %	51.8 %	3.6 %	19.3 %	25.4 %	36.1 %	63.9 %
1988	49.4 %	5.3 %	16.6 %	28.7 %	40.0 %	60.0 %	53.5 %	4.9 %	17.8 %	23.8 %	38.9 %	61.1 %
1989	49.0 %	6.3 %	17.5 %	27.3 %	44.2 %	55.8 %	54.2 %	5.6 %	18.0 %	22.1 %	45.1 %	54.9 %
1990	49.5 %	6.4 %	18.3 %	25.8 %	47.4 %	52.6 %	55.3 %	4.4 %	19.0 %	21.4 %	46.7 %	53.3 %
1991	47.7 %	6.7 %	17.8 %	27.8 %	50.8 %	49.2 %	53.6 %	5.3 %	19.2 %	22.0 %	49.2 %	50.8 %
1992	46.1 %	9.7 %	17.4 %	26.8 %	54.3 %	45.7 %	51.9 %	8.5 %	18.3 %	21.3 %	54.1 %	45.9 %
1993	46.6 %	9.8 %	17.0 %	26.6 %	53.7 %	46.3 %	52.0 %	8.7 %	18.0 %	21.3 %	53.7 %	46.3 %

Table 10.7

Source: Industrial Associations / DG III Annual Survey [83].

Comparative Breakdown of Aerospace Turnover												
By Sector and by Destination in % of Total												
USA							JAPAN					
	Sector				Destination		Sector				Destination	
	Aircraft and Missiles	Space	Engines	Equipment	Civil	Military	Aircraft and Missiles	Space	Engines	Equipment	Civil	Military
1981	54.2 %	7.0 %	17.7 %	21.0 %	40.8 %	59.2 %	42.8 %	29.4 %	15.0 %	12.8 %	44.7 %	55.3 %
1982	49.2 %	8.1 %	17.4 %	25.3 %	29.4 %	70.6 %	45.6 %	27.3 %	14.1 %	13.1 %	43.9 %	56.1 %
1983	52.0 %	7.7 %	16.2 %	24.2 %	29.1 %	70.9 %	44.2 %	27.7 %	13.5 %	14.7 %	43.4 %	56.6 %
1984	51.7 %	7.9 %	17.1 %	23.3 %	25.9 %	74.1 %	47.8 %	21.7 %	15.0 %	15.5 %	35.4 %	64.6 %
1985	53.6 %	8.0 %	15.4 %	23.0 %	26.6 %	73.4 %	48.3 %	23.5 %	14.3 %	13.9 %	35.5 %	64.5 %
1986	54.3 %	7.4 %	15.0 %	23.3 %	27.4 %	72.6 %	44.9 %	21.6 %	15.2 %	18.3 %	34.5 %	65.5 %
1987	52.5 %	9.0 %	16.9 %	21.6 %	25.0 %	75.0 %	44.8 %	23.1 %	14.0 %	18.0 %	38.0 %	62.0 %
1988	49.3 %	9.4 %	20.1 %	21.1 %	28.5 %	71.5 %	43.0 %	25.1 %	13.8 %	18.0 %	40.8 %	59.2 %
1989	49.2 %	10.1 %	19.6 %	21.2 %	32.4 %	67.6 %	40.3 %	27.7 %	13.6 %	18.4 %	44.8 %	55.2 %
1990	54.4 %	8.9 %	18.1 %	18.5 %	39.0 %	61.0 %	41.3 %	25.2 %	14.4 %	19.2 %	43.9 %	56.1 %
1991	56.5 % ^R	9.6 % ^R	17.7 %	16.2 % ^R	43.7 % ^R	56.3 % ^R	43.1 %	25.7 %	14.7 %	16.4 %	44.2 %	55.8 %
1992	60.3 %	8.9 %	16.0 %	14.9 %	47.0 % ^R	53.0 % ^R	40.3 %	29.9 % ^R	14.0 %	15.8 %	47.6 % ^R	52.4 % ^R
1993	57.7 %	10.2 %	16.5 %	15.6 %	46.2 %	53.8 %	40.6 %	30.6 %	14.6 %	14.1 %	48.5 %	51.5 %

Table 10.8 Sources: A.I.A.A. [64, 80]; S.J.A.C. [81].

Breakdown of EU Overall Aerospace Turnover

Totals at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	2,061	1,151	3,565	6,776	4,039	3,314	1,725	9,077	878	2,291	6,387	9,556	25,409	8,247	9,050	8,112
1982	2,153	1,251	3,880	7,285	4,504	3,799	1,846	10,149	911	2,883	7,190	10,985	28,419	9,029	10,354	9,036
1983	2,492	1,236	4,460	8,188	4,607	4,435	1,855	10,897	850	2,796	7,449	11,094	30,178	9,777	11,097	9,304
1984	2,879	1,603	4,840	9,323	4,653	4,465	2,228	11,345	1,123	2,922	7,909	11,954	32,622	10,941	11,544	10,137
1985	3,119	1,684	5,836	10,639	4,829	4,141	2,980	11,950	1,420	2,891	8,619	12,931	35,519	11,998	11,922	11,600
1986	3,560	1,959	6,416	11,934	6,018	4,734	3,930	14,682	1,561	2,705	9,038	13,304	39,920	13,324	13,629	12,968
1987	3,907	2,144	7,089	13,139	6,375	4,433	3,669	14,477	1,543	2,966	9,566	14,075	41,691	14,525	13,931	13,235
1988	3,445	2,313	7,673	13,431	7,108	5,544	3,949	16,601	1,886	3,661	10,465	16,012	46,044	14,857	16,773	14,414
1989	4,256	2,570	7,410	14,236	7,341	4,766	3,537	15,644	2,579	3,685	13,809	20,073	49,953	15,738	16,868	17,347
1990	4,793	2,913	7,132	14,838	7,505	5,672	5,737	18,914	3,031	4,214	12,640	19,885	53,637	15,949	19,312	18,377
1991	6,106 ^R	3,678 ^R	6,037 ^R	15,821	7,703	6,607 ^R	5,604 ^R	19,914	3,044 ^R	5,295 ^R	10,225 ^R	18,565	54,299	17,324 ^R	21,146 ^R	15,829 ^R
1992	5,552	3,305	5,405	14,262	7,347	5,028	4,518	16,893	2,959	8,189	8,857	20,006	51,160	16,055	21,731	13,375
1993	4,927	2,899	5,400	13,226	7,106	4,749	4,132	15,987	2,259	5,884	9,339	17,481	46,695	14,529	18,695	13,471

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.9 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

In % of Totals

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	8.1 %	4.5 %	14.0 %	26.7 %	15.9 %	13.0 %	6.8 %	35.7 %	3.5 %	9.0 %	25.1 %	37.6 %	100.0 %	32.5 %	35.6 %	31.9 %
1982	7.6 %	4.4 %	13.7 %	25.6 %	15.8 %	13.4 %	6.5 %	35.7 %	3.2 %	10.1 %	25.3 %	38.7 %	100.0 %	31.8 %	36.4 %	31.8 %
1983	8.3 %	4.1 %	14.8 %	27.1 %	15.3 %	14.7 %	6.1 %	36.1 %	2.8 %	9.3 %	24.7 %	36.8 %	100.0 %	32.4 %	36.8 %	30.8 %
1984	8.8 %	4.9 %	14.8 %	28.6 %	14.3 %	13.7 %	6.8 %	34.8 %	3.4 %	9.0 %	24.2 %	36.6 %	100.0 %	33.5 %	35.4 %	31.1 %
1985	8.8 %	4.7 %	16.4 %	30.0 %	13.6 %	11.7 %	8.4 %	33.6 %	4.0 %	8.1 %	24.3 %	36.4 %	100.0 %	33.8 %	33.6 %	32.7 %
1986	8.9 %	4.9 %	16.1 %	29.9 %	15.1 %	11.9 %	9.8 %	36.8 %	3.9 %	6.8 %	22.6 %	33.3 %	100.0 %	33.4 %	34.1 %	32.5 %
1987	9.4 %	5.1 %	17.0 %	31.5 %	15.3 %	10.6 %	8.8 %	34.7 %	3.7 %	7.1 %	22.9 %	33.8 %	100.0 %	34.8 %	33.4 %	31.7 %
1988	7.5 %	5.0 %	16.7 %	29.2 %	15.4 %	12.0 %	8.6 %	36.1 %	4.1 %	8.0 %	22.7 %	34.8 %	100.0 %	32.3 %	36.4 %	31.3 %
1989	8.5 %	5.1 %	14.8 %	28.5 %	14.7 %	9.5 %	7.1 %	31.3 %	5.2 %	7.4 %	27.6 %	40.2 %	100.0 %	31.5 %	33.8 %	34.7 %
1990	8.9 %	5.4 %	13.3 %	27.7 %	14.0 %	10.6 %	10.7 %	35.3 %	5.7 %	7.9 %	23.6 %	37.1 %	100.0 %	29.7 %	36.0 %	34.3 %
1991	11.2 % ^R	6.8 % ^R	11.1 % ^R	29.1 %	14.2 %	12.2 % ^R	10.3 % ^R	36.7 %	5.6 %	9.8 % ^R	18.8 %	34.2 %	100.0 %	31.9 %	38.9 %	29.2 %
1992	10.9 %	6.5 %	10.6 %	27.9 %	14.4 %	9.8 %	8.8 %	33.0 %	5.8 %	16.0 %	17.3 %	39.1 %	100.0 %	31.4 %	42.5 %	26.1 %
1993	10.6 %	6.2 %	11.6 %	28.3 %	15.2 %	10.2 %	8.8 %	34.2 %	4.8 %	12.6 %	20.0 %	37.4 %	100.0 %	31.1 %	40.0 %	28.8 %

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.10 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Civil Sector at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹⁾	EU Commercial Market ²⁾	Exports ³⁾
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	276	68	228	572	1,495	760	995	3,250	878	820	2,056	3,753	7,575	572	3,952	3,051
1982	347	58	273	677	1,644	1,195	1,048	3,887	911	1,139	1,933	3,983	8,548	677	4,889	2,981
1983	334	64	498	896	1,888	1,272	1,071	4,231	850	1,206	2,625	4,680	9,808	896	5,216	3,695
1984	360	58	335	753	1,787	1,240	1,422	4,448	1,123	1,303	2,777	5,204	10,405	753	5,453	4,199
1985	554	74	315	943	2,046	1,426	1,679	5,151	1,420	1,532	2,853	5,805	11,900	943	6,424	4,532
1986	716	56	666	1,438	2,356	1,562	2,226	6,144	1,561	1,315	4,236	7,113	14,695	1,438	6,794	6,463
1987	1,000	154	887	2,042	2,559	1,679	2,585	6,823	1,543	1,580	3,397	6,520	15,384	2,042	7,360	5,982
1988	631	178	999	1,807	2,959	2,453	2,650	8,062	1,886	2,235	4,422	8,543	18,413	1,807	9,533	7,072
1989	1,083	303	1,244	2,631	2,801	2,187	2,563	7,551	2,579	2,182	7,129	11,890	22,071	2,631	9,748	9,692
1990	1,404	331	1,456	3,191	3,383	3,148	4,030	10,561	3,031	3,103	5,555	11,689	25,441	3,191	12,665	9,585
1991	1,953 ^R	307 ^R	922 ^R	3,182	4,098	3,924 ^R	4,426 ^R	12,448	3,044 ^R	3,791 ^R	5,222 ^R	12,057	27,687	3,182 ^R	14,857 ^R	9,648 ^R
1992	1,821	215	690	2,726	3,814	3,067	3,276	10,157	2,959	6,396	5,629	14,985	27,868	2,726	16,236	8,905
1993	1,527	328	745	2,600	3,645	2,792	3,015	9,452	2,259	4,581	6,244	13,083	25,135	2,600	13,276	9,259

1) EU Public Market = National State

2) EU Commercial Market = National and Other EU Civil Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.11 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover																
Civil Sector in % of Grand Totals																
	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	1.1 %	0.3 %	0.9 %	2.3 %	5.9 %	3.0 %	3.9 %	12.8 %	3.5 %	3.2 %	8.1 %	14.8 %	29.8 %	2.3 %	15.6 %	12.0 %
1982	1.2 %	0.2 %	1.0 %	2.4 %	5.8 %	4.2 %	3.7 %	13.7 %	3.2 %	4.0 %	6.8 %	14.0 %	30.1 %	2.4 %	17.2 %	10.5 %
1983	1.1 %	0.2 %	1.6 %	3.0 %	6.3 %	4.2 %	3.5 %	14.0 %	2.8 %	4.0 %	8.7 %	15.5 %	32.5 %	3.0 %	17.3 %	12.2 %
1984	1.1 %	0.2 %	1.0 %	2.3 %	5.5 %	3.8 %	4.4 %	13.6 %	3.4 %	4.0 %	8.5 %	16.0 %	31.9 %	2.3 %	16.7 %	12.9 %
1985	1.6 %	0.2 %	0.9 %	2.7 %	5.8 %	4.0 %	4.7 %	14.5 %	4.0 %	4.3 %	8.0 %	16.3 %	33.5 %	2.7 %	18.1 %	12.8 %
1986	1.8 %	0.1 %	1.7 %	3.6 %	5.9 %	3.9 %	5.6 %	15.4 %	3.9 %	3.3 %	10.6 %	17.8 %	36.8 %	3.6 %	17.0 %	16.2 %
1987	2.4 %	0.4 %	2.1 %	4.9 %	6.1 %	4.0 %	6.2 %	16.4 %	3.7 %	3.8 %	8.1 %	15.6 %	36.9 %	4.9 %	17.7 %	14.3 %
1988	1.4 %	0.4 %	2.2 %	3.9 %	6.4 %	5.3 %	5.8 %	17.5 %	4.1 %	4.9 %	9.6 %	18.6 %	40.0 %	3.9 %	20.7 %	15.4 %
1989	2.2 %	0.6 %	2.5 %	5.3 %	5.6 %	4.4 %	5.1 %	15.1 %	5.2 %	4.4 %	14.3 %	23.8 %	44.2 %	5.3 %	19.5 %	19.4 %
1990	2.6 %	0.6 %	2.7 %	5.9 %	6.3 %	5.9 %	7.5 %	19.7 %	5.7 %	5.8 %	10.4 %	21.8 %	47.4 %	5.9 %	23.6 %	17.9 %
1991	3.6 %	0.6 %	1.7 %	5.9 %	7.5 % ^R	7.2 %	8.2 % ^R	22.9 %	5.6 %	7.0 %	9.6 % ^R	22.2 %	51.0 %	5.9 %	27.4 % ^R	17.8 % ^R
1992	3.6 %	0.4 %	1.3 %	5.3 %	7.5 %	6.0 %	6.4 %	19.9 %	5.8 %	12.5 %	11.0 %	29.3 %	54.5 %	5.3 %	31.7 %	17.4 %
1993	3.3 %	0.7 %	1.6 %	5.6 %	7.8 %	6.0 %	6.5 %	20.2 %	4.8 %	9.8 %	13.4 %	28.0 %	53.8 %	5.6 %	28.4 %	19.8 %

1) EU Public Market = National State

2) EU Commercial Market = National and Other EU Civil Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.12 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Military Sector at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹⁾	EU Commercial Market ²⁾	Exports ³⁾
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	1,785	1,083	3,336	6,204	2,544	2,554	730	5,828	-	1,472	4,331	5,802	17,834	7,676	5,098	5,061
1982	1,807	1,192	3,608	6,607	2,860	2,604	797	6,262	-	1,744	5,257	7,002	19,871	8,351	5,465	6,055
1983	2,157	1,172	3,962	7,291	2,719	3,163	784	6,666	-	1,590	4,824	6,414	20,371	8,881	5,881	5,608
1984	2,519	1,546	4,505	8,570	2,866	3,225	806	6,897	-	1,618	5,132	6,750	22,216	10,188	6,091	5,938
1985	2,565	1,609	5,521	9,695	2,783	2,714	1,301	6,799	-	1,359	5,766	7,125	23,619	11,054	5,497	7,068
1986	2,844	1,903	5,750	10,496	3,662	3,172	1,703	8,538	-	1,390	4,801	6,191	25,225	11,886	6,834	6,505
1987	2,907	1,989	6,201	11,098	3,816	2,754	1,084	7,654	-	1,386	6,169	7,555	26,307	12,484	6,570	7,253
1988	2,814	2,135	6,675	11,624	4,150	3,090	1,299	8,539	-	1,426	6,043	7,469	27,631	13,050	7,240	7,342
1989	3,173	2,266	6,166	11,605	4,540	2,579	974	8,093	-	1,502	6,680	8,183	27,881	13,108	7,119	7,655
1990	3,389	2,581	5,676	11,647	4,123	2,524	1,707	8,354	-	1,111	7,085	8,196	28,196	12,758	6,647	8,791
1991	4,152 ^R	3,371 ^R	5,115 ^R	12,638	3,605	2,684 ^R	1,178 ^R	7,466	-	1,504 ^R	5,015 ^R	6,519	26,624	14,142 ^R	6,289 ^R	6,181 ^R
1992	3,730	3,090	4,715	11,535	3,534	1,961	1,242	6,737	-	1,793	3,955	5,748	24,020	13,328	5,495	4,470
1993	3,399	2,571	4,655	10,626	3,461	1,957	1,117	6,535	-	1,304	4,369	5,673	22,834	11,930	5,419	4,212

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Military Manufacturers

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.13 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Military Sector in % of Grand Totals

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	7.0 %	4.3 %	13.1 %	24.4 %	10.0 %	10.1 %	2.9 %	22.9 %	-	5.8 %	17.0 %	22.8 %	70.2 %	30.2 %	20.1 %	19.9 %
1982	6.4 %	4.2 %	12.7 %	23.2 %	10.1 %	9.2 %	2.8 %	22.0 %	-	6.1 %	18.5 %	24.6 %	69.9 %	29.4 %	19.2 %	21.3 %
1983	7.1 %	3.9 %	13.1 %	24.2 %	9.0 %	10.5 %	2.6 %	22.1 %	-	5.3 %	16.0 %	21.3 %	67.5 %	29.4 %	19.5 %	18.6 %
1984	7.7 %	4.7 %	13.8 %	26.3 %	8.8 %	9.9 %	2.5 %	21.1 %	-	5.0 %	15.7 %	20.7 %	68.1 %	31.2 %	18.7 %	18.2 %
1985	7.2 %	4.5 %	15.5 %	27.3 %	7.8 %	7.6 %	3.7 %	19.1 %	-	3.8 %	16.2 %	20.1 %	66.5 %	31.1 %	15.5 %	19.9 %
1986	7.1 %	4.8 %	14.4 %	26.3 %	9.2 %	7.9 %	4.3 %	21.4 %	-	3.5 %	12.0 %	15.5 %	63.2 %	29.8 %	17.1 %	16.3 %
1987	7.0 %	4.8 %	14.9 %	26.6 %	9.2 %	6.6 %	2.6 %	18.4 %	-	3.3 %	14.8 %	18.1 %	63.1 %	29.9 %	15.8 %	17.4 %
1988	6.1 %	4.6 %	14.5 %	25.2 %	9.0 %	6.7 %	2.8 %	18.5 %	-	3.1 %	13.1 %	16.2 %	60.0 %	28.3 %	15.7 %	15.9 %
1989	6.4 %	4.5 %	12.3 %	23.2 %	9.1 %	5.2 %	2.0 %	16.2 %	-	3.0 %	13.4 %	16.4 %	55.8 %	26.2 %	14.3 %	15.3 %
1990	6.3 %	4.8 %	10.6 %	21.7 %	7.7 %	4.7 %	3.2 %	15.6 %	-	2.1 %	13.2 %	15.3 %	52.6 %	23.8 %	12.4 %	16.4 %
1991	7.6 % ^R	6.2 % ^R	9.4 %	23.3 %	6.6 % ^R	4.9 %	2.2 % ^R	13.8 %	-	2.8 %	9.2 % ^R	12.0 %	49.0 %	26.0 %	11.6 %	11.4 % ^R
1992	7.3 %	6.0 %	9.2 %	22.5 %	6.9 %	3.8 %	2.4 %	13.2 %	-	3.5 %	6.3 %	9.8 %	45.5 %	26.1 %	10.7 %	8.7 %
1993	7.3 %	5.5 %	10.0 %	22.8 %	7.4 %	4.2 %	2.4 %	14.0 %	-	2.8 %	6.6 %	9.4 %	46.2 %	25.5 %	11.6 %	9.0 %

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Military Manufacturers

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.14 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Airframe and Missiles Sector at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	1,133	600	1,963	3,697	1,212	1,624	374	3,210	410	1,322	4,951	6,683	13,589	4,457	3,807	5,325
1982	1,137	657	2,021	3,815	1,356	1,791	506	3,653	473	1,846	5,599	7,918	15,386	4,779	4,503	6,104
1983	1,312	626	2,310	4,248	1,441	2,383	389	4,213	335	1,791	5,708	7,833	16,294	5,030	5,167	6,097
1984	1,590	818	2,120	4,528	1,343	2,461	415	4,218	500	1,705	6,341	8,546	17,293	5,254	5,283	6,756
1985	1,653	836	3,112	5,602	1,315	1,984	754	4,053	568	1,745	6,278	8,591	18,246	6,186	5,028	7,032
1986	1,953	964	2,898	5,814	1,407	2,038	1,482	4,927	368	1,298	6,297	7,963	18,704	6,166	4,759	7,778
1987	2,031	1,080	3,249	6,360	1,494	2,059	799	4,351	367	1,482	6,989	8,838	19,549	6,712	5,050	7,788
1988	1,694	1,147	3,392	6,233	2,172	2,705	1,223	6,100	425	2,198	7,792	10,416	22,749	6,665	7,069	9,016
1989	2,418	1,329	3,302	7,049	1,965	2,003	913	4,881	855	2,715	8,976	12,546	24,476	7,990	6,597	9,889
1990	2,345	1,630	3,406	7,380	1,803	2,364	2,464	6,631	1,323	3,174	8,018	12,515	26,526	8,042	8,003	10,482
1991	2,654 ^R	2,201 ^R	3,182	8,038	1,435	3,044 ^R	2,417 ^R	6,896	1,320 ^R	3,681 ^R	5,961 ^R	10,963	25,897	8,829 ^R	8,689 ^R	8,378 ^R
1992	2,463	1,927	2,460	6,851	2,112	1,315	1,168	4,595	1,067	6,321	4,742	12,130	23,576	7,936	9,729	5,910
1993	2,286	1,652	2,482	6,420	2,163	1,473	1,065	4,700	554	4,426	5,648	10,629	21,749	7,109	7,926	6,713

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.15 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Airframes and Missiles Sector in % of Grand Totals

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	4.5 %	2.4 %	7.7 %	14.5 %	4.8 %	6.4 %	1.5 %	12.6 %	1.6 %	5.2 %	19.5 %	26.3 %	53.5 %	17.5 %	15.0 %	21.0 %
1982	4.0 %	2.3 %	7.1 %	13.4 %	4.8 %	6.3 %	1.8 %	12.9 %	1.7 %	6.5 %	19.7 %	27.9 %	54.1 %	16.8 %	15.8 %	21.5 %
1983	4.3 %	2.1 %	7.7 %	14.1 %	4.8 %	7.9 %	1.3 %	14.0 %	1.1 %	5.9 %	18.9 %	26.0 %	54.0 %	16.7 %	17.1 %	20.2 %
1984	4.9 %	2.5 %	6.5 %	13.9 %	4.1 %	7.5 %	1.3 %	12.9 %	1.5 %	5.2 %	19.4 %	26.2 %	53.0 %	16.1 %	16.2 %	20.7 %
1985	4.7 %	2.4 %	8.8 %	15.8 %	3.7 %	5.6 %	2.1 %	11.4 %	1.6 %	4.9 %	17.7 %	24.2 %	51.4 %	17.4 %	14.2 %	19.8 %
1986	4.9 %	2.4 %	7.3 %	14.6 %	3.5 %	5.1 %	3.7 %	12.3 %	0.9 %	3.3 %	15.8 %	19.9 %	46.9 %	15.4 %	11.9 %	19.5 %
1987	4.9 %	2.6 %	7.8 %	15.3 %	3.6 %	4.9 %	1.9 %	10.4 %	0.9 %	3.6 %	16.8 %	21.2 %	46.9 %	16.1 %	12.1 %	18.7 %
1988	3.7 %	2.5 %	7.4 %	13.5 %	4.7 %	5.9 %	2.7 %	13.2 %	0.9 %	4.8 %	16.9 %	22.6 %	49.4 %	14.5 %	15.4 %	19.6 %
1989	4.8 %	2.7 %	6.6 %	14.1 %	3.9 %	4.0 %	1.8 %	9.8 %	1.7 %	5.4 %	18.0 %	25.1 %	49.0 %	16.0 %	13.2 %	19.8 %
1990	4.4 %	3.0 %	6.4 %	13.8 %	3.4 %	4.4 %	4.6 %	12.4 %	2.5 %	5.9 %	14.9 %	23.3 %	49.5 %	15.0 %	14.9 %	19.5 %
1991	4.9 %	4.1 % ^R	5.9 %	14.8 %	2.6 % ^R	5.6 %	4.5 %	12.7 %	2.4 %	6.8 %	11.0 %	20.2 %	47.7 %	16.3 %	16.0 %	15.4 % ^R
1992	4.8 %	3.8 %	4.8 %	13.4 %	4.1 %	2.6 %	2.3 %	9.0 %	2.1 %	12.4 %	9.3 %	23.7 %	46.1 %	15.5 %	19.0 %	11.6 %
1993	4.9 %	3.5 %	5.3 %	13.7 %	4.6 %	3.2 %	2.3 %	10.1 %	1.2 %	9.5 %	12.1 %	22.8 %	46.6 %	15.2 % ^R	17.0 %	14.4 %

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.16 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Space Sector at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	152	1	90	242	69	143	16	227	14	147	111	272	742	242	373	127
1982	214	3	134	351	147	362	24	534	13	81	67	161	1,046	351	603	91
1983	259	5	185	450	95	353	61	509	17	91	66	174	1,132	450	555	127
1984	283	6	185	475	108	339	59	505	95	185	52	331	1,311	475	725	111
1985	479	18	243	741	214	414	31	659	219	221	85	525	1,925	741	1,067	116
1986	235	15	233	483	255	519	58	832	341	170	365	877	2,191	484	1,285	423
1987	289	30	235	554	434	391	68	894	234	169	77	481	1,928	554	1,229	146
1988	398	26	374	799	308	503	32	843	334	311	154	799	2,441	862	1,393	186
1989	605	17	441	1,063	435	556	117	1,109	294	187	473	954	3,125	1,168	1,368	590
1990	532	10	541	1,083	463	1,192	188	1,843	331	100	75	506	3,432	1,087	2,082	263
1991	1,112 ^R	48	208 ^R	1,368	652 ^R	893 ^R	57 ^R	1,602	306	222 ^R	158	686	3,656	1,372	2,069 ^R	215 ^R
1992	1,501	19	348	1,868	471	1,220	77	1,767	656	558	120	1,334	4,969	1,868	2,905	196
1993	1,311	21	481	1,812	572	994	94	1,659	655	282	177	1,114	4,585	1,812	2,502	271

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.17 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Space Sector In % of Grand Totals

	National State			Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³	
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries					Total C
1981	0.6 %	0.0 %	0.4 %	1.0 %	0.3 %	0.6 %	0.1 %	0.9 %	0.1 %	0.6 %	0.4 %	1.1 %	2.9 %	1.0 %	1.5 %	0.5 %
1982	0.8 %	0.0 %	0.5 %	1.2 %	0.5 %	1.3 %	0.1 %	1.9 %	0.0 %	0.3 %	0.2 %	0.6 %	3.7 %	1.2 %	2.1 %	0.3 %
1983	0.9 %	0.0 %	0.6 %	1.5 %	0.3 %	1.2 %	0.2 %	1.7 %	0.1 %	0.3 %	0.2 %	0.6 %	3.8 %	1.5 %	1.8 %	0.4 %
1984	0.9 %	0.0 %	0.6 %	1.5 %	0.3 %	1.0 %	0.2 %	1.5 %	0.3 %	0.6 %	0.2 %	1.0 %	4.0 %	1.5 %	2.2 %	0.3 %
1985	1.3 %	0.1 %	0.7 %	2.1 %	0.6 %	1.2 %	0.1 %	1.9 %	0.6 %	0.6 %	0.2 %	1.5 %	5.4 %	2.1 %	3.0 %	0.3 %
1986	0.6 %	0.0 %	0.6 %	1.2 %	0.6 %	1.3 %	0.1 %	2.1 %	0.9 %	0.4 %	0.9 %	2.2 %	5.5 %	1.2 %	3.2 %	1.1 %
1987	0.7 %	0.1 %	0.6 %	1.3 %	1.0 %	0.9 %	0.2 %	2.1 %	0.6 %	0.4 %	0.2 %	1.2 %	4.6 %	1.3 %	2.9 %	0.3 %
1988	0.9 %	0.1 %	0.8 %	1.7 %	0.7 %	1.1 %	0.1 %	1.8 %	0.7 %	0.7 %	0.3 %	1.7 %	5.3 %	1.9 %	3.0 %	0.4 %
1989	1.2 %	0.0 %	0.9 %	2.1 %	0.9 %	1.1 %	0.2 %	2.2 %	0.6 %	0.4 %	0.9 %	1.9 %	6.3 %	2.3 %	2.7 %	1.2 %
1990	1.0 %	0.0 %	1.0 %	2.0 %	0.9 %	2.2 %	0.4 %	3.4 %	0.6 %	0.2 %	0.1 %	0.9 %	6.4 %	2.0 %	3.9 %	0.5 %
1991	2.0 % ^R	0.1 %	0.4 %	2.5 %	1.2 %	1.6 %	0.1 %	3.0 %	0.6 %	0.4 %	0.3 %	1.3 %	6.7 %	2.5 %	3.8 %	0.4 %
1992	2.9 %	0.0 %	0.7 %	3.7 %	0.9 %	2.4 %	0.1 %	3.5 %	1.3 %	1.1 %	0.2 %	2.6 %	9.7 %	3.7 %	5.7 %	0.4 %
1993	2.8 %	0.0 %	1.0 %	3.9 %	1.2 %	2.1 %	0.2 %	3.6 %	1.4 %	0.6 %	0.4 %	2.4 %	9.8 %	3.9 %	5.4 %	0.6 %

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.18 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Engine Sector at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹⁾	EU Commercial Market ²⁾	Exports ³⁾
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	324	297	553	1,175	877	532	786	2,195	234	656	769	1,658	5,028	1,796	1,677	1,555
1982	346	325	610	1,281	975	566	836	2,377	214	802	967	1,984	5,642	1,947	1,891	1,803
1983	375	326	555	1,255	738	580	886	2,203	294	769	728	1,791	5,249	1,959	1,676	1,613
1984	290	389	694	1,373	775	637	1,078	2,490	237	885	851	1,973	5,836	2,202	1,705	1,929
1985	324	374	661	1,360	951	608	1,263	2,822	293	763	1,421	2,477	6,659	2,044	1,930	2,684
1986	252	352	933	1,537	885	692	1,537	3,114	440	792	1,301	2,533	7,184	2,283	2,063	2,838
1987	390	367	995	1,751	842	649	1,850	3,340	402	858	1,090	2,350	7,442	2,581	1,921	2,940
1988	338	431	953	1,723	833	873	1,858	3,564	459	837	1,061	2,356	7,643	2,472	2,253	2,919
1989	385	443	1,024	1,852	1,119	789	1,697	3,604	500	279	2,496	3,275	8,731	2,062	2,476	4,193
1990	784	358	840	1,982	1,268	888	2,108	4,265	623	301	2,666	3,590	9,836	2,184	2,878	4,774
1991	1,151	389 ^R	475 ^R	2,015	1,112	875 ^R	2,002 ^R	3,988	649 ^R	617 ^R	2,395 ^R	3,661	9,663	2,433	2,831 ^R	4,396 ^R
1992	539	369	644	1,552	880	940	1,936	3,756	549	615	2,431	3,596	8,904	1,850	2,577	4,368
1993	493	299	625	1,417	857	798	1,831	3,487	377	469	2,190	3,036	7,941	1,417	2,230	4,022

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.19 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Engine Sector In % of Grand Totals

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	1.3 %	1.2 %	2.2 %	4.6 %	3.5 %	2.1 %	3.1 %	8.6 %	0.9 %	2.6 %	3.0 %	6.5 %	19.8 %	7.1 %	6.6 %	6.1 %
1982	1.2 %	1.1 %	2.1 %	4.5 %	3.4 %	2.0 %	2.9 %	8.4 %	0.8 %	2.8 %	3.4 %	7.0 %	19.9 %	6.9 %	6.7 %	6.3 %
1983	1.2 %	1.1 %	1.8 %	4.2 %	2.4 %	1.9 %	2.9 %	7.3 %	1.0 %	2.5 %	2.4 %	5.9 %	17.4 %	6.5 %	5.6 %	5.3 %
1984	0.9 %	1.2 %	2.1 %	4.2 %	2.4 %	2.0 %	3.3 %	7.6 %	0.7 %	2.7 %	2.6 %	6.0 %	17.9 %	6.7 %	5.2 %	5.9 %
1985	0.9 %	1.1 %	1.9 %	3.8 %	2.7 %	1.7 %	3.6 %	7.9 %	0.8 %	2.1 %	4.0 %	7.0 %	18.7 %	5.8 %	5.4 %	7.6 %
1986	0.6 %	0.9 %	2.3 %	3.9 %	2.2 %	1.7 %	3.8 %	7.8 %	1.1 %	2.0 %	3.3 %	6.3 %	18.0 %	5.7 %	5.2 %	7.1 %
1987	0.9 %	0.9 %	2.4 %	4.2 %	2.0 %	1.6 %	4.4 %	8.0 %	1.0 %	2.1 %	2.6 %	5.6 %	17.8 %	6.2 %	4.6 %	7.1 %
1988	0.7 %	0.9 %	2.1 %	3.7 %	1.8 %	1.9 %	4.0 %	7.7 %	1.0 %	1.8 %	2.3 %	5.1 %	16.6 %	5.4 %	4.9 %	6.3 %
1989	0.8 %	0.9 %	2.1 %	3.7 %	2.2 %	1.6 %	3.4 %	7.2 %	1.0 %	0.6 %	5.0 %	6.6 %	17.5 %	4.1 %	5.0 %	8.4 %
1990	1.5 %	0.7 %	1.6 %	3.7 %	2.4 %	1.7 %	3.9 %	8.0 %	1.2 %	0.6 %	5.0 %	6.7 %	18.3 %	4.1 %	5.4 %	8.9 %
1991	2.1 %	0.7 %	0.9 %	3.7 %	2.0 % ^R	1.6 %	3.7 %	7.3 %	1.2 %	1.1 %	4.4 %	6.7 %	17.8 %	4.5 %	5.2 %	8.1 %
1992	1.1 %	0.7 %	1.3 %	3.0 %	1.7 %	1.8 %	3.8 %	7.3 %	1.1 %	1.2 %	4.8 %	7.0 %	17.4 %	3.8 %	5.0 %	8.5 %
1993	1.1 %	0.6 %	1.3 %	3.0 %	1.8 %	1.7 %	3.9 %	7.5 %	0.8 %	1.0 %	4.7 %	6.5 %	17.0 %	3.6 %	4.8 %	8.6 %

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.20 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Equipment Sector at Current Prices (Millions of ECU)

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹⁾	EU Commercial Market ²⁾	Exports ³⁾
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	451	253	958	1,663	1,881	1,015	549	3,445	219	167	556	942	6,050	1,752	3,193	1,105
1982	456	266	1,115	1,837	2,026	1,080	480	3,586	211	153	558	923	6,345	1,951	3,357	1,037
1983	546	278	1,410	2,234	2,334	1,120	519	3,973	204	145	947	1,297	7,504	2,338	3,699	1,466
1984	716	390	1,841	2,947	2,427	1,028	677	4,132	291	148	665	1,103	8,182	3,010	3,830	1,342
1985	663	455	1,819	2,937	2,349	1,135	932	4,415	340	162	836	1,338	8,690	3,027	3,896	1,768
1986	1,120	628	2,352	4,100	3,471	1,485	853	5,809	412	445	1,076	1,932	11,841	4,391	5,521	1,929
1987	1,197	667	2,610	4,474	3,605	1,335	952	5,892	539	457	1,410	2,406	12,772	4,679	5,731	2,362
1988	1,015	708	2,954	4,677	3,796	1,462	836	6,094	668	315	1,458	2,441	13,211	4,859	6,059	2,293
1989	849	781	2,643	4,273	3,823	1,418	811	6,051	929	503	1,865	3,297	13,620	4,518	6,427	2,675
1990	1,133	915	2,345	4,392	3,972	1,228	976	6,176	753	639	1,881	3,273	13,842	4,635	6,349	2,858
1991	1,188 ^R	1,039 ^R	2,173 ^R	4,400	4,504	1,796 ^R	1,128 ^R	7,428	769 ^R	775 ^R	1,711 ^R	3,255	15,083	4,683 ^R	7,556 ^R	2,839 ^R
1992	1,049	989	1,953	3,990	3,884	1,553	1,337	6,775	687	696	1,564	2,946	13,711	4,211	6,520	2,901
1993	837	928	1,812	3,576	3,514	1,485	1,142	6,141	672	708	1,323	2,703	12,420	3,584	6,037	2,465

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.21 Source: Industrial Associations / DG III Annual Survey [83].

Breakdown of EU Overall Aerospace Turnover

Equipment Sector in % of Grand Totals

	National State				Aerospace Manufacturers				Final Users				Total A+B+C	EU Public Market ¹	EU Commercial Market ²	Exports ³
	R&D Contracts	Maintenance	Procurement	Total A	National	In Other EU States	In Third Countries	Total B	National	In Other EU States	In Third Countries	Total C				
1981	1.8 %	1.0 %	3.8 %	6.5 %	7.4 %	4.0 %	2.2 %	13.6 %	0.9 %	0.7 %	2.2 %	3.7 %	23.8 %	6.9 %	12.6 %	4.3 %
1982	1.6 %	0.9 %	3.9 %	6.5 %	7.1 %	3.8 %	1.7 %	12.6 %	0.7 %	0.5 %	2.0 %	3.2 %	22.3 %	6.9 %	11.8 %	3.7 %
1983	1.8 %	0.9 %	4.7 %	7.4 %	7.7 %	3.7 %	1.7 %	13.2 %	0.7 %	0.5 %	3.1 %	4.3 %	24.9 %	7.7 %	12.3 %	4.9 %
1984	2.2 %	1.2 %	5.6 %	9.0 %	7.4 %	3.2 %	2.1 %	12.7 %	0.9 %	0.5 %	2.0 %	3.4 %	25.1 %	9.2 %	11.7 %	4.1 %
1985	1.9 %	1.3 %	5.1 %	8.3 %	6.6 %	3.2 %	2.6 %	12.4 %	1.0 %	0.5 %	2.4 %	3.8 %	24.5 %	8.5 %	11.0 %	5.0 %
1986	2.8 %	1.6 %	5.9 %	10.3 %	8.7 %	3.7 %	2.1 %	14.6 %	1.0 %	1.1 %	2.7 %	4.8 %	29.7 %	11.0 %	13.8 %	4.8 %
1987	2.9 %	1.6 %	6.3 %	10.7 %	8.6 %	3.2 %	2.3 %	14.1 %	1.3 %	1.1 %	3.4 %	5.8 %	30.6 %	11.2 %	13.7 %	5.7 %
1988	2.2 %	1.5 %	6.4 %	10.2 %	8.2 %	3.2 %	1.8 %	13.2 %	1.5 %	0.7 %	3.2 %	5.3 %	28.7 %	10.6 %	13.2 %	5.0 %
1989	1.7 %	1.6 %	5.3 %	8.6 %	7.7 %	2.8 %	1.6 %	12.1 %	1.9 %	1.0 %	3.7 %	6.6 %	27.3 %	9.0 %	12.9 %	5.4 %
1990	2.1 %	1.7 %	4.4 %	8.2 %	7.4 %	2.3 %	1.8 %	11.5 %	1.4 %	1.2 %	3.5 %	6.1 %	25.8 %	8.6 %	11.8 %	5.3 %
1991	2.2 %	1.9 %	4.0 %	8.1 %	8.3 %	3.3 %	2.1 %	13.7 %	1.4 %	1.4 %	3.2 % ^R	6.0 %	27.8 %	8.6 % ^R	13.9 %	5.2 %
1992	2.0 %	1.9 %	3.8 %	7.8 %	7.6 %	3.0 %	2.6 %	13.2 %	1.3 %	1.4 %	3.1 %	5.8 %	26.8 %	8.5 %	12.7 %	5.7 %
1993	1.8 %	2.0 %	3.9 %	7.7 %	7.5 %	3.2 %	2.4 %	13.2 %	1.4 %	1.5 %	2.8 %	5.8 %	26.6 %	8.8 %	12.9 %	5.3 %

1) EU Public Market = National State + Other EU Final Military Users

2) EU Commercial Market = National and Other EU Civil and Military Manufacturers + Final Civil Users

3) Exports = Manufacturers and Final Users of Third Countries

Table 10.22 Source: Industrial Associations / DG III Annual Survey [83].

Intra-European Co-operation Level in Aerospace Industry

Proportion of Turnover Exported to Aerospace Companies¹
located in other EU Member States
in % of overall Non-consolidated Turnover

	BE	DE	ES	FR	GB	IT	NL	EU
1981	17.8 %	27.4 %	10.3 %	7.8 %	11.6 %	12.5 %	15.2 %	13.0 %
1982	17.1 %	26.2 %	5.6 %	6.9 %	13.7 %	11.2 %	15.9 %	13.4 %
1983	19.8 %	26.4 %	3.0 %	8.8 %	13.8 %	19.6 %	12.7 %	14.7 %
1984	27.6 %	26.7 %	5.2 %	7.5 %	11.9 %	21.2 %	9.5 %	13.7 %
1985	27.6 %	22.3 %	4.9 %	4.0 %	10.6 %	25.4 %	0.0 %	11.7 %
1986	32.3 %	17.1 %	4.6 %	5.3 %	11.1 %	25.5 %	0.1 %	11.9 %
1987	33.3 %	14.4 %	4.2 %	5.4 %	8.7 %	25.6 %	4.5 %	10.6 %
1988	24.8 %	15.9 %	4.1 %	7.8 %	10.1 %	25.9 %	2.5 %	12.0 %
1989	38.5 %	14.4 %	4.1 %	2.7 %	8.4 %	25.3 %	3.5 %	9.5 %
1990	44.0 %	15.6 %	6.0 %	4.0 %	9.3 %	25.1 %	3.5 %	10.6 %
1991	37.0 % ^R	15.4 %	8.0 %	7.0 %	13.5 %	18.4 %	2.9 %	12.2 %
1992	38.0 %	13.2 %	7.8 %	6.5 %	8.4 % ^R	19.3 %	2.4 %	9.8 %
1993	35.3 %	14.3 %	34.0 %	6.2 %	7.7 %	19.3 %	1.7 %	10.2 %

1) Not including consortia (Airbus, ATR, etc.) which are considered final users

Table 10.23 Source: Industrial Associations / DG III Annual Survey [83].

Exports to other EU Aerospace Companies
in % of overall Turnover

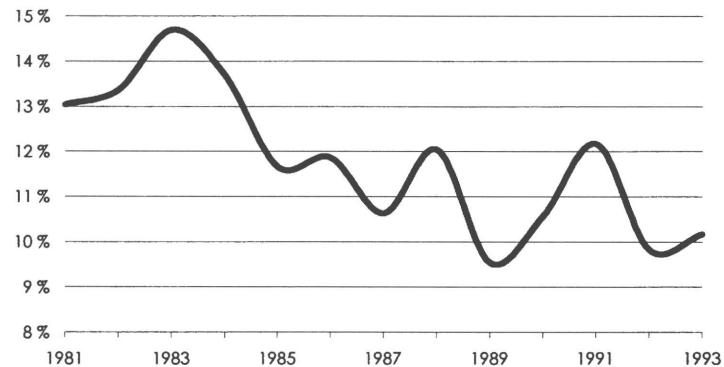


Chart 10.6

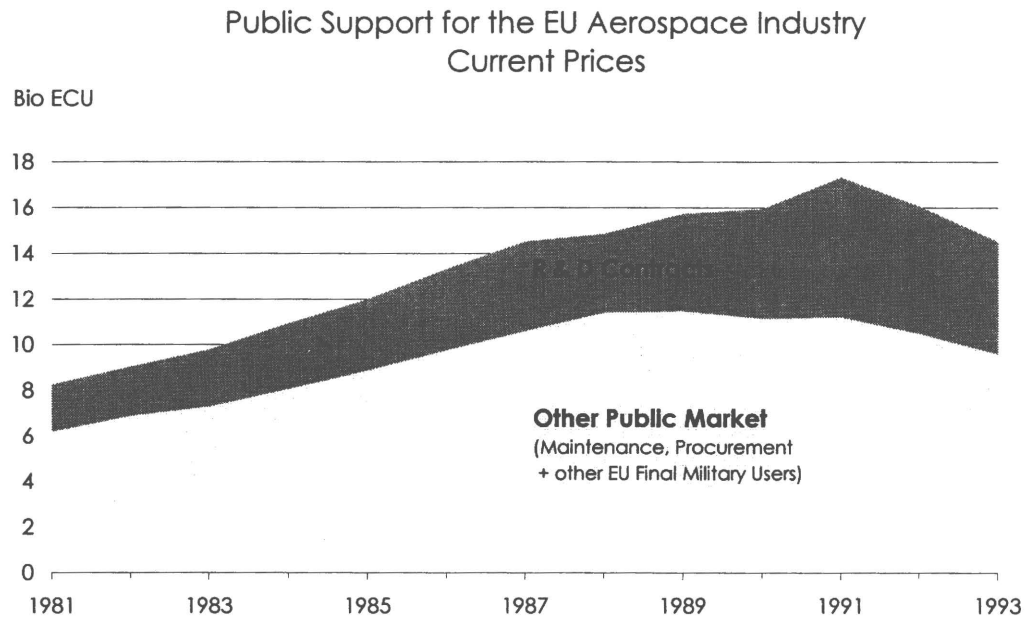


Chart 10.7

Public Support for the EU Aerospace Industry
in % of Final Turnover
Consolidated at EU level

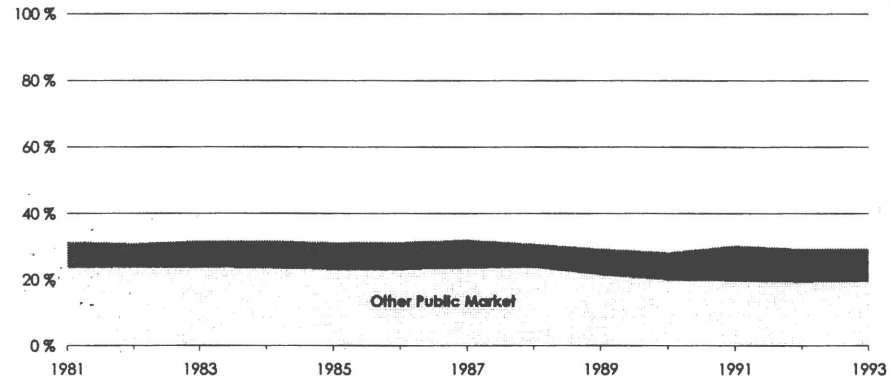


Chart 10.8

Public Support for the US Aerospace Industry
in % of Final Turnover

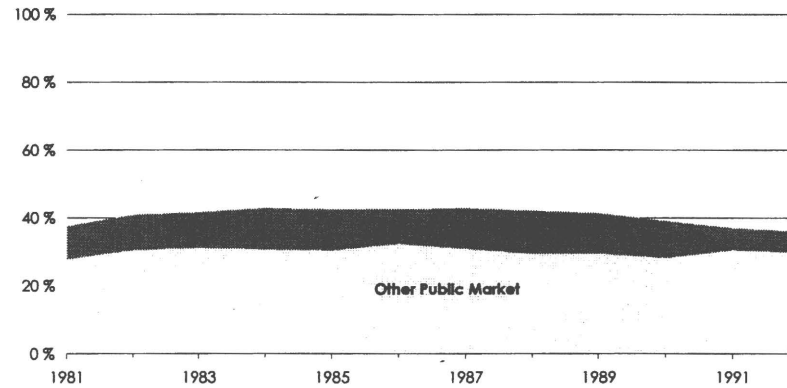


Chart 10.9

Public Support for the EU and USA Aerospace Industry													
Breakdown by Contract Type in Current Prices													
EU ¹								USA					
R&D Contracts		Other Public Market ²		Total Public Support				R&D Contracts		Other Public Market		Total Public Support	
Mio ECU	% of Total	Mio ECU	% of Total	Mio ECU	% of Final Turnover at National Level		Mio ECU	% of Total	Mio ECU	% of Total	Mio ECU	% of Final Turnover	
					% of Total	EU level						Mio ECU	% of Total
1981	2,061	25 %	6,187	75 %	8,247	39 %	46 %	7,639	26 %	21,923	74 %	29,562	60 %
1982	2,153	24 %	6,875	76 %	9,029	38 %	45 %	10,478	25 %	30,908	75 %	41,386	69 %
1983	2,492	25 %	7,286	75 %	9,777	38 %	46 %	12,802	25 %	38,495	75 %	51,296	71 %
1984	2,879	26 %	8,062	74 %	10,941	39 %	47 %	17,863	28 %	45,087	72 %	62,951	75 %
1985	3,119	26 %	8,879	74 %	11,998	39 %	45 %	21,730	28 %	54,587	72 %	76,316	74 %
1986	3,560	27 %	9,764	73 %	13,324	39 %	46 %	15,225	24 %	48,679	76 %	63,904	74 %
1987	3,907	27 %	10,618	73 %	14,525	41 %	47 %	16,042	28 %	41,670	72 %	57,712	75 %
1988	3,445	23 %	11,412	77 %	14,857	38 %	44 %	16,809	30 %	39,351	70 %	56,161	73 %
1989	4,256	27 %	11,482	73 %	15,738	37 %	42 %	17,821	29 %	44,227	71 %	62,048	70 %
1990	4,793	30 %	11,155	70 %	15,949	35 %	39 %	15,090	28 %	39,362	72 %	54,452	64 %
1991	6,106 ^R	35 %	11,219 ^R	65 %	17,324	37 %	43 %	8,954	17 %	42,838	83 %	51,792	59 %
1992	5,552	35 %	10,503	65 %	16,055	37 %	42 %	7,605	17 %	37,452	83 %	45,057	56 %
1993	4,927	34 %	9,603	66 %	14,529	37 %	42 %	-	-	45,073	-	-	-

1) Consolidated at EU Level

2) Maintenance, Procurement + Other EU Final Military Users

Table 10.24 Source: Industrial Associations. EU: DG III Annual Survey [83], USA: A.I.A.A. [64, 80].

Public Support for the EU Aerospace Industry

Breakdown by Contract Type and Subsector in Current Prices at EU Level (Millions of ECU)

	Airframes and Missiles					Space					Engines					Equipment				
	R&D Contracts	Other National Civil Market	Public Military Market	Other EU Final Military Users	Total	R&D Contracts	Other National Civil Market	Public Military Market	Other EU Final Military Users	Total	R&D Contracts	Other National Civil Market	Public Military Market	Other EU Final Military Users	Total	R&D Contracts	Other National Civil Market	Public Military Market	Other EU Final Military Users	Total
1981	1,133	95	2,468	761	4,457	152	85	6	0	242	324	56	794	622	1,796	451	60	1,152	89	1,752
1982	1,137	129	2,548	964	4,779	214	108	29	0	351	346	45	890	666	1,947	456	48	1,333	114	1,951
1983	1,312	285	2,651	782	5,030	259	177	14	0	450	375	28	852	704	1,959	546	72	1,617	104	2,338
1984	1,590	131	2,807	726	5,254	283	186	6	0	475	290	31	1,052	828	2,202	716	45	2,186	64	3,010
1985	1,653	93	3,855	584	6,186	479	185	76	1	741	324	24	1,012	684	2,044	663	87	2,187	90	3,027
1986	1,953	155	3,706	352	6,166	235	159	89	1	484	252	111	1,174	745	2,283	1,120	296	2,683	291	4,391
1987	2,031	168	4,162	351	6,712	289	174	91	0	554	390	240	1,121	830	2,581	1,197	459	2,817	205	4,679
1988	1,694	162	4,377	432	6,665	398	292	108	63	862	338	270	1,114	749	2,472	1,015	452	3,210	182	4,859
1989	2,418	227	4,404	941	7,990	605	371	87	105	1,168	385	372	1,095	210	2,062	849	576	2,847	246	4,518
1990	2,345	572	4,464	661	8,042	532	484	67	4	1,087	784	36	1,162	203	2,184	1,133	696	2,564	243	4,635
1991	2,654 ^R	562	4,822 ^R	791 ^R	8,829	1,112 ^R	227 ^R	29	4	1,372	1,151	22 ^R	841 ^R	422 ^R	2,436	1,188 ^R	417 ^R	2,795 ^R	287 ^R	4,687
1992	2,463	198	4,189	1,086	7,936	1,501	269	99	0	1,868	539	3	1,010	408	1,960	1,049	435	2,507	300	4,290
1993	2,286	331	3,803	689	7,109	1,311	347	155	0	1,812	493	64	860	272	1,689	837	330	2,409	342	3,918

Table 10.25 Source: Industrial Associations / DG III Annual Survey [83].

Public Support for the EU Aerospace Industry																							
Breakdown by Contract Type and Sub-sector in Current Prices at EU Level in % of Sub-sector																							
Airframes and Missiles					Space					Engines					Equipment								
Year	Other National		Public	Other EU		R&D Contracts	Other National		Public	Other EU		R&D Contracts	Other National		Public	Other EU		R&D Contracts	Other National		Public	Other EU	
	R&D Contracts	Civil Market	Military Market	Final Military Users	In % of Grand Total		Civil Market	Military Market	Final Military Users	In % of Grand Total	Civil Market		Military Market	Final Military Users	In % of Grand Total	Civil Market	Military Market		Final Military Users	In % of Grand Total	Civil Market	Military Market	Final Military Users
1981	25.4 %	2.1 %	55.4 %	17.1 %	54.0 %	62.6 %	35.1 %	2.3 %	0.0 %	2.9 %	18.0 %	3.1 %	44.2 %	34.6 %	21.8 %	25.8 %	3.4 %	65.7 %	5.1 %	21.2 %			
1982	23.8 %	2.7 %	53.3 %	20.2 %	52.9 %	61.0 %	30.9 %	8.1 %	0.0 %	3.9 %	17.8 %	2.3 %	45.7 %	34.2 %	21.6 %	23.3 %	2.5 %	68.3 %	5.9 %	21.6 %			
1983	26.1 %	5.7 %	52.7 %	15.5 %	51.4 %	57.6 %	39.3 %	3.2 %	0.0 %	4.6 %	19.1 %	1.4 %	43.5 %	35.9 %	20.0 %	23.3 %	3.1 %	69.1 %	4.5 %	23.9 %			
1984	30.3 %	2.5 %	53.4 %	13.8 %	48.0 %	59.6 %	39.1 %	1.3 %	0.1 %	4.3 %	13.2 %	1.4 %	47.8 %	37.6 %	20.1 %	23.8 %	1.5 %	72.6 %	2.1 %	27.5 %			
1985	26.7 %	1.5 %	62.3 %	9.4 %	51.6 %	64.6 %	25.0 %	10.3 %	0.1 %	6.2 %	15.9 %	1.2 %	49.5 %	33.5 %	17.0 %	21.9 %	2.9 %	72.3 %	3.0 %	25.2 %			
1986	31.7 %	2.5 %	60.1 %	5.7 %	46.3 %	48.5 %	32.9 %	18.5 %	0.1 %	3.6 %	11.0 %	4.9 %	51.4 %	32.7 %	17.1 %	25.5 %	6.8 %	61.1 %	6.6 %	33.0 %			
1987	30.3 %	2.5 %	62.0 %	5.2 %	46.2 %	52.2 %	31.4 %	16.4 %	0.0 %	3.8 %	15.1 %	9.3 %	43.4 %	32.1 %	17.8 %	25.6 %	9.8 %	60.2 %	4.4 %	32.2 %			
1988	25.4 %	2.4 %	65.7 %	6.5 %	44.9 %	46.2 %	33.9 %	12.6 %	7.3 %	5.8 %	13.7 %	10.9 %	45.1 %	30.3 %	16.6 %	20.9 %	9.3 %	66.1 %	3.8 %	32.7 %			
1989	30.3 %	2.8 %	55.1 %	11.8 %	50.8 %	51.8 %	31.8 %	7.4 %	9.0 %	7.4 %	18.7 %	18.1 %	53.1 %	10.2 %	13.1 %	18.8 %	12.8 %	63.0 %	5.4 %	28.7 %			
1990	29.2 %	7.1 %	55.5 %	8.2 %	50.4 %	48.9 %	44.5 %	6.2 %	0.4 %	6.8 %	35.9 %	1.6 %	53.2 %	9.3 %	13.7 %	24.4 %	15.0 %	55.3 %	5.2 %	29.1 %			
1991	30.1 % ^R	6.4 %	54.6 % ^R	9.0 %	51.0 %	81.1 % ^R	16.6 % ^R	2.1 %	0.3 %	7.9 %	47.2 % ^R	0.9 %	34.5 % ^R	17.3 %	14.1 %	25.3 % ^R	8.9 %	59.6 %	6.1 %	27.1 %			
1992	31.0 %	2.5 %	52.8 %	13.7 %	49.4 %	80.3 %	14.4 %	5.3 %	0.0 %	11.6 %	27.5 %	0.2 %	51.5 %	20.8 %	12.2 %	24.4 %	10.1 %	58.4 %	7.0 %	26.7 %			
1993	32.2 %	4.7 %	53.5 %	9.7 %	48.9 %	72.3 %	19.1 %	8.5 %	0.0 %	12.5 %	29.2 %	3.8 %	50.9 %	16.1 %	11.6 %	21.4 %	8.4 %	61.5 %	8.7 %	27.0 %			

Table 10.26 Source: Industrial Associations / DG III Annual Survey [83].

Chapter 11

Finance

FINANCIAL DATA

As to the European companies, the financial data are extracted from "*L'industrie Aéronautique et Spatiale Mondiale*" [84], a study by *EUROSTAF*, in collaboration with *AEROSPATIALE*. Data for USA are from A.I.A.A.'s "*Aerospace Facts & Figures*" [64].

Note

The Eurostaf / Aerospatiale study includes, for some companies, figures that due to accounting practices are not attributable to specific sectors of the company activities. This is notably the case for France (where certain activities in electronics and informatics are included) and the United Kingdom (where activities in the car industry and in civil engineering are included). For these two countries, non-aeronautics activities account for respectively 17 % and 44 % of the total turnover in 1992.

Furthermore, this study is based on a representative selection of companies, whereas the study presented in chapter 10 involves in principle all members of the national associations. The latter will therefore as a general rule show higher figures, with the exception of above mentioned cases where activities other than aerospace are included here.

These facts render comparison between chapter 10 and 11 impossible, and the inclusion of complete company portfolios affects to some degree the aggregation of European figures, which is presented in table 11.1.

The EU comprises in this respect the following six countries, represented by a selection of their major national producers:

<i>France</i>	Aerospatiale, Dassault Aviation, Matra, Snecma, Thomson-CSF
<i>Germany</i>	DASA Airbus, Dornier, MBB, MTU
<i>Italy</i>	Aeritalia, Agusta, Alenia, Selenia
<i>Netherlands</i>	Fokker
<i>Spain</i>	CASA
<i>United Kingdom</i>	British Aerospace, Rolls-Royce, Westland

For each country, the following series are provided:

<i>turnover</i>	
<i>value added (gross)</i>	turnover <i>minus</i> external costs and expenses, excluding wage costs and depreciation
<i>wage costs</i>	
<i>trading income</i>	value added <i>minus</i> wage costs
<i>net income</i>	trading income <i>minus</i> investments, financial costs and income taxes
<i>equity</i>	assets <i>minus</i> all liabilities, except to shareholders
<i>long and medium term debt</i>	
<i>total permanent liabilities</i>	equity <i>plus</i> long and medium term debt
<i>permanent assets</i>	
<i>total R&D, of which industry-funded R&D</i>	
<i>operating investments</i>	
<i>number of employees</i>	

The ratios are defined as follows:

<i>apparent labor productivity</i>	value added on wage costs and per worker
<i>research effort</i>	total R&D and industry-funded R&D on turnover
<i>operating investments on value added</i>	
<i>debt ratio</i>	long and medium term debt on permanent liabilities
<i>profitability</i>	trading income on value added and net income on value added, equity and assets

		Finance - EU ¹									
		Million ECU at Current Prices									
		1983	1984	1985	1986	1987	1988	1989 ^R	1990 ^R	1991 ^R	1992 ²
Turnover		18,156	25,454	29,272	30,790	31,509	36,770	43,556	48,500	50,326	48,036
Value Added (gross)		7,859	10,965	13,075	13,003	13,013 ^R	14,556	15,939	18,522	18,974	18,688
Wage Costs		6,279	8,025	9,828	10,356	10,630	11,398	12,037	14,255	15,204	14,423
Trading Income		1,581	2,939	3,247	2,647	2,382 ^R	3,158	3,901	4,267	3,770	4,264
Net Income		-139	470	638	716	339	1,009	2,116	892	67	-1,904
Equity		4,051	5,210	6,608	8,070	8,662	12,171	14,628	15,100	15,886	13,540
Long and Medium Term Debt		4,751	7,459	9,253	8,799	8,357	9,473	11,406	12,582	14,197	13,641
Total Permanent Liabilities		8,803	12,669	15,862	16,868	17,017	21,645	26,034	27,682	30,077	27,181
Permanent Assets		4,011	6,142	7,421	8,634	9,717 ^R	13,265 ^R	16,916	18,973	20,638	20,685
R&D Industry Funded		-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-	-	-	-	-	-	-
Operating Investments		728	968	1,562	1,525	1,717	2,136	3,089	2,972	2,878	3,057
Number of Employees		291,173	332,276	374,430	386,713	381,766	415,582	416,045	451,586	440,673	393,098
		Ratios									
		1983	1984	1985	1986	1987	1988	1989 ^R	1990 ^R	1991 ^R	1992 ²
Apparent Labor Productivity											
Value Added on Wage Costs		125.2 %	136.6 %	133.0 %	125.6 %	122.4 % ^R	127.7 %	132.4 %	129.9 %	124.8 %	129.6 %
Value Added per Worker (Thousand ECU)		27.0	33.0	34.9	33.6	34.1 ^R	35.0	38.3	41.0	43.1	47.5
Research effort											
Industry Funded R&D on Turnover		-	-	-	-	-	-	-	-	-	-
Total R&D on Turnover		-	-	-	-	-	-	-	-	-	-
Operating Investments on Value Added		9.3 %	8.8 %	11.9 %	11.7 %	13.2 %	14.7 %	19.4 %	16.0 %	15.2 %	16.4 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities		54.0 %	58.9 %	58.3 %	52.2 %	49.1 %	43.8 %	43.8 %	45.5 %	47.2 %	50.2 %
Profitability											
Trading Income on Value Added		20.1 %	26.8 %	24.8 %	20.4 %	18.3 % ^R	21.7 %	24.5 %	23.0 %	19.9 %	22.8 %
Net Income on Value Added		-1.8 %	4.3 %	4.9 %	5.5 %	2.6 %	6.9 %	13.3 %	4.8 %	0.4 %	-10.2 %
Net Income on Equity		-3.4 %	9.0 %	9.7 %	8.9 %	3.9 %	8.3 %	14.5 %	5.9 %	0.4 %	-14.1 %
Net Income on Permanent Assets		-3.5 %	7.6 %	8.6 %	8.3 %	3.5 %	7.6 %	12.5 %	4.7 %	0.3 %	-9.2 %

1) Countries: France, Germany, Italy, Netherlands, Spain, United Kingdom (for years available)

2) Italy not included for 1992

Table 11.1
Source:
Eurostat /
Aerospatiale [84].

Finance - USA

Million ECU at Current Prices

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Turnover	-	112,456	138,714	113,371	96,147	95,430	107,377	104,930	109,083	103,551	109,864
Value Added (gross)	-	40,312 ^R	45,669 ^R	39,177 ^R	35,551 ^R	35,783 ^R	39,600 ^R	36,540 ^R	37,514 ^R	34,262	35,795
Wage Costs	-	30,131 ^R	35,053 ^R	30,021 ^R	26,941 ^R	27,540 ^R	31,001 ^R	27,949 ^R	27,857 ^R	25,523	25,984
Trading Income	-	10,181	10,616	9,156	8,610	8,243	8,599	8,591 ^R	9,657	8,740 ^R	9,811
Net Income	-	4,612	4,290	3,143	3,969	4,129	3,509	3,524	2,005	-1,414	3,946
Equity	-	33,736	38,915	33,422	27,453	28,642	33,508	31,330	32,490	26,546	31,111
Long and Medium Term Debt	-	11,559	18,168	16,883	14,433	15,888	21,124	22,555 ^R	23,245	28,933	34,975
Total Permanent Liabilities	-	45,295	57,083	50,305	41,887	44,530	54,632	53,885 ^R	55,735	55,480	66,086
Permanent Assets	-	32,963	45,361	40,491	33,696	34,524	43,169	42,689	44,036	43,785 ^R	53,991
R&D Industry Funded	-	6,038	7,403	6,163	5,145	5,093	5,451	4,822	5,316	5,470	6,234
Total	-	23,901	29,132	21,388	21,187	21,903	23,271	19,912 ^R	17,505	20,646	23,911
Operating Investments	-	4,601	4,600	3,922	3,119	2,951	3,785	3,157	3,268	3,359 ^R	2,758
Number of Employees	-	817,000	898,000	948,000	968,000	977,000	992,000	946,000	879,000	775,000 ^R	677,000

Ratios

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Apparent Labor Productivity											
Value Added on Wage Costs	-	133.8 %	130.3 %	130.5 %	132.0 % ^R	129.9 %	127.7 %	130.7 %	134.7 % ^R	134.2 % ^R	137.8 %
Value Added per Worker (Thousand ECU)	-	49.3	50.9	41.3	36.7	36.6	39.9	38.6	42.7	44.2	52.9
Research effort											
Industry Funded R&D on Turnover	-	5.4 %	5.3 %	5.4 %	5.4 %	5.3 %	5.1 %	4.6 %	4.9 %	5.3 %	5.7 %
Total R&D on Turnover	-	21.3 %	21.0 %	18.9 %	22.0 %	23.0 %	21.7 %	19.0 %	16.0 %	19.9 %	21.8 %
Operating Investments on Value Added	-	11.4 %	10.1 %	10.0 %	-	8.2 %	9.6 %	8.6 %	8.7 %	9.8 %	7.7 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	-	25.5 %	31.8 %	33.6 %	34.5 %	35.7 %	38.7 %	41.9 %	41.7 %	52.2 %	52.9 %
Profitability											
Trading Income on Value Added	-	25.3 %	23.2 %	23.4 %	24.2 %	23.0 %	21.7 %	23.5 %	25.7 %	25.5 %	27.4 %
Net Income on Value Added	-	11.4 %	9.4 %	8.0 %	11.2 %	11.5 %	8.9 %	9.6 %	5.3 %	-4.1 %	11.0 %
Net Income on Equity	-	13.7 %	11.0 %	9.4 %	14.5 %	14.4 %	10.5 %	11.2 %	6.2 %	-5.3 %	12.7 %
Net Income on Permanent Assets	-	14.0 %	9.5 %	7.8 %	11.8 %	12.0 %	8.1 %	8.3 %	4.6 %	-3.2 % ^R	7.3 %

Table 11.2
Source: A.I.A.A.
[64].

Finance - France ¹										
Million ECU at Current Prices										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turnover	6,575	13,190	15,124	15,713	15,078	16,158	15,158	16,331	17,502	18,071
Value Added (gross)	3,016	5,626	6,690	6,303	6,128	5,912	5,977	6,595	7,233	7,541
Wage Costs	2,140	3,728	4,818	5,115	4,888	4,695	4,406	5,030	5,411	5,778
Trading Income	876	1,898	1,872	1,187	1,240	1,217	1,572	1,565	1,822	1,763
Net Income	-50	175	318	414	356	452	486	319	322	-203
Equity	580	1,218	1,764	2,905	3,502	4,586	4,228	4,959	5,354	5,253
Long and Medium Term Debt	1,870	4,583	6,246	4,991	4,154	3,822	3,708	4,747	5,514	5,916
Total Permanent Liabilities	2,450	5,801	8,009	7,895	7,656	8,408	7,937	9,706	10,864	11,169
Permanent Assets	1,337	3,044	3,906	4,624	4,664	5,026	5,110	6,672	7,268	7,477
R&D Industry Funded	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-
Operating Investments	252	550	911	872	779	701	798	876	958	777
Number of Employees	82,108	130,047	153,291	153,211	134,381	123,779	114,013	124,987	127,234	126,132
Ratios										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Apparent Labor Productivity										
Value Added on Wage Costs	140.9 %	150.9 %	138.8 %	123.2 %	125.4 %	125.9 %	135.7 %	131.1 %	133.7 %	130.5 %
Value Added per Worker (Thousand ECU)	36.7	43.3	43.6	41.1	45.6	47.8	52.4	52.8	56.8	59.8
Research effort										
Industry Funded R&D on Turnover	-	-	-	-	-	-	-	-	-	-
Total R&D on Turnover	-	-	-	-	-	-	-	-	-	-
Operating Investments on Value Added	8.3 %	9.8 %	13.6 %	13.8 %	12.7 %	11.9 %	13.4 %	13.3 %	13.2 %	10.3 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	76.3 %	79.0 %	78.0 %	63.2 %	54.3 %	45.5 %	46.7 %	48.9 %	50.8 %	53.0 %
Profitability										
Trading Income on Value Added	29.0 %	33.7 %	28.0 %	18.8 %	20.2 %	20.6 %	26.3 %	23.7 %	25.2 %	23.4 %
Net Income on Value Added	-1.7 %	3.1 %	4.8 %	6.6 %	5.8 %	7.6 %	8.1 %	4.8 %	4.4 %	-2.7 %
Net Income on Equity	-8.6 %	14.3 %	18.1 %	14.3 %	10.2 %	9.9 %	11.5 %	6.4 %	6.0 %	-3.9 %
Net Income on Permanent Assets	-3.7 %	5.7 %	8.2 %	9.0 %	7.6 %	9.0 %	9.5 %	4.8 %	4.4 %	-2.7 %

Table 11.3
Source:
Eurostat /
Aerospatiale[84].

¹ Companies: Aerospatiale (group) (1984 - 92), Dassault Aviation, Matra (1983 - 88), Snecma (group) (1985 - 92), Thomson-CSF (group)

Finance - Germany¹

Million ECU at Current Prices

	1983	1984	1985	1986	1987	1988	1989 ^R	1990 ^R	1991 ^R	1992
Turnover	3,594	3,737	4,205	4,239	4,351	5,065	5,486	6,104	6,021	8,551
Value Added (gross)	1,690	1,783	1,949	2,058	2,023 ^R	2,357	1,959	2,766	2,825	4,947
Wage Costs	1,359	1,426	1,539	1,744	1,926	2,046	1,689	2,430	2,521	3,247
Trading Income	331	357	410	315	97 ^R	311	269	336	303	1,700
Net Income	52	60	79	-18	16	51	903 ²	-94	7	-169
Equity	1,115	1,299	1,403	1,473	1,399	1,504	3,269	2,264	2,452	3,445
Long and Medium Term Debt	699	631	656	785	721	800	1,288	1,439	1,594	2,219
Total Permanent Liabilities	1,814	1,930	2,059	2,258	2,121	2,305	4,557	3,702	4,046	5,664
Permanent Assets	885	978	1,003	1,119	1,241 ^R	1,499	3,705	3,756	4,047	5,891
R&D Industry Funded	105	126	205	238	259	261	309	390	390	445
Total	472	669	1,258	1,177	1,327	1,394	1,122	2,051	2,092	2,563
Operating Investments	180	156	200	287	309	332	659	457	481	1,352
Number of Employees	52,117	51,163	52,558	54,283	55,538	55,020	55,111	60,835	58,945	73,063

Ratios

	1983	1984	1985	1986	1987	1988	1989 ^R	1990 ^R	1991 ^R	1992
Apparent Labor Productivity										
Value Added on Wage Costs	124.4 %	125.0 %	126.6 %	118.0 %	105.0 % ^R	115.2 %	115.9 %	113.8 %	112.0 %	152.4 %
Value Added per Worker (Thousand ECU)	32.4	34.8	37.1	37.9	36.4 ^R	42.8	35.5	45.5	47.9	67.7
Research effort										
Industry Funded R&D on Turnover	2.9 %	3.4 %	4.9 %	5.6 %	5.9 %	5.2 %	5.6 %	6.4 %	6.5 %	5.2 %
Total R&D on Turnover	13.1 %	17.9 %	29.9 %	27.8 %	30.5 %	27.5 %	20.4 %	33.6 %	34.7 %	30.0 %
Operating Investments on Value Added	10.6 %	8.7 %	10.3 %	14.0 %	15.3 % ^R	14.1 %	33.7 %	16.5 %	17.0 %	27.3 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	38.5 %	32.7 %	31.8 %	34.8 %	34.0 %	34.7 %	28.3 %	38.9 %	39.4 %	39.2 %
Profitability										
Trading Income on Value Added	19.6 %	20.0 %	21.0 %	15.3 %	4.8 % ^R	13.2 %	13.7 %	12.2 %	10.7 %	34.4 %
Net Income on Value Added	3.1 %	3.3 %	4.0 %	-0.9 %	0.8 %	2.1 %	46.1 %	-3.4 %	0.2 %	-3.4 %
Net Income on Equity	4.7 %	4.6 %	5.6 %	-1.2 %	1.1 %	3.4 %	27.6 %	-4.2 %	0.3 %	-4.9 %
Net Income on Permanent Assets	5.9 %	6.1 %	7.9 %	-1.6 %	1.3 % ^R	3.4 %	24.4 %	-2.5 %	0.2 %	-2.9 %

1) Companies: For years 1983 - 88: Dornier, MBB, MTU;

For 1989: DASA consolidated (including Dornier, MBB, MTU, TST) + Deutsche Aerospace Airbus

For years 1990 - 92: DASA consolidated (including Dornier, MBB, MTU, Deutsche Aerospace Airbus, TST).

2) Including 1,483 Mio. ECU quoted as an exceptional result in Deutsche Airbus.

Table 11.4
Source:
Eurostaf /
Aerospatiale [84].

Finance - Italy ¹										
Million ECU at Current Prices										
	1983	1984	1985	1986	1987	1988	1989	1990	1991 ^R	1992 ²
Turnover	642	843	1,318	2,082	2,067	2,140	2,578	3,435	3,724	-
Value Added (gross)	329	357	625	971	1,001	1,075	1,310	1,734	1,524	-
Wage Costs	204	220	403	569	653	707	824	1,204	1,333	-
Trading Income	125	137	222	402	347	368	486	530	191	-
Net Income	4	12	29	39	56	70	65	39	-83	-
Equity	268	289	489	805	895	900	1022	1485	1440	-
Long and Medium Term Debt	602	553	703	1,314	1,264	1,563	1,772	1,961	2,215	-
Total Permanent Liabilities	870	842	1,192	2,119	2,159	2,463	2,794	3,446	3,655	-
Permanent Assets	340	321	466	911	944	1,250	1,380	1,498	1,905	-
R&D Industry Funded	-	-	-	-	-	-	-	-	-	-
Total	189	282	359	605	654	623	648	776	756	-
Operating Investments	94	24	69	-	131	151	166	468	315	-
Number of Employees	12,286	12,321	19,632	29,610	30,223	30,781	31,384	39,643	38,442	-
Ratios										
	1983	1984	1985	1986	1987	1988	1989	1990	1991 ^R	1992 ²
Apparent Labor Productivity										
Value Added on Wage Costs	161.3 %	162.3 %	155.1 %	170.7 %	153.3 %	152.1 %	159.0 %	144.0 %	114.3 %	-
Value Added per Worker (Thousand ECU)	26.8	29.0	31.8	32.8	33.1	34.9	41.7	43.7	39.6	-
Research effort										
Industry Funded R&D on Turnover	-	-	-	-	-	-	-	-	-	-
Total R&D on Turnover	29.4 %	33.5 %	27.2 %	29.1 %	31.6 %	29.1 %	25.1 %	22.6 %	20.3 %	-
Operating Investments on Value Added	28.6 %	6.7 %	11.0 %	-	13.1 %	14.0 %	12.7 %	27.0 %	20.7 %	-
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	69.2 %	65.7 %	59.0 %	62.0 %	58.5 %	63.5 %	63.4 %	56.9 %	60.6 %	-
Profitability										
Trading Income on Value Added	38.0 %	38.4 %	35.5 %	41.4 %	34.7 %	34.2 %	37.1 %	30.6 %	12.5 %	-
Net Income on Value Added	1.2 %	3.4 %	4.6 %	4.0 %	5.6 %	6.5 %	5.0 %	2.2 %	-5.4 %	-
Net Income on Equity	1.5 %	4.2 %	5.9 %	4.8 %	6.3 %	7.8 %	6.4 %	2.6 %	-5.8 %	-
Net Income on Permanent Assets	1.2 %	3.7 %	6.2 %	4.3 %	5.9 %	5.6 %	4.7 %	2.6 %	-4.4 %	-

Table 11.5
Source:
Eurostaf /
Aerospatale [84].

1) Companies: Aeritalia (1983 - 89), Agusta (1986 - 91), Alenia (1990 - 91), Selenia (1985 - 89)

2) Figures for 1992 are not available

Finance - Netherlands¹

Million ECU at Current Prices

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turnover	604	619	533	584	452	880	1,199	1,385	1,650	1,795
Value Added (gross)	215	209	258	300	269	368	396	459	509	512
Wage Costs	183	186	228	277	291	299	319	364	383	422
Trading Income	33	23	30	22	-22	69	77	96	126	89
Net Income	7	9	13	8	-46	6	18	36	38	9
Equity	54	68	104	117	121	365	376	414	431	237
Long and Medium Term Debt	196	229	230	245	676	637	771	908	938	452
Total Permanent Liabilities	251	297	334	361	796	1,002	1,147	1,322	1,368	689
Permanent Assets	106	115	147	168	584	589	607	632	622	353
R&D Industry Funded	15	15	30	40	75	12	10	13	16	-
Total	36	100	159	153	98	39	23	26	28	-
Operating Investments	10	19	36	27	39	24	42	77	57	44
Number of Employees	8,398	9,055	10,053	10,860	11,709	11,690	12,925	13,176 ^R	12,874	12,638

Ratios

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Apparent Labor Productivity										
Value Added on Wage Costs	117.5 %	112.4 %	113.2 %	108.3 %	92.4 %	123.1 %	124.1 %	126.1 %	132.9 %	121.3 %
Value Added per Worker (Thousand ECU)	25.6	23.1	25.7	27.6	23.0	31.5	30.6	34.8 ^R	39.5	40.5
Research effort										
Industry Funded R&D on Turnover	2.5 %	2.4 %	5.6 %	6.8 %	16.6 %	1.4 %	0.8 %	0.9 %	1.0 %	-
Total R&D on Turnover	6.0 %	16.2 %	29.8 %	26.2 %	21.7 %	4.4 %	1.9 %	1.9 %	1.7 %	-
Operating Investments on Value Added	4.7 %	9.1 %	14.0 %	9.0 %	14.5 %	6.5 %	10.6 %	16.8 %	11.2 %	8.6 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	78.1 %	77.1 %	68.9 %	67.9 %	84.9 %	63.6 %	67.2 %	68.7 %	68.6 %	65.6 %
Profitability										
Trading Income on Value Added	15.3 %	11.0 %	11.6 %	7.3 %	-8.2 %	18.8 %	19.4 %	20.9 %	24.8 %	17.4 %
Net Income on Value Added	3.3 %	4.3 %	5.0 %	2.7 %	-17.1 %	1.6 %	4.5 %	7.8 %	7.5 %	1.8 %
Net Income on Equity	13.0 %	13.2 %	12.5 %	6.8 %	-38.0 %	1.6 %	4.8 %	8.7 %	8.8 %	3.8 %
Net Income on Permanent Assets	6.6 %	7.8 %	8.8 %	4.8 %	-7.9 %	1.0 %	3.0 %	5.7 %	6.1 %	2.5 %

Table 11.6
Source:
Eurostaf /
Aerospatiale [84].

¹⁾ Companies: Fokker

Finance - Spain ¹										
Million ECU at Current Prices										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turnover	-	-	355	305	313	532	601	764	681	693
Value Added (gross)	-	-	247	220	205	310	359	412	400	398
Wage Costs	-	-	184	207	214	261	292	306	322	317
Trading Income	-	-	62	13	-9	49	67	106	78	81
Net Income	-	-	13	-63	-97	-46	-29	-23	-54	-27
Equity	-	-	89	30	-68	-14	13	66	67	352
Long and Medium Term Debt	-	-	206	312	285	537	578	717	741	386
Total Permanent Liabilities	-	-	295	342	216	524	591	783	808	738
Permanent Assets	-	-	135	174	195	256	504	662	626	511
R&D Industry Funded	-	-	15	15	15	18	20	17	28	25
Total	-	-	-	-	-	-	-	-	-	-
Operating Investments	-	-	46	47	50	62	74	45	55	32
Number of Employees	-	-	10238	10591	10777	10652	10138	9544	9338	8,999
Ratios										
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Apparent Labor Productivity										
Value Added on Wage Costs	-	-	134.2 %	106.3 %	95.8 %	118.8 %	122.9 %	134.6 %	124.2 %	125.6 %
Value Added per Worker (Thousand ECU)	-	-	24.1	20.8	19.0	29.1	35.4	43.2	42.8	44.2
Research effort										
Industry Funded R&D on Turnover	-	-	4.2 %	4.9 %	4.8 %	3.4 %	3.3 %	2.2 %	4.1 %	3.6 %
Total R&D on Turnover	-	-	-	-	-	-	-	-	-	-
Operating Investments on Value Added	-	-	18.6 %	21.4 %	24.4 %	20.0 %	20.6 %	10.9 %	13.8 %	8.0 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	-	-	69.8 %	91.2 %	131.9 %	102.5 %	97.8 %	91.6 %	91.7 %	52.3 %
Profitability										
Trading Income on Value Added	-	-	25.1 %	5.9 %	-4.4 %	15.8 %	18.7 %	25.7 %	19.5 %	20.4 %
Net Income on Value Added	-	-	5.3 %	-28.6 %	-47.3 %	-14.8 %	-8.1 %	-5.6 %	-13.5 %	-6.8 %
Net Income on Equity	-	-	14.6 %	-210.0 %	142.6 %	328.6 %	-223.1 %	-34.8 %	-80.6 %	-7.7 %
Net Income on Permanent Assets	-	-	9.6 %	-36.2 %	-49.7 %	-18.0 %	-5.8 %	-3.5 %	-8.6 %	-5.3 %

1) Companies: CASA (1985 - 92)

Table 11.7
Source:
Eurostat /
Aerospaciale [84].

Finance - United Kingdom¹

Million ECU at Current Prices

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Turnover	6,741	7,066	7,737	7,868	9,248	11,995	18,534	20,482	20,748	18,926
Value Added (gross)	2,609	2,990	3,307	3,152	3,387	4,534	5,938	6,555	6,483	5,290
Wage Costs	2,393	2,466	2,655	2,444	2,658	3,390	4,507	4,921	5,233	4,660
Trading Income	216	525	651	708	730	1,144	1,430	1,634	1,250	630
Net Income	-153	215	186	336	54	476	673	615	-163	-1,514
Equity	2,035	2,336	2,760	2,741	2,812	4,830	5,719	5,913	6,142	4,253
Long and Medium Term Debt	1,384	1,463	1,213	1,152	1,258	2,113	3,288	2,810	3,195	4,668
Total Permanent Liabilities	3,419	3,799	3,973	3,893	4,070	6,943	9,008	8,723	9,337	8,921
Permanent Assets	1,342	1,685	1,764	1,637	2,089	4,645 ^R	5,610 ^R	5,754 ^R	6,169 ^R	6,452
R&D Industry Funded	394	367	377	369	439	385	523	661	474 ^R	530
Total	535 ²	489 ²	526 ²	1,151 ^R	1,149 ^R	1,464	1,665	1,679	1,613	1,519
Operating Investments	192	219	300	291	408	866	1,350	1,049	1,012	852
Number of Employees	136,264	129,690	128,658	128,158	139,138	183,660	192,474	203,401	193,840	172,266

Ratios

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Apparent Labor Productivity										
Value Added on Wage Costs	109.0 %	121.3 %	124.5 %	129.0 %	127.5 %	133.8 %	131.7 %	133.2 %	123.9 %	113.5 %
Value Added per Worker (Thousand ECU)	19.1	23.1	25.7	24.6	24.3	24.7	30.8	32.2	33.4	30.7
Research effort										
Industry Funded R&D on Turnover	5.8 %	5.2 %	4.9 %	4.7 %	4.8 %	3.2 %	2.8 %	3.2 %	2.3 % ^R	2.8 %
Total R&D on Turnover	7.9 % ²	6.9 % ²	6.8 % ²	14.6 % ^R	12.4 % ^R	12.2 %	9.0 %	8.2 %	7.8 %	8.0 %
Operating Investments on Value Added	7.4 %	7.3 %	9.1 %	9.2 %	12.1 %	19.1 %	22.7 %	16.0 %	15.6 %	16.1 %
Debt Ratio / Long and Medium Term Debt on Permanent Liabilities	40.5 %	38.5 %	30.5 %	29.6 %	30.9 %	30.4 %	36.5 %	32.2 %	34.2 %	52.3 %
Profitability										
Trading Income on Value Added	8.3 %	17.5 %	19.7 %	22.5 %	21.5 %	25.2 %	24.1 %	24.9 %	19.3 %	11.9 %
Net Income on Value Added	-5.9 %	7.2 %	5.6 %	10.7 %	1.6 %	10.5 %	11.3 %	9.4 %	-2.5 %	-28.6 %
Net Income on Equity	-7.5 %	9.2 %	6.7 %	12.3 %	1.9 %	9.9 %	11.8 %	10.4 %	-2.6 %	-35.6 %
Net Income on Permanent Assets	-11.4 %	12.7 %	10.5 %	20.5 %	2.6 %	10.3 % ^R	12.0 %	10.7 %	-2.6 %	-23.5 %

1) Companies: BAe, Rolls-Royce, Westland

2) Excluding Total R&D expenditure for BAe for years 1983 - 85, as the figures are not communicated

Table 11.8
Source:
Eurostat /
Aerospatale [84].

Chapter 12

Employment

The annual survey, conducted by DG III together with the industrial associations of 7 EU Member States - A.I.A. (IT), A.T.E.C.M.A. (ES), B.D.L.I. (DE), G.E.B.E.C.O.M.A. (BE), G.I.F.A.S. (FR), N.A.I. (NL) and S.B.A.C. (GB) -, enables the **employment in the European aerospace industry** to be broken down by *professional categories* and by *activities*.

Participants to this survey are the aerospace companies whose turnover concerns (partly or entirely) one or more of the 3 groups of aerospace products listed in the introductory comments of Chapter 11 (complete aircraft and space systems, propulsion devices / engines, equipment).

Data for Spain relating to the years 1984-86 have been estimated by linear regression to the employment of the major Spanish aerospace company, Casa.

The *professional categories* are the following:

- *engineers and managers,*
- *technical and administrative employees* comprise technicians, draughtsmen, craftsmen, supervisors, foremen, 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.

Note

Due to varying registration methods within the participating companies, and the limited number of categories available for classifying employees, the breakdowns by professional category and by activity do not necessarily add up to the same amount. When considering total employment per country the figures are taken from the activity classification which is the most complete.

Aerospace Employment

Total Figures at Year-end

	BE	DE	ES	FR	GB	IT	NL	EU 10	EU 12	USA ¹	Canada	Japan
1978	5,068	56,348	6,642	103,424	214,918	36,136	7,382	423,276	429,918	663,000	33,800	30,097
1979	6,272	60,866	7,331	106,298	196,566	38,370	7,935	416,307	423,638	775,000	37,700	31,666
1980	7,032	66,086	8,177	110,783	229,821	40,934	8,862	463,518	471,695	830,000	46,800	32,991
1981	6,886	68,650	9,516	113,687	249,863	41,920	9,706	490,712	500,228	829,000	44,800	33,800 R
1982	6,705	66,883	10,216	115,982	230,961	42,907	9,527	472,965	483,181	765,000	39,800	35,100 R
1983	6,127	65,677	10,538	127,269	221,998	42,546	8,398	472,015	482,553	765,000	37,100	33,800 R
1984	5,757	65,366	11,439	127,815	203,201	42,885	9,055	454,079	465,518	817,000	44,041 R	34,200 R
1985	5,470	77,256	11,836	127,072	206,676	43,284	10,053	469,811	481,647	898,000	48,794 R	34,300 R
1986	5,743	85,021	12,019	126,057	203,489	44,780	10,860		487,969	948,000	54,633 R	33,350 R
1987	5,510	86,573	11,304	122,316	207,161	47,000	11,529		491,393	968,000	58,861 R	36,610 R
1988	4,829	93,561	11,770	119,484	196,682	49,500	11,584		487,410	977,000	62,859 R	37,500 R
1989	5,239	94,456	12,581	120,334	189,911	50,501	12,718		485,740	992,000	66,106 R	38,300 R
1990	5,234	95,042	12,627	120,720	186,337	50,698	13,314		483,972	946,000	65,679 R	39,100 R
1991	7,601 R	86,299	12,362	118,300	167,614	47,000	12,606		451,782	879,000	65,615 R	40,300 R
1992	7,128 R	78,501	11,067	111,700 R	149,725	42,000	12,363		412,484	775,000 R	61,316 R	40,200
1993	6,038	72,895	9,619	105,600	132,019	37,000	10,414		373,585	677,000	53,431	39,600

1) USA: Employment in the aircraft, missile, and space industries (SICs 372 and 376) plus estimated aerospace-related employment in the communications (SIC 3662) and instruments (SICs 381 and 382). Other space-related industries are excluded.

Table 12.1 Sources: EU: Industrial Associations [47, 70, 71, 72, 73, 74, 75], USA: AIAA [64], Canada: AIAC [68], Japan: SJAC [69].

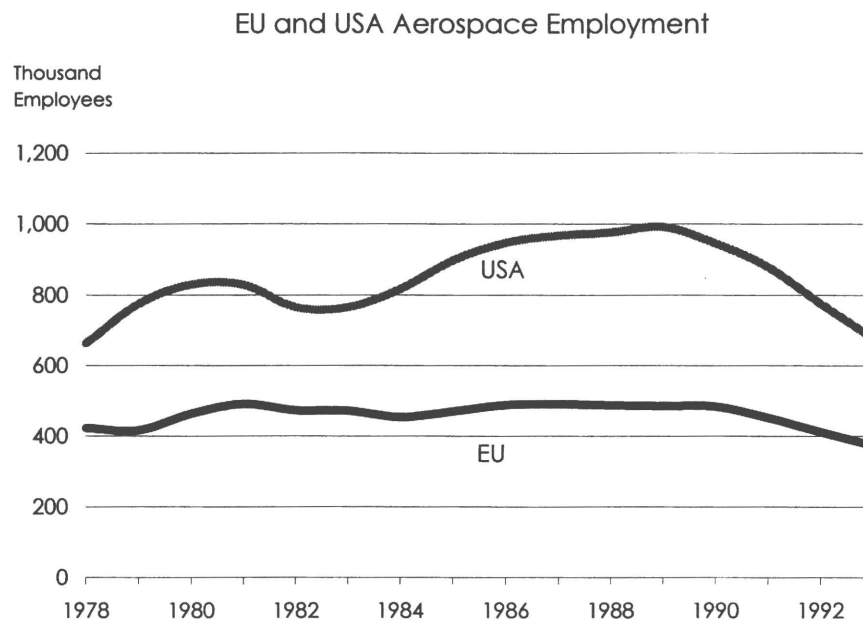


Chart 12.1

EU 1993 - Breakdown by Country

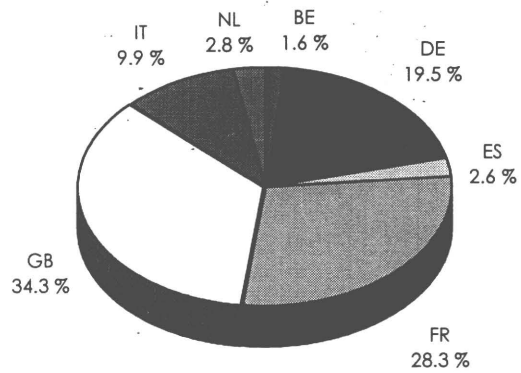


Chart 12.2

Breakdown by Sector

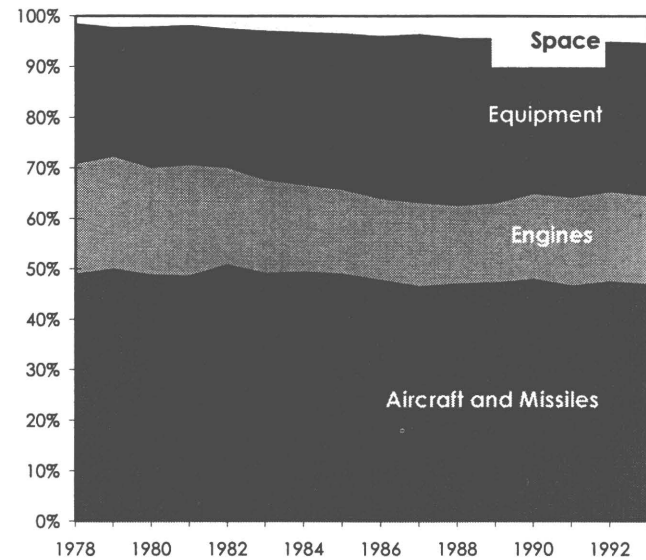


Chart 12.3

Breakdown by Activity

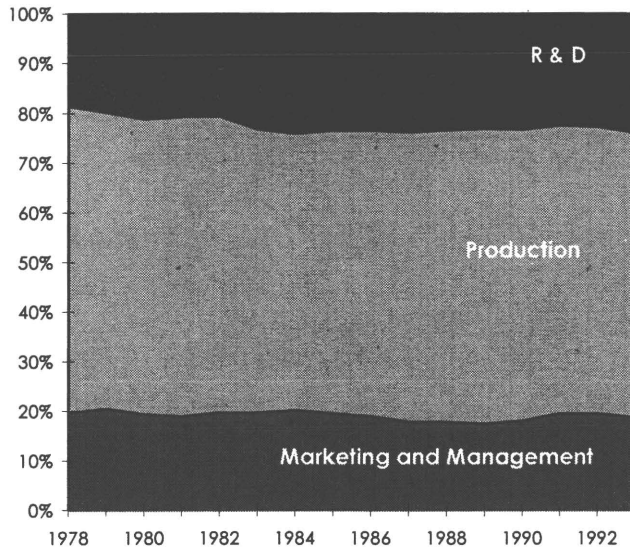


Chart 12.4

Breakdown by Professional Category

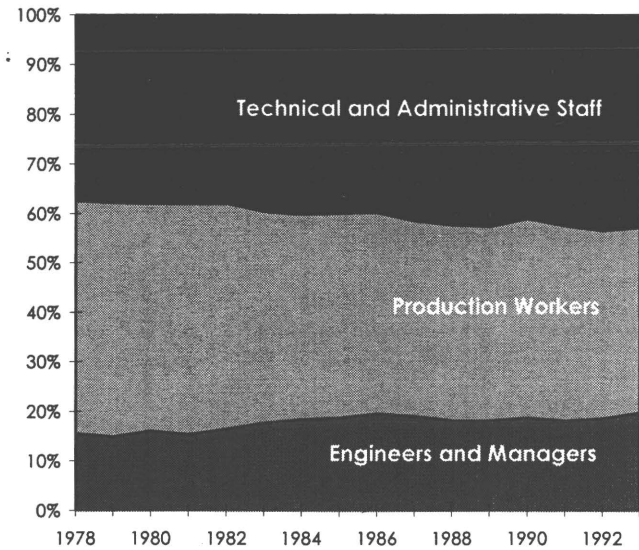


Chart 12.5

Breakdown of EU Workforce at Year-end

By Professional Category / Activity

ALL SECTORS

	Professional category						Activity					
	Engineers and Managers		Technical and Administrative Staff		Production Workers		R & D		Production		Marketing and Management	
	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total	#	% of Total
1978	66,907	15.6 %	161,326	37.5 %	201,683	46.9 %	79,985	18.6 %	265,570	61.8 %	84,363	19.6 %
1979	62,957	14.9 %	160,552	37.9 %	200,128	47.2 %	84,070	19.8 %	252,870	59.7 %	86,698	20.5 %
1980	75,937	16.1 %	179,529	38.1 %	216,230	45.8 %	99,784	21.2 %	280,439	59.5 %	91,472	19.4 %
1981	76,810	15.4 %	190,871	38.2 %	232,548	46.5 %	103,831	20.8 %	301,637	60.3 %	94,760	18.9 %
1982	79,359	16.4 %	183,781	38.0 %	220,042	45.5 %	99,378	20.6 %	288,568	59.7 %	95,235	19.7 %
1983	85,220	17.7 %	191,340	39.7 %	205,991	42.7 %	111,941	23.2 %	275,515	57.1 %	95,097	19.7 %
1984	85,543	18.4 %	187,102	40.2 %	192,873	41.4 %	112,350	24.1 %	259,333	55.7 %	93,835	20.2 %
1985	89,981	18.7 %	193,093	40.1 %	198,573	41.2 %	113,299	23.5 %	274,539	57.0 %	93,809	19.5 %
1986	95,288	19.5 %	194,308	39.8 %	198,371	40.7 %	114,736	23.5 %	280,949	57.6 %	92,284	18.9 %
1987	93,443	19.0 %	204,029	41.5 %	193,920	39.5 %	117,216	23.9 %	286,448	58.3 %	87,729	17.9 %
1988	88,500	18.2 %	206,635	42.4 %	192,275	39.4 %	114,304	23.5 %	286,359	58.8 %	86,747	17.8 %
1989	88,246	18.2 %	207,444	42.7 %	190,050	39.1 %	112,469	23.2 %	288,600	59.4 %	84,671	17.4 %
1990	90,465	18.7 %	198,755	41.1 %	194,752	40.2 %	113,126	23.4 %	283,679	58.6 %	87,167	18.0 %
1991 ^R	81,854	18.1 %	192,297	42.6 %	177,190	39.3 %	101,550	22.5 %	261,958	58.0 %	88,274	19.5 %
1992	76,648	18.6 %	179,380	43.5 %	156,076	37.9 %	93,807	22.7 %	238,237	57.8 %	80,440	19.5 %
1993	73,644	19.7 %	160,158	42.9 %	139,490	37.4 %	89,284	23.9 %	214,471	57.4 %	69,830	18.7 %

Table 12.2

Sources: Industrial Associations [47, 70, 71, 72, 73, 74, 75].

Aerospace Employment - Breakdown of EU Workforce at Year-end																	
By Sector and by Member State																	
AIRFRAMES AND MISSILES									ENGINES								
	BE	DE	ES	FR	GB	IT	NL	Total		BE	DE	ES	FR	GB	IT	NL	Total
1978	2,948	34,386	6,053	56,878	81,120	22,814	5,310	209,509	1978	1,352	7,794	214	21,159	59,817	5,601	0	95,937
1979	3,423	37,935	6,413	58,603	73,875	24,788	5,705	210,742	1979	1,807	8,431	214	21,446	58,524	5,783	0	96,205
1980	3,755	40,901	7,290	60,058	83,907	26,534	6,375	228,820	1980	2,262	8,701	226	22,570	62,986	6,037	0	102,782
1981	3,461	42,472	8,553	61,067	92,310	26,930	6,982	241,775	1981	2,398	8,955	240	23,360	70,942	6,292	0	112,187
1982	3,329	40,501	9,233	61,382	94,953	28,183	6,852	244,433	1982	2,357	8,697	259	24,030	53,671	5,984	0	94,998
1983	2,919	38,722	9,535	60,301	90,015	28,255	6,039	235,786	1983	2,238	7,717	261	24,424	51,264	5,803	0	91,707
1984	2,757	39,411	10,079	60,525	81,844	27,850	6,511	228,977	1984	2,107	8,434	396	24,927	40,630	5,645	0	82,139
1985	2,577	41,694	10,301	59,954	86,799	26,280	7,229	234,834	1985	2,053	8,096	466	25,100	40,701	6,475	0	82,891
1986	2,714	44,934	10,331	57,630	81,463	27,087	7,809	231,968	1986	2,053	8,790	530	25,271	38,591	6,086	0	81,321
1987	2,680	40,698	9,808	55,613	82,249	27,965	8,439	227,452	1987	1,878	9,481	528	25,453	39,924	6,392	0	83,656
1988	2,611	43,824	9,601	54,317	81,170	27,918	8,789	228,230	1988	1,611	9,824	663	24,059	34,765	6,830	0	77,752
1989	2,847	45,237	10,469	54,466	76,088	29,543	9,717	228,367	1989	1,555	9,802	720	24,125	36,004	6,868	0	79,074
1990	2,806	48,598	10,654	53,160	76,318	29,152	10,243	230,931	1990	1,590	10,926	395	24,880	39,523	6,945	0	84,259
1991	4,220[R]	37,769	9,864	52,270	67,886	27,965	9,319	209,293	1991	1,847[R]	10,072	913	24,220	37,083	7,332	0	81,467
1992	4,039	39,948	9,302	50,670	57,371	24,528	9,133	194,991	1992	1,741	10,259	852	23,220	32,174	6,636	0	74,882
1993	3,837	37,652	8,016	48,240	47,642	21,460	7,558	174,405	1993	1,741	8,555	836	21,840	28,052	6,178	0	67,202
EQUIPMENT									SPACE								
	BE	DE	ES	FR	GB	IT	NL	Total		BE	DE	ES	FR	GB	IT	NL	Total
1978	546	11,235	238	23,235	72,541	7,194	1,901	116,890	1978	222	2,933	137	2,152	1,440	527	171	7,582
1979	752	11,659	554	24,218	59,628	7,317	2,041	106,169	1979	290	2,841	150	2,031	4,539	482	189	10,522
1980	770	13,718	515	25,474	78,511	7,493	2,278	128,759	1980	245	2,766	146	2,681	4,417	870	209	11,334
1981	728	14,542	567	26,100	83,443	7,887	2,495	135,762	1981	299	2,681	156	3,160	3,168	811	229	10,504
1982	655	13,958	584	26,116	78,900	7,826	2,449	130,488	1982	364	3,727	140	4,454	3,437	914	226	13,262
1983	560	14,806	586	37,848	76,612	7,205	2,158	139,775	1983	410	4,432	156	4,696	4,107	1,283	201	15,285
1984	513	12,454	735	36,357	77,761	7,970	2,327	138,117	1984	380	5,067	229	6,006	2,966	1,420	217	16,285
1985	406	22,019	802	35,323	76,577	8,249	2,583	145,959	1985	434	5,447	267	6,695	2,599	2,280	241	17,963
1986	405	25,744	856	34,659	80,935	8,643	2,791	154,033	1986	571	5,553	302	8,497	2,500	2,964	260	20,647
1987	397	30,498	610	35,061	82,630	9,400	2,850	161,446	1987	555	5,896	358	6,189	2,358	3,243	240	18,839
1988	263	33,609	1,135	32,574	78,000	11,138	2,526	159,245	1988	344	6,304	371	8,534	2,747	3,614	269	22,183
1989	288	32,943	1,041	32,663	75,841	10,555	2,679	156,010	1989	549	6,474	351	9,080	1,978	3,535	322	22,289
1990	248	28,512	1,046	32,960	68,187	10,951	2,721	144,625	1990	590	7,006	532	9,720	2,309	3,650	350	24,157
1991	1,199[R]	31,502	945	31,640	60,495	8,084	2,927	136,792	1991	335[R]	6,956	640	10,170	2,150	3,619	360	24,230
1992	1,076	21,707	377	28,660	58,959	6,804	2,873	120,456	1992	272	6,587	536	9,150	1,221	4,032	357	22,155
1993	179	20,779	193	26,760	55,233	5,477	2,436	111,057	1993	281	5,909	574	8,760	1,092	3,885	420	20,921

Table 12.3

Sources: Industrial Associations [47, 70, 71, 72, 73, 74, 75].

Aerospace Employment - Breakdown of EU Workforce at Year-end

By Sector and by Professional Category / Activity

	AIRFRAMES AND MISSILES						ENGINES						
	Professional category			Activity			Professional category			Activity			
	Engineers and Managers	Technical and Administrative Staff	Production Workers	R & D	Production	Marketing and Management	Engineers and Managers	Technical and Administrative Staff	Production Workers	R & D	Production	Marketing and Management	
1978	31,601	84,635	93,219	33,331	135,250	40,928	1978	13,142	31,029	51,777	17,925	57,465	20,547
1979	29,176	84,169	97,369	34,481	133,422	42,839	1979	13,382	32,248	50,582	18,594	56,275	21,336
1980	33,804	93,577	101,480	44,742	140,817	43,261	1980	14,128	32,924	55,716	15,772	67,259	19,751
1981	35,132	97,256	109,434	46,062	148,580	47,133	1981	14,208	38,686	59,321	17,582	73,429	21,176
1982	36,646	98,407	109,455	47,205	149,401	47,827	1982	15,480	30,439	49,122	15,959	58,383	20,656
1983	38,868	95,500	101,484	51,384	137,410	46,992	1983	15,211	32,273	44,225	17,091	54,475	20,141
1984	39,309	94,260	95,408	51,963	130,321	46,693	1984	13,947	28,989	39,203	15,845	48,828	17,466
1985	39,854	94,863	100,117	48,623	140,323	45,888	1985	14,271	28,627	39,993	15,660	49,823	17,408
1986	39,978	96,975	95,131	48,615	137,708	45,645	1986	13,703	28,280	39,344	15,324	49,607	16,390
1987	39,935	93,873	93,587	51,641	135,117	40,694	1987	12,976	35,495	35,189	16,510	51,814	15,332
1988	39,567	97,679	90,984	51,061	136,859	40,310	1988	11,756	32,708	33,288	15,496	47,809	14,447
1989	37,980	99,832	90,555	49,842	139,309	39,216	1989	12,181	33,345	33,548	15,918	48,351	14,805
1990	41,302	98,630	90,999	50,340	139,581	41,010	1990	11,673	32,667	39,919	17,615	52,026	14,618
1991 ^R	36,821	93,519	78,807	42,061	127,662	39,570	1991 ^R	10,706	33,278	37,337	17,251	47,877	16,339
1992	33,727	89,968	71,210	37,726	119,019	38,246	1992	10,362	31,425	32,949	18,364	43,062	13,456
1993	31,264	78,743	64,252	34,834	107,141	32,430	1993	9,348	28,872	28,836	17,401	38,441	11,360
	EQUIPMENT						SPACE						
	Professional category			Activity			Professional category			Activity			
	Engineers and Managers	Technical and Administrative Staff	Production Workers	R & D	Production	Marketing and Management	Engineers and Managers	Technical and Administrative Staff	Production Workers	R & D	Production	Marketing and Management	
1978	20,518	41,730	54,684	24,185	70,915	21,790	1978	1,646	3,932	2,003	4,544	1,940	1,098
1979	17,857	39,045	49,288	25,428	59,809	20,932	1979	2,542	5,090	2,889	5,567	3,364	1,591
1980	24,703	47,773	56,257	32,772	69,326	26,661	1980	3,302	5,255	2,777	6,498	3,037	1,799
1981	24,907	49,984	60,796	34,117	76,687	24,958	1981	2,563	4,945	2,997	6,070	2,941	1,493
1982	23,551	48,871	57,949	28,628	77,089	24,771	1982	3,682	6,064	3,516	7,586	3,695	1,981
1983	26,873	56,047	56,785	34,656	79,553	25,566	1983	4,268	7,520	3,497	8,810	4,077	2,398
1984	27,991	56,070	54,056	36,766	74,308	27,043	1984	4,296	7,783	4,206	7,776	5,876	2,633
1985	30,954	60,131	54,874	39,192	79,482	27,285	1985	4,902	9,472	3,589	9,824	4,911	3,228
1986	35,673	58,367	59,870	39,702	87,494	26,837	1986	5,934	10,686	4,026	11,095	6,140	3,412
1987	34,762	64,647	62,090	39,335	94,007	28,104	1987	5,770	10,014	3,054	9,730	5,510	3,599
1988	29,674	64,889	64,682	36,728	94,957	27,560	1988	7,503	11,359	3,321	11,019	6,734	4,430
1989	30,359	64,137	61,514	35,948	92,820	27,242	1989	7,726	10,130	4,433	10,761	8,120	3,408
1990	28,798	56,913	58,914	33,613	83,524	27,488	1990	8,692	10,545	4,920	11,558	8,548	4,051
1991 ^R	25,589	54,487	56,567	30,222	78,065	28,505	1991 ^R	8,738	11,013	4,479	12,016	8,354	3,860
1992	25,023	47,916	47,369	27,531	68,382	24,543	1992	7,536	10,071	4,548	10,186	7,774	4,195
1993	25,359	43,233	42,464	26,923	61,428	22,706	1993	7,673	9,310	3,938	10,126	7,461	3,334

Table 12.4
Sources: Industrial Associations [47, 70, 71, 72, 73, 74, 75].

Appendices

Average Annual ECU Exchange Rates

1 ECU =

	BEC	DKR	DM	DRA	ESC	FF	FMK	HFL	IRL	LIT	LUF	OS	PTA	SFR	SKR	UKL	AUD	CAD	USD	YEN
1970	51.112	7.6668	3.7414	30.67	29.38	5.6777	4.2934	3.7005	0.42593	638.9	51.112	26.578	71.36	4.4702	5.2882	0.42593	0.9127	1.0710	1.0222	368.00
1971	50.866	7.7526	3.6457	31.43	29.64	5.7721	4.3842	3.6575	0.42858	647.4	50.866	26.179	72.57	4.3313	5.3707	0.42858	0.9248	1.0580	1.0478	363.83
1972	49.361	7.7891	3.5768	33.65	30.48	5.6572	4.6512	3.5999	0.44894	654.3	49.361	25.930	72.00	4.2843	5.3424	0.44894	0.9408	1.1105	1.1218	339.72
1973	47.801	7.4160	3.2764	36.95	30.27	5.4678	4.7067	3.4285	0.50232	716.5	47.801	24.117	71.81	3.8982	5.3792	0.50232	0.8665	1.2318	1.2317	333.17
1974	45.912	7.1932	3.0867	35.78	29.93	5.6745	4.5365	3.1714	0.51350	791.7	45.912	22.471	68.84	3.5814	5.3367 ^R	0.51350	0.8375	1.1757 ^R	1.2021	339.68
1975	45.569	7.1227	3.0494	39.99	31.44	5.3192	4.5640	3.1349	0.55981	809.5	45.569	21.547	70.27	3.2005	5.1413	0.56003	0.9480	1.2620 ^R	1.2408	360.73
1976	43.166	6.7618	2.8155	40.88	33.62	5.3449	4.3112	2.9552	0.62192	930.2	43.166	20.035	74.74	2.7940	4.8666	0.62158	0.9149	1.1023	1.1180	331.21
1977	40.883	6.8557	2.6483	42.16	43.62	5.6061	4.5934	2.8001	0.65370	1,006.8	40.883	18.842	86.82	2.7389	5.1193	0.65370	1.0291	1.2140	1.1411	305.81
1978	40.061	7.0195	2.5561	46.80	55.87	5.7398	5.2385	2.7541	0.66389	1,080.2	40.061	18.464	97.42	2.2722	5.7494	0.66391	1.1131	1.4537	1.2741	267.08
1979	40.165	7.2079	2.5110	50.76	67.01	5.8298	5.3220	2.7488	0.66945	1,138.4	40.165	18.310	91.97	2.2787	5.8717	0.64630	1.2261	1.6056	1.3705	300.46
1980	40.598	7.8274	2.5242	59.42	69.55	5.8690	5.1722	2.7603	0.67600	1,189.2	40.598	17.969	99.70	2.3278	5.8810	0.59849	1.2228	1.6261	1.3923	315.04
1981	41.295	7.9226	2.5139	61.62	68.49	6.0399	4.7930	2.7751	0.69102	1,263.2	41.295	17.715	102.68	2.1871	5.6347	0.55311	0.9715	1.3379	1.1164	245.38
1982	44.712	8.1569	2.3760	65.34	78.01	6.4312	4.7072	2.6139	0.68961	1,323.8	44.712	16.699	107.56	1.9863	6.1434	0.56046	0.9647	1.2082	0.9797	243.55
1983	45.438	8.1319	2.2705	78.09	98.69	6.7708	4.9482	2.5372	0.71496	1,349.9	45.438	15.969	127.50	1.8675	6.8212	0.58701	0.9873	1.0967	0.8902	211.35
1984	45.442	8.1465	2.2381	88.42	115.68	6.8717	4.7241	2.5234	0.72594	1,381.4	45.442	15.735	126.57	1.8475	6.5110	0.59063	0.8971	1.0207	0.7890	187.09
1985	44.914	8.0188	2.2263	105.74	130.25	6.7950	4.6942	2.5110	0.71517	1,448.0	44.914	15.643	129.13	1.8557	6.5213	0.58898	1.0921	1.0420	0.7631	180.56
1986	43.798	7.9357	2.1282	137.42	147.09	6.7998	4.9797	2.4009	0.73353	1,461.9	43.798	14.964	137.46	1.7609	6.9957	0.67154	1.4780	1.3673	0.9842	165.00
1987	43.041	7.8847	2.0715	156.27	162.62	6.9291	5.0652	2.3342	0.77545	1,494.9	43.041	14.571	142.16	1.7178	7.3100	0.70457	1.6473	1.5302	1.1544	166.60
1988	43.429	7.9515	2.0744	167.58	170.06	7.0364	4.9436	2.3348	0.77567	1,537.3	43.429	14.586	137.60	1.7282	7.2419	0.66443	1.5140	1.4559	1.1825	151.46
1989	43.381	8.0493	2.0702	178.84	173.41	7.0239	4.7230	2.3353	0.77682	1,510.5	43.381	14.570	130.41	1.8001	7.0994	0.67330	1.3928	1.3043	1.1017	151.94
1990	42.426	7.8565	2.0521	201.41	181.11	6.9141	4.8550	2.3121	0.76777	1,522.0	42.426	14.440	129.41	1.7622	7.5205	0.71385	1.6302	1.4854	1.2734	183.66
1991	42.223	7.9086	2.0508	225.22	178.61	6.9733	5.0021	2.3110	0.76781	1,533.2	42.223	14.431	128.47	1.7725	7.4793	0.70101	1.5910	1.4198	1.2392	166.49
1992	41.593	7.8093	2.0203	247.03	174.71	6.8484	5.8070	2.2748	0.76072	1,595.5	41.593	14.217	132.53	1.8178	7.5330	0.73765	1.7695	1.5686	1.2981	164.22
1993	40.471	7.5936	1.9364	268.57	188.37	6.6337	6.6963	2.1752	0.79995	1,841.2	40.471	13.624	149.12	1.7302	9.1215	0.77999 ^R	1.7240	1.5107	1.1710	130.15
1994	39.657	7.5433	1.9245	288.03	196.90	6.5826	6.1908	2.1583	0.79362	1,915.1	39.657	13.540	158.92	1.6213	9.1631	0.77590	1.6247	1.6247	1.1895	121.32
1995 ^F	39.294	7.4916	1.9114	305.03	196.00	6.5830	5.8922	2.1401	0.79208	1,995.0	39.294	13.452	160.81	1.5983	9.1368	0.78097	1.5743	1.6853	1.2188	120.41
1996 ^F	39.294	7.4916	1.9114	321.82	196.00	6.5830	5.8922	2.1401	0.79208	2,008.9	39.294	13.452	160.81	1.5983	9.1368	0.78220	1.5830	1.6744	1.2230	118.22

Table A.1 The annual average rates are calculated as averages of the daily rates throughout the year.
Source: Commission Services [1].

Gross Domestic Product at Current Market Prices (Billion ECU)

	AT	BE	DE	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL	PT	SE	EU 12 ^R	EU 15	AU	CA	JP	US
1970	14.1	24.7	180.5	15.5	37.2	10.7	139.8	121.2	11.7	3.9	105.1	1.1	33.3 ^R	6.1	32.9	680.0		38.5	82.6 ^R	199.3	989.6
1971	16.0	27.2	205.7	16.9	41.3	11.5	153.2	134.4	12.6	4.5	112.7	1.1	38.0 ^R	6.7	35.1	754.2		42.5	91.3 ^R	221.8	1,048.0
1972	18.5	31.3	230.1	19.4	48.8	12.6	174.6	143.6	13.5	5.2	122.0	1.3	43.6 ^R	7.6	38.6	840.9		47.6	97.1 ^R	272.0	1,076.8
1973	22.5	36.7	280.0	23.3	59.0	15.2	206.6	147.5	15.7	5.6	135.0	1.6	52.2 ^R	9.3	42.6	972.6		61.9	102.6 ^R	337.7	1,096.5
1974	27.5	44.8	318.8	26.9	75.4	19.9	229.6	163.0	18.9	6.0	154.3	2.0	64.1 ^R	11.3	48.5	1,115.2		77.4	128.4 ^R	395.2	1,215.0
1975	30.4	49.8	336.7	30.4	86.7	22.9	276.0	188.6	20.2	7.0	171.3	1.9	71.4 ^R	12.0	59.2	1,251.8		81.0	134.8 ^R	411.2	1,279.5
1976	36.2	59.7	398.0	37.2	98.1	27.3	318.2	201.1	24.2	7.7	188.0	2.3	86.7 ^R	13.9	70.7	1,435.1		95.9	178.1	502.9	1,583.5
1977	42.3	68.1	451.3	40.7	107.1	28.3	342.1	222.8 ^R	27.4	9.0	212.9	2.5	99.9 ^R	14.3	73.1	1,598.4		92.7	178.0	607.0	1,731.1
1978	45.6	74.6	502.2	44.4	116.8	27.4	380.3	253.3 ^R	29.8	10.5	234.7	2.8	109.7 ^R	14.1	72.6	1,773.0		97.5	164.8	765.3	1,749.9
1979	50.2	79.4	552.9	48.1	144.7	31.4	425.6	306.1	33.8	12.2	272.2	3.0	116.9 ^R	14.8	79.6	2,009.8		100.3	170.7	737.4	1,813.9
1980	55.4	85.0	583.2	47.8	154.3	37.2	478.5	386.4	34.6	14.3	326.0	3.3	124.1 ^R	18.1	90.3	2,255.3		114.7	189.2	762.4	1,945.1
1981	59.6	86.7	610.6	51.5	167.3	45.6	524.0	459.7 ^R	39.9	17.0	367.3	3.4	129.3 ^R	21.9	103.2	2,478.7		162.9	264.2	1,051.3	2,719.3
1982	67.9	87.0 ^R	668.4	56.9	184.0	52.2	563.8	496.4 ^R	47.3	20.1	411.8	3.6	143.5 ^R	23.7	103.5	2,706.5		178.1	307.7	1,111.1	3,217.8
1983	75.2	90.8	734.9	63.0	176.3	55.5	591.7	517.1 ^R	47.3	21.4	469.2	3.8	152.7 ^R	23.3	104.4	2,891.7		197.4	366.8	1,333.2	3,813.0
1984	81.1	97.6 ^R	782.3	69.4	200.6	65.3	634.8	550.0 ^R	51.7	23.4	525.4	4.3	161.3 ^R	24.3	122.5	3,125.1		241.1	432.4	1,606.4	4,770.0
1985	86.2	105.7 ^R	818.9	76.7	218.4	70.7	691.7	604.7 ^R	52.4	25.7	559.8	4.6	169.4 ^R	27.1	132.9	3,355.1		220.0	455.2	1,774.6	5,263.5
1986	95.1	114.0	904.7	84.0	235.2	71.4	745.5	571.3	48.2	26.6	615.6	5.1	182.3 ^R	30.1	135.4	3,562.4		179.0	366.7	2,027.9	4,298.7
1987	101.7	121.1	960.9	88.8	254.2	76.4	770.2	598.8 ^R	48.2	27.2	658.1	5.3	188.7	31.8	140.0	3,753.3		181.2	357.3	2,091.4	3,895.2
1988	107.4	128.1 ^R	1,010.4	92.1	291.9	87.9	815.1	707.0 ^R	54.2	29.2	710.2	5.8	195.9	35.3	153.9	4,075.2		224.5	412.7	2,452.3	4,104.9
1989	114.8	139.1 ^R	1,074.5	95.3	345.4 ^R	103.1	877.0 ^R	763.8 ^R	60.5	32.7	790.1	6.5	207.5	41.1	173.6	4,433.5		265.7	494.6 ^R	2,607.6	4,724.1
1990	124.7	151.4 ^R	1,182.2 ^R	101.7	387.3	106.0	941.5 ^R	769.6 ^R	64.4	35.3	862.1	7.1	223.3	47.0	180.8	4,772.8		233.0	447.3 ^R	2,311.5 ^R	4,291.5
1991	133.2	159.7 ^R	1,391.5 ^R	104.6	426.7 ^R	98.0	970.0 ^R	818.2 ^R	70.4	36.7	932.3 ^R	7.6	234.6 ^R	55.5	193.5	5,207.8		244.0	471.0 ^R	2,710.7 ^R	4,527.8
1992	143.2	170.7 ^R	1,522.3 ^R	109.4	444.1 ^R	81.9	1,022.0 ^R	806.9 ^R	73.8	39.4	942.9 ^R	8.2	247.5 ^R	65.1	191.1	5,452.3		226.8	434.4 ^R	2,824.6 ^R	4,560.7 ^R
1993	154.7	180.0	1,631.4	116.1	408.4	70.4	1,069.3	804.8	76.7	40.4	847.3	8.6	264.0	64.0	159.2	5,511.2		244.3	466.1	3,619.4	5,310.8
1994	165.0	191.0	1,729.2	124.5	405.6	81.1	1,119.4	857.4	79.5	44.4	862.8	9.2	277.0	65.1	165.0	5,765.0		273.9	453.4	3,963.1	5,554.4
1995 ^F	176.7	203.1	1,832.8	132.1	429.5	91.9	1,179.4	898.1	83.3	48.1	881.3	9.8	294.3	70.6	174.5		6,505.7	302.8	464.6	4,093.3	5,726.2
1996 ^F	187.9	215.0	1,940.7	139.0	463.5	100.2	1,243.6	949.7	87.5	51.9	934.9	10.5	310.3	75.9	184.7		6,895.3	324.1	495.6	4,336.8	6,023.2

Table A.2 Source: Commission Services [1]

Gross Domestic Product at 1985 Prices and 1985 Exchange Rates (Billion ECU)

	AT	BE	DE ^R	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL ^R	PT	SE	EU 12 ^R	EU 15	AU	CA	JP	US
1970	56.4	73.8	591.3	54.0	144.7	43.3	463.4 ^R	454.0 ^R	30.9	14.3	359.6	3.1	120.9	16.3	100.4	2,326.3		137.4	252.7	951.3	3,544.5
1971	59.3	76.5	610.1	55.4	151.6	44.2	485.5 ^R	461.1	33.2	14.8	365.3	3.2	126.3	17.4	101.3	2,400.5		144.5	267.0	991.0	3,643.0
1972	63.1	80.6	635.3	58.4	163.9	47.5	506.6 ^R	478.1 ^R	36.0	15.7	377.5	3.4	130.4	18.7	103.6	2,504.6		150.2	281.9	1,072.8	3,814.2
1973	66.2	85.3	665.6	60.4	176.4	50.7	534.6 ^R	513.4 ^R	38.7	16.5	402.5	3.7	136.3	20.8	107.9	2,654.3		156.3	304.1	1,153.8	4,004.0
1974	68.8	88.7	667.6	59.9	186.0	52.3	551.0	504.0 ^R	37.4	17.2	424.0	3.9	141.7	21.2	111.3	2,702.8		159.5	317.0	1,147.4	3,979.3
1975	68.5	87.5	658.7	59.4	187.2	52.9	549.7 ^R	500.8 ^R	39.5	18.2	414.5	3.6	141.7	20.3	114.1	2,681.0		163.9	325.2	1,180.3	3,940.3
1976	71.6	92.3	694.2	63.3	193.1	53.0	572.7	515.1 ^R	42.2	18.4	440.8	3.7	149.0	21.6	115.4	2,806.2		168.7	345.6	1,230.0	4,128.1
1977	74.9	92.7	714.0	64.4	198.9	53.1	591.7 ^R	527.3 ^R	43.6	19.9	455.6	3.8	152.3	22.8	113.4	2,886.9		170.3	357.6	1,288.3	4,314.4
1978	74.9	95.3	735.4	65.3	201.6	54.3	611.8 ^R	544.8 ^R	46.4	21.3	473.2	3.9	156.2	23.4	115.5	2,978.8		178.8	374.5	1,350.9	4,522.7
1979	78.5	97.3	766.1	67.6	201.6	58.2	631.7 ^R	560.7 ^R	48.3	22.0	501.1	4.0	159.8	24.8	119.9	3,085.0		182.8	388.5	1,425.1	4,634.1
1980	80.8	101.5	773.3	67.3	203.9	61.3	641.8	548.3 ^R	49.1	22.7	521.9	4.0	161.2	25.9	121.9	3,120.8		189.2	394.3	1,478.0	4,620.9
1981	80.6	100.5 ^R	774.7	66.7	203.4	62.3	648.7 ^R	541.0 ^R	49.1	23.4	525.3	4.0	160.2	26.3	121.9	3,123.5		193.2	409.2	1,529.6	4,719.2
1982	81.4	102.0	767.0	68.7	205.9	64.5	665.4 ^R	550.6 ^R	49.3	24.0	526.5	4.1	157.9	26.9	123.1	3,148.4		190.0	396.0	1,579.2	4,615.8
1983	83.0	102.6 ^R	780.7	70.5	209.8	66.4	670.0 ^R	570.1 ^R	49.5	23.9	531.5	4.2	160.1	26.8	125.3	3,199.6		201.4	408.5	1,620.5	4,782.8
1984	84.1	104.8 ^R	802.5	73.6	213.5	68.4	679.3	584.2 ^R	50.8	24.9	545.4	4.4	165.1	26.3	130.3	3,274.9		211.8	434.8	1,689.9	5,105.4
1985	86.2	105.7 ^R	818.9	76.7	218.4	70.7	691.7	604.7 ^R	52.4	25.7	559.8	4.6	169.4	27.1	132.9	3,355.1		220.0	455.2	1,774.6	5,263.5
1986	87.2	107.1	838.0	79.5	225.3	72.4	709.2 ^R	631.1 ^R	53.3	25.6	576.0	4.8	174.1	28.2	135.9	3,452.1		225.3	469.9	1,820.4	5,409.0
1987	88.7	109.3	850.7	79.7	238.0	75.4	725.2 ^R	661.4 ^R	53.0	27.1	594.4	4.9	176.2	29.6	140.3	3,549.6		236.8	489.5	1,895.6	5,574.8
1988	92.3	114.6 ^R	882.4	80.6	250.4	79.1	757.6 ^R	694.2 ^R	55.4	28.2	618.6	5.2	180.7	30.8	143.4	3,698.7		248.2	513.9	2,012.8	5,798.4
1989	95.8	118.5 ^R	914.1	81.1	262.3	83.7	789.6 ^R	709.3 ^R	57.6	30.3	636.5	5.6	189.2	32.4	146.7	3,826.5		255.5	526.0 ^R	2,107.8	5,956.5
1990	99.9	122.4 ^R	966.0	82.3	271.8 ^R	83.6	809.8 ^R	712.0 ^R	57.0	32.9	650.0	5.7	196.9	33.8	148.7	3,940.9		254.5	525.2 ^R	2,209.8 ^R	6,002.8
1991	102.6	125.2 ^R	1,093.7	83.1	277.8 ^R	77.7	815.9 ^R	698.1 ^R	58.8	33.9	658.1	5.9	201.4	34.5	147.1	4,086.6		256.1	516.3 ^R	2,303.6 ^R	5,934.3
1992	104.3	127.5 ^R	1,129.6	84.2	279.9 ^R	74.6	826.0 ^R	694.6 ^R	59.3	35.6	663.0 ^R	6.0	203.9	34.9	144.3	4,144.5		262.3	519.8 ^R	2,331.2 ^R	6,084.8
1993	103.9	125.4	1,124.4	85.4	277.0	72.7	818.1	708.6	59.0	37.0	658.6	6.1	204.6	34.5	141.3	4,138.5		272.4	531.2	2,333.5	6,269.0
1994	106.8	128.0	1,156.0	89.5	283.2	75.3	836.1	735.4	59.2	39.2	674.4	6.2	209.2	34.9	144.3	4,251.3		284.3	552.7	2,348.2	6,514.7
1995 ^F	110.1	131.5	1,194.8	92.5	291.0	79.1	862.3	755.1	59.9	41.4	694.3	6.4	215.9	35.9	148.3		4,718.5	295.7	575.3	2,398.7	6,685.5
1996 ^F	113.7	135.5	1,237.9	95.2	300.2	83.1	889.8	776.6	60.9	43.6	716.6	6.6	223.0	37.0	152.3		4,872.0	307.5	597.8	2,464.8	6,841.4

Table A.3 Source: Commission Services [1]

GDP Deflator for National Currencies: Index = 1985 = 100

	AT	BE	DE	DK	ES	FI	FR	GB	GR	IE	IT	LU	NL	PT	SE	EU 12	EU 15	AU	CA	JP	US	
1970	42.6	38.1	51.3 ^R	27.4	14.2	22.5	25.2 ^R	19.3 ^R	11.0	16.4	12.9	39.2	40.6	8.4	26.6	23.6		23.4	33.6	42.7	37.4 ^R	
1971	45.2	40.2	55.2 ^R	29.5	15.3	24.2	26.8 ^R	21.2	11.3	18.1	13.8	38.9	43.8	8.8	28.5	25.3		24.9	34.7	45.1	39.5 ^R	
1972	48.6	42.7	58.2 ^R	32.2	16.6	26.3	28.7 ^R	22.9	11.9	20.6	14.6	41.1	47.9	9.5	30.5	27.1		27.3	36.7	47.7	41.5 ^R	
1973	52.5	45.8	61.9 ^R	35.7	18.6	30.0	31.1 ^R	24.5 ^R	14.2	23.7	16.6	46.1	52.3	10.4	32.6	29.6		31.4	39.9	54.0	44.2 ^R	
1974	57.5	51.6	66.2 ^R	40.3	21.6	36.7	34.8	28.2	17.1	25.1	19.9	54.0	57.1	12.3	35.7	33.5		37.2	45.7	64.8	48.1 ^R	
1975	61.2	57.8	70.0 ^R	45.4	25.2	42.0	39.3 ^R	35.8 ^R	19.3	30.2	23.1	53.5	62.9	14.3	40.9	38.4		42.9	50.2	69.6	52.8 ^R	
1976	64.7	62.2	72.5 ^R	49.5	29.4	47.3	43.7	41.2 ^R	22.2	36.6	27.4	60.1	68.5	16.7	45.7	43.0		47.6	54.5	75.0	56.2 ^R	
1977	68.0	66.9	75.2 ^R	54.1	36.2	52.1	47.7 ^R	46.9 ^R	25.1	41.4	32.5	60.8	73.1	21.1	50.6	48.0		51.3	58.0	79.8	60.0 ^R	
1978	71.9	69.8	78.4 ^R	59.5	43.7	56.3	52.5 ^R	52.4 ^R	28.4	45.8	37.0	63.9	77.0	25.8	55.4	53.1		55.6	61.4	83.8	64.6 ^R	
1979	74.8	73.0	81.4 ^R	64.0	51.1	61.1	57.8 ^R	59.9 ^R	33.6	52.0	42.7	67.9	80.1	30.8	59.8	58.8		61.6	67.7	86.1	70.3 ^R	
1980	78.7	75.7	85.5 ^R	69.3	58.4	66.9	64.4	71.6 ^R	39.6	59.7	51.3	73.3	84.6	37.3	66.8	66.3		67.9	74.9	90.0	76.8 ^R	
1981	83.8	79.3	89.0 ^R	76.2	65.4	74.7	71.8 ^R	79.8 ^R	47.4	70.1	61.0	78.6	89.2	43.8	73.2	73.6		75.0	82.9	93.4	84.3 ^R	
1982	89.0	84.9	93.0 ^R	84.3	74.4	81.2	80.2 ^R	85.8 ^R	59.3	80.7	71.5	87.1	94.6	52.9	79.2	81.3		82.8	90.1	94.9	89.5 ^R	
1983	92.5	89.6	96.0 ^R	90.7	83.0	88.1	88.0 ^R	90.4 ^R	70.7	89.4	82.3	93.0	96.4	65.9	87.2	88.3		88.6	94.5	96.3	93.0 ^R	
1984	97.0	94.3	98.0 ^R	95.8	92.1	96.0	94.5	94.4 ^R	85.0	95.1	91.9	97.1	98.2	82.1	93.8	94.3		93.5	97.4	98.5	96.6 ^R	
1985	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1986	104.3	103.8	103.2 ^R	104.6	111.1	104.5	105.2 ^R	103.2 ^R	117.5	106.5	107.9	103.8	100.1 ^R	120.5	106.9	105.5		107.5	102.4	101.8	102.5 ^R	
1987	106.8	106.2	105.1 ^R	109.5	117.6	109.4	108.3 ^R	108.3 ^R	134.3	108.8	114.3	102.8	99.6 ^R	134.0	111.9	109.8		115.4	107.2	101.8	105.7 ^R	
1988	108.5	108.1	106.7 ^R	113.2	124.2	117.0	111.4 ^R	114.9 ^R	155.2	112.2	121.9	106.9	100.8 ^R	149.5	119.2	114.6		125.4	112.2	102.2	109.7 ^R	
1989	111.6	113.3 ^R	109.3 ^R	118.0	133.0 ^R	124.0	114.8 ^R	123.1 ^R	177.7	117.1	129.5	113.3	102.0 ^R	168.9	128.8	120.3		132.6	117.7 ^R	104.1	114.5 ^R	
1990	115.3	116.8 ^R	112.8 ^R	121.1	142.8 ^R	131.2	118.3 ^R	131.0 ^R	215.1	115.0	139.4	116.6	104.4 ^R	193.1	140.2	126.7		136.7	121.4	106.4 ^R	119.3 ^R	
1991	119.8	119.9 ^R	117.2 ^R	124.2	152.8 ^R	134.3	122.0 ^R	139.5 ^R	254.7	116.3	150.0 ^R	120.1	107.2 ^R	220.3	150.9	133.6		138.8	124.3 ^R	108.5 ^R	123.9 ^R	
1992	124.8	124.0 ^R	122.3 ^R	126.6	162.8 ^R	135.8	124.7 ^R	145.5 ^R	290.8	117.8	156.7	125.5	110.0 ^R	249.9	153.0	139.3		140.1	125.8 ^R	110.2 ^R	127.5 ^R	
1993	129.7	129.4	126.2	128.8	170.3	138.1	127.6	150.4	330.4	122.0	163.6	128.2	111.8	268.4	157.6	144.4		141.6	127.2	111.8	130.0	
1994	133.7	131.7	129.3	130.8	176.3	141.9	129.7	153.6	365.7	125.6	169.2	131.8	113.8	282.1	160.7	148.2		143.3	127.9	113.4	132.9	
1995 ^F	138.0	135.1	131.7	133.5	183.8	145.9	132.5	157.7	401.3	128.7	174.9	135.0	116.2	295.9	164.9		152.2	147.6	130.6	113.8	136.8	
1996 ^F	142.1	138.8	134.6	136.5	192.3	151.3	135.4	162.4	437.6	131.9	181.0	139.0	118.6	308.5	169.9		156.8	152.8	133.2	115.2	141.1	

Table A.4 Source: Commission Services [1].

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