

THE EUROPEAN AEROSPACE INDUSTRY - TRADING POSITION AND FIGURES

X X X

(Commission Staff Working Paper)

ERRATUM

p.87 lire "CHIFFRES D'AFFAIRES GLOBAUX"
au lieu de "CHIFFRES D'AFFAIRES FINALS NATIONAUX"

p.57,58 read "MILITARY HELICOPTER" instead of "CIVIL HELICOPTER"
p.87 read "OVERALL TURNOVER" instead of "FINAL NATIONAL TURNOVER"

PREFACE

This document is a compilation of the most relevant statistics available to the Commission of the European Communities on the aerospace sector in Europe and the United States.

The Directorate-General for the Internal Market and Industrial Affairs has been compiling and collating these statistics since 1972. The very first communication to the Council on this subject, dated 19 July 1972 (COM(72)850), already included a statistical annex on the trading position of the aerospace sector. In subsequent years (1) it became possible to make a more detailed analysis, owing mainly to the co-operation of AECMA member associations which have helped the Commission conduct a survey on turnover and employment among companies in the sector.

This paper gives the position of the aerospace sector on 31 December 1981 and retains the presentation adopted since 1979 (see documents SEC(79)995, SEC(80)1287, III/1146/81 and III/846/82).

(1) See:	SEC(73)813	of 01.03.1973
	III-243/73	of 31.12.1973
	SEC(75)1539	of 23.04.1975
	SEC(76)2657	of 09.07.1976
	SEC(77)2939	of 02.08.1977
	SEC(78)3298	of 28.07.1978
	SEC(79)995	of 12.06.1979
	SEC(80)1287	of 23.09.1980
	III/1146/81	of 05.10.1981
	III/846/82	of 30.07.1982

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CHAPTER 1

C I V I L A I R T R A F F I C

1. In 1981, the world scheduled traffic grew only by 2 % in volume compared with 1980. The estimate for 1982 shows a 3.1 % increase over 1981. Whilst the expected growth in volume of scheduled traffic is higher than in 1981, this rise is clearly inferior to the average growth of the past decade (more than 8 %). It is therefore too soon to say that air transport is emerging from its crisis more especially as the availability of seats per km has increased more rapidly than passengers carried.

As for freight, there has been in these last years a moderate but constant growth in volume.

2. In 1981, the aircraft load factor of world scheduled traffic (see page 8) increased by 1 % with respect to 1980, and is estimated to remain constant in 1982. Although this load factor has risen, its growth would only be effective if it were accompanied by a reduction in the number of available seats, and thus by a more rational use of aircraft.

3. The volume of scheduled traffic of European companies, members of the A.E.A. grew in volume in 1981 by 4.1 % (one percentage point more than world scheduled traffic growth), but this increase is estimated to have fallen to 0.7 % between 1981 and 1982. The analysis by traffic zone reveals a relative stability in intercontinental traffic between 1980 and 1982, a slight increase in domestic traffic in 1982 and a slow but continuous reduction in intra-European traffic between 1978 and 1982.

4. The analysis of world scheduled traffic shows in 1982 a clear recovery in US air traffic (+ 4 %) while companies which are member of the AEA continue to suffer the effects of a stagnation in air transport.

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WORLD SCHEDULED TRAFFIC

1) Passengers (billion)

YEAR	Passengers carried	RPK	ASK	Load factor (%)
including USSR				
1973	0,489	618	1073	58
1974	0,515	656	1108	59
1975	0,534	697	1179	59
1976	0,576	762	1270	60
1977	0,610	818	1346	61
1978	0,679	936	1451	65
1979	0,754	1060	1607	66
1980	0,748	1089	1721	63
1981	0,749	1117	1752	64
1982	0,765	1152	1804	64

2) Freight (million tons)

YEAR	TFC	FTK		
		Freight	Mail	Total
including USSR				
1973	8,2	17530	2880	20410
1974	8,7	19020	2880	21900
1975	8,7	19370	2900	22270
1976	9,3	21540	3030	24570
1977	10,0	23630	3180	26810
1978	10,6	25940	3270	29210
1979	11,0	28010	3430	31440
1980	11,0	29130	3680	32810
1981	10,8	30610	3800	34410
1982	10,9	31250	3870	35120

Notes : - RPK : Revenue Passengers-km
 - ASK : Available Seats-km
 - TFC : Tons freight carried
 - FTK : Freight Tonnes-km
 - 1982 : Estimates

Source : ICAO : Airlines in 143 countries

DISTRIBUTION OF WORLD SCHEDULED TRAFFIC

Revenue Passengers-km (billion)

Traffic Zones	1978		1979		1980		1981		1982		Trend (%)		
	RPK	%	RPK	%	RPK	%	RPK	%	RPK	%	79/80	80/81	81/82
AEA	163	17	180	17	182	17	189	17	190	17	+ 1,4	+ 4,1	+ 0,7
USA	363	39	417	39	407	37	399	36	415	36	+ 2,0	- 2,0	+ 4,0
USSR	129	14	156	15	161	15	*	*	*	*	+ 3,2	*	*
Rest of the World	281	30	307	29	339	31	529	47	547	47	+ 10,4	+ 5,8	+ 3,4
TOTAL	936	100	1060	100	1089	100	1117	100	1152	100	+ 2,7	+ 2,6	+ 3,1

Notes : - 1982 : Estimates
 (*) : Not separately available

- Source : AEA (Association of European Airlines)

AEA AIRLINE TRAFFIC

TRAFFIC	RPK (million)				ASK (million)				Load Factor (%)			
	1979	1980	1981	1982	1979	1980	1981	1982	1979	1980	1981	1982
Domestic	19775	19327	19834	21026	29664	30237	29949	31707	66,7	63,8	66,3	66,3
Intra-European	49818	48149	49449	49184	84105	86325	84893	85821	59,2	55,8	58,2	57,3
Intercontinental	109504	114200	119723	120031	169134	185095	185280	184877	64,7	61,7	64,6	64,9
TOTAL	179097	181676	189006	190241	282903	301657	300122	302405	63,3	60,2	63,0	62,9

Notes : - 1982 : Estimates
 - Source : AEA

RATES OF INCREASE IN REVENUE PASSENGERS-KM BY AEA AIRLINES

	Domestic Traffic	Intra-European Traffic	Intercontinental Traffic	TOTAL
1976-1977	8,6	12,1	4,2	7,0
1977-1978	2,3	9,0	17,3	13,1
1978-1979	10,4	6,8	11,5	10,1
1979-1980	-2,3	-3,4	4,2	1,4
1980-1981	2,6	2,7	4,8	4,1
1981-1982	6,0	-0,5	0,3	0,7

AEA AIRLINE TRAFFIC IN PERCENTAGE TERMS

	1978	1979	1980	1981	1982
Domestic Traffic	10,6	10,7	10,3	10,5	11,0
Intra-European Traffic	29,0	27,8	26,5	26,2	25,9
Intercontinental Traffic	60,4	61,4	63,2	63,3	63,1
TOTAL	100,0	100,0	100,0	100,0	100,0

Note : 1982 = Estimates

CHAPTER 2

THE CIVIL TRANSPORT MARKET

1. The figures of this chapter were prepared for the Commission by the ITA (Air Transport Institute, Paris). They cover virtually all airlines (about 600) using all types of aircraft, turbojets and turbo-props built in the United States, Europe, Japan and Canada.
2. During 1981, 63 Airbuses were sold (of which 23 were A310) representing 19 % of jet sales and more than 60 % of sales of widebody aircraft. Other European jet sales were of 19 Fokker F-28's.
3. European companies' fleets represented 23 % by value and 22.1 % by number of the world fleet; (28.7 % by value and 24 % by number of long-haul carriers and 20.3 % by value and 21.5 % by number of short/medium-haul carriers). The penetration of aircraft built in Europe showed an increase on 1980 of 1 % in Europe, of 0.8 % in the United States and of 1.3 % in the rest of the world, being an increase in the penetration of the total world fleet of 0.9 % (by value).
4. In 1981 85.6 % by value of the world fleet was of US origin (79.1 % for the short/medium-haul carriers and 99.2 % for the long-haul carriers). American penetration of the markets exceeded 60 % in Europe for the short/medium-haul carriers and 97.3 % for the long-haul carriers. In the rest of the world, this penetration exceeded 80 %.
5. AIRBUS INDUSTRIE held 42.5 % in 1981 of the market for short/medium-haul carriers with widebodies (compared with 35 % in 1980). For the whole market of short/medium-haul carriers Airbus' share was 15 %, 2 % better than in 1980. It kept third place behind BOEING (50.7 %) and McDONNELL-DOUGLAS (19.6 %)

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x x

VALUE OF AIRCRAFT IN SERVICE OR ON ORDER BUT NOT YET DELIVERED AT 31.12.1981

(Mio ECU)

FLEETS	ORIGIN		LONG-HAUL			SHORT/MEDIUM-HAUL			TOTAL	%	%
	USA	OTHERS	USA	EUROPE	OTHERS	USA	EUROPE	OTHERS			
Belgique-België	343,0	-	246,4	142,6	-	732,0	142,6	-	732,0	0,56	3,3
Danmark	1,6	-	205,1	6,3	-	213,0	6,3	-	213,0	0,16	1,0
Deutschland	1709,0	-	1570,0	1459,2	-	4738,2	1459,2	-	4738,2	3,62	21,6
France	2022,3	156,8	899,5	1798,9	-	4877,5	1798,9	-	4877,5	3,73	22,3
Hellas	130,0	0,4	248,9	322,4	-	701,7	322,4	-	701,7	0,53	3,2
Ireland	61,4	0,6	145,2	6,4	-	213,6	6,4	-	213,6	0,16	1,0
Italia	956,0	-	1023,5	373,5	-	2353,0	373,5	-	2353,0	1,80	10,7
Luxembourg	140,7	-	24,2	3,2	-	168,1	3,2	-	168,1	0,13	0,8
Nederland	1464,5	-	328,2	505,1	-	2297,8	505,1	-	2297,8	1,76	10,5
United Kingdom	1766,4	1,3	2412,2	1274,4	1,3	5611,5	1274,4	-	5611,5	4,28	25,6
CEE-EEC-EWG-EEG	8594,9	1,9	7103,2	5892,0	1,9	21906,4	5892,0	-	21906,4	16,73	100,0
Other European Countries	3185,5	-	3853,5	1200,7	-	8239,7	1200,7	-	8239,7	6,29	-
Europe	11780,4	1,9	10956,7	7092,7	1,9	30146,1	7092,7	-	30146,1	23,02	-
U.S.A.	7740,3	3,1	41658,8	1622,8	3,1	51055,8	1622,8	30,8	51055,8	38,99	-
Rest of the World	22335,1	5,7	17589,1	9715,1	5,7	49743,7	9715,1	97,9	49743,7	37,99	-
WORLD	41855,8	10,7	70204,6	18430,6	10,7	130945,6	18430,6	128,7	130945,6	100,00	-

MARKET TRENDS AND MARKET SHARE WON BY COMMUNITY-BUILT AIRCRAFT

(% value)

Market (Fleet)	Relative size of the market								Market share won by aircraft built in the EEC							
	1976 %	1977 %	1978 %	1979 %	1980 %	1981 %	Trend 76/81	1976 %	1977 %	1978 %	1979 %	1980 %	1981 %	Trend 76/81		
CEE-EEC-EWG	17,6	17,7	17,8	18,3	17,0	16,7	-0,9	22,3	23,2	25,7	30,2	27,1	28,3	+6,0		
Other European Countries	7,9	7,8	6,7	7,2	7,8	6,3	-1,6	4,6	6,0	9,3	15,4	16,0	14,6	+10,0		
Europe	(25,5)	(25,5)	(24,5)	(25,5)	(24,8)	(23,0)	(-2,5)	(16,9)	(17,9)	(21,2)	(26,0)	(24,6)	(23,6)	(+7,7)		
U.S.A.	42,8	40,7	40,7	37,5	39,3	39,0	-3,8	0,2	0,6	2,2	2,7	2,4	3,2	+3,0		
Rest of the World	31,7	33,8	34,8	37,0	35,9	38,0	+6,3	10,9	12,7	11,9	14,1	18,2	19,5	+8,6		
WORLD	100,0	100,0	100,0	100,0	100,0	100,0	-	7,8	9,1	10,2	12,9	13,4	14,3	+6,5		

RELATIVE SIZE OF THE MARKET OF COMMUNITY-BUILT AIRCRAFT

Breakdown into Short and Medium-Haul and Long-haul Aircraft

(% value)

MARKET	Relative size of the market						
	1976 %	1977 %	1978 %	1979 %	1980 %	1981 %	Trend 76/81
a) <u>S/M-Haul Aircraft</u>							
CEE-EEC-EWG-EEG	13,1	12,5	14,6	15,9	14,5	14,6	+1,5
Other European Countries	6,3	8,2	6,7	7,4	7,6	5,1	-0,6
Europe	(19,4)	(20,7)	(21,3)	(23,3)	(22,1)	(20,3)	(+0,9)
U.S.A.	52,8	51,0	50,8	44,2	47,7	48,8	-4,0
Rest of the World	27,8	28,3	27,9	32,5	30,2	30,9	+3,1
WORLD	100,0	100,0	100,0	100,0	100,0	100,0	-
b) <u>Long-Haul Aircraft</u>							
CEE-EEC-EWG-EEG	23,5	24,9	22,3	22,5	22,2	21,1	-2,4
Other European Countries	9,9	7,3	6,7	6,9	8,1	7,6	-2,3
Europe	(33,4)	(32,2)	(29,0)	(29,4)	(30,3)	(28,7)	-4,7
U.S.A.	30,0	26,4	26,0	25,3	22,2	18,3	-11,7
Rest of the World	36,6	41,4	45,0	45,3	47,5	53,0	+16,4
WORLD	100,0	100,0	100,0	100,0	100,0	100,0	-

MARKET SHARE WON BY COMMUNITY-BUILT AIRCRAFT

(Breakdown into Short- and Medium-Haul and Long-Haul Aircraft)

(% value)

		Market share won by Aircraft built in the EEC						
MARKET		1976 %	1977 %	1978 %	1979 %	1980 %	1981 %	Trend 76/81
a) <u>S/M-Haul Aircraft</u>								
CEE-EEC-EWG-EEG		38,6	42,8	44,6	48,8	44,8	45,3	+6,7
Other European Countries		10,2	9,8	15,7	23,4	24,4	23,8	+13,6
Europe		(29,4)	(29,7)	(35,5)	(40,7)	(37,7)	(39,3)	(+9,9)
U.S.A.		0,3	0,8	3,3	3,6	3,0	3,7	+3,4
Rest of the World		21,8	26,2	25,2	25,0	32,4	35,4	+13,6
WORLD		11,9	14,0	16,1	19,2	19,5	20,8	+8,9
b) <u>Long-Haul Aircraft</u>								
CEE-EEC-EWG-EEG		10,5	9,6	7,8	6,2	3,9	3,5	-7,0
Other European Countries		-	-	-	-	-	-	-
Europe		(7,4)	(7,4)	(6,0)	(4,8)	(2,9)	(2,6)	(-4,8)
U.S.A.		-	-	-	-	-	-	-
Rest of the World		0,1	0,0	0,0	0,0	0,0	0,0	-0,1
WORLD		2,5	2,4	1,7	1,4	0,9	0,7	-1,8

BREAKDOWN OF FLEETS INTO GEOGRAPHICAL ZONES

	1973	1974	1976	1977	1978	1979	1980	1981
CEE-EEC-EWG-EEG	18,2	18,0	17,6	17,7	17,8	18,3	17,0	16,7
Other European Countries	8,1	8,0	7,9	7,8	6,7	7,2	7,8	6,3
Europe	(26,3)	(26,0)	(25,5)	(25,5)	(24,5)	(25,5)	(24,8)	(23,0)
U.S.A.	53,0	45,4	42,8	40,7	40,7	37,5	39,3	39,0
Rest of the World	20,7	28,6	31,7	33,8	34,8	37,0	35,9	38,0
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FLEETS AND ORDERS (TRADING POSITION IN DECEMBER)

Type	Number										Value (Mio ECU)				
	1976	1977	1978	1979	1980	1981	1976	1977	1978	1979	1980	1981			
Long-Haul	1719	1748	1844	1913	1824	1685	22034	24197	30449	29452	32589	42182			
S/M-Haul	5042	5265	5845	6165	6463	6184	28627	33422	44172	53510	65985	88764			
TOTAL	6761	7013	7689	8078	8287	7869	50661	57619	74621	82962	98574	130946			

FLEETS AND ORDERS : VALUE BREAKDOWN

	1970	1971	1973	1974	1976	1977	1978	1979	1980	1981
Long-Haul	55,2	51,1	51,1	51,6	43,5	42,0	40,8	35,5	33,1	32,2
S/M-Haul	44,8	48,9	48,9	48,4	56,5	58,0	59,2	64,5	66,9	67,8
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

SHORT- AND MEDIUM-HAUL AIRCRAFT IN SERVICE AND ON ORDER

(% value)

	1976	1977	1978	1979	1980	1981
Standard Aircraft	72,7	74,4	70,3	66,1	63,9	64,7
Wide-Body	27,3	25,6	29,7	33,9	36,1	35,3
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0
Boeing	42,2	43,5	50,5	50,2	46,8	50,7
McDonnell Douglas	29,6	28,9	21,8	20,0	22,1	19,6
Lockheed	15,5	13,0	11,0	10,0	11,2	8,6
Other US Manufacturers	0,2	0,2	0,2	0,3	0,2	0,1
Airbus Industrie	2,6	4,2	8,5	12,6	13,0	15,0
Other European	9,3	9,8	7,6	6,6	6,6	5,8
Total USA	87,5	85,6	83,5	80,5	80,3	79,0
Total Europe	11,9	14,0	16,1	19,2	19,6	20,8
Other Manufacturers	0,6	0,4	0,4	0,3	0,1	0,2
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0

LONG- HAUL AIRCRAFT IN SERVICE AND ON ORDER

(% value)

	1976	1977	1978	1979	1980	1981
Standard Material	34,8	31,8	26,6	11,6	7,9	3,1
Wide-Body	62,6	65,9	71,7	88,4	92,1	96,9
Supersonic	2,6	2,3	1,7	(*)	(*)	(*)
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0
Boeing	66,4	68,2	68,6	65,6	63,2	67,4
McDonnell Douglas	30,6	28,4	26,9	28,7	30,8	27,5
Other US Manufacturers	0,01	0,9	2,6	4,3	5,1	4,3
European Manufacturers	2,9	2,4	1,8	1,4	0,9	0,8
Other Manufacturers	0,1	0,1	0,1	0,0	0,0	0,0
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0

(*) Included in "Standard Material" - Not available separately.

AVERAGE PRICES OF AIRCRAFT IN 1981

LONG-HAUL AIRCRAFT	PRICE (Mio ECU)	S/M-HAUL AIRCRAFT	PRICE (Mio ECU)
B.707-120	0,09	B.727-100	1,8
B.707-120-B	0,45	B.727-100-C-QC	2,5
B.707-320	0,09	B.727-200	5,1
B.707-320-B	0,7	B.727-200-ADV	19,3
B.707-320-C	0,8	B.737-100	3,8
B.707-420	0,09	B.737-200	4,5
B.720	0,09	B.737-200-ADV	12,1
B.720-B	0,3	B.737-200-C	4,9
B.747-100	20,2	B.757	26,9
B.747-100-B/SR	49,3	B.767	33,1
B.747-100-F	24,6		
B.747-SP	52,9	DC-9-10/15	2,2
B.747-200-BM	62,7	DC-9-20	2,5
B.747-200-CF	67,2	DC-9-30	13,0
		DC-9-40	5,4
DC-8-20	0,09	DC-9-50	14,3
DC-8-30/30F	0,18	DC-9-80	19,7
DC-8-40	0,18	DC-10-10	41,2
DC-8-50	0,45		
DC-8-50F	0,67	L.1011	12,0
DC-8-61	2,70	L.188	0,7
DC-8-61F	2,70	L.1011-100-1	34,0
DC-8-62	1,12	L.1011-200	35,8
DC-8-62F	1,30		
DC-8-63	3,60	CV-580/600	0,4
DC-8-63F	4,00	FH-27/227	0,6
DC-10-30/30CF	48,4		
DC-10-40	48,4	CVL 3/6	0,09
		CVL 10/11/12	0,7
L.1011-500	37,6	A-300	40,3
		A-310	34,1
CV.880/990	0,13	Mercure	4,5
		Vanguard	0,5
Concorde	22,4	V-700	0,3
Brittania	0,18		
		BAC 111-2/300	1,6
CL-44	0,63	BAC 400	2,5
		BAC 475/500	10,7
		BAE 146	9,9
		Herald	0,3
		Trident	3,6
		HS-748	6,3
		F-27-100	0,8
		F-27-200/300	1,3
		F-27-400	1,6
		F-27-500/600	5,8
		F-28	9,0
		YS-11	1,1

ADDENDUM TO CHAPTER 2

1. The figures in this chapter were prepared for the Commission by the ITA (Air Transport Institute, Paris). They cover virtually all airlines (about 600) using all types of aircraft, turbojets and turbo-props built in the United States, Europe, Japan and Canada.
2. During 1982, 27 Airbuses were sold (of which 10 were A320) representing 12 % of jet sales and more than 66 % of sales of widebodied aircraft. Other European jet sales included 12 Fokker F-28's.
3. It should be borne in mind that in 1982 many orders recorded before 1982 have since been cancelled. It follows that there exists a difference between 1981 cumulated values, 1982 cumulated values and the orders recorded during 1982 (Difference of 54 aircraft : 5 DC-10-30, 10 A300, 6 B.727, 10 B.737, 17.B.757, 1 F.27, 2 F.28 and 3 L-1011-1).
4. European companies' fleets represented in 1982 more than 24 % by value and more than 22 % by number of the world fleet; (27 % by value and 24 % by number of long-haul carriers and 23 % by value and 22 % by number of short/ medium-haul carriers). The penetration of aircraft built in Europe showed an increase on 1981 of 5 % in Europe, of 1.8 % in the United States and of 3 % in the rest of the world. The share of the total world fleet (in value) held by european aircraft increased by 3.8 % in 1982.
5. In 1982, 82 % by value of the world fleet was of US origin (71.6 % for the short/medium-haul carriers and 99.4% for the long-haul carriers). American penetration of the markets exceeded 53 % in Europe for the short/medium-haul carriers and 98.0 % for the long-haul carriers. Outside the USA and the EEC, US penetration exceeded 77 %.
6. In 1982, AIRBUS INDUSTRIE held 53 % (compared with 42.5 % in 1981) of the market for short/medium-haul carriers with widebodies (B.767, DC-10, L-1011, A-300). For the whole market of short/medium-haul carriers Airbus' share was 21.7 %, 7 % better than in 1981. It kept third place behind BOEING (49 %) and McDONNELL-DOUGLAS (15 %).

x
x x

VALUE OF AIRCRAFT IN SERVICE OR ON ORDER BUT NOT YET DELIVERED AT 31.12.1982

(Mio ECU)

FLEETS	ORIGIN		LONG-HAUL			SHORT/MEDIUM-HAUL			TOTAL	%	%
	USA	EUROPE	OTHER	USA	EUROPE	OTHER	USA	EUROPE				OTHER
Belgique-België	218,7	-	-	310,0	188,0	-	716,7	0,56	3,09		
Danmark	98,3	-	-	179,0	8,8	-	286,1	0,22	1,23		
Deutschland	1795,2	-	-	1234,5	2000,9	-	5030,6	3,92	21,67		
France	2584,1	140,0	-	567,0	2188,8	-	5479,9	4,27	23,61		
Hellas	176,0	0,1	-	224,5	424,0	-	824,6	0,64	3,55		
Ireland	67,1	-	1,0	201,5	5,6	-	275,2	0,21	1,19		
Italia	846,1	-	-	1228,0	431,4	-	2505,5	1,95	10,79		
Luxembourg	186,1	-	-	31,0	3,9	-	221,0	0,17	0,95		
Nederland	1709,0	-	-	352,5	659,7	-	2721,2	2,12	11,72		
United Kingdom	1701,9	120,2	2,0	2607,0	722,7	-	5153,8	4,01	22,20		
CEE-EEC-EWG-EEG	9382,5	260,3	3,0	6935,0	6633,8	-	23214,6	18,07	100,00		
Other European Countries	3024,8	-	-	2976,7	2033,8	-	8035,3	6,25	-		
Europe	12407,3	260,3	3,0	9911,7	8667,6	-	31249,9	24,32			
U.S.A.	8279,3	-	4,0	32386,2	2138,3	34,1	42841,9	33,35			
Rest of the World	25961,2	0,6	11,0	16072,2	12243,6	97,9	54386,5	42,33			
WORLD	46647,8	260,9	18,0	58370,1	23049,5	132,0	128478,3	100,00			

RELATIVE SIZE OF THE MARKET OF COMMUNITY-BUILT AIRCRAFT

Breakdown into Short and Medium-Haul and Long-haul Aircraft

(% value)

MARKET	Relative size of the market						
	1977 %	1978 %	1979 %	1980 %	1981 %	1982 %	Trend 76/82
a) S/M-Haul Aircraft							
CEE-EEC-EWG-EEG	12,5	14,6	15,9	14,5	14,6	16,7	+3,6
Other European Countries	8,2	6,7	7,4	7,6	5,1	6,1	-0,2
Europe	(20,7)	(21,3)	(23,3)	(22,1)	(20,3)	(22,8)	(+3,4)
U.S.A.	51,0	50,8	44,2	47,7	48,8	42,4	-10,4
Rest of the World	28,3	27,9	32,5	30,2	30,9	34,8	+7,0
WORLD	100,0	100,0	100,0	100,0	100,0	100,0	-
b) Long-Haul Aircraft							
CEE-EEC-EWG-EEG	24,9	22,3	22,5	22,2	21,1	20,6	-2,9
Other European Countries	7,3	6,7	6,9	8,1	7,6	6,4	-3,5
Europe	(32,2)	(29,0)	(29,4)	(30,3)	(28,7)	(27,0)	-6,4
U.S.A.	26,4	26,0	25,3	22,2	18,3	17,7	-12,3
Rest of the World	41,4	45,0	45,3	47,5	53,0	55,3	+18,7
WORLD	100,0	100,0	100,0	100,0	100,0	100,0	-

MARKET SHARE WON BY COMMUNITY-BUILT AIRCRAFT

(Breakdown into Short- and Medium-Haul and Long-Haul Aircraft)

(% value)

MARKET	Market share won by Aircraft built in the EEC						
	1977 %	1978 %	1979 %	1980 %	1981 %	1982 %	Trend 76/82
a) <u>S/M-Haul Aircraft</u>							
CEE-EEC-EWG-EEG	42,8	44,6	48,8	44,8	45,3	48,9	+10,3
Other European Countries	9,8	15,7	23,4	24,4	23,8	40,6	+30,4
Europe	(29,7)	(35,5)	(40,7)	(37,7)	(39,3)	(46,7)	(17,3)
U.S.A.	0,8	3,3	3,6	3,0	3,7	6,2	+5,9
Rest of the World	26,2	25,2	25,0	32,4	35,4	43,1	+21,3
WORLD	14,0	16,1	19,2	19,5	20,8	28,3	+16,4
b) <u>Long-Haul Aircraft</u>							
CEE-EEC-EWG-EEG	9,6	7,8	6,2	3,9	3,5	2,7	-7,8
Other European Countries	-	-	-	-	-	-	-
Europe	(7,4)	(6,0)	(4,8)	(2,9)	(2,6)	(2,1)	(-5,3)
U.S.A.	-	-	-	-	-	-	-
Rest of the World	0,0	0,0	0,0	0,0	0,0	0,0	-0,1
WORLD	2,4	1,7	1,4	0,9	0,7	0,5	-2,0

MARKET TRENDS AND MARKET SHARE WON BY COMMUNITY-BUILT AIRCRAFT

(% value)

Market (Fleet)	Relative size of the market							Market share won by aircraft built in the EEC						
	1977 %	1978 %	1979 %	1980 %	1981 %	1982 %	Trend 76/82	1977 %	1978 %	1979 %	1980 %	1981 %	1982 %	Trend 76/82
CEE-EEC-EMG Other European Countries	17,7	17,8	18,3	17,0	16,7	18,1	+0,5	23,2	25,7	30,2	27,1	28,3	29,3	+7,0
	7,8	6,7	7,2	7,8	6,3	6,2	-1,7	6,0	9,3	15,4	16,0	14,6	25,3	+20,7
Europe	(25,5)	(24,5)	(25,5)	(24,8)	(23,0)	(24,3)	(-1,2)	(17,9)	(21,2)	(26,0)	(24,6)	(23,6)	(28,6)	(+11,7)
U.S.A.	40,7	40,7	37,5	39,3	39,0	33,4	-9,4	0,6	2,2	2,7	2,4	3,2	2,0	+4,8
Rest of the World	33,8	34,8	37,0	35,9	38,0	42,3	+10,6	12,7	11,9	14,1	18,2	19,5	22,5	+11,6
WORLD	100,0	100,0	100,0	100,0	100,0	100,0	-	9,1	10,2	12,9	13,4	14,3	18,1	+10,3

BREAKDOWN OF FLEETS INTO GEOGRAPHICAL ZONES

	1974	1976	1977	1978	1979	1980	1981	1982
CEE-EEC-EMG-EEG	18,0	17,6	17,7	17,8	18,3	17,0	16,7	18,1
Other European Countries	8,0	7,9	7,8	6,7	7,2	7,8	6,3	6,2
Europe	(26,0)	(25,5)	(25,5)	(24,5)	(25,5)	(24,8)	(23,0)	(24,3)
U.S.A.	45,4	42,8	40,7	40,7	37,5	39,3	39,0	33,4
Rest of the World	28,6	31,7	33,8	34,8	37,0	35,9	38,0	42,3
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

FLEETS AND ORDERS (TRADING POSITION IN DECEMBER)

Type	Number								Value (Mio ECU)				
	1977	1978	1979	1980	1981	1982	1977	1978	1979	1980	1981	1982	
Long-Haul	1748	1844	1913	1824	1685	1736	24197	30449	29452	32589	42182	46927	
S/M-Haul	5265	5845	6165	6463	6184	6402	33422	44172	53510	65985	88764	81552	
TOTAL	7013	7689	8078	8287	7869	8138	57619	74621	82962	98574	130946	128479	

FLEETS AND ORDERS : VALUE BREAKDOWN

	1971	1973	1974	1976	1977	1978	1979	1980	1981	1982
Long-Haul	51,1	51,1	51,6	43,5	42,0	40,8	35,5	33,1	32,2	36,5
S/M-Haul	48,9	48,9	48,4	56,5	58,0	59,2	64,5	66,9	67,8	63,5
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

SHORT- AND MEDIUM-HAUL AIRCRAFT IN SERVICE AND ON ORDER

(% value)

	1977	1978	1979	1980	1981	1982
Standard Aircraft	74,4	70,3	66,1	63,9	64,7	59,1
Wide-Body	25,6	29,7	33,9	36,1	35,3	40,1
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0
Boeing	43,5	50,5	50,2	46,8	50,7	49,1
McDonnell Douglas	28,9	21,8	20,0	22,1	19,6	15,3
Lockheed	13,0	11,0	10,0	11,2	8,6	6,8
Other US Manufacturers	0,2	0,2	0,3	0,2	0,1	0,3
Airbus Industrie	4,2	8,5	12,6	13,0	15,0	21,7
Other European	9,8	7,6	6,6	6,6	5,8	6,6
Total USA	85,6	83,5	80,5	80,3	79,0	71,5
Total Europe	14,0	16,1	19,2	19,6	20,8	28,3
Other Manufacturers	0,4	0,4	0,3	0,1	0,2	0,2
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0

LONG- HAUL AIRCRAFT IN SERVICE AND ON ORDER

(% value)

	1977	1978	1979	1980	1981	1982
Standard Material	31,8	26,6	11,6	7,9	3,1	2,9
Wide-Body	65,9	71,7	88,4	92,1	96,9	97,1
Supersonic	2,3	1,7	*	*	*	*
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0
Boeing	68,2	68,6	65,6	63,2	67,4	81,1
McDonnell Douglas	28,4	26,9	28,7	30,8	27,5	15,5
Other US Manufacturers	0,9	2,6	4,3	5,1	4,3	2,8
European Manufacturers	2,4	1,8	1,4	0,9	0,8	0,6
Other Manufacturers	0,1	0,1	0,0	0,0	0,0	0,0
TOTAL (%)	100,0	100,0	100,0	100,0	100,0	100,0

(*) Included in "Standard Material" - Not available separately.

AVERAGE PRICES OF AIRCRAFT IN 1982

LONG-HAUL AIRCRAFT	PRICE (Mio ECU)	S/M-HAUL AIRCRAFT	PRICE (Mio ECU)
B.707-120	0,1	B.727-100	1,7
B.707-120-B	0,4	B.727-100-C-QC	2,3
B.707-320	0,1	B.727-200	4,5
B.707-320-B	0,9	B.727-200-ADV	9,
B.707-320-C	1,0	B.737-100	4,0
B.707-420	0,1	B.737-200	5,1
B.720	0,1	B.737-200-ADV	15,8
B.720-B	0,2	B.737-200-C	6,0
B.747-100	20,5	B.737-200-C-ADV	16,8
B.747-100-B/SR	74,0	B.737-300	24,0
B.747-100-F	26,5	B.757	38,0
B.747-SP	68,3	B.767	47,0
B.747-200-BM	84,5	DC-9-10/15	2,4
B.747-200-CF	87,0	DC-9-20	2,6
B.747-300	90,0	DC-9-30	6,0
DC-8-20	0,2	DC-9-40	5,5
DC-8-30/30F	0,3	DC-9-50	9,0
DC-8-40	0,15	DC-9-80	24,5
DC-8-50	0,5	DC-10-10	21,5
DC-8-50F	1,0	L.100	17,0
DC-8-61	2,5	L.188	1,0
DC-8-61F	3,0	L.1011-100-1	22,0
DC-8-62	1,5	L.1011-200	27,0
DC-8-62F	2,1		
DC-8-63	3,5	CV-580/600	0,9
DC-8-63F	4,6	FH-27/227	1,0
DC-8-70	19,0		
DC-10-30/30CF	32,0	CVL 3/6	0,2
DC-10-40	26,0	CVL 10/11/12	1,1
		A-300	53,0
L.1011-500	34,0	A-310	45,0
		Mercure	4,0
CV.880/990	0,2	Vanguard	0,7
		V-700	0,4
Concorde	20,0	V-800	0,3
Brittania	0,1	BAC 111-2/300	1,4
		BAC 111-2/400	2,2
CL-44	1,0	BAC 111-2/475/500	3,0
		BAE 146	13,9
		Herald	0,3
		Trident	2,0
		HS-748	7,0
		F-27-100	0,7
		F-27-200/300	1,6
		F-27-400	2,5
		F-27-500/600	7,0
		F-28	12,0
		YS-11	1,1

CHAPTER 3

THE HELICOPTER AND LIGHT AIRCRAFT
MARKET

1. The data on the fleet of single-engined aircraft, twin-engined aircraft and executive jets have been compiled by the "Administration de l'Aéronautique belge", the "Luftfahrt Bundesamt", the "Bureau Veritas", the "Registro Aeronautico Italiano" and the "Civil Aviation Authority".
2. The data on the helicopter fleet are those provided by the Société Aérospatiale and relate to the situation on 01.01.81.
3. The French figures relate only to the fleet for Metropolitan France.

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SINGLE-ENGINEED, TWIN-ENGINEED LIGHT AIRCRAFT AND EXECUTIVE JET FLEET IN WESTERN EUROPE AT 31.12.1981

	Fleet		Fleet Breakdown by Design Origin							
			USA		EEC		Canada		Others	
	Number	%	Number	%	Number	%	Number	%	Number	%
Belgique-België	822	3,6	539	65,6	270	32,8	1	0,1	12	1,5
Danmark	850	3,8	619	72,8	211	24,8	15	1,8	5	0,6
Deutschland	7366	32,6	4589	62,3	2552	34,6	6	0,1	219	2,9
France	5737	25,4	2179	36,2	3623	63,2	1	0,0	1	0,6
Hellas	121	0,5	99	81,8	21	17,4	-	-	1	0,8
Ireland	228	1,0	124	54,4	102	44,7	-	-	2	0,9
Italia	1412	6,2	651	46,2	735	52,1	5	0,4	19	1,3
Luxembourg	53	0,2	37	69,8	15	28,3	-	-	1	1,9
Nederland	506	2,2	424	83,7	63	12,5	1	0,2	18	3,6
United Kingdom (*)	5527	24,4	3382	61,2	1977	35,8	27	0,5	141	2,5
CEE-EEC-EWG-EEG (10)	22621	100,0	12544	55,5	9569	42,3	56	0,2	452	2,0

Source : Ministère des Communications - Administration de l'Aéronautique (B)
 Luftfahrt Bundesamt (D)
 Bureau Veritas (DK,F,IRL,GR,L,NL)
 Registro Aeronautico Italiano (I)
 Civil Aviation Authority (UK)

Note (*) 31.12.80

SINGLE-ENGINEED AIRCRAFT FLEET IN WESTERN EUROPE AT 31.12.1981

	Fleet		Fleet Breakdown by Design Origin									
	Number	%	USA		EEC		Canada		Others			
			Number	%	Number	%	Number	%	Number	%		
Belgique-België	734	3,8	464	63,2	262	35,7	1	0,1	7	1,0		
Danmark	748	3,8	532	71,1	196	26,2	15	2,0	5	0,7		
Deutschland	6584	33,8	3886	59,0	2482	37,7	2	0,0	214	3,3		
France	5143	26,4	1590	30,9	3518	68,4	1	0,0	34	0,7		
Hellas	116	0,6	94	81,0	21	18,1	-	-	1	0,9		
Ireland	204	1,1	104	51,0	98	48,0	-	-	2	1,0		
Italia	1157	6,0	475	41,1	661	57,1	5	0,4	16	1,4		
Luxembourg	47	0,2	31	66,0	15	31,9	-	-	1	2,1		
Nederland	443	2,3	374	84,4	50	11,3	1	0,2	18	4,1		
United Kingdom (*)	4284	22,0	2471	57,7	1698	39,6	8	0,2	107	2,5		
CEE-EEC-EWG-EEG (10)	19460	100,0	10021	51,5	9001	46,2	33	0,2	405	2,1		

Source : Ministère des Communications - Administration de l'Aéronautique (B)
 Luftfahrt Bundesamt (D)
 Bureau Veritas (DK,F,IRL,GR,I,NL)
 Registro Aeronautico Italiano (I)
 Civil Aviation Authority (UK)

Note (*) 31.12.80

TWIN-ENGINE LIGHT AIRCRAFT AND EXECUTIVE JET FLEET IN WESTERN EUROPE AT 31.12.1981

	Fleet		Fleet Breakdown by Design Origin									
	Number	%	USA		EEC		Canada		Others			
			Number	%	Number	%	Number	%	Number	%		
Belgique-België	88	2,8	75	85,2	8	9,1	-	-	5	5,7		
Danmark	102	3,2	87	85,3	15	14,7	-	-	-	-		
Deutschland	782	24,7	703	89,9	70	9,0	4	0,5	5	0,6		
France	594	18,8	489	82,3	105	17,7	-	-	-	-		
Hellas	5	0,2	5	100,0	-	-	-	-	-	-		
Ireland	24	0,8	20	83,3	4	16,7	-	-	-	-		
Italia	254	8,0	177	69,7	74	29,1	-	-	3	1,2		
Luxembourg	6	0,2	6	100,0	-	-	-	-	-	-		
Nederland	63	2,0	50	79,4	13	20,6	-	-	-	-		
United Kingdom (*)	1243	39,3	911	73,3	279	22,5	19	1,5	34	2,7		
CEE-EEC-EWG-EEG (10)	3161	100,0	2523	79,8	568	18,0	23	0,7	47	1,5		

Source : Ministère des Communications - Administration de l'Aéronautique (B)
 Luftfahrt Bundesamt (D)
 Bureau Veritas (DK,F,IRL,GR,L,NL)
 Registro Aeronautico Italiano (I)
 Civil Aviation Authority (UK)

Note (*) 31.12.80

CIVIL HELICOPTER FLEET IN WESTERN EUROPE AND NORTH AMERICA AT 01.01.1981

	Fleet		Fleet Breakdown by Design Origin				
	Number	%	USA		EEC		
			Number (*)	%	Number	%	
Belgique-België	27	1,9	17	(3)	63,0	10	37,0
Danmark	38	2,6	38	(2)	100,0	-	-
Deutschland	343	23,7	186	(56)	54,2	157	45,8
France	384	26,6	155	(79)	40,4	229	59,6
Hellas	18	1,2	13	(3)	72,2	5	27,8
Ireland	13	0,9	12	(1)	92,3	1	16,7
Italia	163	11,3	115	(79)	70,5	48	29,5
Luxembourg	-	-	-	-	-	-	-
Nederland	27	1,9	12	(0)	44,4	15	55,6
United Kingdom	432	29,9	381	(129)	88,2	51	11,8
CEE-EEC-EWG-EEG(10)	1445	100,0	929	(352)	64,3	516	35,7
Europe-Europa (**)	576	-	423	(141)	73,4	98	17,1
USA & Canada	8677	-	8146	(6)	93,9	531	6,1

(*) The number of helicopters manufactured in Europe under licence is given in brackets.

(**) Non-EEC European countries.

Source : Aerospatiale

CHAPTER 4

THE MILITARY AIRCRAFT FLEETS

1. The data used as the base for these tables have been compiled by Interavia Information and Data Services. Many figures have been checked with manufacturers and with the armed forces, but, in certain parts of the world, official sources do not provide any assistance whatsoever and it has been necessary to make estimates. With the continual re-equipment programmes which are in progress in the leading industrialized nations, even when information has been provided by official sources or manufacturers, it is not always clear at any one point in time exactly how many aircraft of a particular type have been withdrawn or how many have been delivered. In case of doubt, estimates have been made. Therefore, the user is advised to regard all figures in these tables as best estimates.

2. The following tables provide information on the numbers of military aircraft in operation worldwide (with the exception of the Eastern Bloc countries) at December 31, 1981. They have been classified into two broad categories of fixed-wing and rotary-wing aircraft and by whether or not they were designed in the EEC nations, the United States of America, the Soviet Union, or in other countries, these being principally Canada, Brazil, Spain and Sweden. The fixed-wing aircraft operated by the ten EEC member states have been further subdivided into the following categories :
 - Fighter/strike/Counter-insurgency (COIN)
 - Bombers
 - Reconnaissance/observation/electronic counter-measures (ecm)
 - Trainers
 - Transports
 - Maritime patrol/anti-submarine warfare (ASW)/search & rescue (SAR)
 - Liaison/utility
 - Tanker/transports
 - Miscellaneous.

The requirement in drawing up these tables was to provide the numbers of aircraft in service, without making any attempt to quantify their capabilities. This has the result, however, that although the aircraft fleets of the developing nations may sometimes appear to be nearly as large as those of the NATO members, if not greater, the former will often be operating 20- to 30-year old types, whilst the latter will have first-line aircraft representing the latest state of the art.

3. Although this report tries to determine the value of the fleets, it should not be lost from view that unlike civil aircraft no standard method of amortization exists. The replacement value of the fleet is above all a function of the requirement to modernize it determined by strategic and tactical exigences. The less wealthy nations cannot usually afford to replace their aging fleet and more often than not do have a choice as to what they procure since it is determined by aid programmes (1).

(1) In the recent past the developing countries have increasingly demanded more sophisticated weapons.

On the other hand the industrialized countries replace their out-of-date equipment with higher performance machines with more and more sophisticated and costly weapon systems. This often results in a reduction in the fleet size, this being not necessarily due to higher prices, but also because of the better performance of the system.

4. Aircraft prices are notoriously difficult to determine with any degree of exactitude; definitions of what equipment should be taken into consideration vary widely. The prices used as a basis for determining total fleet values have been taken from officially published figures and, in most cases, cross-checked with manufacturers. These prices represent basic system prices, that is to say that the prices of certain aircraft with more complex systems can be much higher than those with the basic system. The increasing sophistication of air defence systems has led to a corresponding emphasis on electronic countermeasures and weapons to counteract these threats which, together with the development in communications systems, means that avionics represents a more and more significant part of an aircraft's costs. This trend which shows every indication of continuing and, indeed, it can be expected that during an aircraft's life, its initial costs will be multiplied many times over by the fitting of new avionics and weapons systems.
5. The approach taken in calculating replacement values has been to examine operational fleets by type and to estimate what numbers and types of aircraft would be procured to replace these. Examples of typical aircraft procurement costs are given at a later stage. While the method employed is subject to imprecision, the results obtained by its application are approximately comparable to the current expenditures of the NATO members.
6. Most of the aircraft production programmes underway at the end of 1981 involved types which will remain in service for the rest of the century and, in a number of cases, beyond the year 2000. Future programmes under consideration mainly involve aircraft that would not see service much before the mid-1990s.
7. The principal aircraft-manufacturing members of the European Community, namely, France, the Federal Republic of Germany, Italy and the United Kingdom, have long participated in co-operative programmes which have involved each of them at different moments on a bilateral or trilateral basis (See programmes : JAGUAR, MRCA, ALPHA-JET and different helicopter programmes). The proposed common programme for a European Combat Aircraft for the nineties (FACE) may be realized on a much larger scale involving all of the European constructors.

8. The sale of military aircraft to third countries depends largely at the present time on the value of the compensation offered since developing countries are no longer satisfied to be solely customers. Some of these countries have indicated an intention to establish their own aeronautical industry and only buy material from those countries who are prepared to furnish them with assistance in establishing a production line. Other countries, such as Brazil and India which already have an aeronautical industry, are no longer satisfied to produce under licence but want also to participate in the development phase - example : the Italo-Brazilian combat aircraft programme AM-X.

Although countries such as Canada, Australia and Spain appear to be content to build advanced combat aircraft under licence, they have no intention of abandoning their development capabilities. This is evidenced by the support given by the governments of these countries to the aircraft industry and locally-designed products. It is the situation of the Swedish industry. The Swedish government has provided funds during 1982 for the development of a fighter aircraft. In the same direction Japan while she does not produce military equipment for export has undertaken a number of independent military programmes while also produced advanced fighter and reconnaissance aircraft under licence

x
x x

The following table gives price indications (Mio ECU) of some typical current aircraft programmes. These data were compiled in mid-1983.

a) EEC-designed aircraft

Aeritalia G.22210 -	14 M
AerMacchi MB.3392.	7 - 3 M
Aérospatiale Transall NG	12 - 14 M
Aérospatiale SA 365 Dauphin	1.8 M
Aérospatiale AS 332 Super Puma	3.4 - 4 M
Aérospatiale AS 350 Ecureuil/Astar	0.4 M
Aérospatiale/Westland SA 341 Gazelle	0.4 M
British Aerospace HS.748	6 M
British Aerospace HS.1182 Hawk	5 M
Dassault-Breguet Mirage III/5/50	6 - 7 M
Dassault-Breguet Mirage F1	9 - 11 M
Dassault-Breguet Mirage 2000	25 M
Dassault-Breguet/Dornier Alpha Jet	5 - 7 M
Fokker F27	6.8 - 7 M
MBB B0105	0.75 - 0.8 M
Panavia Tornado MRCA	21.7 - 22.5
SEPECAT Jaguar	11 - 13 M
Short SC. 7 Skyvan	1.1 - 1.2 M
SIAI-Marchetti SF.260	0.4 - 0.45 M
Westland/Aérospatiale WG.13 Lynx	2.8 - 3.15 M

b) U.S.A.- designed aircraft

Bell AH-1S Cobra	3.1 M
Boeing E-3A Sentry	85.5 M
Fairchild A-10A Thunderbolt II	12.5 M
General Dynamics F-16 Fighting Falcon	25 - 30 M
Grumman A-6E Invader	19 M
Grumman E-2C Hawkeye	25 M
Grumman F-14 Tomcat	33 M
Hughes Helicopters AH-64 Apache	9.5 M
Lockheed C-130 Hercules	15 - 20 M
McDonnell Douglas F-15 Eagle	27 M
McDonnell Douglas F/A-18 Hornet	28 M
Northrop F-5E Tiger II	6 M
Sikorsky CH-53E Superstallion	10.5 - 12 M
Sikorsky UH-60 Black Hawk	4.8 M

c) Aircraft designed outside the EEC and U.S.A.

CASA C.101 Aviojet	2.8 - 3 M
CASA C.212 Aviocar	2.1 M
de Havilland Canada DHC-5D Buffalo	10 M
de Havilland Canada DHC-6 Twin Otter	1.6 M
Embraer EMB-110 Bandeirante	1.7 M
Embraer EMB-312 Tucano	1.2 M
GAF N22/N24 Nomad	0.9 - 1.2 M
Israel Aircraft Industries 201 Arava	1.25 - 1.7 M
Israel Aircraft Industries Kfir-C2	5.5 - 6 M
Pilatus PC-7 Turbo	0.9 - 1 M
Saab JA37 Viggen	15 M

AVERAGE REPLACEMENT VALUE OF MILITARY AIRCRAFT IN SERVICE IN THE EEC AND BREAKDOWN ACCORDING TO DESIGN ORIGIN

(Mio ECU at current prices)

	E.E.C.	U.S.A.	Other
Fighter/strike	14,68	16,05	12,00
Bombers	22,79	...	...
Recce/ECM	12,98	14,94	12,00
Trainers	3,12	6,71	0,50
Transports	5,59	10,39	4,20
Patrol/SAR	11,49	14,40	3,45
Liaison/utility	0,50	0,50	0,21
Tanker/transports	15,00	10,91	...
Helicopters	1,09	2,76	...

NUMBER OF MILITARY AIRCRAFT AND HELICOPTERS IN SERVICE IN THE EEC IN 1981 AND BREAKDOWN ACCORDING TO DESIGN ORIGIN

	E.E.C.			U.S.A.			Other		Total Aircraft	Total Helicopters	TOTAL
	Aircraft	Helicopters	Total	%	Aircraft	Helicopters	Total	%			
B	181	82	263	66,4	130	3	133	33,6	-	85	396
DK	-	16	16	8,1	83	23	106	53,8	75	39	197
D	478	425	903	41,9	824	426	1250	58,1	-	851	2153
F	1853	750	2603	95,6	117	-	117	4,3	4	750	2724
H	64	4	68	10,6	418	137	555	86,7	17	141	640
IRL	19	11	30	73,2	11	-	11	26,8	-	11	41
I	702	5	707	44,1	342	553	895	55,9	-	558	1602
NL	20	123	143	30,8	321	-	321	69,2	-	123	464
UK	1523	859	2382	91,8	191	13	204	7,9	10	872	2596
EEC	4840	2275	7115	65,8	2437	1155	3592	33,2	106	3430	10813

REPLACEMENT VALUE OF AIRCRAFT AND HELICOPTERS IN SERVICE IN THE EEC AND BREAKDOWN ACCORDING TO DESIGN ORIGIN (1981)

(Mio ECU)

	E.E.C.				U.S.A				Other		Total Aircraft	Total Helicopters	TOTAL
	Aircraft		Helicopters		Aircraft		Helicopters		Aircraft	%			
	Total	%	Total	%	Total	%	Total	%					
B	858	32,1	902	67,9	1910	67,9	1910	67,9	-	-	2768	44	2812
DK	-	1,2	20	72,5	1238	72,5	1243	26,3	451	26,3	1689	25	1714
D	5928	30,0	6208	70,0	12351	70,0	14481	-	-	-	18279	2410	20689
F	12736	94,9	13686	5,0	723	5,0	723	0,1	6	0,1	13465	950	14415
H	888	16,9	890	81,7	4130	81,7	4318	1,4	74	1,4	5092	190	5282
IRL	14	66,7	18	33,3	9	33,3	9	-	-	-	23	4	27
I	3490	48,9	3498	51,1	2949	51,1	3659	-	-	-	6439	718	7157
NL	156	4,3	266	95,7	5975	95,7	5975	-	-	-	6131	110	6241
UK	15952	89,3	17016	10,7	1900	10,7	2043	0,0	0	0,0	17852	1207	19059
EEC	40022	54,9	42504	44,4	31185	44,4	34361	0,7	531	0,7	71738	5658	77396

NUMBER OF MILITARY AIRCRAFT AND HELICOPTERS IN SERVICE IN THE EEC IN 1981 AND BREAKDOWN BY CATEGORY

CATEGORY	B	DK	D	F	H	IRL	I	NL	UK	EEC	%
Fighter/strike	134	74	730	718	225	-	248	214	518	2861	26,4
Bombers	-	-	-	47	-	-	-	-	130	177	1,6
Recce/ECM	21	18	117	57	44	-	123	18	99	497	4,6
Trainers	97	50	217	686	138	17	350	61	710	2326	21,6
Transports	24	7	198	273	44	1	126	12	123	808	7,5
Patrol/SAR	-	-	15	86	21	2	18	36	34	212	2,0
Liaison/utility	35	9	25	48	27	10	135	-	34	323	3,0
Tanker/transports	-	-	-	11	-	-	-	-	24	35	0,3
Miscellaneous	-	-	-	48	-	-	44	-	52	144	1,3
Total Aircraft	311	158	1302	1974	499	30	1044	341	1724	7383	68,3
Helicopters	85	39	851	750	141	11	558	123	872	3430	31,7
T O T A L	396	197	2153	2724	640	41	1602	464	2596	10813	100,0
%	3,7	1,8	19,9	25,2	5,9	0,4	14,8	4,3	24,0	100,0	-

REPLACEMENT VALUE OF MILITARY AIRCRAFT AND HELICOPTERS IN SERVICE IN THE EEC IN 1981 AND BREAKDOWN BY CATEGORY

(Mio ECU)

CATEGORY	B	DK	D	F	H	IRL	I	NL	UK	EEC	%
Fighter/strike	1622	1224	13918	6120	3600	-	3220	4280	9660	43644	56,4
Bombers	-	-	-	1175	-	-	-	-	2860	4035	5,2
Recce/ECM	147	216	1640	513	704	-	1290	320	2000	6830	8,8
Trainers	760	195	1357	3400	280	10	800	750	1350	8902	11,5
Transports	236	50	1085	1434	456	5	892	84	960	5202	6,7
Patrol/SAR	-	-	250	980	38	4	180	697	650	2499	3,2
Liaison/utility	3	4	29	23	14	4	57	-	12	146	0,2
Tanker/transports	-	-	-	120	-	-	-	-	360	480	0,6
Miscellaneous	-	-	-	-	-	-	-	-	-	-	-
Total Aircraft	2768	1689	18279	13465	5092	23	6439	6131	17852	71738	92,7
Helicopters	44	25	2410	950	190	4	718	110	1207	5658	7,3
T O T A L	2812	1714	20689	14415	5282	27	7157	6241	19059	77396	100,0
%	3,6	2,2	26,7	18,6	6,8	0,0	9,3	8,1	24,7	100,0	-

BREAKDOWN BY MANUFACTURING ORIGIN OF US-DESIGNED
AIRCRAFT IN MEMBER STATES' FLEETS (1981)

in % over the number

	Manufactured in the EEC	Manufactured in the USA
Belgique	43,7 %	56,3 %
Danmark (*)	9,4 %	69,8 %
Deutschland	33,8 %	66,2 %
France	27,4 %	62,6 %
Hellas	16,2 %	83,8 %
Ireland	72,7 %	27,3 %
Italia	80,0 %	20,0 %
Nederland	25,5 %	74,5 %
United Kingdom	0,0 %	100,0 %

(*) Part (20,8 %) built neither in the EEC, nor in the USA

NUMBER OF MILITARY AIRCRAFT AND HELICOPTERS IN SERVICE IN THE WORLD IN 1981 AND BREAKDOWN ACCORDING TO DESIGN ORIGIN

AREA	E.E.C.				U.S.A.				U.S.S.R.				Other	
	Aircraft	Helicopters	Total	%	Aircraft	Helicopters	Total	%	Aircraft	Helicopters	Total	%	Aircraft	%
U.S.A.	71	-	71	0,3	13253	9071	22324	99,7	-	-	-	-	6	0,0
Canada	4	-	4	0,5	390	194	584	75,4	-	-	-	-	187	24,1
Latin America and Caribbean	500	233	733	15,8	1742	629	2371	51,1	363	109	472	10,2	1065	22,9
Non-EEC Europe	737	371	1108	20,1	1676	674	2350	42,7	309	51	360	6,5	1686	30,7
Middle East and North Africa	1287	527	1814	22,4	1819	1087	2906	35,9	2474	388	2862	35,3	513	6,4
Africa south of the Sahara	541	193	734	66,1	387	85	472	28,6	300	14	314	19,0	131	7,9
South Africa	386	153	539	78,1	131	-	131	19,0	-	-	-	-	20	2,9
Asia	841	570	1411	19,0	2675	1335	4010	54,0	784	73	857	11,5	1151	15,5
Australasia	218	20	238	39,0	129	115	244	39,9	-	-	-	-	129	21,1
World outside EEC	4585	2067	6652	12,9	22202	13190	35392	68,3	4230	635	4865	9,4	4888	9,4
EEC	4840	2275	7115	65,8	2437	1155	3592	33,2	-	-	-	-	106	1,0
W O R L D	9425	4342	13767	22,0	24639	14345	38984	62,3	4230	635	4865	7,7	4994	8,0

REPLACEMENT VALUE OF MILITARY AIRCRAFT AND HELICOPTERS IN SERVICE IN THE WORLD IN 1981

(Mio ECU at current prices)

AREA	Aircraft	Helicopters	TOTAL
U.S.A.	191887	25943	207830
Canada	7925	555	8480
Latine America and Caribbean	34785	1602	36387
Non-EEC Europe	43066	1808	44874
Middle East and North Africa	66059	3303	69362
Africa south of Sahara	13549	318	13867
South Africa	5354	167	5521
Asia	62158	4386	66544
Australasia	6136	373	6509
World outside EEC	421919	38455	459374
E.E.C	71738	5658	77396
W O R L D	493657	44113	537770

BREAKDOWN OF EEC DESIGNED AIRCRAFT
IN THE FLEETS OF NON-MEMBER COUNTRIES IN 1981

in % of the number

Middle East and North Africa	27,3 %
Asia	21,2 %
Non-EEC Europe	16,7 %
Africa south of the Sahara	11,0 %
Latin America and Caribbean	11,0 %
South Africa	8,1 %
Australasia	3,6 %
United States	1,1 %
Canada	0,0 %
TOTAL	100,0 %

CHAPTER 5

INTERNATIONAL TRADE

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

2. The entry into force of the GATT-agreement on the trade of civil aircraft has had as immediate statistical consequence the redefinition of the statistical subdivisions of the tariff positions of civil and military aeronautical goods. The new statistical data only concern the civil aeronautical products and therefore exclude the military ones.

3. In order to simplify the presentation of the data concerning the trade in these products, four groups of products have been created to cover these NIMEXE positions, as follows :

- <u>Airframes</u>	: 8801-10 - 8802-01 - 8802-15 - 8802-19 - 8802-33 8802-35 - 8802-39 - 8803-20 - 8803-40 - 8805-10 8805-40
- <u>Engines</u>	: 8406-03 - 8406-14 - 8406-26 - 8406-92 - 8408-02 8408-04 - 8408-06 - 8408-12 - 8408-19 - 8408-20 8408-32 - 8408-32 - 8408-51 - 8408-72 - 8408-82
- <u>Equipment</u>	: 8453-01 - 8453-09 - 8514-10 - 8515-02 - 8515-06 8515-11 - 8515-30 - 8515-31 - 8515-33 - 8515-35 8515-40 - 8522-40 - 9014-01 - 9014-07 - 9014-12 9014-17 - 9014-23 - 9028-01 - 9028-03 - 9028-05 9028-07 - 9028-08 - 9028-09 - 9028-62 - 9029-01 9029-15
- <u>Other Material</u>	: 3907-01 - 4009-10 - 4011-20 - 4016-10 - 6205-01 6813-38 - 6814-10 - 7008-01 - 7325-01 - 7338-01 8302-01 - 8307-10 - 8308-20 - 8407-01 - 8410-20 8411-01 - 8411-52 - 8412-20 - 8415-01 - 8418-51 8421-01 - 8422-01 - 8459-45 - 8463-11 - 8463-15 8501-01 - 8501-03 - 8501-04 - 8501-05 - 8501-06 8501-07 - 8508-20 - 8512-02 - 8512-11 - 8512-50 8517-20 - 8520-01 - 8522-81 - 8523-01 - 9018-10 9023-01 - 9024-10 - 9027-20 - 9103-10 - 9108-10 9401-02 - 9403-11 - 9403-15 - 9403-19

4. Data concerning the United Kingdom are not complete and do not allow the subdivision as indicated at paragraph 3. However, an estimation of the UK's intra EEC exports can be obtained using the data based on turnover supplied by the SBAC (see page 86).

5. Comparison of the evolution of the intra-EEC and extra-EEC trade during the period 1980-1982, is not possible due to new modifications of the data base as well as uncomplete information from the UK.

- Airframes

8801-10 Civil balloons and airships
8802-01 Civil gliders
8802-15 Civil helicopters of an unladen weight not exceeding 2000 kg
8802-19 Civil helicopters of an unladen weight exceeding 2000 kg
8802-33 Civil aircraft of an unladen weight not exceeding 2000 kg
8802-35 Civil aircraft of an unladen weight exceeding 2000 kg but not exceeding 15000 kg
8802-39 Civil aircraft of an unladen weight exceeding 15000 kg
8803-20 Parts of goods for use in civil balloons or airships
8803-40 Parts of goods for use in flying machines and gliders
8805-10 Catapults and similar aircraft launching gear; parts thereof
8805-40 Ground flying trainers; parts thereof

- Engines

8406-03 Internal combustion piston engines for use in civil aircraft
8406-14 Spark ignition engines of a cylinder capacity of 250 cm³ or less, for use in civil aircraft
8406-26 Other internal combustion piston engines for use in civil aircraft
8406-92 Parts of engines for use in civil aircraft
8408-02 Turbo-jets for use in civil aircraft, developing a thrust of more than 44000 N or less
8408-04 Turbo-jets for use in civil aircraft, developing a thrust of more than 44000 N but not more than 132000 N
8408-06 Turbo-jets for use in civil aircraft, developing a thrust of more than 132000 N
8408-12 Other (for example, ram-jets, pulse jets, rocket engines for use in civil aircraft)
8408-19 Turbo-propellers for use in civil aircraft, developing a power of 1865 kW or less
8408-20 Turbo-propellers for use in civil aircraft, developing a power of more than 1865 kW but not more than 3730 kW
8408-22 Turbo-propellers for use in civil aircraft, developing a power of more than 3730 kW
8408-32 Other reaction engines for use in civil aircraft
8408-51 Other engines and motors for use in civil aircraft
8408-72 Parts of reaction engines or of turbo-propellers, for use in civil aircraft
8408-82 Parts of gas turbines, for use in civil aircraft

- Equipment

8453-01 Automatic data processing machines (analog and hybrid) and units there of, for use in civil aircraft
8453-09 Automatic digital data processing machines, and units thereof, for use in civil aircraft
8514-10 Microphones and stands therefor; loudspeakers; audiofrequency electric amplifiers, for use in civil aircraft, excluding parts of such goods
8515-02 Radiotelegraphic and radiotelephonic transmitters, for use in civil aircraft

- 8515-06 Radiotelegraphic and radiotelephonic transmitters-receivers, for use in civil aircraft
- 8515-11 Radio receivers and radiotelegraphic and radiotelephonic apparatus, for use in civil aircraft
- 8515-30 Radio navigational receivers, for use in civil aircraft
- 8515-31 Radio altimeters, for use in civil aircraft
- 8515-33 Meteorological radars, for use in civil aircraft
- 8515-35 Other apparatus, for use in civil aircraft
- 8515-40 Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for apparatus falling within subheading 85-153', for use in civil aircraft
- 8522-40 Flight recorders, for use in civil aircraft
- 9014-01 Compasses, for use in civil aircraft
- 9014-07 Parts for gyroscopic compasses, for use in civil aircraft
- 9014-12 Optical air navigational instruments, for use in civil aircraft (excluding parts of such goods)
- 9014-17 Other air navigational instruments (including automatic pilots), for use in civil aircraft
- 9014-23 Air navigational equipment
- 9028-01 Stall warning calculators, for use in civil aircraft
- 9028-03 Inertial navigation systems, for use in civil aircraft
- 9028-05 Ground proximity warning systems, for use in civil aircraft
- 9028-07 Terrestrial magnetic field detector apparatus operating by saturation of magnetic circuits (flux valve), for use in civil aircraft
- 9028-08 Air conditioning regulators, for use in civil aircraft
- 9028-09 Other electronic equipment and apparatus, for use in civil aircraft
- 9028-62 Other electrical measuring, checking, analysing or automatically controlling instruments and apparatus, for use in civil aircraft
- 9029-01 Parts of automatic flight control instruments and apparatus, for use in civil aircraft, falling within heading 90-28..
- 9029-15 Other parts of automatic flight control instruments and apparatus, for use in civil aircraft

- Other Material

- 3907-01 Piping and tubing, with fittings attached, suitable for conducting gases or liquids, for use in civil aircraft (high polymers, artificial resins and artificial plastic materials)
- 4009-10 Piping and tubing of unhardened vulcanised rubber with fittings attached, suitable for conducting gases or liquids, for use in civil aircraft
- 4011-20 Pneumatic tyres for use on civil aircraft
- 4016-10 Piping and tubing, with fittings attached, suitable for conducting gases or liquids for use in civil aircraft (ebonite and vulcanite)
- 6205-01 Escape chutes, for use in civil aircraft
- 6813-38 Fabricated asbestos and articles thereof, for use in civil aircraft
- 6814-10 Friction material (segments, discs, washers, strips, plates, rolls and the like) of a kind suitable for brakes, for clutches or the like, with a basis of asbestos, for use in civil aircraft
- 7008-01 Windscreens, not framed, for use in civil aircraft

7325-01 Stranded wire, cables, cordage, ropes, plaited bands, slings and the like, of iron or steel wire, but excluding insulated electric cables, with fittings attached or made up into articles, for use in civil aircraft

7338-01 Sanitary ware (excluding parts thereof) for use in civil aircraft

8302-01 Base metal fittings and mountings (excluding automatic door closers), for use in civil aircraft

8307-10 Lamps and lighting fittings, of base metal, and parts thereof, of base metal, for use in civil aircraft

8308-20 Flexible tubing and piping, of base metal, with fittings attached, for use in civil aircraft

8407-01 Hydraulic engines and motors, for use in civil aircraft

8410-20 Pumps, for use in civil aircraft

8411-01 Pumps and compressors, for use in civil aircraft

8411-52 Fans, blowers and the like, for use in civil aircraft

8412-20 Air conditioning machines, for use in civil aircraft

8415-01 Refrigerators and refrigerating equipment (excluding parts thereof for use in civil aircraft

8418-51 Machinery and apparatus (excluding parts thereof), for use in civil aircraft

8421-01 Fire extinguishers, charged or not (excluding parts thereof), for use in civil aircraft

8422-01 Lifting, handling, loading or unloading machinery, telfers and conveyors (excluding parts thereof), for use in civil aircraft

8459-45 Hydropneumatic spherical batteries; mechanical actuators for thrust reversers; toilet units specially designed for aircraft; servo-mechanisms, non electric; hydraulic servo-motors, non-electric; non electric starter motors; pneumatic starters for jet engines; windscreen wipers, non electric; non-electric propeller regulators, for use in civil aircraft

8463-11 Pulleys, shaft couplings (other than universal joints and torque converters, for use in civil aircraft

8463-15 Speed changers and gearboxes, chain sprockets, clutches and universal joints (excluding parts thereof), for use in civil aircraft

8501-01 Motors of an output of not less than 0.75 kW, but less than 150 kW, for use in civil aircraft

8501-03 Generators, for use in civil aircraft

8501-04 Rotary converters, for use in civil aircraft

8501-05 Static converters, rectifiers and rectifying apparatus, for use in civil aircraft

8501-06 Transformers, for use in civil aircraft

8501-07 Inductors, for use in civil aircraft

8508-20 Electrical starting and ignition equipment for internal combustion engines (including ignition magnetos, magneto-dynamos, ignition coils, starter motors, sparking plugs and glow plugs); generators (dynamos and alternators) and cut-outs for use in conjunction with such engines, for use in civil aircraft

8512-02 Electric instantaneous or storage water heaters and immersion heaters, for use in civil aircraft, excluding parts of such goods

8512-11 Electric soil heating apparatus and electric space heating apparatus, for use in civil aircraft, excluding parts of such goods

8512-50 Electric cooking stoves, ranges, ovens and food warmers (excluding parts thereof), for use in civil aircraft

- 8517-20 Electric sound or visually signalling apparatus (such as bells, sirens, indicator panels, burglar and fire alarms), for use in civil aircraft, excluding parts of such goods
- 8520-01 Sealed beams, for use in civil aircraft
- 8522-81 Assemblies and sub-assemblies consisting of two or more parts or pieces fastened or joined together, for flight recorders, for use in civil aircraft
- 8523-01 Ignition wiring sets and wiring sets, for use in civil aircraft
- 9018-10 Gas masks and similar respirators (excluding parts thereof), for use in civil aircraft
- 9023-01 Thermometers, for use in civil aircraft
- 9024-10 Instruments and apparatus for measuring, checking or automatically controlling the flow, depth, pressure of liquids or gases, or for automatically controlling temperature (for example, pressure gauges, thermostats, level gauges, flow meters, heat meters, automatic overdraught regulators), for use in civil aircraft
- 9027-20 Speed indicators and tachometers, for use in civil aircraft
- 9103-10 Clocks with clock movements measuring less than 4,5 cm in width and clocks with watch movements, for use in civil aircraft
- 9108-10 Clock movements, assembled, without dials or hands, or with dials or hands whether or not assembled thereon, constructed or designed to operate for over 47 hours without rewinding, having more than one jewel, for use in civil aircraft
- 9401-02 Chairs and other seats, not leather covered (excluding parts thereof), for use in civil aircraft
- 9403-11 Furniture of base metal (excluding parts thereof), for use in civil aircraft
- 9403-15 Furniture of wood (excluding parts thereof), for use in civil aircraft
- 9403-19 Furniture of other materials (excluding parts thereof), for use in civil aircraft

x
x x
x x

INTRA-COMMUNITY TRADE IN 1981 : AIRFRAMES - ENGINES - EQUIPMENT - OTHER MATERIAL

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	2042	11342	4518	594	521	588	4692	2097	26394
Danmark	859	-	1720	4330	115	69	382	927	317	8719
Deutschland	32006	1049	-	179979	2947	2338	12527	50096	25753	306695
France	41934	1947	1891835	-	4178	1077	88860	17972	12581	2060384
Hellas	666	0	164	90	-	0	0	13	74	1009
Ireland	9520	7	653	334	10	-	195	571	5820	17110
Italia	7372	32	4900	2891	841	285	-	368	683	17372
Nederland	7691	1618	54203	48393	197	614	3412	-	13212	129340
United (1) Kingdom	16289	4297	265169	157908	3043	18988	5123	112102	-	582919
EEC IMPORT	116337	10992	2229986	398443	11925	23892	111089	186741	60537	3149942
BALANCE	-89943	-2273	-1923291	1661941	-10916	-6782	-93717	-57401	522382	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1981 : AIRFRAMES

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	8	6308	2503	570	108	73	3614	...	13184
Danmark	583	-	1118	4000	113	46	3	426	...	6289
Deutschland	15833	331	-	155003	2466	232	3392	36306	...	213563
France	12081	296	1852654	-	4115	77	83616	13506	...	1966345
Hellas	664	0	161	30	-	0	1	13	...	869
Ireland	8834	6	18	0	2	-	0	7	...	8867
Italia	6711	0	1879	2143	441	0	-	50	...	11224
Nederland	2536	73	46990	46727	142	43	2953	-	...	99464
United (1) Kingdom	9848	3573	171827	104966	2980	4046	604	40755	-	338599
EEC IMPORT	57090	4287	2080955	315372	10829	4552	90642	94677	...	2658404
BALANCE	-43906	2002	-1867392	1650973	-9960	4315	-79418	4787	338599	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1981 : ENGINES

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	1896	2669	1634	0	93	3	59	414	6768
Danmark	194	-	406	0	0	0	0	30	21	651
Deutschland	10825	265	-	7354	19	61	5654	10509	22094	56781
France	27430	86	14844	-	0	884	369	1437	7716	52766
Hellas	0	0	0	0	-	0	0	0	0	0
Ireland	330	0	0	321	0	-	0	125	5155	5931
Italia	18	0	458	104	1	0	-	13	146	740
Nederland	2377	1359	2482	636	0	0	5	-	5051	11910
United (1) Kingdom	5461	35	74424	20151	0	7571	2226	51776	-	161644
EEC IMPORT	46635	3641	95283	30200	20	8609	8257	63949	40597	297191
BALANCE	-39867	-2990	-38502	22566	-20	-2678	-7517	-52039	121047	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1981 : EQUIPMENT

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	1	533	42	11	253	97	28	1378	2343
Danmark	38	-	106	185	2	15	70	435	244	1095
Deutschland	1030	118	-	6686	35	163	946	1178	1601	11757
France	1361	1254	13538	-	3	65	3087	2623	2885	24816
Hellas	0	0	0	10	-	0	0	0	74	84
Ireland	332	1	3	8	8	-	19	435	389	1195
Italia	36	4	999	208	48	268	-	28	270	1861
Nederland	925	164	3985	85	22	538	247	-	7379	13345
United (1) Kingdom	373	603	14514	13333	27	4089	1665	15313	-	49917
EEC IMPORT	4095	2145	33678	20557	156	5391	6131	20040	14220	106413
BALANCE	-1752	-1050	-21921	4259	-72	-4196	-4270	-6695	35697	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1981 : OTHER MATERIAL

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	137	1832	339	13	67	415	991	305	4099
Danmark	44	-	90	145	0	8	309	36	52	684
Deutschland	4318	335	-	10936	427	1882	2535	2103	2058	24594
France	1062	311	10799	-	60	51	1788	406	1980	16457
Hellas	2	0	3	50	-	0	1	0	0	56
Ireland	24	0	632	5	0	-	176	4	276	1117
Italia	607	28	1564	436	351	17	-	277	267	3547
Nederland	1853	22	746	945	33	33	207	-	782	4621
United (1) Kingdom	607	86	4404	19458	36	3282	628	4258	-	32759
EEC IMPORT	8517	919	20070	32314	920	5340	6059	8075	5720	87934
BALANCE	-4418	-235	4524	-15857	-864	-4223	-2512	-3454	27039	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRACOMMUNITY TRADE IN 1982 : AIRFRAMES - ENGINES - EQUIPMENT - OTHER MATERIAL

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	125	21537	9780	530	6446	1067	4643	2388	46516
Danmark	1860	-	2952	4229	119	20	689	919	188	10981
Deutschland	30944	1238	-	398555	2108	602	12191	51868	37415	534921
France	48439	211	337793	-	3929	657	70117	20951	7956	3530053
Hellas	1035	0	839	68	-	1	78	162	250	2433
Ireland	9168	0	883	2	93	-	35	371	19352	29904
Italia	36639	17	9101	7982	715	39	-	596	1422	56511
Nederland	8265	65	72318	22873	294	324	1618	-	12347	118104
United (1) Kingdom	14600	1035	256347	110010	1202	11001	4507	121885	-	520587
EEC IMPORT	150950	2696	3741770	553499	8990	19090	90302	201395	81318	4850010
BALANCE	-104434	8285	-3206849	2976554	-6557	10814	-33791	-83291	439269	-

(1) Data uncomplete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1982 : AIRFRAMES

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	61	13084	6504	509	6040	586	3558	...	30342
Danmark	313	-	2447	3890	113	1	26	471	...	7261
Deutschland	16474	1057	-	366004	1776	41	6613	36886	...	428851
France	30021	6	3332719	-	3889	17	55649	16669	...	3438970
Hellas	1029	0	839	10	-	0	78	18	...	1974
Ireland	8142	0	591	0	10	-	0	222	...	8965
Italia	35992	7	1357	6185	277	0	-	8	...	43826
Nederland	1578	13	57016	20959	270	10	159	-	...	80005
United (1) Kingdom	10019	46	212314	68204	1167	1786	1690	45603	-	340829
EEC IMPORT	103568	1190	3620367	471756	8011	7895	64801	103435	...	4381023
BALANCE	-73226	6071	-3191516	2967214	-6037	1070	-20975	-23430	340829	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1982 : ENGINES

(1000 ECU)

	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
IMPORT										
EXPORT										
Belgique-Lux	-	32	5276	2855	4	117	40	233	787	9344
Danmark	1445	-	233	3	0	0	0	327	12	2020
Deutschland	11545	24	-	9408	0	137	742	12556	33809	68221
France	16621	12	8671	-	6	545	8240	2552	5996	42643
Hellas	0	0	0	0	-	1	0	114	71	186
Ireland	874	0	238	0	0	-	0	0	18566	19678
Italia	150	0	1561	1489	4	0	-	5	1164	4373
Nederland	3761	32	12505	1037	0	39	20	-	7216	24610
United (1) Kingdom	3870	417	19662	11553	13	4139	571	56566	-	96791
EEC IMPORT	38266	517	48146	26345	27	4978	9613	72353	67621	267866
BALANCE	-28922	1503	20075	16298	159	14700	-5240	-47743	29170	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1982 : EQUIPMENT

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	0	572	137	7	129	218	159	1435	2657
Danmark	58	-	65	136	4	0	266	30	55	619
Deutschland	455	103	-	8394	116	64	2342	740	1796	14010
France	998	114	22448	-	11	43	1490	906	1236	27246
Hellas	0	0	0	50	-	0	0	30	179	259
Ireland	137	0	10	1	81	-	14	148	372	763
Italia	241	0	5227	75	5	3	-	22	24	5597
Nederland	1035	15	1677	157	21	179	816	-	4602	8502
United Kingdom (1)	303	209	17503	9243	10	2912	1841	15012	-	47033
EEC IMPORT	3227	446	47502	18193	255	3330	6987	17047	9699	106686
BALANCE	-570	173	-33492	9053	4	-2567	-1390	-8545	37334	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

INTRA-COMMUNITY TRADE IN 1982 : OTHER MATERIAL

(1000 ECU)

IMPORT EXPORT	B - L	DK	D	F	H	IRL	I	NL	UK	EEC EXPORT
Belgique-Lux	-	32	2605	284	10	160	223	693	166	4173
Danmark	44	-	207	200	2	19	397	91	121	1081
Deutschland	2470	54	-	14749	216	360	2494	1686	1810	23839
France	799	79	13955	-	23	52	4738	824	724	21194
Hellas	6	0	0	8	-	0	0	0	0	14
Ireland	15	0	44	1	2	-	21	1	414	498
Italia	256	10	956	233	429	36	-	561	234	2715
Nederland	1891	5	1120	720	3	96	623	-	529	4987
United (1) Kingdom	408	363	6868	21010	12	2164	405	4704	-	35934
EEC IMPORT	5889	543	25755	37205	697	2887	8901	8560	3998	94435
BALANCE	-1716	538	-1916	-16011	-683	-2389	-6186	-3573	31936	-

(1) Data not complete - See introductory Note

Source : EUROSTAT Import Tables - SIENA

EXTRA-COMMUNITY TRADE IN 1981 : AIRFRAMES - ENGINES - EQUIPMENT - OTHER MATERIAL

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	129750	54484	-73266	69221	4130	-65091	1365	150	-1215	570	93	-477
Danmark	338478	16642	-321836	320411	6835	-313576	13220	361	-12859	27	11	-16
Deutschland	1090399	307255	-783144	1025921	137920	-888001	3839	1927	-1912	2531	3059	528
France	1445416	1599541	154125	1378510	566631	-811879	9052	5461	-3591	220	78287	78067
Hellas	17711	1518	-16193	16195	1492	-14703	24	0	-24	481	1	-480
Ireland	35912	18360	-17552	34208	5595	-28613	667	93	-574	7	16	9
Italia	426322	213704	-212618	410516	67095	-343421	76	454	378	59	176	117
Nederland	283507	375035	91528	253133	163251	-89882	5065	360	-4705	155	34	-121
United Kingdom (1)	513953	170561	-343392	467625	42411	-425214	20436	16753	-3683	408	3422	3014
CEE-EEC-EWG-EEG	4281448	2759100	-1522348	3975740	995360	-2980380	53744	25559	-28185	4458	85099	80641

(1) Data incomplete - See introductory Note

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1981 : AIRFRAMES

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	79839	49423	-30416	37970	2033	-35937	1291	89	-1202	14	88	74
Danmark	213890	5016	-208874	201728	2543	-199185	10832	64	-10768	0	0	0
Deutschland	918820	202813	-716007	880494	91013	-789481	761	1447	686	221	2830	2609
France	729902	1403382	673480	676517	460228	-216289	126	2849	2723	5	72690	72685
Hellas	16777	424	-16353	15933	424	-15509	22	0	-22	116	0	-116
Ireland	8641	8946	305	7730	3051	-4679	555	74	-481	0	0	0
Italia	409815	180891	-228924	399096	64544	-334552	47	0	-47	0	0	0
Nederland	114207	264724	150517	103557	84331	-19226	2094	155	-1939	154	1	-153
United Kingdom (1)	...	...	...	...	...	...	...	...	...	...	...	...
CEE-EEC-EWG-EEG	2491891	2115619	-376272	2323025	708167	-1614858	15728	4678	-11050	510	75609	75099

(1) Data incomplete - See introductory Note

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1981 : ENGINES

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	42994	3838	-39156	27423	1354	-26069	0	0	0	0	0	0
Danmark	108550	8542	-100008	104522	2569	-101953	1706	112	-1594	0	0	0
Deutschland	102230	55602	-46628	83962	19258	-64704	2386	202	-2184	0	62	62
France	596932	131996	-464936	591630	94909	-496721	3873	1279	-2594	19	3986	3967
Hellas	13	1070	1057	1	1068	1067	0	0	0	0	0	0
Ireland	14721	2814	-11907	14208	1398	-12810	0	0	0	0	0	0
Italia	6850	6365	-485	4768	1179	-3589	0	12	12	0	0	0
Nederland	142200	93530	-48670	130301	75494	-54807	0	30	30	0	0	0
United Kingdom	311501	47518	-263983	278833	7481	-271352	19020	13152	-5868	148	2113	1965
CEE-EEC-EWG-EEG	1325991	351275	-974716	1235648	204710	-1030938	26985	14787	-12198	167	6161	5994

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1981 : EQUIPMENT

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	4413	1329	-3084	2787	524	-2263	48	43	-5	63	4	-59
Danmark	11569	2041	-9528	10668	1234	-9434	187	162	-25	24	11	-13
Deutschland	39597	25346	-14251	36282	15397	-20885	273	244	-29	18	21	3
France	61678	29663	-32015	55082	5856	-49226	5005	1006	-3999	176	924	748
Hellas	784	3	-781	185	0	-185	2	0	-2	335	1	-334
Ireland	6821	3484	-3337	6653	694	-5959	70	6	-64	1	0	-1
Italia	4992	9824	4832	3441	879	-2562	25	5	-20	13	53	40
Nederland	18011	9378	-8633	13941	1811	-12130	1603	148	-1455	0	2	2
United Kingdom	164188	100530	-63658	152986	30746	-122240	995	2680	1685	32	1271	1239
CEE-EEC-EWG-EEG	312053	181598	-130455	282025	57141	-224884	8208	4294	-3914	662	2287	1625

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1981: OTHER MATERIAL

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	2504	1894	-610	1041	219	-822	26	18	-8	493	1	-492
Danmark	4469	1043	-3426	3493	489	-3004	495	23	-472	3	0	-3
Deutschland	29752	23494	-6258	25183	12252	-12931	419	34	-385	2292	146	-2146
France	56904	34500	-22404	55281	5638	-49643	48	327	279	20	687	667
Hellas	137	21	-116	76	0	-76	0	0	0	30	0	-30
Ireland	5729	3116	-2613	5617	452	-5165	42	13	-29	6	16	10
Italia	4665	16624	11959	3211	493	-2718	4	437	433	46	123	77
Nederland	9089	7403	-1686	5334	1615	-3719	1368	27	-1341	1	31	30
United Kingdom	38264	22513	-15751	35806	4184	-31622	421	921	500	228	38	-190
CEE-EEC-EWG-EEG	151513	110608	-40905	135042	25342	-109700	2823	1800	-1023	3119	1042	-2077

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1982 : AIRFRAMES - ENGINES - EQUIPMENT - OTHER MATERIAL

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	120434	65595	-54839	80796	3653	-77143	869	141	-728	676	32	-644
Danmark	210184	32892	-177292	199891	5751	-194140	8028	607	-7421	17	0	-17
Deutschland	777452	354334	-423118	695681	140266	-555415	3778	1216	-2562	11304	3264	-8040
France	1373700	2854627	1480927	1296808	859055	-437753	12689	7218	-5471	294	97678	97384
Hellas	13316	15822	2506	12061	15509	3448	4	181	177	276	0	-276
Ireland	33784	17223	-16561	33003	2713	-30290	281	51	-230	19	0	-19
Italia	219134	112754	-106380	204709	58964	-145745	66	555	489	100	646	546
Nederland	260946	307684	46738	238602	98619	-139983	2235	437	-1798	24	21	-3
United Kingdom (1)	549504	383250	-166254	479759	95610	-384149	22811	53398	30587	1559	8941	7382
CEE-EEC-EWG-EEG	3558454	4144181	585727	3241310	1280140	-1961170	50761	63804	13043	14269	110582	96313

(1) Data incomplete - See introductory Note

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1982 : AIRFRAMES

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	80728	46600	-34128	51885	2999	-48886	862	81	-781	6	27	21
Danmark	66741	29111	-37630	59596	2906	-56690	6306	100	-6206	1	0	-1
Deutschland	537633	197736	-339897	485957	70955	-415002	395	413	18	9966	3121	-6845
France	415975	2428012	2012037	359630	533115	173485	673	4503	3830	147	96606	96459
Hellas	12368	1875	-10493	11561	1694	-9867	4	181	177	71	0	-71
Ireland	8909	7873	-1036	8759	727	-8032	15	51	36	0	0	0
Italia	181226	75716	-105510	180032	51335	-128697	25	35	10	0	0	0
Nederland	150244	243763	93519	139233	63011	-76222	697	141	-556	6	4	-2
United Kingdom (1)	...	...	...	...	...	...	...	...	...	...	...	...
CEE-EEC-EWG-EEG	1453824	3030686	1576862	1296653	726742	-569911	8977	5505	-3472	10197	99758	89561

(1) Data incomplete - See introductory Note

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1982 : ENGINES

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	33312	12259	-21053	25744	81	-25663	0	0	0	0	0	0
Danmark	110832	1072	-109760	109307	726	-108581	1288	259	-1029	0	0	0
Deutschland	142257	90404	-51853	119513	32629	-86884	2306	405	-1901	221	74	-147
France	820271	344194	-476077	810119	312203	-497916	5548	1159	-4389	16	11	-5
Hellas	71	13225	13154	11	13225	13214	0	0	0	9	0	-9
Ireland	15235	2919	-12316	15017	521	-14496	196	0	-196	0	0	0
Italia	23440	11347	-12093	15021	5316	-9705	22	169	147	0	423	423
Nederland	81543	53128	-28415	75729	32884	-42845	12	30	18	0	0	0
United Kingdom (1)	337972	228069	-109903	287415	56378	-231037	21507	46046	24539	990	6770	5780
CEE-EEC-EWG-EEG	1564933	756617	-808316	1457876	453963	-1003913	30879	48068	17189	1236	7278	6042

(1) Data incomplete - See introductory Note

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1982 : EQUIPMENT

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	2836	1032	-1804	2076	378	-1698	0	59	59	53	5	-48
Danmark	28018	2153	-25865	27387	1872	-25515	51	83	32	10	0	-10
Deutschland	64868	31774	-33094	61351	19564	-41787	747	129	-618	46	18	-28
France	75601	38524	-37077	67114	7127	-59987	6442	1440	-5002	127	760	633
Hellas	624	590	-34	325	590	265	0	0	0	193	0	-193
Ireland	5691	3135	-2556	5436	679	-4757	38	0	-38	1	0	-1
Italia	10479	5780	-4699	7282	1373	-5909	19	27	8	23	138	115
Nederland	20903	6781	-14122	17761	2044	-15717	574	208	-366	18	2	-16
United Kingdom	170745	111580	-59165	155566	30083	-125483	799	3773	2974	86	1592	1506
CEE-EEC-EWG-EEG	379765	201349	-178416	344298	63710	-280588	8670	5719	-2951	557	2515	1958

Source : EUROSTAT Import-Export Tables

EXTRA-COMMUNITY TRADE IN 1982 : OTHER MATERIAL

(1000 ECU)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
Belgique - Lux.	3558	5704	2146	1091	195	-896	7	1	-6	617	0	-617
Danmark	4593	556	-4037	3601	247	-3354	383	165	-218	6	0	-6
Deutschland	32694	34420	1726	28860	17118	-11742	330	269	-61	1071	51	-1020
France	61853	43897	-17956	59945	6610	-53335	26	116	90	4	301	297
Hellas	253	132	-121	164	0	-164	0	0	0	3	0	-3
Ireland	3949	3296	-653	3791	786	-3005	32	0	-32	18	0	-18
Italia	3989	19911	15922	2374	940	-1434	0	324	324	77	85	8
Nederland	8256	4012	-4244	5879	680	-5199	952	58	-894	0	15	15
United Kingdom (1)	40787	43601	2814	36778	9149	-27629	505	3579	3074	483	579	96
CEE-EEC-EWG-EEG	159932	155529	-4403	142483	35725	-106758	2235	4512	2277	2279	1031	-1248

(1) Data incomplete - See introductory Note

Source : EUROSTAT Import-Export Tables

CHAPTER 6

T U R N O V E R O F T H E
A E R O S P A C E I N D U S T R Y

1. The survey made each year in conjunction with the industrial associations in each Member State enables the turnover of the European aerospace industry to be broken down by type of customer and sector.

2. Mention should be made of the following distinctions:

(a) In each Member State:

- Overall Turnover

This includes transactions between aerospace companies within individual Member States. Consequently, it does not show the output of the aerospace industry as such since it does not separate out intermediate trade in each Member State.

- Final Turnover in each Member State

This does not include transactions between aerospace companies within individual Member States, and thus represents to some extent the output of the aerospace industry as such.

Thus, the difference between overall turnover and final turnover (for each Member State) is an indication of the sale of aerospace goods and services between companies within individual Member States in different subsectors (airframes, engines, equipment and space) and between companies within individual Member States in the same subsectors (e.g. subcontracting between airframe manufacturers for certain sub-assemblies).

(b) Within the EEC as a whole:

- Final EEC Turnover

This represents the output of the EEC as a whole in that it separates out intra-Community transactions. Community turnover is given in the table entitled: "Final Turnover - Breakdown into Civil and Military Contracts".

3. The constant value figures have been completely revised on account of changes made by the Statistical Office of the European Communities on the Gross Domestic Product and the price index.

4. With a view to eliminating double counting in international programs, the data relating to Germany was amended from 1978 onwards.

5. The items considered in the various subsectors are as follows:

- (a) Airframes : (Aeroplanes, helicopters, gliders), missiles, their parts and spares.
- (b) Engines : (Piston, turboprop and turbojet engines), their parts and spares, equipment and accessories for installation in the equipment mentioned under (a).
- (c) Equipment : All equipment for (a) and (b) (finished products, parts and spares, sub-assemblies), including test and ground-training equipment.
- (d) Space : Space vehicles, satellites, launch vehicles, ground installations.

x

x

x

FINAL TURNOVER

(Million ECU)

	B	D	F	I	NL	U.K	EEC(1)	USA	CANADA	JAPAN
(current prices)										
1970	39	770	1310	227	113	1576	4035	21800	...	295
1971	53	823	1386	219	119	1610	4210	18663	...	306
1972	65	908	1529	359	169	2125	5155	16830	586	396
1973	61	1138	1993	353	160	2137	5842	17385	537	525
1974	74	1213	2263	361	141	2500	6552	19361	625	557
1975	99	1279	2924	494	227	2894	7917	20616	622	651
1976	111	1531	3790	491	280	3106	9309	23450	762	755
1977	114	1433	3933	568	301	3425	9774	24321	782	850
1978	132	1705	4220	623	285	3889	10854	25217	790	1046
1979	215	2097	4739	773	336	4129	12289	26619	1032	934
1980	319	2710	6294	1028	336	6647	17334	31665	1353	872
1981	426	3317	7245	1526	441	8153	21108	47405	2199	1188
(1975 prices and exchange rates)										
1970	66	1288	2134	317	208	2210	6223	24748	...	474
1971	84	1247	2170	289	200	2082	6072	20572	...	463
1972	95	1281	2209	450	255	2656	6946	19090	720	531
1973	80	1381	2583	435	212	2796	7487	20497	670	617
1974	84	1299	2765	406	160	2883	7597	20186	639	566
1975	99	1279	2924	494	227	2894	7917	20616	622	651
1976	98	1365	3458	478	242	3000	8641	19983	608	638
1977	88	1160	3454	502	232	3053	8489	19981	641	628
1978	96	1279	3457	519	205	3171	8727	21518	729	645
1979	152	1484	3569	586	232	2850	8873	22483	953	631
1980	218	1847	4276	674	220	3563	10798	24823	1140	600
1981	282	2165	4527	904	276	3607	11761	27244	1385	620

(1) The sum of all turnovers of all Member States (greater than the final EEC turnover, since intra-Community transactions between EEC aerospace manufacturers have not been deducted).

FINAL TURNOVER OF THE AEROSPACE INDUSTRY IN THE MAIN WESTERN PRODUCING

COUNTRIES & JAPAN

(current prices)

	U.S.A		EEC (1)		CANADA		JAPAN	
	Mio ECU	%	Mio ECU	%	Mio ECU	%	Mio ECU	%
1972	16830	73,3	5155	22,4	586	2,6	396	1,7
1973	17385	71,5	5842	24,1	537	2,2	525	2,2
1974	19361	71,4	6552	24,2	625	2,3	557	2,1
1975	20616	69,1	7917	26,6	622	2,1	651	2,2
1976	23450	68,4	9309	27,2	762	2,2	755	2,2
1977	24321	68,0	9774	27,4	782	2,2	850	2,4
1978	25217	66,5	10854	28,6	790	2,1	1046	2,8
1979	26619	65,1	12289	30,1	1032	2,5	934	2,3
1980	31665	61,9	17334	33,8	1353	2,6	872	1,7
1981	47405	65,8	21108	29,4	2199	3,1	1188	1,7

(1975 prices and exchange rates)

	U.S.A		EEC (1)		CANADA		JAPAN	
	Mio ECU	%	Mio ECU	%	Mio ECU	%	Mio ECU	%
1972	19090	70,0	6946	25,5	720	2,6	531	1,9
1973	20497	70,0	7487	25,6	670	2,3	617	2,1
1974	20186	69,6	7597	26,2	639	2,2	566	2,0
1975	20616	69,1	7917	26,6	622	2,1	651	2,2
1976	19983	67,0	8641	28,9	608	2,0	638	2,1
1977	19981	67,2	8489	28,5	641	2,2	628	2,1
1978	21518	68,1	8727	27,6	729	2,3	645	2,0
1979	22483	68,3	8873	26,9	953	2,9	631	1,9
1980	24823	66,4	10798	28,9	1140	3,1	600	1,6
1981	27244	66,4	11761	28,7	1385	3,4	620	1,5

(1) The sum of all turnovers of all Member States (greater than the final EEC turnover, since intra-Community transactions between EEC aerospace manufacturers have not been deducted).

OVERALL TURNOVERS OF THE MEMBER STATES IN 1981

(Mio ECU at current prices)

	Mio ECU	Breakdown by subsector (%)			
		Airframes	Engines	Equipement	Space
Belgique	428,7	33,1	51,0	11,6	4,3
Deutschland	4113,7	61,5	10,8	22,8	4,9
France	8820,9	63,5	16,6	17,3	2,6
Italia	1757,7	69,5	13,7	14,3	2,5
Nederland	445,0	44,6	0,0	52,2	3,2
United Kingdom	9580,5	38,3	27,7	31,7	2,3
CEE-EEC-EWG	25146,5	53,2	20,0	24,0	2,8
U.S.A. (1)	...	47,7	14,6	20,0	17,7 *
Japan (1)	...	60,8 **	21,6	18,0	..

(1) Figures estimated from final turnover.

* Including missiles.

** Including Space

TREND IN FINAL TURNOVER OF THE AEROSPACE INDUSTRY
AND GDP, 1975 -1981

(in ECU at constant prices)

	% over the period		Mean annual growth rate	
	Turnover	GDP	Turnover	GDP
Belgique	184,8	13,7	19,1	2,2
Deutschland	69,3	19,1	9,2	3,0
France	54,8	17,3	7,6	2,7
Italia	82,9	20,6	10,6	3,2
Nederland	21,6	18,6	3,3	2,9
United Kingdom	24,6	6,2	3,7	1,0
CEE-EEC-EWG (1)	48,6	16,4	6,8	2,6
United States	32,1	20,7	4,8	3,2
Canada	122,6	18,1	14,3	2,8
Japan	-4,5	31,6	-0,8	4,7

PERCENTAGE OF GDP REPRESENTED BY TURNOVER OF THE AEROSPACE INDUSTRY

(in ECU at constant prices)

	1976	1977	1978	1979	1980	1981
Belgique	0,19	0,17	0,18	0,27	0,38	0,50
Deutschland	0,39	0,32	0,34	0,38	0,46	0,54
France	1,21	1,17	1,13	1,13	1,34	1,41
Italia	0,29	0,30	0,30	0,33	0,36	0,48
Nederland	0,34	0,31	0,26	0,29	0,28	0,35
United Kingdom	1,55	1,56	1,56	1,38	1,76	1,82
CEE-EEC-EWG (1)	0,77	0,74	0,73	0,72	0,87	0,95
United States	1,54	1,46	1,50	1,53	1,70	1,82
Canada	0,44	0,45	0,49	0,63	0,75	0,89
Japan	0,15	0,14	0,14	0,13	0,12	0,12

- (1) The sum of all turnovers of all Member States (greater than the final EEC turnover, since intra-Community transactions between EEC aerospace manufacturers have not been deducted).

FINAL TURNOVER OF THE E.E.C. AND THE U.S.A.

Breakdown into civil and military contracts

(Mio ECU at current prices)

	E.E.C.			United States		
	Mio ECU	civil %	military %	Mio ECU	civil %	military %
1974	5732	30	70	19361	39	61
1975	6848	28	72	20616	36	64
1976	7974	28	72	23450	34	66
1977	8274	25	75	24321	33	67
1978	9116	28	72	25216	36	65
1979	10103	27	73	26619	46	54
1980	14274	28	72	31665	47	53
1981	16551	29	71	47405	43	57

PROPORTION OF FINAL TURNOVER OF EACH MEMBER STATE EXPORTED TO

INDUSTRIAL UNDERTAKINGS IN OTHER MEMBER STATES (%)

	1974	1975	1976	1977	1978	1979	1980	1981
Belgique	56,9	60,3	59,4	54,4	37,5	26,3	27,8	18,0
Deutschland	14,7	12,1	22,8	28,7	28,8	32,4	36,7	44,6
France	9,3	10,8	7,8	8,4	8,6	9,8	9,3	9,5
Italia	11,0	15,0	9,1	7,4	16,9	11,8	26,1	14,3
Nederland	5,6	6,3	7,5	9,7	11,6	11,0	2,9	15,4
United Kingdom	13,6	15,4	18,0	18,2	17,9	20,7	17,2	24,8
CEE-EEC-EWG	12,5	13,5	14,3	15,3	16,0	17,8	17,7	21,6

INTRA-COMMUNITY TRADE IN 1981 - Base : Turnover

(1000 ECU)

IMPORTING COUNTRY	EXPORTING COUNTRY										% IMPORTS
	B	D	F	I	NL	UK	EEC				
Belgique	-	2434	24834	1277	762	2457	31764				0,7
Deutschland	11116	-	289238	110572	2267	1562573	1975766				43,5
France	62130	1092272	-	32949	52772	261515	1501638				32,9
Italia	65	63473	66391	-	0	93674	223603				4,9
Nederland	3771	56163	17219	2887	-	94892	174392				3,8
United Kingdom	731	264615	256954	69447	10361	-	602108				13,2
Other of EEC	85	1795	34272	1816	0	9609	45577				1,0
CEE-EEC-EWG-EEG	77898	1480752	688908	218948	66162	2024720	4557388				100,0
% EXPORTS	1,7	32,5	15,1	4,8	1,5	44,4	100,0				-

BREAKDOWN OF FINAL TURNOVER BY CUSTOMER CATEGORY

(Mio ECU at current prices)

Customers	1979		1980		1981	
	Civil	Military	Civil	Military	Civil	Military
<u>STATE</u>	741,1	4718,0	585,0	6016,6	559,9	6118,7
-R&D contracts	188,8	1687,3	340,5	1724,0	274,7	1781,6
-Modifications, Repairs, Maintenance	45,4	757,6	66,5	980,0	66,5	1063,6
-Sales	506,9	2273,1	178,0	3312,6	218,7	3273,5
<u>AEROSPACE MANUFACTURERS IN NON-MEMBER COUNTRIES</u>	377,2	332,4	689,8	561,7	990,1	730,2
<u>FINAL USERS</u>	1921,9	2561,6	2764,1	3656,6	3321,0	4831,1
-EEC	988,0	168,7	1303,2	643,6	1296,8	555,7
-Non-member countries	933,9	2392,9	1460,9	3013,0	2024,2	4275,4
TOTAL	3040,2	7612,0	4038,9	10234,9	4871,0	11680,0
%	28,5	71,5	28,3	71,7	29,4	70,6

PERCENTAGE BREAKDOWN OF EEC'S FINAL TURNOVER BY CUSTOMER CATEGORY

Customers	1979		1980		1981	
	Civil	Military	Civil	Military	Civil	Military
<u>STATE</u>	4,1	44,1	4,1	42,2	3,4	37,0
-R&D contracts	1,9	13,2	2,4	12,1	1,7	10,8
-Modifications, Repairs, Maintenance	0,5	7,7	0,5	6,9	0,4	6,4
-Sales	1,7	23,2	1,2	23,2	1,3	19,8
<u>AEROSPACE MANUFACTURERS IN NON-MEMBER COUNTRIES</u>	3,8	3,3	4,8	3,9	6,0	4,4
<u>FINAL USERS</u>	19,2	25,5	19,3	25,6	20,0	29,2
-EEC	9,8	1,8	9,1	4,5	7,8	3,4
-Non-member countries	9,4	23,7	10,2	21,1	12,2	25,8
TOTAL (%)	27,1	72,9	28,2	71,8	29,4	70,6

PERCENTAGE BREAKDOWN OF FINAL EEC TURNOVER BY MARKET

	1976	1977	1978	1979	1980	1981
1. <u>Aerospace</u>						
-State	51,5	64,9	49,4	50,0	50,8	43,7
-Domestic civil market	12,9	13,4	9,6	9,8	9,1	7,8
-Exports	35,6	21,7	41,0	40,2	40,1	48,5
2. <u>Aviation</u>						
-State	51,0	65,4	49,0	50,3	50,8	43,6
-Domestic civil market	12,4	12,5	9,4	8,7	8,2	7,1
-Exports	36,6	22,1	41,6	41,0	41,0	49,3
2.1 <u>Airframes</u>						
-State	46,3	65,3	44,8	47,4	49,1	40,7
-Domestic civil market	12,8	12,4	7,8	6,9	6,3	5,8
-Exports	40,9	22,3	47,4	45,7	44,6	53,5
2.2 <u>Engines</u>						
-State	58,2	65,8	51,8	49,1	47,8	41,2
-Domestic civil market	11,9	14,7	12,1	12,2	11,7	8,6
-Exports	29,9	19,5	36,1	38,7	40,5	50,2
2.3 <u>Equipment</u>						
-State	62,0	65,3	60,1	61,0	59,8	55,3
-Domestic civil market	11,4	10,1	12,3	10,8	10,4	9,5
-Exports	26,6	24,6	27,6	28,2	29,8	35,2

BREAKDOWN OF STATE BACKING FOR THE AVIATION INDUSTRY
BY CONTRACT TYPE

(Mio ECU et current prices)

	EEC		USA	
	Mio ECU	%	Mio ECU	%
<u>R&D contracts</u>	2056,3	28,4	7043	25,7
Civil	274,7	3,8	...	...
Military	1781,6	24,6	...	...
<u>Purchase & Maintenance contracts</u>	5178,0	71,6	20362	74,3
Civil	285,2	3,9	...	...
Military	4892,8	67,7	...	...
TOTAL	7234,3	100,0	27405	100,0
As % of final turnover	(16551,0)	43,7	(47405)	57,8

BREAKDOWN BY SUBSECTOR OF STATE BACKING

Subsector	1980		1981	
	Mio ECU	%	Mio ECU	%
Airframes	4149,9	57,3	3981,0	55,0
Engines	1356,1	18,7	1276,3	17,6
Equipment	1504,8	20,8	1735,9	24,0
Space	234,4	3,2	241,1	3,4
Total	7245,2	100,0	7234,3	100,0

BREAKDOWN OF STATE BACKING FOR THE EEC AVIATION INDUSTRY

BY CONTRACT AND SUBSECTOR (%)

	1976	1977	1978	1979	1980	1981
<u>AIRFRAMES</u>						
<u>-R&D Contracts</u>						
civil	3,0	1,9	2,7	2,4	2,5	2,6
military	39,5	15,8	27,3	25,3	24,2	25,8
<u>-Purchase & maintenance contracts</u>						
civil	1,6	2,4	4,5	4,0	2,6	2,4
military	55,9	79,9	65,5	68,3	70,7	69,2
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0
<u>ENGINES</u>						
<u>-R&D Contracts</u>						
civil	6,1	3,8	3,8	3,1	2,2	1,7
military	28,8	29,7	32,5	34,2	19,9	23,7
<u>-Purchase & maintenance contracts</u>						
civil	3,5	3,6	2,2	3,1	5,3	4,4
military	61,6	62,9	61,5	59,6	72,6	70,2
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0
<u>EQUIPMENT</u>						
<u>-R&D Contracts</u>						
civil	0,3	0,3	0,6	0,6	0,4	0,4
military	21,5	24,2	25,9	25,0	29,0	25,6
<u>-Purchase & maintenance contracts</u>						
civil	3,2	5,8	5,0	4,7	3,8	2,8
military	75,0	69,7	68,5	69,7	66,8	71,2
TOTAL	100,0	100,0	100,0	100,0	100,0	100,0

TREND IN EEC AND USA FINAL AEROSPACE TURNOVERS (%)

	EEC		UNITED STATES	
	Current Prices	Constant Prices	Current Prices	Constant Prices
1970-1971	4,3 %	-2,4 %	-14,4 %	-16,9 %
1971-1972	22,4 %	14,4 %	-9,8 %	-7,2 %
1972-1973	13,3 %	7,8 %	3,3 %	7,4 %
1973-1974	12,2 %	1,5 %	11,4 %	-1,5 %
1974-1975	20,8 %	4,2 %	6,5 %	2,1 %
1970-1975 (1)	14,4 %	4,9 %	-1,1 %	-3,5 %
1975-1976	17,6 %	9,1 %	13,7 %	-3,1 %
1976-1977	5,0 %	-1,8 %	3,7 %	-0,0 %
1977-1978	11,0 %	2,8 %	3,7 %	7,7 %
1978-1979	13,2 %	1,7 %	5,6 %	4,5 %
1979-1980	41,0 %	21,7 %	19,0 %	10,4 %
1975-1980 (1)	17,0 %	6,4 %	9,0 %	3,7 %
1980-1981	21,8 %	8,9 %	49,7 %	9,8 %

(1) Mean annual growth rate

TREND IN EEC FINAL TURNOVER AS A PERCENTAGE OF

FINAL TURNOVER IN THE USA

(at current prices)

YEAR	EEC %	USA %
1970	18,5	100,0
1971	22,6	100,0
1972	30,6	100,0
1973	33,6	100,0
1974	33,8	100,0
1975	38,4	100,0
1976	39,7	100,0
1977	40,2	100,0
1978	43,0	100,0
1979	46,2	100,0
1980	54,7	100,0
1981	44,5	100,0

(1975 prices and exchange rates)

YEAR	EEC %	USA %
1970	25,1	100,0
1971	29,5	100,0
1972	36,4	100,0
1973	36,5	100,0
1974	37,6	100,0
1975	38,4	100,0
1976	43,2	100,0
1977	42,5	100,0
1978	40,6	100,0
1979	39,5	100,0
1980	43,5	100,0
1981	43,2	100,0

CHAPTER 7

EMPLOYMENT IN THE
AEROSPACE INDUSTRY

1. The figures for employment in the European aerospace industry are taken from the results of the annual survey conducted in conjunction with the national industrial associations.
2. The production items taken into consideration in the various sub-sectors are the same as those given in the previous chapter on turnover.
3. Since the Italian industrial association was unable to provide detailed figures, 1800 units should be added to the figures for Italy in the various tables (Subsector equipment).
4. The tables showing the distribution of the workforce by occupational grading should be interpreted with a certain amount of caution, since there are definitions lacking of international uniformity.
5. The annual fluctuations in employment in the Community make it impossible to detect a definite trend due to the crisis in air transport which has repercussions on the industry's work schedule and consequently on its employment. However, on the whole, one can consider that employment in this sector is relatively stable, this stability being maintained by the hope of launching new programmes (civilian programmes : A-320, Fokker 50 and 100; military programmes : PAH-2/HAP/HAC - Anti-Tank Helicopter - and FCA - Future Combat Aircraft).

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x x
x x

EMPLOYMENT TRENDS

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Belgique	4941	4380	4422	4025	5015	4895	5068	6272	7032	6886
Deutschland	52455	52985	52982	51914	51367	52416	56348	60886	66086	68650
France	108525	106132	106769	108915	107454	103295	103424	106297	110783	113690
Italia	28500	30000	30000	30768	31991	32080	34036	36570	39134	40920
Nederland	6600	7000	6555	7682	7865	7320	7382	7935	8862	9706
United Kingdom	207500	201700	210100	233792	227402	219251	214918	204381	229821	249863
CEE-EEC-EWG	408521	402197	410828	437096	431094	419257	421176	422321	461718	489715
United States	912000	956000	982000	941000	896000	893000	977000	1109000	1187000	1207000
Canada	28800	31700	28400	27300	25300	28900	33800	37700	46800	44800
Japan	26000	26026	25550	26746	...	23756	25398	25653	26373	27096

WORKFORCE IN THE EEC ON 31 DECEMBER 1981

(Breakdown by country)

	B	D	F	I	NL	U.K	E.E.C	%
<u>Occupational grading</u>								
1. Engineers & managerial staff	628	11698	18054	1589	862	43168	75999	15,5
2. Executive staff	1181	17405	39849	8560	1521	41581	110097	22,5
- technical	681	10947	17748	7081	2017	39245	77719	15,9
3. Skilled workers	3649	22783	35901	16197	4383	107478	190391	38,9
4. Non-skilled workers	747	5817	2138	7493	923	18391	35509	7,2
TOTAL	6886	68650	113690	40920	9706	249863	489715	100,0
<u>Main activity</u>								
1. R&D	179	15340	24289	5620	1461	56394	103283	21,1
2. Production	5695	42463	66059	28440	6700	143185	292542	59,7
3. Marketing & Management	1012	10847	23342	6860	1545	50284	93890	19,2
TOTAL	6886	68650	113690	40920	9706	249863	489715	100,0

WORKFORCE IN THE E.E.C. ON 31 DECEMBER 1981

(Breakdown by subsector)

	AIRFRAMES & SPACE	ENGINES	EQUIPEMENT	TOTAL
<u>Occupational grading</u>				
1. Engineers & Managerial staff	36924	14234	24841	75999
2. Executive staff - technical	58243	23032	28822	110097
- administrative	40725	15858	21136	77719
3. Skilled workers	89048	51374	49969	190391
4. Non-skilled workers	17266	7750	10493	35509
TOTAL	242206	112248	135261	489715
<u>Main activity</u>				
1. R&D	51087	17946	34250	103283
2. Production	143325	73086	76131	292542
3. Marketing & Management	47794	21216	24880	93890
TOTAL	242206	112248	135261	489715
Breakdown (%)	49,5	22,9	27,6	100,0

BREAKDOWN OF THE WORKFORCE IN THE EEC ON 31 DECEMBER 1981

(Airframes and Space subsectors)

	B	D	F	I	NL	U.K	E.E.C	%
<u>Occupational grading</u>								
1. Engineers & managerial staff	371	8250	11583	819	608	15293	36924	15,2
2. Executive staff	757	11844	23370	5654	1003	15615	58243	24,0
- technical	381	7849	9998	5555	1412	15530	40725	16,8
3. Skilled workers	1968	13072	17198	10910	3639	42261	89048	36,8
4. Non-skilled workers	283	4138	714	4803	549	6779	17266	7,2
TOTAL	3760	45153	62863	27741	7211	95478	242206	100,0
<u>Main activity</u>								
1. R&D	122	11388	14308	4272	1365	19632	51087	21,1
2. Production	2761	27117	35442	19069	5424	53512	143325	59,2
3. Marketing & Management	877	6648	13113	4400	422	22334	47794	19,7
TOTAL	3760	45153	62863	27741	7211	95478	242206	100,0

BREAKDOWN OF THE WORKFORCE IN THE EEC ON 31 DECEMBER 1981

(Engines subsector)

	B	D	F	I	NL	U.K	E.E.C	%
<u>Occupational grading</u>								
1. Engineers & managerial staff	187	984	3244	455	0	9364	14234	12,7
2. Executive staff	255	1369	8839	863	0	11706	23032	20,5
- technical	231	1520	3707	610	0	9790	15858	14,1
- administrative								
3. Skilled workers	1293	4879	7937	2291	0	34974	51374	45,8
4. Non-skilled workers	432	203	334	1673	0	5108	7750	6,9
TOTAL	2398	8955	24061	5892	0	70942	112248	100,0
<u>Main activity</u>								
1. R&D	43	936	5662	309	0	10996	17946	16,0
2. Production	2278	5799	12714	4480	0	47815	73086	65,1
3. Marketing & Management	77	2220	5685	1103	0	12131	21216	18,9
TOTAL	2398	8955	24061	5892	0	70942	112248	100,0

BREAKDOWN OF THE WORKFORCE IN THE EEC ON 31 DECEMBER 1981

(Equipment subsector)

	B	D	F	I	NL	U.K	E.E.C	%
<u>Occupational grading</u>								
1. Engineers & managerial staff	70	2464	3227	315	254	18511	24841	18,4
2. Executive staff	169	4192	7640	2043	518	14260	28822	21,3
- technical	69	1578	4043	916	605	13925	21136	15,6
- administrative								
3. Skilled workers	388	4832	10766	2996	744	30243	49969	36,9
4. Non-skilled workers	32	1476	1090	1017	374	6504	10493	7,8
TOTAL	728	14542	26766	7287	2495	83443	135261	100,0
<u>Main activity</u>								
1. R&D	14	3016	4319	1039	96	25766	34250	25,3
2. Production	656	9547	17903	4891	1276	41858	76131	56,3
3. Marketing & Management	58	1979	4544	1357	1123	15819	24880	18,4
TOTAL	728	14542	26766	7287	2495	83443	135261	100,0

CHAPTER 8

COMPANIES

1. The figures for the turnover and workforce of the major American and European airframe and engine manufacturers have been taken from information supplied by the companies themselves or are published in their annual balance sheets.
2. The data relating to General Electric and United Technologies cover only their aviation operations and do not include all the activities of the groups to which they belong.
3. The turnover/employment ratio is certainly not the best way of measuring productivity, since it inconveniently overestimates the position of manufactures which undertake little R&D activity and/or carry-out more work under license or under sub-contracts.

If individual company data is aggregated at US or Community level for example, these distortions appear to lose their significance, as was pointed out in a former version of this document. (1)

Whilst, during the period 1970-1975, the ratio turnover/employment in the USA as compared to the European Community was 2.03, its value is assessed at 1.15 for 1980. Therefore, even if this kind of international comparison entails an error margin due to monetary factors, it is worth noting the increase in productivity of the European aerospace companies which have strongly improved their position with respect to their american competitors.

4. In 1981, the five major aerospace companies in the world won about 40 % of the world sales (not consolidated). The ten most important firms in this sector, four of which are European, took about 58 % of the world sales. However, if one considers concentration in terms of national business, in 1981, the five premier companies in the USA won 61,8 % of US-sales (against 52.6 % in 1972 and 62.5 % in 1977), while the five major EEC firms gained around 57 % of the aerospace sales in the EEC (against 54.4 % in 1972 and 58.8 % in 1977).

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x x

(1) "The European Aerospace Industry - Trading Position and Figures SEC(77) 2939, Page 47, Table 69.

TURNOVER (SALES) AND WORKFORCE OF THE MAJOR AEROSPACE MANUFACTURERS

1981 - 1982

(Mio ECU at current values)

RANK		STATE	COMPANY	1982		1981	
'82	'81			SALES	WORKFORCE	SALES	WORKFORCE
1	1	USA	BOEING	9222	95700	8767	105300
2	2	USA	Mc DONNELL-DOUGLAS	7483	72451	6615	72264
3	5	USA	GENERAL DYNAMICS	6282	85100	4263	74400
4	4	USA	LOCKHEED	5729	70200	4636	71300
5	3	USA	PRATT & WHITNEY	5398	...	4994	...
6	6	UK	BRITISH AEROSPACE	3663	78990	2837	79180
7	7	F	AEROSPATIALE	3331	36450	2735	35390
8	8	USA	GENERAL ELECTRIC	3205	...	2642	...
9	11	USA	ROCKWELL	2857	29000	2042	29000
10	9	UK	ROLLS-ROYCE	2664	48800	2609	56000
11	13	USA	NORTHROP	2524	35000	1783	31400
12	12	D	M.B.B.	2391	38494	1929	37094
13	14	USA	MARTIN MARIETTA AERO	2356	27962	1723	27600
14	15	USA	GRUMMAN	2099	27300	1602	28600
15	10	F	DASSAULT-BREGUET	1967	15782	2063	15789
16	19	F	SNECMA	924	12595	721	11928
17	17	D	M.T.U.	884	12607	736	12757
18	18	F	MATRA	871	5933	733	5560
19	16	USA	CESSNA	849	11542	950	15830
20	20	USA	VOUGHT	793	10000	714	10000
21	22	D	DORNIER	662	8656	489	8585
22	23	JPN	MITSUBISHI H.I.	632	6000	487	6000
23	26	I	AERITALIA	612	12293	418	12135
24	24	NL	FOKKER	516	9606	467	9706
25	27	JPN	ISHIKAWAJIMA HARIMA	515	4870	287	4800
26	25	UK	WESTLAND (Group)	506	12195	440	12736
27	21	I	AGUSTA (Groupe)	503	10135	553	10020
28	29	CDN	DE HAVILLAND	373	4327	261	5543
28	35	UK	SHORTS	361	6265	189	7096
30	34	CDN	CANADAIR	355	6500	213	7000
31	31	ESP	CASA	307	9000	239	8896
32	28	F	TURBOMECA	296	4330	264	4363
33	30	SWE	SAAB AEROSPACE	280	6799	246	6413
34	32	JPN	KAWASAKI H.I.	274	3500	230	3500
35	37	I	FIAT AVIAZIONE	217	3593	164	3557
36	33	B	FN-DIVISION MOTEURS	210	2579	221	2448
37	36	F	S.E.P.	188	3206	175	2963
38	39	SWE	VOLVO FLYGMOTOR	146	3089	104	3024
39	38	B	SABCA	100	1968	120	2147
40	40	I	ALFA ROMEO AVIO	67	1369	56	1355

Figures are related to fiscal years or to calendar years

TURNOVER (SALES) AND WORKFORCE OF THE MAJOR AEROSPACE MANUFACTURERS

1979 - 1980

(Mio ECU at current values)

RANK		STATE	COMPANY	1980		1979	
'80	'79			SALES	WORKFORCE	SALES	WORKFORCE
1	1	USA	BOEING	6772	106300	6168	98300
2	2	USA	Mc DONNELL-DOUGLAS	4358	82550	3850	82736
3	5	USA	LOCKHEED	3876	74600	2960	66500
4	3	USA	PRATT & WHITNEY	3493	...	3345	...
5	4	USA	GENERAL DYNAMICS	3407	76100	2961	72600
6	8	UK	BRITISH AEROSPACE	2378	77500	1589	73410
7	6	F	AEROSPATIALE	2244	34422	1951	33833
8	10	UK	ROLLS-ROYCE	2102	58800	1312	57800
9	7	USA	GENERAL ELECTRIC	1910	...	1597	...
10	11	F	DASSAULT-BREGUET	1830	15660	1222	15553
11	9	USA	ROCKWELL INTL.	1466	29100	1441	26200
12	13	D	M.B.B.	1309	26287	1059	24500
13	12	USA	NORTHROP	1189	30200	1156	28800
14	14	USA	GRUMMAN	1120	27800	875	27900
15	15	USA	CESSNA	718	18024	685	16000
16	16	F	SNECMA	594	11460	513	10800
17	18	USA	VOUGHT	468	10000	381	9570
18	20	F	MATRA	440	4600	364	4300
19	17	D	V.F.W.	427	12185	385	11177
20	21	NL	FOKKER	409	8862	351	7935
21	23	UK	WESTLAND (Group)	408	12662	307	12380
22	22	D	DORNIER	401	8454	345	8195
23	19	I	AGUSTA (Groupe)	378	9358	381	9201
24	25	JPN	MITSUBISHI H.I.	316	6000	247	5925
25	26	D	M.T.U.	276	6594	202	6398
26	24	I	AERITALIA	233	11500	293	10950
27	29	F	TURBOMECA	218	4400	182	4366
28	30	SWE	SAAB AEROSPACE	180	5952	156	5930
29	32	SP	CASA	160	8270	107	8027
30	27	JPN	ISHIKAWAJIMA HARIMA	157	4690	187	4503
31	31	F	S.E.P.	155	2775	133	2502
32	33	CDN	DE HAVILLAND	153	4831	107	4599
33	34	UK	SHORTS	152	6629	104	6648
34	28	JPN	KAWASAKI H.I.	144	3500	178	2870
35	36	B	F.N. HERSTAL	131	2282	80	1831
36	37	I	FIAT AVIAZIONE	124	3555	...	3348
37	38	B	SABCA	98	1870	79	1860
38	35	SWE	VOLVO FLYGMOTOR	92	2500	83	2500
39	39	CDN	CANADAIR LTD	71	6300	72	5400
40	40	I	ALFA ROMEO AVIO	34	1250	33	1300

Figures are related to fiscal years or to calendar years

TURNOVER OF THE EEC HELICOPTER MANUFACTURERS

(Mio ECU at current prices)

STATE	COMPANY	1982	1981	1980	1979
F	AEROSPATIALE	536,9	437,0	443,0	429,9
UK	WESTLAND (1)	307,3	223,0	182,5	143,5
I	AGUSTA (2)	247,2	274,0	237,0	237,6
D	M.B.B.	118,5	90,0	83,7	(67,0)
CEE-EEC-EWG-EEG		1209,9	1024,0	946,2	878,0

WORKFORCE OF THE EEC HELICOPTER MANUFACTURERS

STATE	COMPANY	1982	1981	1980	1979
F	AEROSPATIALE	7424	7457	7327	7448
UK	WESTLAND (1)	7508	7564	7542	7329
I	AGUSTA (2)	6090	6050	5950	5640
D	M.B.B.	2100	2000	1800	1500
CEE-EEC-EWG-EEG		23122	23071	22619	21917

(1) Helicopter activity only

(2) Including the part of SIAI MARCHETTI related to helicopter activity

CHAPTER 9

PUBLIC FINANCING OF R&D IN THE
CIVIL AEROSPACE INDUSTRIES

1. The figures given in the following tables were supplied by the SOEC (1) and include funds for research and development granted to industry and to research centres, laboratories, universities, etc.
2. For the EEC Member States taken as a whole, 36 % of R&D funds granted to the aerospace industry in 1981 was devoted to civil aviation R&D and 64 % to space R&D.
3. The data relating to space R&D comprise since 1980 credits allocated to the European Space Agency. This must be taken into account when comparing the data set out below with that of previous years.
4. The marked growth of Italian R&D credits for civil aviation manufacture can be explained by the inclusion as from 1980 of R&D credits allocated to multilateral programmes.
5. Although certain cooperation programmes are in their final stages, notably ARIANE, it however appears that the cooperation grants given to space research still represent about 60 % of the total public multilateral cooperation grants (after having previously taken up to 66 % of the same grants). Let us recall for the record the major cooperation programmes in the space sector, which were developed in the framework of the European Space Agency (E.S.A.) :
 - Telecommunication satellites (OTS, ECS, MARECS, PROSAT, LSAT)
 - Experimental research satellites (EXOSAT, ISPM, HIPPARCOS, GIOTTO)
 - Earth observation satellites (METEOSAT, SIRIO, ERS)
 - European space laboratory (SPACELAB)
 - European launching systems (ARIANE)
6. Although a comparison of statistics from different sources can sometimes produce misleading results, it should be pointed out that the difference between the figures given in the following table and those given in the chapter on the turnover of the aerospace industry is indicative of the proportion of public funds granted to non-industrial bodies.
It would therefore appear that in 1981 some 54 % of aerospace R&D funds for civil aviation goes to industry and the remaining 46 % to other research bodies compared with approximately 94 % and 6 % respectively in 1980.

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(1) Statistical Office of the European Communities

PUBLIC FINANCING OF AEROSPACE R&D

YEAR 1981

	Civil Aviation manufacture			Space			Total		
	a	b	c	a	b	c	a	b	c
Belgique	4402	5,5	0,8	26839	33,8	4,9	31241	39,3	5,7
Danmark	-	-	-	8091	20,0	3,2	8091	20,0	3,2
Deutschland	167555	21,8	2,4	291821	38,0	4,1	459376	59,8	6,5
France	111591	19,6	1,7	277652	47,7	4,2	389243	67,3	5,9
Hellas	-	-	-	203	7,4	0,3	203	7,4	0,3
Ireland	-	-	-	1085	9,1	1,7	1085	9,1	1,7
Italia	6055	1,6	0,3	120503	31,4	5,8	126558	33,0	6,1
Nederland	...	...	...	39926	42,2	3,4	...	(42,2)	(3,4)
United Kingdom	218671	47,2	3,6	122507	26,4	2,0	341178	73,6	5,6
CCE-CEC-KEG (1)	-	0,0	0,0	6171	17,2	1,8	6171	17,2	1,8
CEE-EEC-EWG	508274	20,6	1,6	894798	36,3	3,7	1403072	56,9	5,8

YEAR 1982

	Civil Aviation manufacture			Space			Total		
	a	b	c	a	b	c	a	b	c
Belgique	4096	4,7	0,7	26349	29,9	4,7	30445	34,6	5,4
Danmark	-	-	-	9233	19,6	3,4	9233	19,6	3,4
Deutschland	171794	18,1	2,1	339503	35,7	4,2	511297	53,8	6,3
France	...	(14,6)	(1,6)	317983	38,8	4,3	...	(53,4)	(5,9)
Hellas	-	-	-	199	6,1	0,3	199	6,1	0,3
Italia	29132	6,6	1,3	91849	20,9	4,1	120981	27,5	5,4
Ireland	-	-	-	1080	8,2	1,5	1080	8,2	1,5
Nederland	...	...	...	42435	31,0	3,2	...	(31,0)	(3,2)
United Kingdom	160449	37,7	2,5	125853	29,6	1,9	286302	67,3	4,4
CCE-CEC-KEG (1)	-	-	-	4775	10,1	1,2	4475	10,1	1,2
CEE-EEC-EWG	...	(16,6)	(1,8)	959289	32,3	3,6	...	(49,2)	(5,4)

a. 1000 ECU at current prices

b. % of appropriations for Productivity, Industrial Technology and Space R&D

c. % of total R&D appropriations

(1) Financing provided by the Commission of European Communities

PUBLIC FINANCING OF AEROSPACE R&D

1978 - 1982

PERCENTAGE BREAKDOWN BY COUNTRY

	Civil Aviation manufacture					Space					Total				
	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982
Belgique	0,2	0,3	2,1	0,9	0,8	4,1	3,6	3,4	3,0	2,7	2,9	2,6	3,0	2,2	2,1
Danmark	-	-	-	-	-	1,4	1,3	0,9	0,9	1,0	1,0	1,0	0,6	0,6	0,6
Deutschland	30,9	29,2	30,1	33,0	35,1	36,3	37,8	33,6	32,6	35,4	34,7	35,4	32,6	32,8	35,4
France	49,1	54,9	33,2	21,9	(25,5)	30,4	29,4	38,0	31,0	33,2	36,1	36,6	36,6	27,7	(30,4)
Hellas	-	-	-	-	-	-	-	0,0	0,0	0,0	-	-	0,0	0,0	0,0
Ireland	-	-	-	-	-	-	0,2	0,1	0,1	0,1	-	0,1	0,0	0,1	0,1
Italia	-	0,2	2,5	1,2	5,9	12,1	12,5	9,4	13,5	9,6	8,4	9,1	7,4	9,0	8,4
Nederland	1,9	1,8	...	...	...	5,7	5,1	4,1	4,5	4,4	4,5	4,1	2,9	2,9	2,9
U.K.	17,9	13,6	32,1	43,0	32,7	9,7	9,8	10,1	13,7	13,1	12,2	10,9	16,6	24,3	19,8
GCE-CEC-KEG	-	-	-	-	-	0,3	0,3	0,4	0,7	0,5	0,2	0,2	0,3	0,4	0,3
CEE-EEC-EWG	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

Note : Approximative figures, since data on appropriations for civil aviation manufacture R&D in Netherlands is not available for 1980, 1981 and 1982.

A N N E X E S

EXCHANGE RATES

1 ECU =

	DM	FF	LIT	HFL	BFR	UK £	PTA	DKR	US \$	CA \$	YEN
1970	3,741	5,677	638,8	3,700	51,11	0,4259	71,36	7,666	1,022	...	368,0
1971	3,645	5,772	647,4	3,657	50,86	0,4285	72,57	7,752	1,047	...	368,8
1972	3,576	5,657	654,2	3,599	49,36	0,4489	72,20	7,789	1,121	1,111	339,7
1973	3,276	5,467	716,4	3,428	47,80	0,5023	71,81	7,415	1,231	1,232	333,1
1974	3,083	5,733	775,7	3,202	46,39	0,5098	68,82	7,259	1,192	1,166	347,4
1975	3,049	5,319	809,5	3,134	45,56	0,5600	71,16	7,122	1,240	1,262	367,6
1976	2,815	5,344	930,1	2,955	43,16	0,6215	74,74	6,761	1,118	1,102	331,2
1977	2,648	5,606	1006,0	2,800	40,88	0,6537	86,85	6,855	1,141	1,214	305,8
1978	2,556	5,740	1080,2	2,754	40,06	0,6639	97,43	7,019	1,274	1,454	267,1
1979	2,511	5,829	1138,4	2,749	40,16	0,6464	97,97	7,207	1,371	1,606	300,3
1980	2,524	5,869	1189,2	2,760	40,60	0,5985	99,70	7,827	1,392	1,626	315,0
1981	2,514	6,040	1263,2	2,775	41,29	0,5531	102,68	7,923	1,116	1,338	245,4
1982	2,376	6,431	1323,7	2,614	44,71	0,5605	107,56	8,157	0,980	1,209	243,5

GROSS DOMESTIC PRODUCT - BASIS : GDP AT MARKET PRICES

Bio ECU at current prices

YEAR	B	D	F	I	NL	U.K	EEC 10	E	USA	CANADA	JAPAN
1970	24,7	180,5	137,8	98,4	31,0	120,1	622,6	36,1	967,1	...	199,1
1971	27,2	205,9	151,1	105,8	35,4	134,0	692,3	40,2	1024,2	...	221,6
1972	31,3	230,3	173,4	114,8	40,8	141,6	769,0	47,7	1051,8	95,5	271,7
1973	36,7	280,0	203,8	125,3	49,0	145,9	884,0	57,6	1067,7	101,0	337,4
1974	44,3	319,3	222,9	142,7	59,4	163,6	1002,6	74,1	1191,2	127,7	386,1
1975	49,8	336,6	273,0	154,9	66,8	187,7	1124,6	84,6	1240,0	132,1	402,6
1976	59,6	397,7	313,9	168,4	81,3	201,5	1289,5	96,8	1525,6	175,1	500,7
1977	67,8	451,7	336,2	188,8	98,2	220,9	1438,1	105,7	1667,7	174,4	601,7
1978	74,4	502,8	373,0	205,7	107,8	250,1	1595,6	115,3	1680,0	160,7	758,7
1979	79,2	554,6	418,9	237,3	115,0	300,0	1795,5	142,8	1738,0	164,5	727,6
1980	84,4	586,9	471,2	284,8	122,0	378,0	2020,3	152,3	1866,3	182,4	748,8
1981	86,2	613,7	514,3	317,7	127,3	450,6	2213,3	168,7	2618,8	253,3	1026,2
1982	86,1	673,0	552,0	354,9	140,6	487,6	2411,7	185,1	3104,3	295,0	1085,9

GROSS DOMESTIC PRODUCT AT MARKET PRICES

Bio ECU at 1975 prices and exchange rates

YEAR	B	D	F	I	NL	U.K.	EEC 10	E	USA	CANADA	JAPAN
1970	41,9	302,2	224,4	137,5	57,2	169,6	980,5	64,6	1097,0	...	320,5
1971	43,5	312,1	236,6	139,7	59,6	174,0	1015,1	67,8	1128,7	...	335,3
1972	45,8	325,2	250,5	144,2	61,7	177,7	1057,9	73,4	1193,6	117,4	364,8
1973	48,6	339,8	264,0	154,3	65,2	191,2	1118,6	79,1	1258,4	126,2	396,9
1974	50,8	342,0	272,5	160,7	67,5	189,3	1137,9	83,7	1242,2	130,7	392,8
1975	49,8	336,6	273,0	154,9	66,8	187,7	1124,6	84,6	1240,0	132,1	402,6
1976	52,6	354,7	286,5	164,0	70,4	194,6	1181,8	87,1	1299,8	139,8	423,3
1977	52,9	365,7	295,3	167,1	75,7	197,0	1214,6	90,0	1369,0	144,0	445,6
1978	54,6	377,2	307,1	171,6	77,6	203,9	1255,1	91,6	1433,1	148,4	468,0
1979	55,9	392,5	317,3	180,0	79,4	208,1	1298,7	91,8	1466,7	152,0	492,0
1980	57,7	400,2	320,7	187,0	80,1	202,6	1314,4	93,2	1463,5	152,7	516,5
1981	57,1	400,3	321,6	187,3	79,5	200,0	1312,6	93,4	1507,4	157,8	537,1
1982	57,7	396,2	326,7	186,6	78,2	204,7	1318,4	94,6	1471,9	150,8	554,3

PRICE INDICES - BASIS : GDP AT MARKET PRICES

1975 = 100

YEAR	B	D	F	I	NL	U.K	EEC 10	E	USA	CANADA	JAPAN
1970	66,1	73,3	65,5	56,5	63,9	53,9	62,1	56,0	72,6	66,1	62,2
1971	69,7	78,9	69,3	60,6	69,4	59,0	66,8	60,5	76,6	68,1	65,4
1972	74,0	83,1	73,6	64,4	75,9	63,9	71,4	65,7	79,7	71,6	68,8
1973	79,2	88,5	79,3	71,8	82,3	68,4	77,3	73,5	84,2	78,2	77,0
1974	88,8	94,4	88,2	85,1	89,9	78,6	87,0	85,7	92,2	90,3	92,9
1975	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
1976	107,3	103,5	110,1	118,0	108,9	114,9	110,6	116,7	105,8	109,4	106,6
1977	115,1	107,2	120,0	140,5	115,8	130,8	121,3	143,3	112,0	117,2	112,3
1978	119,9	111,7	131,1	160,0	122,1	145,4	131,5	172,3	120,4	124,7	117,8
1979	124,8	116,3	144,7	185,4	126,9	166,4	143,7	201,0	130,9	138,5	120,8
1980	130,2	121,4	162,1	223,7	134,0	199,4	159,4	229,0	143,1	153,9	124,2
1981	136,8	126,4	181,6	264,7	141,8	222,5	173,8	260,6	156,3	170,2	127,5
1982	146,4	132,4	204,3	310,9	149,2	238,4	189,3	295,9	166,5	187,4	129,8

THE SPANISH AEROSPACE INDUSTRY

The figures given below have been calculated using data on employment and turnover for the Spanish aerospace industry as supplied to the Commission by ATECMA.

These results have been compiled using the questionnaire previously used by the trade associations who form the members of AECMA and the Commission departments.

It should be noted that the turnover figure used for calculations is the final Spanish national turnover and not the final turnover at community level as defined in chapter 6, paragraph 2.b. For the purpose of this study, Spain is taken to be a third country, even though it actively participates in certain European aerospace programs, in particular the Airbus program.

Nevertheless, the turnover at Community level which would be Spain's turnover were it a member of the Community, is indicated hereafter in order to show the share of turnover due to trade with the countries of the Community.

x x
x x

(All data in current values)

Overall Turnover in 1981 : 262.5 Mio ECU

Final National Turnover in 1981 : 262.2 Mio ECU

Final Turnover at community level : 189.1 Mio ECU

Proportion of Spain's final
turnover exported to industrial
undertakings in EEC member states : 27.9 %

Percentage of GDP represented by
turnover of the aerospace
industry 1981 : 0.3 %

Average exchange rate in 1981 : 1 ECU = 102,7 PTA

SPAIN : FINAL TURNOVER

YEAR	Mio ECU at current prices	Mio ECU at 1975 prices & exchange rates
1978	132,5	105,3
1979	130,6	90,1
1980	184,2	112,8
1981	262,2	146,5

SPAIN : OVERALL TURNOVER

(Mio ECU at current prices)

	Mio ECU	Breakdown by subsector (%)			
		Airframes	Engines	Equipment	Space
1978	133,2	88,6	3,5	2,9	5,0
1979	131,4	86,2	1,8	5,9	6,1
1980	184,5	83,1	3,6	8,3	5,0
1981	262,5	85,3	4,0	7,8	2,9

SPAIN : BREAKDOWN OF FINAL TURNOVER BY CUSTOMER CATEGORY

(Mio ECU at current prices)

Customers	1979		1980		1981	
	Civil	Military	Civil	Military	Civil	Military
<u>STATE</u>	<u>1,9</u>	<u>47,4</u>	<u>7,0</u>	<u>74,8</u>	<u>12,1</u>	<u>85,1</u>
-R&D contracts	0,3	1,1	1,8	2,3	1,3	3,1
-Modifications, Repairs, Maintenance	0,4	19,1	0,9	18,8	1,1	19,3
-Sales	1,2	27,2	4,3	53,7	9,7	62,7
<u>AEROSPACE MANUFACTURERS IN NON-MEMBER COUNTRIES</u>	<u>26,6</u>	<u>9,0</u>	<u>37,0</u>	<u>14,7</u>	<u>59,3</u>	<u>18,6</u>
<u>FINAL USERS</u>	<u>14,5</u>	<u>31,2</u>	<u>21,6</u>	<u>29,1</u>	<u>31,8</u>	<u>55,3</u>
-EEC	6,1	-	0,2	-	0,1	-
-Non-member countries	8,4	31,2	21,4	29,1	31,7	55,3
TOTAL	43,0	87,6	65,6	118,6	103,2	159,0
%	32,9	67,1	35,6	64,4	39,4	60,6

PERCENTAGE BREAKDOWN OF SPAIN'S FINAL TURNOVER BY CUSTOMER CATEGORY

Customers	1979		1980		1981	
	Civil	Military	Civil	Military	Civil	Military
<u>STATE</u>	<u>1,4</u>	<u>36,3</u>	<u>3,8</u>	<u>40,6</u>	<u>4,6</u>	<u>32,5</u>
-R&D contracts	0,2	0,9	1,0	1,2	0,5	1,2
-Modifications, Repairs, Maintenance	0,3	14,6	0,5	10,2	0,4	7,4
-Sales	0,9	20,8	2,3	29,2	3,7	23,9
<u>AEROSPACE MANUFACTURERS IN NON-MEMBER COUNTRIES</u>	<u>20,4</u>	<u>6,9</u>	<u>20,1</u>	<u>8,0</u>	<u>22,6</u>	<u>7,1</u>
<u>FINAL USERS</u>	<u>11,1</u>	<u>23,9</u>	<u>11,7</u>	<u>15,8</u>	<u>12,1</u>	<u>21,1</u>
-EEC	4,7	-	0,1	-	-	-
-Non-member countries	6,4	23,9	11,6	15,8	12,1	21,1
TOTAL (%)	32,9	67,1	35,6	64,4	39,4	60,6

SPAIN : PERCENTAGE BREAKDOWN OF FINAL TURNOVER BY MARKET

	1978	1979	1980	1981
1. <u>Aerospace</u>				
-State	34,7	37,7	44,4	37,1
-Domestic civil market	0,1	4,7	0,1	0,0
-Exports	65,2	57,6	55,5	62,9
2. <u>Aviation</u>				
-State	36,5	40,2	46,4	37,8
-Domestic civil market	0,1	2,8	0,1	0,0
-Exports	63,4	57,0	53,5	62,2
2.1 <u>Airframes</u>				
-State	33,8	38,7	40,4	31,1
-Domestic civil market	-	3,0	0,1	0,0
-Exports	66,2	58,3	59,5	68,9
2.2 <u>Engines</u>				
-State	95,7	82,6	92,4	99,0
-Domestic civil market	-	-	-	-
-Exports	4,3	17,4	7,6	1,0
2.3 <u>Equipment</u>				
-State	48,6	49,3	88,0	80,2
-Domestic civil market	2,9	-	0,7	0,5
-Exports	48,5	50,7	11,3	19,3

SPAIN : BREAKDOWN OF STATE BACKING FOR THE AVIATION INDUSTRY
BY CONTRACT TYPE

(Mio ECU et current prices)

	1980		1981	
	Mio ECU	%	Mio ECU	%
<u>R&D contracts</u>	<u>4,1</u>	<u>5,0</u>	<u>4,4</u>	<u>4,5</u>
Civil	1,8	0,2	1,3	1,3
Military	2,3	44,8	3,1	3,2
<u>Purchase & Maintenance contracts</u>	<u>77,7</u>	<u>95,0</u>	<u>92,8</u>	<u>95,5</u>
Civil	5,2	6,4	10,8	11,1
Military	72,5	88,6	82,0	84,4
TOTAL	81,8	100,0	97,2	100,0
As % of final turnover	(184,2)	44,4	(262,2)	37,1

SPAIN : BREAKDOWN BY SUBSECTOR OF STATE BACKING

Subsector	1980		1981	
	Mio ECU	%	Mio ECU	%
Airframes	61,9	75,7	66,7	71,7
Engines	6,1	7,5	10,4	10,7
Equipment	13,2	16,1	16,2	16,7
Space	0,6	0,7	0,9	0,9
Total	81,8	100,0	97,2	100,0

SPAIN : PERCENTAGE BREAKDOWN OF STATE BACKING FOR THE AVIATION INDUSTRY

BY CONTRACT AND SUBSECTOR

	1979	1980	1981
<u>AIRFRAMES</u>			
<u>-R&D contracts</u>			
civil	0,5	0,3	-
military	2,3	1,9	3,2
<u>-Purchase & Maintenance contracts</u>			
civil	-	-	-
military	97,2	97,8	96,8
TOTAL	100,0	100,0	100,0
<u>ENGINES</u>			
<u>-R&D contracts</u>			
civil	-	-	-
military	-	-	-
<u>-Purchase & Maintenance contracts</u>			
civil	-	-	-
military	100,0	100,0	100,0
TOTAL	100,0	100,0	100,0
<u>EQUIPMENT</u>			
<u>-R&D contracts</u>			
civil	-	9,8	2,5
military	2,9	8,3	5,6
<u>-Purchase & Maintenance contracts</u>			
civil	45,7	39,4	66,7
military	51,4	42,5	25,2
TOTAL	100,0	100,0	100,0

SPAIN : AEROSPACE WORKFORCE ON 31 DECEMBER 1981

	AIRFRAMES	ENGINES	EQUIPEMENT	SPACE	TOTAL	%
<u>Occupational grading</u>						
1. Engineers & managerial staff	565	20	116	53	754	7,9
2. Executive staff	1129	21	77	63	1290	13,6
-technical	1306	49	53	15	1423	15,0
-administrative						
3. Skilled workers	4396	135	174	22	4727	49,6
4. Non-skilled workers	1157	15	147	3	1322	13,9
TOTAL	8553	240	567	156	9516	100,0
<u>Main activity</u>						
1. R & D	282	0	75	85	442	4,6
2. Production	7676	235	430	49	8390	88,2
3. Marketing & Management	595	5	62	22	684	7,2
TOTAL	8553	240	567	156	9516	100,0

INDEX OF ABBREVIATIONS USED IN THE PRESENT DOCUMENT

CEC : Commission of the European Communities
EEC : European Economic Community
EEC 6 : EEC - 6 Member States (B, D, F, L, I, NL)
EEC 9 : EEC - 9 Member States (B, DK, D, F, L, IRL, I, NL, UK)
EEC 10 : EEC - 10 Member States (B, DK, D, GR, F, L, IRL, I, NL, UK)
Intra-EEC : With Member States of the EEC only
Extra-EEC : With countries not member of the EEC

B : Belgium
CDN : Canada
DK : Denmark
D : Federal Republic Germany
E : Spain
GR : Greece
F : France
L : Luxembourg
IRL : Ireland
I : Italy
JPN : Japan
NL : Netherlands
SWE : Sweden
UK : United Kingdom
USA : United States of America

ECU : European Currency Unit
BFR : Belgian Franc
DKR : Danish Crown
DM : German Mark
CA\$: Canadian Dollar
FF : French Franc
HFL : Dutch Guilder
LIT : Italian Lira
PTA : Spanish Peseta
UK£ : Pound Sterling
US\$: US Dollar
YEN : Japanese Yen

Bio, Mia : Billion
Mio : Million
GDP : Gross Domestic Product
R&D : Research and Development

INDEX OF USED SIGNS

... : Data not available
.,. : Decimal data not available
- : Data nihil or negligible
() : Estimate