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OF THE
EUROPEAN COMMUNITIES

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THE EUROPEAN AEROSPACE INDUSTRY

TRADING POSITION AND FIGURES

(Commission Staff Working Paper)

SEC(79)995-EN

PREFACE

This document is a compilation of the most relevant statistical data available to the Commission 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 data since 1972; its very first communication to the Council, dated 19 July 1972 (document COM(72)850), included a statistical annex on the trading position of the aerospace sector.

In subsequent years*, it became possible to make a more detailed analysis, owing mainly to the cooperation of the industrial associations in each Member State belonging to AECMA (European Association of Aerospace Manufacturers), which collaborated actively with the Commission in conducting an annual survey on turnover and employment among companies in the sector.

This version of the document gives the trading position of the sector on 31 December 1977, and is shorter than in previous years: it was not considered necessary to repeat the methodological considerations, and the comments on the tables at the head of each chapter have been reduced to the bare minimum.

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* Documents:	SEC(73)813,	1 March 1973
	III-243/73	31 December 1973
	SEC(75)1539	23 April 1975
	SEC(76)2657	9 July 1976
	SEC(77)2939	2 August 1977
	SEC(78)3298	11 October 1978

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

1. In 1978 the volume of world scheduled traffic was 12% greater than in 1977. This growth rate has been exceeded only once during the last ten years (1972 : +13%). The load factor of the fleet -64%- was in 1978 an absolute record. The growth in the volume of passengers carried and the increase of the load factor can largely be explained by the introduction of cheap fares.

2. The volume of scheduled traffic carried by AEA-member European airlines underwent in 1978 the same growth as world scheduled traffic (+ 12%).

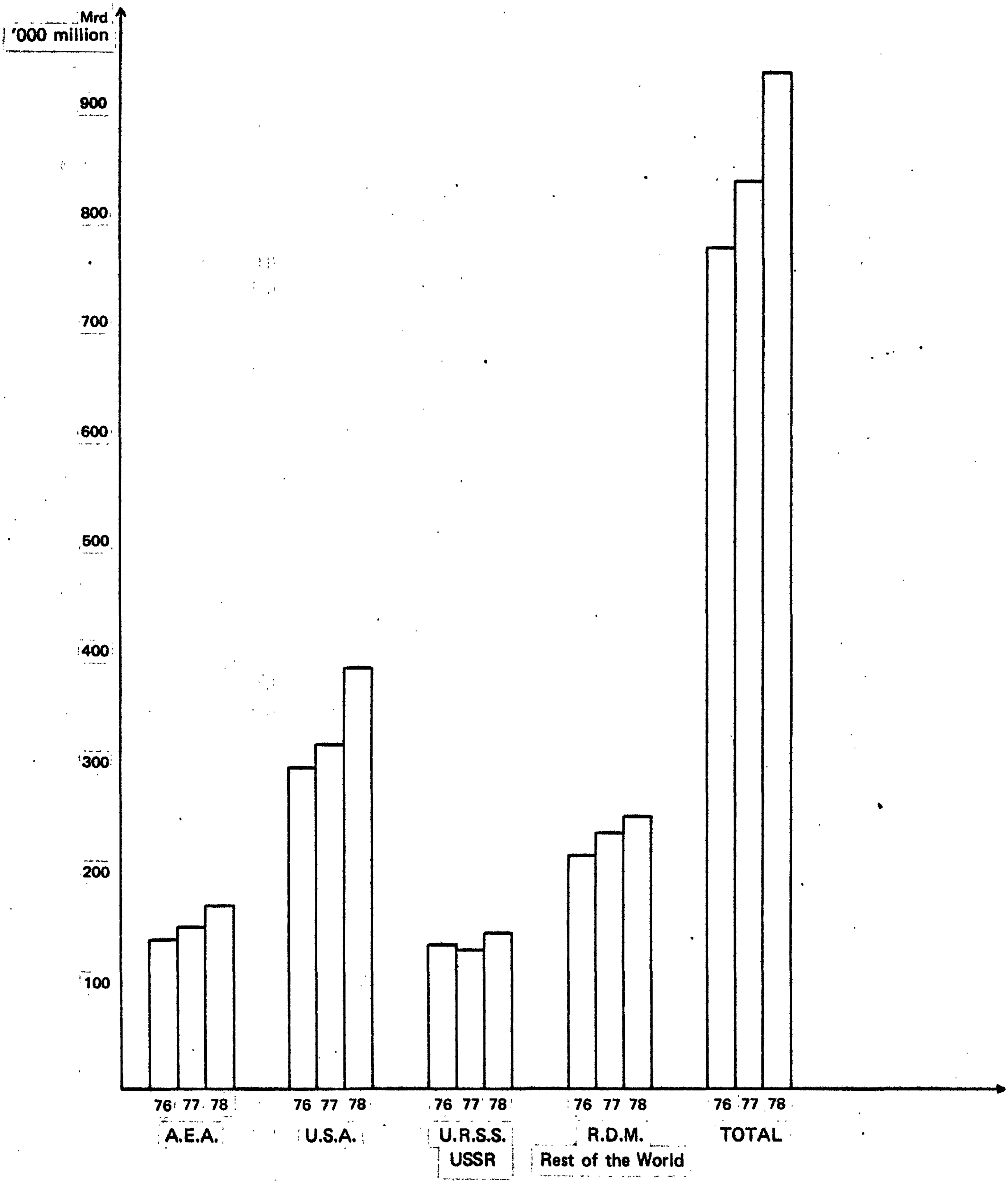
When this figure is broken down into traffic zones, it can be seen that the best results have been achieved on intercontinental flights, where the increase in traffic with respect to 1977 was 15.1% for an increase in available seats of 9.4%, which produced a remarkable improvement in load factor.

3. 1978 was characterized by a general reduction in non-scheduled flights. Although there was a 12% increase in world traffic in 1978, there was an 18% decline in passenger-km in non-scheduled flights for IATA-member airlines as a whole. For traffic between the United States and Europe this decline was 20.7% whereas the overall traffic increased by 13.3%. In the United States non-scheduled traffic fell in general by 21%.

A preliminary study of these figures reveals a direct link between the reduction in non-scheduled traffic and the reduction in fares for scheduled flights in 1978.

TRAFIC MONDIAL REGULIER DES COMPAGNIES MEMBRES DE L'OACI
WORLD SCHEDULED TRAFFIC CARRIED BY ICAO MEMBER COMPANIES

(passagers-kilomètres transportés en milliards)
('000 million passenger/kilometres)



SOURCE: A.E.A.
SOURCE: A.E.A.

WORLD SCHEDULED TRAFFIC

1) Passengers ('000 million)

YEAR	Passengers carried	P C K	S A K	Load Factor (%)
		not including USSR		
1973	0.404 (10)	520 (12)	942 (10)	55
1974	0.424 (5)	548 (5)	966 (3)	57
1975	0.436 (3)	575 (5)	1 026 (6)	56
1976	0.475 (9)	632 (10)	1 104 (8)	57
1977	0.517 (9)	691 (9)	1 180 (7)	59
1978	0.575 (11)	785 (14)	1 270 (8)	62
		Including U S S R		
1973	0.489 (8)	618 (10)	1 073 (9)	58
1974	0.515 (5)	656 (6)	1 108 (3)	59
1975	0.534 (4)	697 (6)	1 179 (6)	59
1976	0.576 (8)	762 (9)	1 268 (8)	60
1977	0.610 (6)	818 (7)	1 346 (6)	61
1978	0.673 (10)	920 (12)	1 445 (7)	64

2) Freight (million tonnes)

YEAR	T F C	T K C		
		Freight	Mail	T o t a l
		Including USSR		
1973	8.2 (13)	17 530 (17)	2 880 (4)	20 410 (15)
1974	8.7 (5)	19 020 (8)	2 880 (0)	21 900 (7)
1975	8.7 (0)	19 370 (2)	2 900 (1)	22 270 (2)
1976	9.3 (7)	21 450 (11)	3 030 (4)	24 480 (9)
1977	10.3 (10)	23 620 (10)	3 180 (5)	26 800 (9)
1978	11.2 (9)	26 400 (12)	3 260 (3)	29 660 (10)

<u>Notes.</u>
- PCK : Passengers carried/km
- SAK : Seats available/km
- TFC : Tonnes Freight Carried
- TKC : Tonnes/km Covered
- Source : ICAO: airlines in 143 countries
- 1978 : Estimates
- Rates of increase in brackets

DISTRIBUTION OF WORLD SCHEDULED TRAFFIC

('000 million Passengers Carried/km)

Traffic Zones	1976		1977		1978		Trend 76/77	Trend 77/78
AEA	135	18 %	144	18 %	163	17 %	+ 7 %	+ 13 %
USA	288	38 %	311	38 %	378	41 %	+ 8 %	+ 22 %
USSR	130	17 %	127	16 %	135	15 %	- 3 %	+ 6 %
Rest of World	209	27 %	231	28 %	244	27 %	+ 11 %	+ 6 %
Total	762	100 %	813	100 %	920	100 %	+ 7 %	+ 13 %

Notes. -Source: AEA (Association of European Airlines)

- 1978 : Estimates

AEA AIRLINE TRAFFIC

	PCK (million)			SAK (million)			Load Factor		
	1976	1977	1978	1976	1977	1978	1976	1977	1978
Domestic Traffic	15 674	17 015	17 360	24 752	25 989	26 270	63	65.5	66.1
Intra-European Traffic	38 342	42 836	47 217	67 533	72 587	79 447	57	59.0	59.4
Intercontinental Traffic	80 949	85 563	98 494	142 182	146 253	160 042	57	58.5	61.5

Notes
- Source : A.E.A.
- 1978 : Estimates
- As a result of the redefinition of domestic traffic in 1976, thereby including the traffic between parent countries and their overseas territories, domestic traffic has been artificially increased at the expense of intercontinental traffic

RATES OF INCREASE IN PASSENGERS CARRIED/KM BY AEA AIRLINES

	Intra-European Traffic	Domestic Traffic	Intercontinental Traffic	TOTAL
1973/74	2.6	2.78	4.3	3.8
1974/75	8.1	4.9	4.0	5.2
1975/76 *)	11.0	13.2	7.2	8.8
1976/77 *)	11.7	9.13	5.7	7.7
1977/78	10.23	2.03	15.1	12.4
1973/78	52.51	71.44	35.83	43.55

Note.

* Following the redefinition of domestic traffic in 1976 (see footnote to the previous table), in calculating the increased rate for 1975/76 the number of PCK was defined in the same way as in 1975, and in calculating the increased rate for 1976/77 the number of PCK was defined in the same way as in 1977.

PERCENTAGE DISTRIBUTION OF
AEA AIRLINE TRAFFIC (PCK)

	1976	1977	1978
Domestic Traffic	11.6	11.7	10.6
Intra-European Traffic	28.4	29.5	29.0
Intercontinental Traffic	60.0	58.8	60.4
	100.0	100.0	100.0

THE CIVIL TRANSPORT MARKET

1. These data were prepared for the Commission by the Institute of Air Transport (ITA) and cover virtually all airlines (of which there are more than 450) using all types of aircraft-turbojets and turboprops built in the United States, Europe, Japan and Canada.

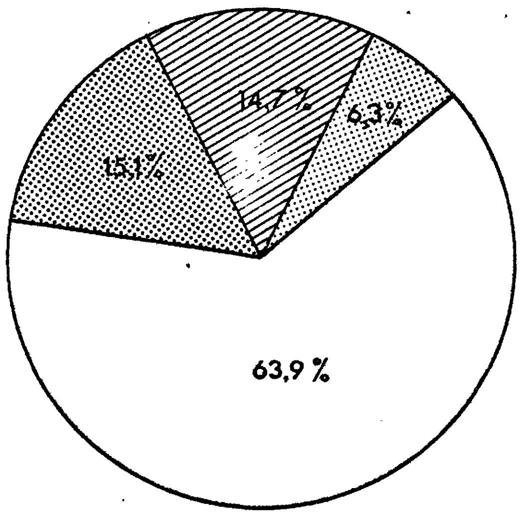
2. The share of the market won by short- and medium-haul aircraft is increasing at the expense of long-haul aircraft. As regards the geographical distribution of the fleets, there is a steady upward trend in the relative value of the fleet of the rest of the world to the detriment of the United States, the European fleet remaining approximately stable since 1973.

3. A comparison between the trend in the geographical distribution of the markets and the trend in the share of the market won by European aircraft shows, for the period 1970-77, (a) that the value of the European market has increased by 4.5% and that the share of this market won by European goods has fallen by 12.2%, and (b) that the virtual monopoly of the United States aerospace industry, which absorbs approximately 90% of the world market and 82% of the European market, has remained intact.

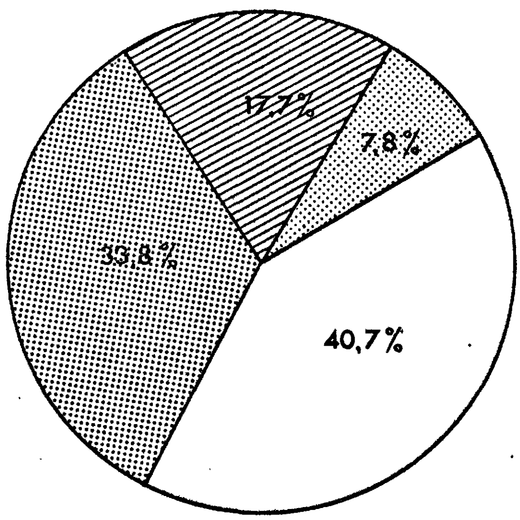
4. If, however, we observe the 1976-77 trend, it is noticeable that there has been a significant recovery in the share of the various markets won by short- and medium-haul aircraft, owing in particular to Airbus and F28 sales. The increase in Airbus sales in 1978 will only confirm this trend.

REPARTITION DU MARCHE GLOBAL
SHARE OF THE OVERALL MARKET

1970



1977



C.E.E.
E.E.C.

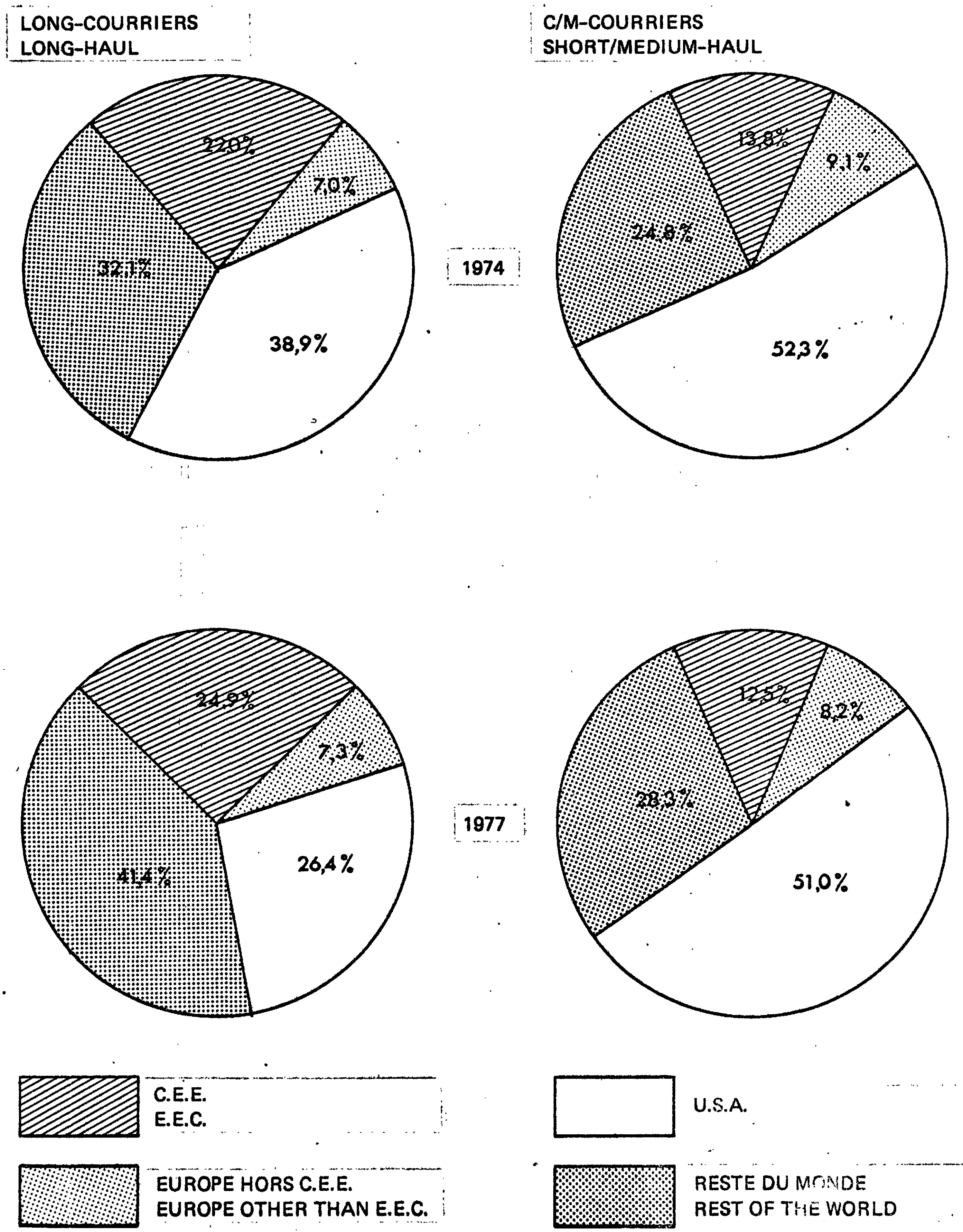
U.S.A.

EUROPE HORS C.E.E.
EUROPE OTHER THAN E.E.C.

RESTE DU MONDE
REST OF THE WORLD

REPARTITION DU MARCHE

BREAKDOWN OF THE MARKET



ORDERS & DELIVERIES

AIRCRAFT	Ordered by	Delivered by	YEARLY ORDERS			
	31/12/78	31/12/78	1975	1976	1977	1978
LONG-HAUL						
. Concorde	9	9	-	-	-	-
. Boeing 707	786	776	3	4	4	-
. 720	154	154	-	-	-	-
. 747	440	347	19	14	42	83
. DC-8	556	556	-	-	-	-
. DC-10-30/40	204	164	7	15	25	41
. VC-10	35	35	-	-	-	-
. Comet	51	51	-	-	-	-
. 880/990 (Coronado)	83	83	-	-	-	-
. L-1011-500 (Tristar)	25	-	-	-	-	19
SHORT- AND MEDIUM-HAUL						
. A-300-B	123	59	16	3	18	70
. Caravelle	278	278	-	-	-	-
. BAC-111	227	224	5	2	-	5
. Boeing 727	1 621	1 425	49	113	134	131
. 737	685	546	33	39	38	146
. 757	40	-	-	-	-	40
. 767	84	-	-	-	-	84
. Fokker F-27 *	682	669	23	3	3	9
. F-28	144	132	26	6	12	11
. HS-Trident	117	117	-	-	-	-
. Mercure	10	10	-	-	-	-
. DC-9	992	893	30	25	51	66
. DC-10-10	114	99	-	1	6	2
. L-1011-100/200 (Tristar)	172	157	-	8	8	11
. VFW-614	16	10	1	6	-	-
. HS-748	335	321	1	11	3	16
TOTAL	7 983	7 115	213	250	344	736

*) Including 205 built under licence in the United States by Fairchild

Value of Aircraft in Service or on Order but not yet Delivered at 31 December 1977 (million EUA)

FLEETS / ORIGIN	LONG-HAUL			SHORT- AND MEDIUM-HAUL			TOTAL	%	%
	USA	EUROPE	OTHER	USA	EUROPE	OTHER			
F.R. Germany	1 173.50	-	1.20	605.70	366.04	-	2 146.44	-	21.0
Belgium	255.80	1.60	-	122.40	24.04	-	403.84	-	4.0
Denmark	22.50	-	-	73.00	32.65	-	128.15	-	1.3
France	943.60	246.00	-	240.55	616.92	-	2 047.07	-	20.1
Ireland	90.50	0.80	-	60.00	3.00	-	154.30	-	1.5
Italy	452.60	-	-	524.70	50.12	-	1 027.42	-	10.1
Luxembourg	82.80	-	2.40	15.00	5.83	-	106.03	-	1.0
Netherlands	867.00	-	-	189.60	27.91	-	1 081.51	-	10.6
United Kingdom	1 536.70	327.90	10.80	559.00	664.22	-	3 098.62	-	30.4
E.E.C.	5 425.00	576.30	14.40	2 389.95	1 790.73	-	10 196.38	17.7	100.0
Other European Countries	1 753.14	0.80	3.60	2 465.76	267.81	8.40	4 499.51	7.8	
Europe	7 178.14	577.10	18.00	4 855.71	2 058.54	8.40	14 695.89	25.5	
United States	6 387.12	-	-	16 867.28	144.64	33.60	23 432.64	40.7	
Rest of the World	10 018.72	5.60	12.00	6 879.54	2 473.61	100.80	19 490.27	33.8	
World	23 583.98	582.70	30.00	28 602.53	4 676.79	142.80	57 618.80	100.0	

MARKET TRENDS AND MARKET SHARE WON BY COMMUNITY BUILT AIRCRAFT

(% value)

	Relative Size of the Market					Market Share Won by Aircraft Built in the EEC				
Market (Fleets)	1970 %	1974 %	1976 %	1977 %	Trend 70/77 (5)	1970 %	1974 %	1976 %	1977 %	Trend 70/77 %
European Countries	14.7 6.3	18.0 8.0	17.6 7.9	17.7 7.8	3.0 1.5	33.0 23.1	21.4 7.7	22.3 4.6	23.2 6.0	- 9.8 -17.1
Europe	(21.0)	(26.0)	(25.5)	(25.5)	(+ 4.5)	(30.1)	(17.2)	(16.9)	(17.9)	(-12.2)
USA	63.9	45.4	42.8	40.7	-23.2	2.1	0.4	0.2	0.6	- 1.5
Rest of the World	15.1	28.6	31.7	33.8	18.7	12.1	12.6	10.9	12.7	0.6
World	100.0	100.0	100.0	100.0	-	9.5	8.2	7.8	9.1	- 0.4

MARKET TRENDS AND MARKET SHARE WON BY COMMUNITY-BUILT AIRCRAFT

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

(% value)

MARKET	Relative Size of the Market				Market Share Won by Aircraft Built in the EEC			
	1974 %	1976 %	1977 %	Trend 74/77	1974 %	1976 %	1977 %	Trend 74/77
a). Short- and Medium-Haul Aircraft								
EEC	13.8	13.1	12.5	- 1.3	42.9	38.6	42.8	- 0.1
Other European Countries	9.1	6.3	8.2	- 0.9	14.1	10.2	9.8	- 4.4
Europe	(22.9)	(19.4)	(20.7)	(- 2.2)	31.5	29.4	29.7	- 1.8
USA	52.3	52.8	51.0	- 1.3	0.7	0.3	0.8	0.1
Rest of the World	24.8	27.8	28.3	3.5	25.7	21.8	26.2	0.5
World	100.0	100.0	100.0	-	13.9	11.9	14.0	0.1
b). Long-Haul Aircraft								
EEC	22.0	23.5	24.9	2.9	8.6	10.5	9.6	1.0
Other European Countries	7.0	9.9	7.3	0.3	-	-	-	-
Europe	(29.0)	(33.4)	(32.2)	3.2	6.5	7.4	7.4	0.9
USA	38.9	30.0	26.4	-12.5	-	-	-	-
Rest of the World	32.1	36.6	41.4	9.3	3.0	0.1	-	-3
World	100.0	100.0	100.0	-	2.9	2.5	2.4	- 0.5

Aggregate Sales at 31 December (Units)

	USA Aircraft				European Aircraft				Total			
	1975	1976	1977	1978	1975	1976	1977	1978	1975	1976	1977	1978
Short- and Medium-Haul	2 814	3 000	3 237	3 708	1 740	1 771	1 807	1 932	4 554	4 771	5 044	5 640
Long-Haul	1 989	2 022	2 093	2 248	95	95	95	95	2 084	2 117	2 188	2 343
Total	4 803	5 022	5 330	5 956	1 835	1 866	1 902	2 027	6 638	6 888	7 232	7 983

Fleet and Orders (Trading Position in December)

TYPE	Units			Value (million EUA)		
	1974	1976	1977	1974	1976	1977
Long-Haul	1 886	1 719	1 748	18 517.3	22 034.2	24 196.7
Short- and Medium-Haul	4 348	5 042	5 265	17 337.2	28 626.6	33 422.1
Total	6 234	6 761	7 013	35 854.5	50 660.8	57 618.8

Fleet and Orders : Value Breakdown

	1970	1971	1973	1974	1976	1977
Long-Haul	55 2	51 1	51 1	51 6	43 5	42 0
Short- and Medium-Haul	44.8	48.9	48,9	48,4	56.5	58.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

BREAKDOWN OF FLEET VALUE INTO GEOGRAPHICAL ZONES

	1970	1973	1974	1976	1977
E.E.C.	14.7	18.2	18.0	17.6	17.7
Other European Countries	6.3	8.1	8.0	7.9	7.8
Europe	(21.0)	(26.3)	(26.0)	(25.5)	(25.5)
USA	63.9	53.0	45.4	42.8	40.7
Rest of the World	15.1	20.7	28.6	31.7	33.8
	100.0	100.0	100.0	100.0	100.0

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

(Value Breakdown)

	1976	1977	
Standard Aircraft	72.7 %	74.4 %	100
Wide-Body	27.3 %	25.6 %	
Boeing	42.2 %	43.5 %	100
McDonnell Douglas	29.6 %	28.9 %	
Lockheed	15.5 %	13.0 %	
Other USA	0.2 %	0.2 %	
European Manufacturers	11.9 %	14.0 %	
Other Manufacturers	0.6 %	0.4 %	

LONG-HAUL AIRCRAFT IN SERVICE AND ON ORDER

(Value Breakdown)

	1976	1977	
Standard Aircraft	34.8	31.8	100
Wide-Body	62.6	65.9	
Supersonic	2.6	2.3	
Boeing	66.4	68.2	100
McDonnell Douglas	30.6	28.4	
Other USA	(x)...	0.9	
European Manufacturers	2.9	2.4	
Other Manufacturers	0.2	0.1	

x) Negligible

THE CIVIL HELICOPTER

&

LIGHT AIRCRAFT MARKET

1. The civil helicopter and light aircraft fleet is, for Western Europe, calculated on the basis of registrations in the 1979 International Aviation Register (VERITAS Bureau, French Edition); for North America, the figures and data are taken from "Aerospace Facts and Figures 1978/79".

2. ITA (The Institute of Air Transport) gives the world light aircraft fleet as 264 080 units, broken down as follows: 230 350 single-engined aircraft and 33 730 twin-engined aircraft and executive jets.

CIVIL HELICOPTER FLEET IN WESTERN EUROPE AND NORTH AMERICA

(Beginning of 1978)

	Fleet		Fleet Breakdown by Design Origin			
			USA		EEC	
	Number	%	Number *)	%	Number	%
Belgium	18	1.5	17 (2)	94	1	6
Denmark	41	3.5	41 (2)	100	-	-
France	279	23.9	129 (60)	46	150	54
Ireland	9	0.8	8 (2)	89	1	11
Italy	126	10.8	98 (52)	78	28	22
Luxembourg	-	-	-	-	-	-
Netherlands	18	1.5	16 (1)	89	2	11
F.R. Germany	319	27.3	197 (59)	62	122	38
United Kingdom	359	30.7	312 (74)	87	47	13
EEC	1 169	100	818 (252)	70	351	30
Other European Countries	413	-	298 (91)	72	115	28
USA and Canada	7 160	-	7 017	98	143	2

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

SINGLE-ENGINED LIGHT AIRCRAFT FLEET IN WESTERN EUROPE AND THE USA (Beginning of 1978)

	FLEET		FLEET BREAKDOWN BY DESIGN ORIGIN							
			USA		Europe		Japan		Other	
	Number	%	Number	%	Number	%	Number	%	Number	%
Belgium	676	4	404	60	271	40	1	-	-	-
Denmark	820	5	591	72	229	28	-	-	-	-
France	5 658	32	1 326	23	4 297	76	-	-	35	1
Ireland	200	1	60	30	139	69	1	1	-	-
Italy	1 145	7	457	40	673	59	-	-	15	1
Luxembourg	43	-	20	47	22	51	1	2	-	-
Netherlands	404	2	327	81	65	16	12	3	-	-
F.R. Germany	5 028	29	3 038	60	1 867	37	86	2	37	1
United Kingdom	3 605	20	1 684	47	1 889	52	15	0,5	17	0,5
EEC	17 579	100	7 907	45	9 452	54	116	0,6	104	0,4
Other European Countries	4 837		3 631	75	1 146	24	19	0,4	41	0,6
Europe	22 416		11 538	51	10 598	47	135	1	145	1
USA	151 816		148 780	98	3 036	2	-	-	-	-

TWIN-ENGINED LIGHT AIRCRAFT AND EXECUTIVE JET FLEET IN WESTERN EUROPE AND THE USA

(Beginning of 1978)

	Fleet		FLEET BREAKDOWN BY DESIGN ORIGIN							
			USA		Europe		Japan		Other	
	Number	%	Number	%	Number	%	Number	%	Number	%
Belgium	84	3.0	77	92	7	8	-	-	-	-
Denmark	96	3.4	79	82	13	14	4	4	-	-
France	726	26.0	608	84	118	16	-	-	-	-
Ireland	6	0.2	4	67	2	33	-	-	-	-
Italy	198	7.1	142	71.7	55	27.7	1	0.6	-	-
Luxembourg	6	0.2	6	100	-	-	-	-	-	-
Netherlands	67	2.4	51	76	16	24	-	-	-	-
F.R. Germany	576	20.7	526	91.4	46	8	2	0.3	2	0.3
United Kingdom	1 031	37.0	720	70	311	30	-	-	-	-
E.E.C.	2 790	100	2 213	79.3	568	20.4	7	0.3	2	0.0
Other Western European Countries	720	—	637	88	82	12	1	-	-	-
Europe	3 510	-	2 850	81.3	650	18.5	8	0.2	2	-
USA	27 148	-	25 791	95	1 086	4	271	1	-	-
TOTAL :	30 658	-	28 641	93	1 736	6	279	1	2	-

THE MILITARY AVIATION MARKET

1. The European military aviation market is described in the tables given in this Chapter on the basis of data supplied by the American publication DMS (Defense Aerospace Market Intelligence).

   The aircraft and helicopter fleet in 1977 was analysed on the basis of the origin of the equipment design and not on the place of manufacture.

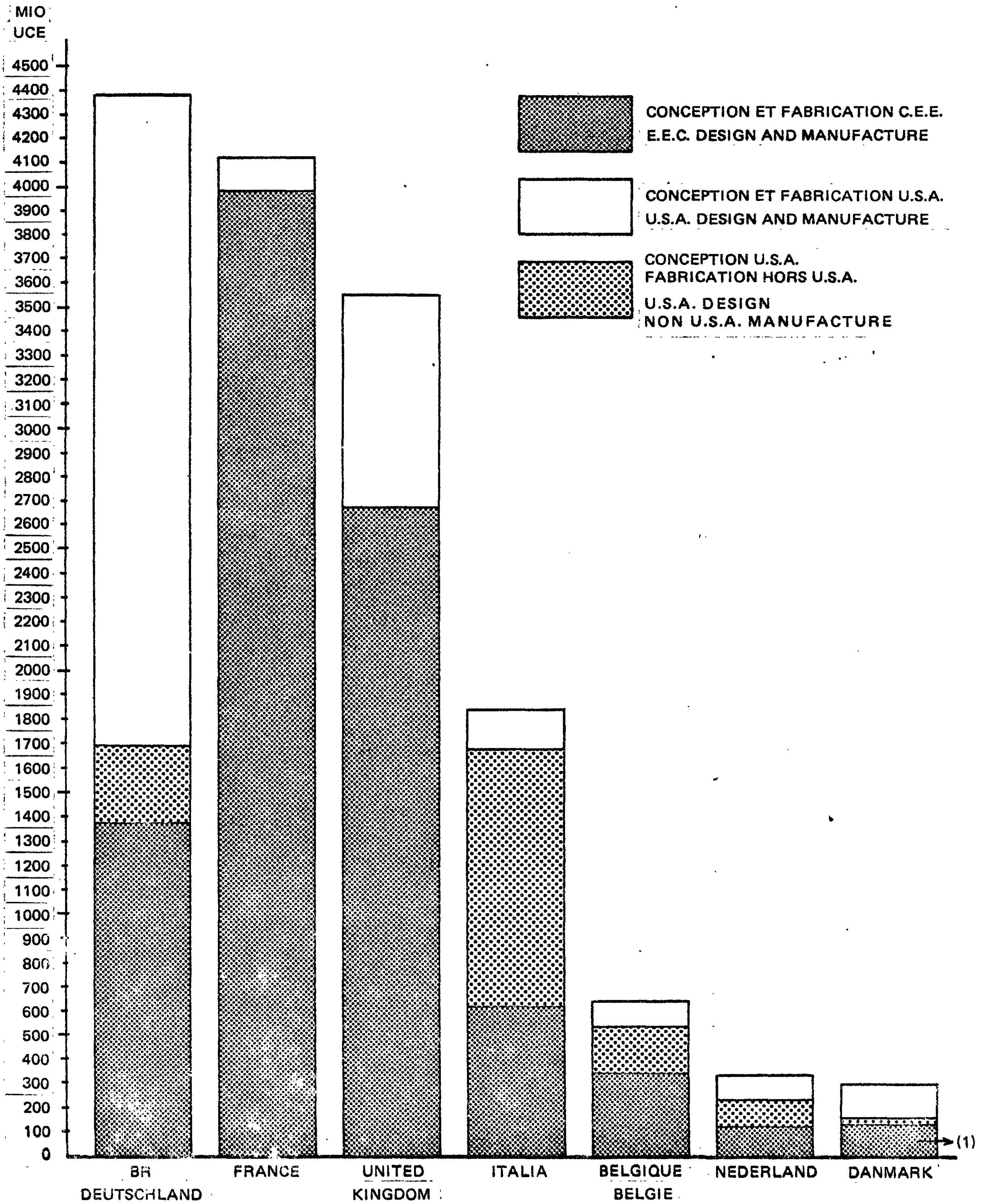
   For the European fleet, the added distinction was made as to whether American designed equipment was manufactured in the Community or in the USA.

2. Between 1976 and 1977, the share of Community-designed equipment in the fleets of the Member States has on the whole remained stable (with considerable divergences between the Member States), whereas during the same period there has been an overall downward trend (- 16.9 %) in the share of Community-designed equipment in the fleets of non-member states.

   An appreciation of this trend will be meaningful, however, only after a few years when more extended historical series are available.

VALEUR DES FLOTTES MILITAIRES DES ETATS MEMBRES (Avions et hélicoptères)
REPARTITION SELON LA CONCEPTION ET LA FABRICATION DU MATERIEL

VALUE OF MILITARY FLEETS IN THE MEMBER STATES (Aircraft and helicopters)
BREAKDOWN OF EQUIPMENT BY DESIGN AND MANUFACTURING ORIGIN



(1) Conception et fabrication Suédoise
Swedish design + manufacture

1977 million EUA

VALUE OF AIRCRAFT AND HELICOPTERS IN SERVICE IN THE EEC AND BREAKDOWN ACCORDING TO DESIGN ORIGIN

	E E C				U S A				Other		Total	Total	TOTAL
	Aircraft	Helicopters	Total	%	Aircraft	Helicopters	Total	%	Aircraft	%	Aircraft	Helicopters	
FR Germany	1 322.9	62.3	1 385.2	31.5	2 707.2	305.4	3 012.6	68.5	-	0.0	4 030.1	367.7	4 397.8
Belgium	334.5	16.9	351.4	56.3	273.3	-	273.3	43.7	-	0.0	607.8	16.9	624.7
Denmark	-	2.2	2.2	0.8	166.2	7.1	173.3	58.9	118.7*	40.3	284.9	9.3	294.2
France	3 591.8	382.9	3 974.7	96.2	159.0	-	159.0	3.8	-	0.0	3 750.8	382.9	4 133.7
Ireland	1.8	2.2	4.0	80.0	1.0	-	1.0	20.0	-	0.0	2.8	2.2	5.0
Italy	618.8	2.5	621.3	33.7	821.0	399.2	1 220.2	66.3	-	0.0	1 439.8	401.7	1 841.5
Netherlands	77.1	37.4	114.5	36.2	202.1	-	202.1	63.8	-	0.0	279.2	37.4	316.6
United Kingdom	2 401.3	284.2	2 685.5	75.4	872.0	4.4	876.4	24.6	0.7	0.0	3 274.0	288.6	3 562.6
E E C	8 348.2	790.6	9 138.8	60.2	5 201.8	716.1	5 917.9	39.0	119.4	0.8	13 669.4	1 506.7	15 176.1

*) Swedish design and manufacture

BREAKDOWN BY MANUFACTURING ORIGIN OF US-DESIGNED AIRCRAFT IN SERVICE IN MEMBER STATES' FLEETS (1977)

Manufactured in the EEC		Manufactured in the U.S.
Italy	86.9 %	13.1 %
Belgium	68.6 %	31.4 %
Netherlands (*)	31.0 %	44.8 %
FR Germany	10.1 %	89.9 %
Ireland	10.0 %	90.0 %
Denmark (*)	0.0 %	90.1 %

(*) Part built neither in the EEC, nor in the United States or Canada.

TRENDS IN THE PROPORTION OF EEC-DESIGNED AIRCRAFT

IN THE FLEETS OF THE MEMBER STATES

	1976	1977	Trends	
			Points	%
FR Germany	23,2	31.5	+ 8.3	+ 35.8
Belgium	34,2	56,3	+ 22.1	+ 64.6
Denmark	0.7	0.8	+ 0.1	+ 14.3
France	94,9	96,2	+ 1,3	+ 1.4
Ireland	97.0	80.0	- 17.0	- 17.5
Italy	45.8	33,7	- 12.1	- 26.4
Netherlands	31.5	36,2	+ 4.7	+ 14.9
United Kingdom	85.2	75.4	- 9,8	- 11.5
E E C	59.9	60,2	+ 0.3	+ 0,5

1977 million EUA

VALUE IN NON-EEC MARKETS OF AIRCRAFT AND HELICOPTERS IN SERVICE IN 1977

BROKEN DOWN BY DESIGN ORIGIN

	E E C				U S A				U S S R				Other	
	Aircraft	Helicopters	Total	%	Aircraft	Helicopters	Total	%	Aircraft	Helicopters	Total	%	Aircraft	%
U S A	233,7	-	233,7	0.4	56 743,9	8 790,4	65 534,3	99,6	-	-	-	0,0	0,7	0,0
Canada	10,1	-	10,1	1,9	419,8	74,6	494,4	92,2	-	-	-	0,0	31,6	5.9
Latin America	499,6	47.9	547,5	23,4	1 332,2	174,1	1 506,3	64,3	41.5	4,2	45,7	2,0	241,8	10.3
Non-EEC Europe (1)	886,2	92,4	978,6	16,8	2 396,3	414,6	2 810.9	48,2	534,8	14.3	549,1	9,4	1 491,2	25,6
Middle East + North Africa (2)	941,2	304.3	1 245,5	9.5	6 576,5	928,1	7 504,6	57,5	3 556,8	184,5	3 741,3	28,7	561,1	4,3
Africa South of the Sahara and Malagasy Republic (3)	195,2	52,1	247,3	33,3	170,0	34,6	204,6	27,5	242,3	1,1	243.4	32,7	48,0	6,5
South Africa + Rhodesia	493,3	99,3	592,6	75.2	55,6	-	55,6	7,0	-	-	-	0,0	140,2	17,8
Asia	609,7	115,7	725.4	9,1	3 050,1	775.4	3 825,5	47,8	2 084.2	74,2	2 158,4	27,0	1 292,7	16,1
Australia	179,3	26,6	205,9	23.6	590,5	54.8	645,3	73,9	-	-	-	0,0	22,0	2,5
Oceania	58.4	3,5	61,9	17.3	245.2	36.3	281.5	78.7	-	-	-	0,0	14,1	4,0
World outside EEC	4 106,7	741.8	4 848,5	4,9	71 580,1	11 282.9	82.863,0	84,3	6 459,6	278,3	6 737.9	6,9	3 843,4	3,9

(1) : Austria, Finland, Greece, Norway, Portugal, Spain, Switzerland, Turkey, Yugoslavia, Sweden

(2) : Abu Dhabi, Algeria, Dubai, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Saudi Arabia, People's Democratic Republic of Yemen, Yemen Arab Republic

(3) : Cameroon, Central African Republic, Chad, Ethiopia, Gabon, Ghana, Ivory Coast, Kenya, Malagasy Republic, Niger, Nigeria, Somalia, Tanzania, Uganda, Republic of Zaire, Zambia

BREAKDOWN OF EEC-DESIGNED AIRCRAFT IN THE FLEETS OF NON-MEMBER COUNTRIES IN 1977

Middle East and North Africa	25.7 %
Non-EEC Europe	20.2 %
Asia	15.0 %
South Africa and Rhodesia	12.2 %
Latin America	11.3 %
Africa South of the Sahara and Malagasy Republic	5.1 %
United States	4.8 %
Australia	4.2 %
Oceania	1.3 %
Canada	0.2 %
	100.0 %

TRENDS IN THE PROPORTION OF EEC-DESIGNED AIRCRAFT

IN THE FLEETS OF NON-MEMBER COUNTRIES

	1976	1977	Trends	
			points	%
United States	0.6	0.4	- 0.2	- 33.3
Canada	3.6	1.9	- 1.7	- 47.2
Latin America	28.3	23.4	- 4.9	- 17.3
Non-EEC Europe	16.2	16.8	+ 0.6	+ 3.7
Middle East and North Africa	12.8	9.5	- 3.3	- 25.8
Africa South of the Sahara and Malagasy Republic	28.4	33.3	+ 4.9	+ 17.3
South Africa and Rhodesia	82.7	75.2	- 7.5	- 9.1
Asia	9.8	9.1	- 0.7	- 7.1
Australia	27.5	23.6	- 3.9	- 14.2
Oceania	19.4	17.3	- 2.1	- 10.8
World outside EEC	5.9	4.9	- 1.0	- 16.9

INTERNATIONAL TRADE

1. The figures on foreign trade in the aerospace industry, which were supplied by the Statistical Office of the European Communities (EUROSTAT), are incomplete in two respects :

   (a) on-board and ground equipment are not included, since national statistics give no indication of the trading position in these items; and

   (b) data for the United Kingdom are not included in the figures on trade in airframes, since the UK supplies statistics on parts and spares only.

2. The two groups of goods under consideration coincide with the following NIMEXE tariff headings :

   - Airframes : 88.02, 88.03.90

   - Engines : 84.06.01/02, 84.06.97, 84.08.11/13, 84.08.31/33, 84.08.71.

3. The EEC has a positive trade balance in the aerospace industry to the tune of approximately 665 million EUA.

   This positive balance is mainly due to Community exports to countries other than North America, the balance being negative with both the United States and Canada.

INTRA-COMMUNITY TRADE IN 1977 : AIR FRAMES

(1000 EUA)

Import / Export	FR. Germany	France	Italy	Netherlands	Belgium Luxembourg	U K (*)	Ireland	Denmark	E E C
FR Germany	-	46 818	11 562	30 203	18 585	20 222	681	1 108	129 179
France	573 990	-	17 812	12 799	22 585	107 263	943	3 523	738 915
Italy	12 759	10 678	-	275	8 273	1 825	1 591	100	35 501
Netherlands	44 255	8 617	403	-	4 888	8 043	73	214	66 493
Belg/Lux.	4 079	13 366	1 159	5 501	-	3 918	438	7	28 468
UK	105 350	92 866	11 736	27 540	12 586	-	1 389	152	251 619
Ireland	107	-	1	78	63	2 435	-	-	2 684
Denmark	552	1 132	158	428	495	255	58	-	3 078
EEC	741 092	173 477	42 831	76 824	67 475	143 961	5 173	5 104	1 255 937
Balance	-611 913	565 438	-7 330	-10 331	-39 007	107 658	-2 489	-2 026	-

Source : EUROSTAT Import Tables

(*) Parts and spares only

INTRA-COMMUNITY TRADE IN 1977 : ENGINES

(1000 EUA)

Import / Export	FR Germany	France	Italy	Netherlands	Bel/Lux.	U K	Ireland	Denmark	E E C
FR Germany	-	13 940	13 628	7 156	10 659	86 642	52	413	132 490
France	16 912	-	6 318	3 417	12 971	82 499	31	921	123 069
Italy	1 097	886	-	151	499	23 899	-	2	26 534
Netherlands	3 166	2 392	812	-	2 212	6 697	19	528	15 826
Bel/Lux.	5 697	6 851	8	818	-	7 193	13	389	20 969
UK	36 096	72 986	27 975	35 185	6 572	-	560	2 898	182 272
Ireland	-	-	-	-	238	3 943	-	-	4 181
Denmark	882	7	35	445	4 013	2 133	-	-	7 515
E E C	63 850	97 062	48 776	47 172	37 164	213 006	675	5 151	512 856
Balance	68 640	26 007	-22 242	-31 346	-16 195	-30 734	3 506	2 364	-

Source : EUROSTAT Import Tables

EXTRA-COMMUNITY TRADE IN 1977 : AIRFRAMES

(1000 EUA)

	Extra-EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance
FR Germany	319 579	87 820	-231 759	300 349	31 667	-268 682	3 815	176	-3 639	443	68	-375
France	235 441	661 984	426 543	219 314	154 567	-64 747	1 554	101	-1 453	-	781	781
Italy	125 024	209 561	84 537	105 677	19 796	-85 881	152	13	-139	-	-	-
Netherlands	86 340	198 733	112 393	88 073	18 460	-69 613	4 931	1 986	-2 945	7	2	— 5
Belg./Lux.	95 900	18 546	-77 354	84 973	5 368	-79 605	891	17	-874	2	14	12
UK (*)	119 836	308 372	188 536	82 451	77 087	-5 364	4 591	12 236	7 645	769	2 663	1 894
Ireland	5 699	2 458	-3 241	586	262	-324	43	86	43	-	-	-
Denmark	30 441	4 371	-26 070	21 908	301	-21 607	43	45	2	1	2	1
E E C	1 018 260	1 491 845	473 585	903 331	307 508	-595 823	16 020	14 660	-1 360	1 222	3 530	2 308

Source : Import-Export Tables

(*) Parts and spares only

EXTRA-COMMUNITY TRADE IN 1977 : ENGINES

(1000 EUA)

	Extra- EEC			United States			Canada			Japan		
	Import	Export	Balance	Import	Export	Balance	Import	Export	Balance	Import	Import	Balance
FR Germany	57 691	73 086	15 395	48 409	28 895	-19 514	961	1 254	293	-	2	2
France	153 547	131 739	-21 808	146 244	21 829	-124 415	665	268	-397	73	122	49
Italy	46 641	36 347	-10 294	40 133	11 160	-28 973	2 714	111	-2 603	16	13	-3
Netherlands	72 944	55 598	-17 346	47 035	26 565	-20 470	925	52	-873	-	-	-
Belg/Lux.	58 909	6 258	-52 651	57 299	698	-56 601	392	-	-392	-	-	-
U K	272 522	564 226	291 704	193 321	230 261	36 940	17 672	20 915	3 243	4 213	17 503	13 290
Ireland	320	988	668	77	248	171	-	-	-	-	-	-
Denmark	18 279	4 390	-13 889	17 450	944	-16 506	208	71	-137	-	-	-
E E C	680 853	872 632	191 779	549 968	320 600	-229 368	23 537	22 671	-866	4 302	17 640	13 338

Source : EUROSTAT : Import - Export Tables

TURNOVER OF THE AEROSPACE INDUSTRY

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

   Since AIA (the Italian industrial association) was unable to provide a breakdown for the entire turnover of the Italian aerospace industry, the relevant figures (approximately 3.8 %) were obtained by estimation.

2. The items considered in the various subsectors are the following :

   (a) <u>Airframes</u>: (aeroplanes, helicopters, gliders), missiles, their parts and spares.

   (b) <u>Engines</u> : (piston, propeller-turbine and jet engines), their parts and spares, equipment and accessories, for installation in the equipment mentioned under a.

   (c) <u>Equipment</u> : all equipment for airframes(see a.) and space (see d.) (finished products, parts and spares, sub-assemblies) including test and ground-training equipment.

   (d) <u>Space</u> : space vehicles, satellites, launch vehicles, ground installations.

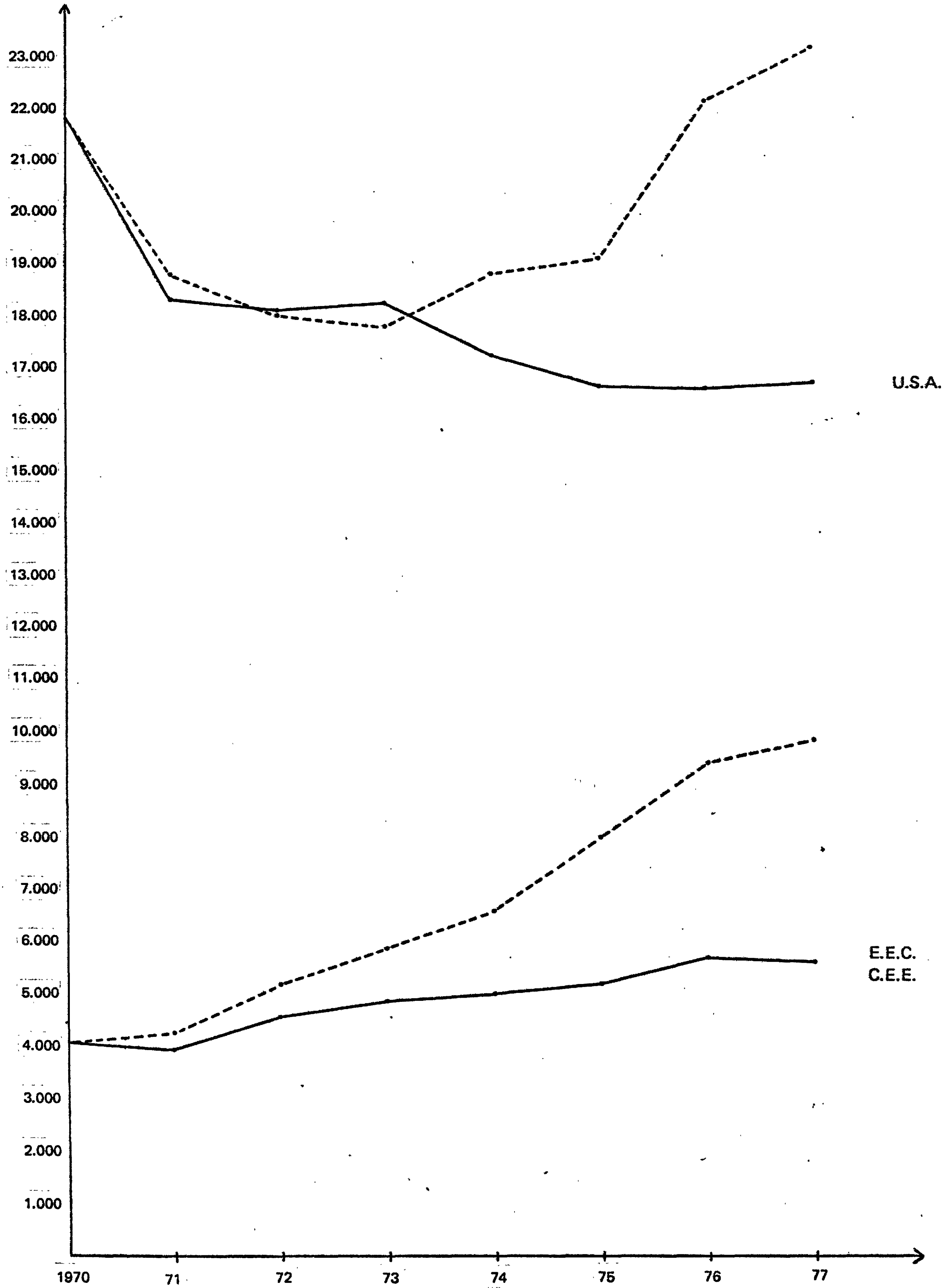
3. For the first time since 1971, the European aerospace industry's turnover in 1977 fell in comparison with the 1976 figure, at constant prices and exchange rates. On the other hand, the United States' industry was able in 1977, for the first time since 1970, to halt the decline in its turnover and even register a slight increase.

4. In 1977 an increased proportion of turnover was taken up by military contracts rather than civil contracts : 74.6 % in 1977, as against 72.2 % in 1976 and 72.1 % in 1975. Similarly, in all branches of the industry, the share of turnover represented by public contracts has increased markedly in comparison with previous years, at the expense of the proportion of exports, which is on the decrease.

(7)

FINAL TURNOVER

CHIFFRES D'AFFAIRES FINALS



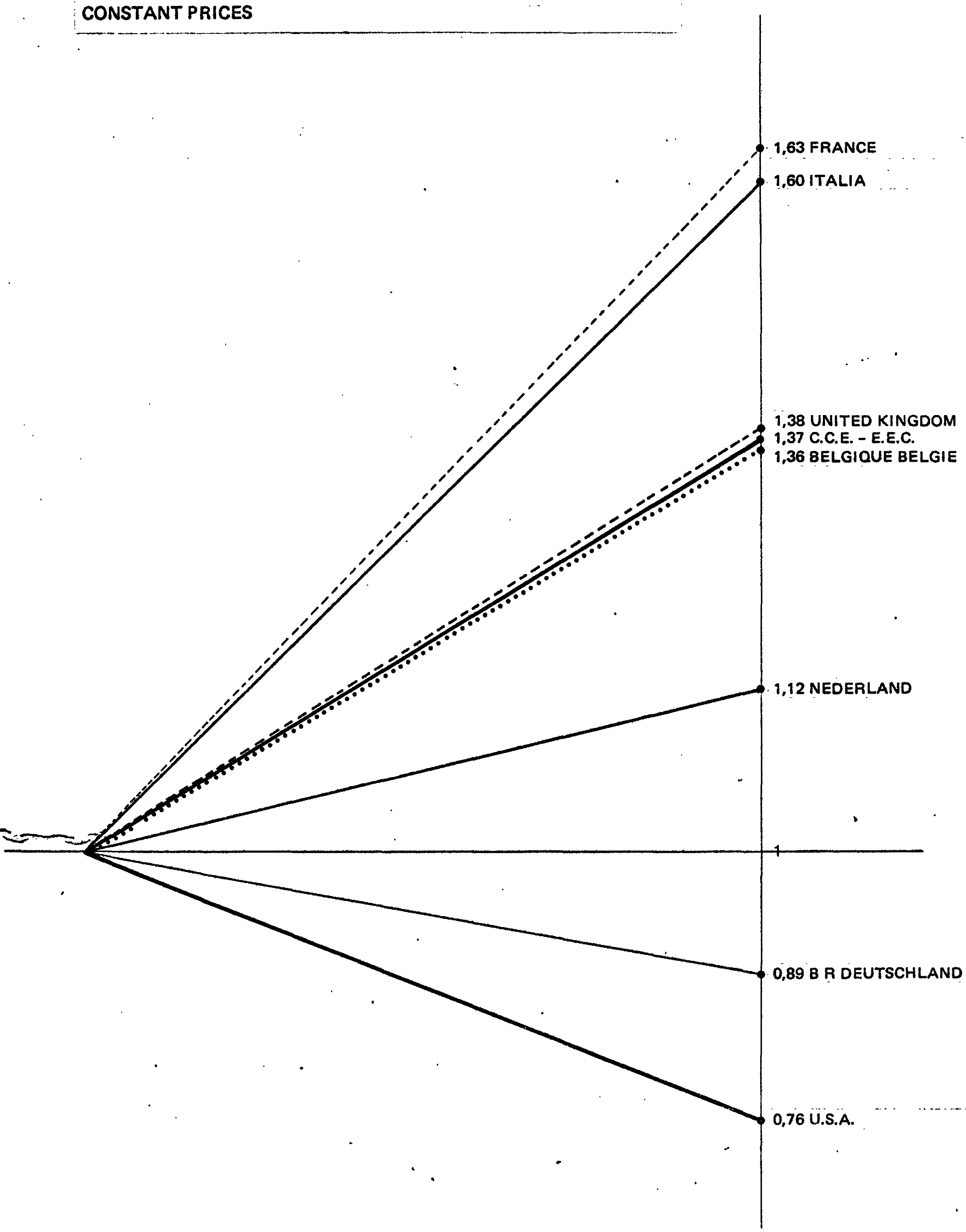
PRIX ET TAUX DE CHANGE 1970
1970 PRICES AND RATES OF EXCHANGE

PRIX COURANTS
CURRENT PRICES

②

RAPPORTS 1970/1977 ENTRE LES CHIFFRES D'AFFAIRES FINALS EN VALEUR CONSTANTE

RATIO BETWEEN 1970/1977 FINAL TURNOVER AT CONSTANT PRICES



FINAL TURNOVER (million EUA)

	FRG	B	FR	I	NL	UK	EEC (1)	USA
(current prices)								
1970	770	39	1 310	227	113	1 576	4 035	21 779
1971	823	53	1 386	219	119	1 610	4 210	18 750
1972	908	65	1 529	359	169	2 125	5 155	17 993
1973	1 138	61	1 993	353	160	2 137	5 842	17 437
1974	1 213	74	2 263	361	141	2 500	6 552	18 735
1975	1 279	99	2 924	494	227	2 894	7 917	19 016
1976	1 531	111	3 790	491	280	3 106	9 309	22 046
1977	1 433	114	3 933	568	301	3 425	9 774	23 017
(1970 prices and exchange rates)								
1970	770	39	1 310	227	113	1 576	4 035	21 779
1971	764	50	1 310	205	110	1 479	3 918	18 292
1972	761	58	1 359	319	139	1 898	4 534	18 057
1973	823	48	1 580	313	115	1 988	4 867	18 168
1974	771	50	1 690	295	88	2 081	4 975	17 178
1975	746	59	1 779	358	125	2 071	5 138	16 587
1976	808	58	2 164	346	134	2 122	5 632	16 519
1977	689	53	2 130	363	126	2 181	5 542	16 632

(1) The sum of the final turnovers of all the 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

	United States		EEC (1)		Canada		Japan	
	million EUA (current prices)	%	million EUA (current prices)	%	million EUA (current prices)	%	million EUA (current prices)	%
972	17 993	74.6	5 155	21.4	562	2.4	396	1.6
1973	17 437	72.0	5 842	24.1	537	2.2	401	1.7
1974	18 735	70.7	6 552	24.7	625	2.4	572	2.2
1975	19 016	67.8	7 917	28.2	502	1.8	617	2.2
1976	22 046	67.2	9 309	28.3	726	2.2	746	2.3
1977	23 017	66.8	9 774	28.3	718	2.1	969	2.8

(1) - see note on page 38.

Trend in final turnover of the aerospace industry and GDP, 1970 - 1977

(in EUA at constant prices)

	percentage over the period		mean annual growth rate	
	Turnover	GDP	Turnover	GDP
FR Germany	- 10,5	19.9	nég.	2,7
Belgium	35,9	27.9	4.5	3,6
France	62,6	31,1	7,2	4,0
Italy	59,9	21.2	6,9	2,8
Netherlands	11.5	26,4	1,6	3,4
UK	38,4	14.3	4.7	1,9
EEC (1)	37,4	22,3.	4,6	2,9
USA	- 23,6	23,9	nég.	3,1

(1) - See note on page 38

Percentage of GDP represented by turnover of the aerospace industry 1977

(in EUA at constant prices)

FR Germany	0.32
Belgium	0,17
France	1.18
Italy	0,33
Netherlands	0,32
United Kingdom	1,60
EEC (1)	0,75
USA	1,40

(1) - See note on page 38

OVERALL TURNOVERS OF THE MEMBER STATES IN 1977

(million EUA at current prices)

	million EUA	breakdown by subsector (%)			
		Airframe	Engines	Equipment	Space
FR Germany	1 735.6	58.2	10.7	18.2	12,9
Belgium	117.8	41.9	22.1	14,3	21,7
France	4 795,6	61.7	18.5	17,9	1,9
Italy	708,7	64.4	20.1	12,0	3,5
Netherlands	301,0	84,1	-	7.4	8,5
United Kingdom	3 866.9	40.2	32,0	26.2	1.6
E E C	11 525.6	54.5	21,5	20.1	3.9
U S A (i)	-	45.6	14,1	18,4	21.9

(i) Figures estimated from final turnover

FINAL TURNOVER

Breakdown into civil and military contracts

	E E C			U S A		
	million EUA at current prices	civil %	military %	million EUA at current prices	civil %	military %
1974	5 732	30	70	18 735	35	65
1975	6 848	28	72	19 016	33	67
1976	7 974	28	72	22 046	35	65
1977	8 274	25	75	23 017	36	64

PROPORTION OF FINAL TURNOVER OF EACH MEMBER STATE EXPORTED TO INDUSTRIAL UNDERTAKINGS IN OTHER MEMBER STATES (%)

	1972	1973	1974	1975	1976	1977
FR Germany	7.0	4.8	14.7	12.1	22.8	28.7
Belgium	45.6	42.0	56.9	60.3	59.4	54.4
France	9.3	10.7	9.3	10.8	7.8	8.4
Italy	11.0	14.6	11.0	15.0	9.1	7.4
Netherlands	1.0	2.3	5.6	6.3	7.5	9.7
UK	7.8	13.0	13.6	15.4	18.0	18.2
TOTAL	8.6	11.3	12.5	13.5	14.3	15.3

BREAKDOWN OF FINAL EEC TURNOVER IN 1977 BY CUSTOMER CATEGORY

million EUA at current prices)

Customers	Civil	Military	TOTAL
States	412.9	4 959.4	5 372.3
- R+D contracts	243.7	1 045.9	1 289.6
- modifications, repairs, maintenance	30.6	556.5	587.1
- sales	138.6	3 357.0	3 495.6
Aerospace manufacturers in non-member countries	148.4	187.6	336.0
End users	1 534.1	1 031.8	2 565.9
- EEC	1 104.1	-	1 104.1
- non member countries	430.0	1 031.8	1 461.8
TOTAL	2 095.4	6 178.8	8 274.2
%	25	75	100

PERCENTAGE BREAKDOWN OF FINAL EEC TURNOVER BY CUSTOMER CATEGORY

Customers	1975		1976		1977	
	civil	military	civil	military	civil	military
States	6.4	50.2	4.6	46.9	5.0	59.8
- R&D contracts	5.0	17.9	3.4	16.9	2.9	12.6
- modifications, repairs, maintenance, sales	1.4	32.3	1.2	30.0	2.1	47.2
Aerospace manufacturers in non-member countries	3.9	1.9	2.5	2.3	1.8	2.3
End users	17.6	20.0	20.7	23.0	18.6	12.5
- EEC	8.2	-	12.9	-	13.4	-
- non-member countries	9.4	20.0	7.8	23.0	5.2	12.5
TOTAL	27.9	72.1	27.8	72.2	25.4	74.6

BREAKDOWN OF FINAL EEC TURNOVER BY MARKET

(%)

	1974	1975	1976	1977
1. Aerospace				
- State	58.9	56.6	51.5	64.9
- Domestic civil market	8.8	8.2	12.9	13.4
- Exports	32.3	35.2	35.6	21.7
2. Aviation				
- State	58.2	56.3	51.0	65.4
- Domestic civil market	8.5	7.6	12.4	12.5
- Exports	33.3	36.1	36.6	22.1
2.1 Airframes				
- State	54.8	52.5	46.3	65.3
- Domestic civil market	7.6	6.8	12.8	12.4
- Exports	37.6	40.7	40.9	22.3
2.2 Engines				
- State	59.4	60.4	58.2	65.8
- Domestic civil market	9.5	7.9	11.9	14.7
- Exports	31.1	31.7	29.9	19.5
2.3 Equipment				
- State	67.9	63.8	62.0	65.3
- Domestic civil market	10.3	10.3	11.4	10.1
- Exports	21.8	25.9	26.6	24.6

BREAKDOWN OF STATE BACKING BY CONTRACT TYPE

	E E C (1)		UNITED STATES (2)	
	million EUA at current prices	%	million EUA at current prices	%
R + D contracts	1 289.6	24	4 225	29.1
civil	243.7	4.5	-	-
military	1 045.9	19.5	-	-
Purchase and maintenance contracts	4 082.7	76	10 280	70.9
civil	169.2	3.1	-	-
military	3 913.5	72.9	-	-
	5 372.3	100 -	14 505	100 -

(1) 1977

(2) 1976

BREAKDOWN BY SUBSECTOR OF STATE BACKING IN THE EEC IN 1977

	million EUA at current prices	%
Airframes	3 350.7	62.4
Engines	1 087.6	20.2
Equipment	784.4	14.6
Space	149.6	2.8
Total	5 372.3	100 -

BREAKDOWN OF STATE BACKING FOR THE EEC AVIATION INDUSTRY BY CONTRACT AND SUBSECTOR

	1974	1975	1976	1977
AIRCRAFT				
- R + D contracts				
civil	9.7	6.2	3,0	1,9
military	35.4	38.3	39.5	15,8
- Purchase & maintenance contracts				
civil	1.3	1.4	1,6	2,4
military	53,6	54,1	55.9	79.9
Total	100,0	100,0	100,0	100,0
ENGINES				
- R + D contracts				
civil	13.4	9.4	6.1	3.8
military	18.6	27.6	28,8	29,7
- Purchase & maintenance contracts				
civil	4,0	4.3	3.5	3,6
military	64,0	58.7	61,6	62,9
Total	100.0	100,0	100,0	100,0
EQUIPMENT				
- R + D contracts				
civil	0,6	1,5	0,3	0,3
military	21,5	22.5	21.5	24,2
- Purchase & maintenance contr.				
civil	4,9	3.5	3,2	5,8
military	73,0	72.5	75,0	69,5
Total	100,0	100,0	100,0	100.0

EMPLOYMENT IN THE AEROSPACE INDUSTRY

1. The figures on employment in the European aerospace industry have been taken from the results of the annual survey conducted in collaboration with the national industrial associations.

   Since AIA (the Italian industrial association) was unable to provide detailed figures, 2 180 units should be added to the figures for Italy in the various tables.

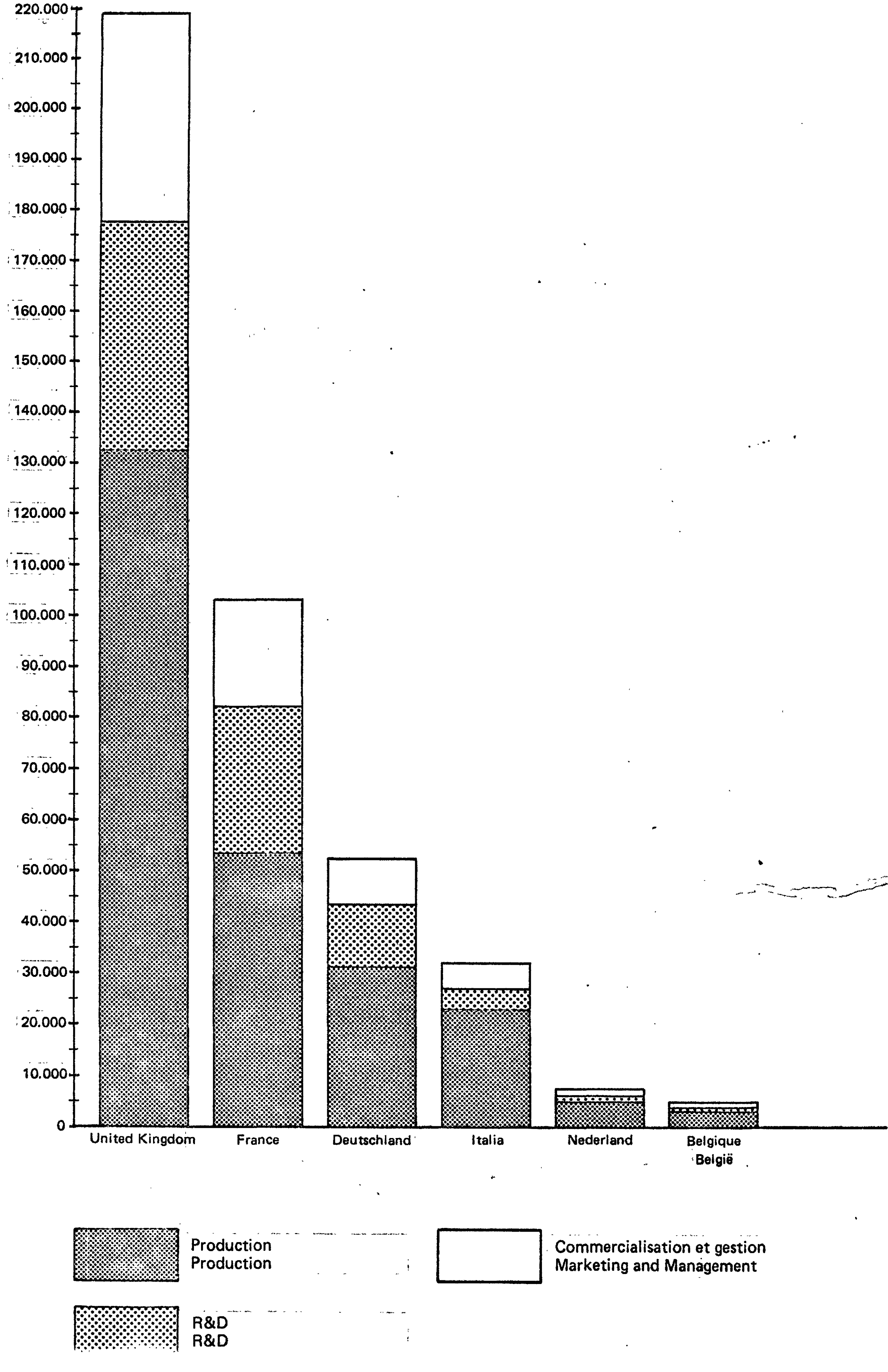
2. The production items taken into consideration in the various subsectors are the same as those given in the previous Chapter on turnover.

3. The annual fluctuations in employment in the Community render it impossible to detect a definite trend; on the whole it can be considered that employment in this sector is relatively stable and that this stability, when compared with the increase in turnover, is a sign of increased productivity.

4. The tables showing the distribution of the workforce according to occupational grading should be interpreted with a certain amount of caution, since there are still difficulties in harmonizing definitions at international level.

EFFECTIFS DANS LA C.E.E. AU 31 DECEMBRE 1977
Répartition par pays

EMPLOYMENT IN THE E.E.C. UP TO 31st DECEMBER 1977
Breakdown by Country



EMPLOYMENT TRENDS

	1972	1973	1974	1975	1976	1977
FR Germany	52 455	52 985	52 982	51 914	51 367	52 416
Belgium	4 941	4 380	4 422	4 025	5 015	4 895
France	108 525	106 132	106 769	108 915	107 454	103 295
Italy	28 500	30 000	30 000	30 768	31 991	32 080
Netherlands	6 600	7 000	6 555	7 682	7 865	7 320
United Kingdom	207 500	201 700	210 100	233 792	227 402	219 251
E E C	408 521	402 197	410 828	437 096	431 094	419 257
U S A	922 000	948 000	965 000	942 000	899 000	890 000
Canada	28 800	31 700	28 400	27 300	25 300	27 400
Japan	26 000	26 026	25 550	26 746	n.d.	23 756

WORKFORCE IN THE EEC ON 31 DECEMBER 1977

Breakdown by country

	FRG	B	F	I	NL	UK	E.E.C.	%
Occupational grading								
1. Engineers & managerial staff	7 496	474	14 540	845	655	44 411	68 421	16,3
2. Executive staff								
- technical	13 626	771	36 830	7 750	1 164	30 649	90 790	21,6
- administrative	9 905	708	12 554	4 305	1 535	34 983	63 990	15,3
3. Skilled workers	17 345	2 660	39 371 (3. and 4.)	13 805	3 284	89 293	196 056 (3. and 4.)	46,8 (3. and 4.)
4. Non-skilled workers	4 044	282		5 375	682	19 915		
Total	52 416	4 895	103 295	32 080	7 320	219 251	419 257	100,-
Main activity								
1. R&D	12 472	202	28 819	3 835	1 098	45 236	91 662	21,9
2. Production	31 220	3 698	53 507	23 330	5 030	132 648	249 433	59,5
3. Marketing and management	8 724	995	20 969	4 915	1 192	41 367	78 162	18,6
Total	52 416	4 895	103 295	32 080	7 320	219 251	419 257	100,-

WORKFORCE IN THE EEC ON 31 DECEMBER 1977

BREAKDOWN BY SUBSECTOR

	Airframes & Space	Engines	Equipment	TOTAL
Occupational grading				
1. Engineers + managerial staff	33 018	15 969	19 434	68 421
2. Executive staff				
- Technical	50 096	16 125	24 569	90 790
- Administrative	34 391	12 841	16 758	63 990
3. Skilled workers 4. Non-skilled workers	89 193	54 126	52 737	196 056
TOTAL	206 698	99 061	113 498	419 257
Main activity				
1. R&D	43 409	23 930	24 323	91 662
2. Production	122 567	57 658	69 208	249 433
3. Marketing and management	40 722	17 473	19 967	78 162
TOTAL	206 698	99 061	113 498	419 257
Breakdown (%)	49.3	23.6	27.1	100.-

BREAKDOWN OF THE WORKFORCE IN THE EEC ON 31 DECEMBER 1977

(airframes and space subsectors)

	FRG	Belgium	France	Italy	Netherlands	United Kingdom	EEC
Occupational grading							
1. Engineers + managerial staff	4 940	337	9 577	575	453	17 136	33 018
2. Executive staff							
- technical	9 751	482	20 712	5 250	753	13 148	50 096
- administrative	7 353	431	7 962	3 155	1 054	14 436	34 391
3. Skilled workers	9 990	2 038	19 442	9 020	2 7[illegible]	31 960	89 193
4. Non-skilled workers	2 820	52		3 780	404	6 965	
TOTAL	34 854	3 340	57 693	21 780	5 386	83 645	206 698
Main activity							
- R&D	9 240	136	15 231	2 800	1 020	14 982	43 409
- Production	19 687	2 318	31 038	16 015	4 052	49 457	122 567
- Marketing and management	5 927	886	11 424	2 965	314	19 206	40 722
TOTAL	34 854	3 340	57 693	21 780	5 386	83 645	206 698

BREAKDOWN OF THE WORKFORCE IN THE EEC ON 31 DECEMBER 1977

(Equipment subsector)

	FRG	B	F	I	NL	U K	E E C
Occupational grading							
- Engineers + managerial staff	1 746	47	2 011	120	202	15 308	19 434
- Executive staff							
. technical	2 684	153	8 913	1 505	411	10 903	24 569
. administrative	1 419	143	1 882	570	481	12 263	16 758
- Skilled workers	3 473	216	10 763	2 110	562	26 464	52 737
- Non-skilled workers	899	11		565	278	7 396	
TOTAL	10 221	570	23 569	4 870	1 934	72 334	113 498
Main activity							
- R & D	2 296	25	6 575	735	78	14 614	24 323
- Production	6 352	472	12 208	3 505	978	45 693	69 208
- Marketing + management	1 573	73	4 786	630	878	12 027	19 967
TOTAL	10 221	570	23 569	4 870	1 934	72 334	113 498

BREAKDOWN OF THE WORKFORCE IN THE EEC ON 31 DECEMBER 1977

(Engines subsector)

	FRG	B	FR	I	NL	U K	E E C
Occupational grading							
1. Engineers + managerial staff	810	90	2 952	150	-	11 967	15 969
2. Executive staff							
- Technical	1 191	136	7 205	995	-	6 598	16 125
- Administrative	1 133	134	2 710	580	-	8 284	12 841
3. Skilled workers	3 882	406	9 166	2 6[illegible]	-	30 869	54 126
4. Non-skilled workers	325	219		1 030		5 554	
Total	7 341	985	22 033	5 430	-	63 272	99 061
Main activity							
1. R&D	936	41	7 013	300	-	15 640	23 930
2. Production	5 181	908	10 261	3 810	-	37 498	57 658
3. Marketing + management	1 224	36	4 759	1 320	-	10 134	17 473
Total	7 341	985	22 033	5 430	-	63 272	99 061

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 in their published annual balance sheets.

2. The data relating to General Electric, Pratt & Whitney and Hawker-Siddeley (until its merger with BAC) cover only their aviation operations and do not include all the activities of the groups to which they belong.

TURNOVER OF THE MAJOR EUROPEAN AND US AEROSPACE COMPANIES

(million EUA at current prices)

Country	Company	1973	1974	1975	1976	1977
USA	Boeing	2 713	3 125	3 000	3505	3 522
USA	McDonnell Douglas	2 442	2 575	2 627	3 169	3 106
USA	Lockheed	2 242	2 746	2 734	2 864	2 956
USA	General Dynamics	1 335	1 647	1 748	2 284	2 542
USA	Pratt & Whitney	1 381	1 624	1 760	2 204	2 254
USA	General Electric	1 310	1 605	1 591	1 404	n.d.
USA	Rockwell Int.	773	1 053	1 183	n.a.	1 560
USA	Northrop	n.a.	715	796	1 131	1 403
USA	Grumman	884	931	1 089	1 360	1 402
France	Aérospatiale	651	817	1 353	1 684	1 695
UK	British Aerospace (1)	-	-	-	-	1 314
UK	Rolls-Royce	859	919	1 073	998	1 077
France	Dassault-Breguet	634	636	798	1 109	1 016
UK	B.A.C.	346	532	547	777	-
FRG	M.B.B.	372	481	503	581	661
FRG/NL	VFW-Fokker	427	441	528	628	642
UK	Hawker-Siddeley Aviation	401	368	433	441	-
France	SNECMA	318	308	359	474	409
FRG	Dornier	149	169	124	177	273
Italy	Agusta (group)	80	93	118	209	254
UK	Westland (Group)	137	161	193	211	213
France	Turbomeca	87	112	155	176	167
France	S.E.P.	-	-	144	147	162
FRG	M.T.U. (Munich)	169	171	149	144	153
Italy	Aeritalia	116	103	142	178	134
Italy	FIAT Aviazione	41	42	71	92	100
Belgium	SABCA	25	28	35	41	53

(1) British Aerospace is the result of the merger of BAC and Hawker-Siddeley in 1977.

WORKFORCE OF THE

MAJOR EUROPEAN AND US AEROSPACE COMPANIES

Country	Company	1973	1974	1975	1976	1977
USA	General Dynamics	62 400	63 600	63 800	71 600	73 700
USA	British Aerospace	-	-	-	-	68 000
USA	Boeing	63 200	75 400	72 600	65 400	66 900
USA	McDonnell Douglas	78 799	70 739	62 830	57 867	61 577
UK	Rolls Royce	59 988	60 515	60 941	60 000	58 000
USA	Lockheed	66 900	62 100	57 567	55 100	55 100
USA	Pratt & Whitney	33 000	33 500	43 000	44 000	42 000
France	Aérospatiale	41 399	40 242	36 000	35 882	34 393
USA	Northrop	n.a.	26 200	23 300	24 000	26 200
USA	General Electric	23 000	23 000	n.a	22 000	22 500
FRG	M.B.B.	18 697	19 978	20 030	20 123	19 000
FRG/NL	VFW-Fokker	17 120	17 978	18 565	18 543	17 473
France	Dassault-Breguet	14 855	15 161	15 000	14 980	14 819
UK	Westland (group)	11 414	11 904	12 599	13 000	12 894
France	SNECMA	14 160	14 225	13 850	10 900	10 300
Italy	AERITALIA	9 100	9 283	9 000	9 284	9 306
Italy	Agusta (group)	3 097	3 392	3 700	8 200	8 245
FRG	DORNIER	7 136	7 000	6 723	6 641	6 848
FRG	MBB (Munich)	6 118	5 711	5 514	5 574	5 819
France	Turbomeca	4 436	4 558	4 700	4 399	4 480
Italy	FIAT Aviazione	2 400	2 460	2 500	2 300	2 550
France	SEP	-	-	2 279	2 456	2 340
Belgium	SABCA	1 800	1 750	1 750	1 840	1 835
UK	BAC	34 124	34 994	35 000	34 528	-
UK	Hawker-Siddeley	35 000	35 000	32 000	33 800	-

DEGREE OF CONCENTRATION

(Percentage of Final Aerospace Industry Turnover)

	EEC		USA	
	1972	1977	1972	1977
Largest Company	17.6	17.3	13.5	15.3
Two Largest Companies	30.3	30.6	25.7	28.8
Three " "	38.9	41.7	37.5	41.6
Four " "	47.0	52.1	45.1	52.7
Five " "	54.4	58.8	52.6	62.5
Six " "	61.6	65.4	59.9	68.6
Seven " "	68.4	69.6	63.2	75.4
Eight " "	74.3	71.8	66.6	81.5

TURNOVER OF COMMUNITY

HELICOPTER MANUFACTURERS

(million EUA at current prices)

Company / year		1973	1974	1975	1976	1977
Aérospatiale	(F)	204.15	232.59	282.11	402.32	429.90
Agusta	(I)	80.05	93.19	118.51	137.64	182.29
MBB	(FRG)	67.44	81.58	66.18	49.70	41.69
Westland	(UK)	94.80	104.93	133.86	154.95	143.51
Total		446.44	512.29	600.66	744.61	797.39

WORKFORCE OF COMMUNITY HELICOPTER MANUFACTURERS

IN 1977

Aérospatiale	7 689
Agusta	6 745
MBB	724
Westland	9 026
Total :	24 184

TURNOVER OF
LIGHT AND EXECUTIVE AIRCRAFT
MANUFACTURERS

(million EUA at current prices)

	1973	1974	1975	1976	1977
Community Companies	220.2	233.5	457.7	354.8	380.7
American Companies	672.5	760.5	833.9	1 099.3	1 359.3

PUBLIC FINANCING OF R&D IN THE CIVIL AEROSPACE INDUSTRIES

1. The figures given in the following table were supplied by SOEC (1). They include finance granted both to industry and to research centres, laboratories, universities, etc.

2. The approximation can be made -Belgian statistics for the financing of aviation R&D are missing- that for the EEC as a whole one-third of R&D finance is devoted to civil aviation R&D and two-thirds to space R&D.

3. Although the comparison of statistics originating from different sources can sometimes lead to imprecise results, it should be pointed out, for guidance only, that the difference between the figures given in the following table and those listed in the Chapter on turnover reveals the share of public financing which is granted to non-industrial bodies. It would therefore appear that approximately 90% of aerospace R&D financing goes to industry and the remaining 10% to other research institutions.

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(1) Statistical Office of the European Communities

PUBLIC FINANCING OF AEROSPACE R&D

1977	Civil Aviation Manufacture			Space			Total		
	a	b	c	a	b	c	a	b	c
FRG	63 795	11.4	1.3	209 691	37.6	4.3	273 486	49.0	5.7
France	138 653	23.4	3.9	186 227	31.5	5.3	324 880	54.9	9.2
Italy	680	0.5	0.1	58 897	45.8	8.3	59 577	46.1	8.4
Netherlands	12 357	17.1	1.4	27 722	38.4	3.1	40 079	47.4	4.5
Belgium	...	...	...	25 421	32.4	5.0	...	...	...
UK	53 592	28.4	2.1	62 991	31.9	2.5	116 583	48.2	4.6
Ireland	-	-	-	168	2.2	0.4	168	2.2	0.4
Denmark	-	-	-	9 674	39.7	4.2	9 674	39.7	4.2
Commission	-	-	-	1 896	8.0	0.9	1 896	8.0	0.9
Total	269 077	16.1	2.1	582 687	34.8	4.3	826 343	49.4	6.1

a. '000 EUA at current prices
b. % of appropriations for Productivity, Industrial Technology and fare R&D
c. % of total R&D appropriations
d. financing provided by the Commission of the European Communities

EXCHANGE RATES

1 EUA =

	1970	1971	1972	1973	1974	1975	1976	1977	1978
DM	3.741	3.645	3.576	3.276	3.083	3.049	2.815	2.648	2.556
FF	5.677	5.772	5.657	5.467	5.733	5.319	5.344	5.606	5.740
LIT	638.8	647.4	654.2	716.4	775.7	809.5	930.1	1006	1080.2
HFL	3.700	3.657	3.599	3.428	3.202	3.134	2.955	2.800	2.754
BFR/LFR	51.11	50.86	49.36	47.80	46.39	45.56	43.16	40.88	40.06
UKL	0.4259	0.4285	0.4489	0.5023	0.5098	0.5600	0.6215	0.6537	0.6639
DKR	7.666	7.752	7.789	7.415	7.259	7.122	6.761	6.855	7.019
USD	1.022	1.047	1.121	1.231	1.192	1.240	1.118	1.141	1.274
CAD	-	-	1.111	1.232	1.166	1.262	1.102	1.214	1.454
YEN	368.0	363.8	339.7	333.1	347.4	367.6	331.2	305.8	267.1