

THE EUROPEAN AEROSPACE INDUSTRY  
TRADING POSITION AND FIGURES

COMMENTS

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(Commission Staff Working Paper)

We have the pleasure to present you with a summary of the comments of the 1986 edition of the document "The European aerospace industry - Trading position and figures".

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Commission of the European Communities  
General Directorate "Internal Market and Industrial Affairs"  
R.P. 6 - 4/26 (III/A/5)  
200 rue de la Loi  
1049 Brussels  
Belgium

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THE EUROPEAN AEROSPACE INDUSTRY - TRADING POSITION AND FIGURES (COMMENTS)  
(III-A-5 - RP6 4/26)

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## PREFACE

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

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

This analysis was able to be furthered owing mainly to the cooperation of AECMA member associations which have helped the Commission conduct a survey on turnover and employment among companies in the sector. This research is elaborated yearly.

Data for Spain and Portugal are presented separately. They will be included in Community figures in the next edition.

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## CHAPTER 1

### C I V I L   A I R   T R A F F I C

1. According to ICAO estimations, world scheduled passenger traffic increased 8% in 1985 (revenue passengers-kms). This is the highest growth rate since 1979. Aircraft load factor increased by 1% to reach 66%. Revenue Passengers-kms figures increase faster than revenue passengers figures, which reveals longer flights.
2. After growth rates of 9.6% and 13.6% in 1983 and 1984 respectively, the number of freight tons-kms grew by 1.3% only in 1985. The diminution of freight carried was slightly compensated by longer distances.
3. The volume of scheduled traffic of European companies members of the AEA grew by 6.4% in 1985 (1.7% percentage point below world growth). The analysis by traffic in 1985 reveals a recovery of the intra-European and intercontinental traffic (6.3% and 6.5% respectively) and a slower increase in domestic traffic (2.8%).
4. The breakdown of 1984 world scheduled traffic shows growth rates, close to the world average (7%), for companies which are members of the AEA (6%) and of the US (6.2%), a slower growth rate in the USSR (4.2%) and an acceleration for other companies (9.2%).

## CHAPTER 2

### THE CIVIL TRANSPORT MARKET

1. The figures analyzed 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 turboprops built in Europe and the United States.
2. In 1983 the share of European companies' fleets represented 18% of the world fleet (value), 19.5% for long-haul carriers and 17% for short/medium-haul carriers. The penetration of aircraft built in the Europe (in value) amounted to 32.2% in the EC, 4.4% in the US and 22% in other countries (17.7% in overall world fleet).
3. 1985 was a record year for the aircraft manufacturers. Boeing with 390 firm orders in 1985 (60% of the market), keeps a dominant position, but the share of Airbus showed a notable increase. The 92 orders recorded in 1985 present a triplex of these in 1984.
4. In 1984, commuters fleets in the EEC represented 12.6% of the world fleet (in value). The penetration of aircraft built in Europe amounted to 82.4% in the EC, 38.4% in the US and 72.4% in other countries (59.1% in the overall world fleets).

## 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 "Bureau Veritas".
2. In 1984, the fleet of light aircraft in the EEC amounted to 20.755 aircraft ( 3% fleet decrease over 1983). The penetration of aircraft built in the EEC (fleet number) represented 56.2% for single-engined aircraft, 11.7% for twin-engined aircraft and 61.7% for executive jets. The rest is mainly from US design.
3. The data on the civil and parapublic helicopter fleet are those provided by the Société Aérospatiale.

Over the period 1960-1984, the fleet of civil and parapublic helicopters in the EEC increased ten times in number. The share of helicopters built in the EEC grew at a constant pace to reach 35% in 1984. The helicopter fleet in North America amounts to about five times the EEC fleet. The share of helicopters built in the EEC grew between 1960 and 1984 to reach 9.1% at the end of the period.

4. Data on the commercial helicopter fleet (in value) were prepared for the Commission by the ITA (Air Transport Institute, Paris).

In 1984, the share of commercial helicopter fleet in the EEC represented 21.1% of overall European and US fleets (in value). The penetration of aircraft built in Europe (in value) amounted to 50.6% in the EEC and 12.1% in the US (overall penetration of 22.8%).

## CHAPTER 4

### THE MILITARY AIRCRAFT FLEETS

1. It is not possible to present the part "Aircraft" of the chapter entitled "Military Aircraft Fleets" due to a modification in the corresponding data banks.

The current survey will provide more complete information for the next publication of this document.

2. Data on the military helicopter fleets were provided by the Société AEROSPATIALE.

While the military helicopter fleet in the EEC increased slowly between 1970 and 1984, the US fleet decreased by half between 1970 and 1984, after the US retreat from South-East Asia.

Aircraft built in the EEC amounts to about 50% of the EEC fleet, while the helicopter fleet in North America is made up of helicopters built in the US only.



## 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 air-craft 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 on these products, four groups of products have been created to cover these NIMEXE positions, as follows:
  - Airframes
  - Engines
  - Equipment
  - Other Material
4. Data concerning the United Kingdom are not complete and do not allow the subdivision as indicated at paragraph 3.
5. Over the period 1981-1985, the EEC-10 aeronautic trade balance has become again positive (except for equipment). At the same time, the trade deficit with the USA has decreased considerably (positive for the engine sector).

75% of EEC-10 aeronautic imports come from non-EEC Member countries, out of which the USA (45%).

80% of EEC-10 aeronautic exports are for non-EEC Member countries (with the USA for 30%).

## 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 carried out 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. The analysis is based on **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.

In contrast, **final turnover in each Member State** does not include transactions between aerospace companies within individual Member States and, therefore, it shows 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).

3. The items considered in the various subsectors are as follows:
  - (a) Airframes : (Aeroplanes, helicopters, gliders), missiles and engines, 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 (d) (finished products, part and spares, sub-assemblies), including test and ground-training equipment.
  - (d) Space : Space vehicles, satellites, launch vehicles, ground installation.
4. In current value, the EEC aerospace turnover represents one third of the US aerospace turnover. The Japanese aerospace turnover amounts to less than 10% of EEC aerospace turnover.

In 1976-1977 growth of the aerospace sector began to recover after a period of stagnation: the annual growth rate doubled between the periods 1970-1976 and 1977-1982.

In order to evaluate the European performance one compares these growth rates to the US and Japanese rates at constant prices and exchange rates. This shows that in the US and Japan, the aerospace industry started to recover in 1977, but that growth was higher in the EEC than in the US: this is explained by a latter development in Europe. In Japan, growth rates are also higher than in the US and for the same reason.

The subsector "Airframes, Missiles and Space" represents about 3/5 of EEC aerospace turnover. The subsectors "engines" and "equipment" amount to about 1/5 and 1/4 respectively of the aerospace turnover. The share of the subsector "Equipment" increased during the last 10 years, at the loss of that of "Airframes, Missiles and Space".

The share of the aerospace internal public market represents about 30% of EEC aerospace turnover (7% of the civil turnover and 40% of the military turnover). The share of the internal public market in the various subsectors is as follows:

- airframes : 28%
- engines : 24%
- equipment : 37%
- space : 36%

The share of the aerospace internal commercial market represents about 40% of EEC aerospace turnover (53% of the civil turnover and 33% of the military turnover). The share of the internal commercial market in the various subsectors is as follows:

- airframes : 34%
- engines : 42%
- equipment : 47%
- space : 55%

EEC aerospace exports, in current value, had a sustained growth rate during the last ten years. The share of the aerospace exports represents about 30% of EEC aerospace turnover (40% of the civil turnover and 27% of the military turnover). The share of the exports in the various subsectors is as follows:

- airframes : 39%
- engines : 33%
- equipment : 16%
- space : 9%

## CHAPTER 7

### EMPLOYMENT

#### IN THE AEROSPACE INDUSTRY

1. 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 subsectors are the same as those given in the previous chapter on turnover.
3. Figures showing distribution of the workforce by occupational grading should be interpreted with a certain amount of caution, since they are based on definitions lacking of international uniformity.
4. Over the period 1970-1976, employment stayed at the same level in the EEC (+/- 430.000), while employment decreased slightly in the US (+/- 900.000).

During the period 1977-1984, employment increased slightly in the EEC (450.000 in 1984), while employment increased more steadily in the US (1.242.000 in 1984).

## CHAPTER 8

### C O M P A N I E S

1. The figures for the turnover and workforce of the major world aerospace manufactures have been taken from information supplied by the companies themselves or are published in their annual balance sheets.
2. Except when otherwise stated, the data relating to groups cover only their aerospace operations.
3. The turnover/employment ratio is certainly not the best way of measuring productivity, since it overestimates the position of manufacturers which undertake little R&D activity and/or carry-out more work under license or under sub-contracts.
4. In 1984, the three main aerospace companies in the world (which are american) had a turnover higher than the overall turnover of the european aerospace industry.

## CHAPTER 9

### PUBLIC FINANCING OF R&D IN THE

### CIVIL AEROSPACE INDUSTRIES

1. The figures were supplied by the SOEC ( Statistical Office of the European Communities) and include funds for research and development granted to industry and to research centres, laboratories, universities, etc.
2. The data relating to space R&D comprise since 1980 credits allocated to the European Space Agency (ESA). This must be taken into account when comparing the data set out below with that of previous years.
3. The public financing of the R&D in the civil aerospace sector is very high. However, it should be noted that between 1975 and 1981, this effort has decreased in the EEC. This is worrying for the future of the EEC technology.

According to the OECD, the share of R&D public financing amounts to about 75% of the overall R&D financing.

The marked growth of Italian R&D credits for civil aerospace industry can be explained by the inclusion as from 1980 of R&D credits allocated to multilateral programmes.