

AECMA

ASSOCIATION EUROPEENNE DES CONSTRUCTEURS DE MATERIEL AEROSPATIAL

88, Boulevard Malesherbes, 75008 PARIS
Téléphone: 45.63.82.85
Télex: 642 701 F AECMA
Télécopie: 42.25.15.48

Panorama of EC Industry

Aerospace Industry

English Text

DECEMBER 1989

INTRODUCTION

This document, reviewing the situation and outlook of the European Aerospace Industry, comprises the 1989 contribution of AECMA (Association Européenne des Constructeurs de Matériel Aérospatiale) to the "Panorama of EC Industry" to be published by the Commission of the European Communities at the end of 1989, covering all Europe's industrial sectors.

It was prepared by Euroconsult in conjunction with a working group of the AECMA Economic Commission, comprising representatives of the national industrial associations AIA, ATECMA, BDLI, GEBECOMA, GIFAS, SAI and SBAC.

EXECUTIVE SUMMARY

Performance

1988 saw Europe's aerospace industry continue to expand, achieving total sales of ECU 39 billion, a 5.8 % inflation adjusted increase from the previous year. This reinforced the position of Europe as being second only to the USA and a long way ahead of the next country, Japan.

Recent years have also seen an increase in the relative importance of the aerospace industry to Europe's economy, rising from 0.6 % of GDP in 1972 to 1.04 % in 1987, a trend that is expected to continue.

Single Market

It is anticipated that the creation of the Single European Market in 1992 will have only a minor impact on the aerospace industry. This is firstly because the aerospace market is essentially world-wide and secondly because for many years the industry has already been initiating industrial and technological integration through major European corporate ventures such as Airbus Industrie, Panavia, Arianespace and the European Space Agency.

International Co-operation

Co-operation has also extended between Europe and other countries, particularly the USA. American industry supplies up to 30 % of an Airbus, depending on the model, and European companies participate in most of the major American civilian aircraft programmes (Boeing 767, 757, MD80, MD11). This co-operation is equally evident regarding engines with the CFM56 being a good example.

Trade

As regards trade, the EC is a net exporter to all countries except the USA, historically and in recent years.

In terms of the trade balance Europe has moved from being a net importer in 1981 (ECU 1.5 billion deficit) to a net exporter in 1984 (ECU 1.3 billion surplus) with a drop in 1987 to a slight deficit of ECU 40 million. This is a temporary deterioration related to the time needed for Europe to adapt to the upturn in the civilian market. The evidence for this is that in 1987 56 European civilian aircraft were sold. Incomplete figures for 1988 already indicate over 90. Order books are such that production in excess of 200 aircraft per year is considered as necessary in the next 2 - 3 years.

Environment

Competition has led to technological progress in the field of environmental protection. In particular, noise and fuel reduction considerations have led to rapid changes in engine technology which are helping the setting of increasingly stringent noise standards in airport zones. As a result, it has become possible to ban the noisiest aircraft from operation in Europe. It can be accepted that Europe intends to remain at the leading edge of environmental and economic technological progress.

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Structure

A significant trend of recent years, expected to continue into the 1990s, is the decline in relative importance of the military market. This is a result not only of the resurgence of civilian sales but also of the stagnation in defence production for both home and export markets.

Research and Development

Because of the rapid technological progress being made within the industry, affecting almost all components and systems, the ability to maintain a sufficient R&D effort represents a key factor in the ability of Europe to remain competitive.

Traditionally, a major part of R&D is funded by governments through military purchases and contracts. Over the past 15 years however, European governments, notably those of France, Great Britain and Germany, have steadily disengaged themselves. The share of public-sector participation in European R&D has fallen from approximately 75 % in 1971 to 58 % in 1985. This contrasts with the USA where federal government participation has never been less than 72 %.

The emphasis of publicly funded support in Europe has shifted towards civilian programmes. In the USA it remains nominally the military sector which is supported although both military and civilian applications are jointly developed.

Thus, when the difference in absolute values between European and US defence budgets is also considered (the US budget being 2½ times that of Europe's), the relative burden of essential R&D to the aerospace industry in Europe remains far greater than to the American industry.

Outlook

All things considered, prospects for the European aerospace industry continue to be healthy and growth of about 5 % per year in volume can be anticipated for 1989 and 1990. This will come largely from the civilian sector. Refocussing towards civilian activities is the short-term challenge facing the European industry.

Looking longer term, experience has shown that the civilian market is far more subject to fluctuations than the military. After the current phase of backlogs and record deliveries, companies will find themselves facing the problem of how to regulate their activities. The American industry, Europe's only true competitor, has shown its capability to withstand civilian market fluctuations but mostly through its continuing defence sales. Europe's long-term challenge is to remain competitive without such buoyancy from defence and without the same level of publicly funded R&D investment.

Panorama of EC Industry

Aerospace Industry

Development of European aerospace production (EC 12)

ECU in millions 1980 1981 1982 1983 1984 1985 1986 1987e 1988e 1990p

CONSOLIDATED EUROPEAN PRODUCTION (national level)

Current value	17 253	21 370	23 915	25 572	27 898	30 623	33 929	35 540	38 990	45 600
Constant value (ECU 1980)	17 253	19 069	20 015	20 564	21 409	22 260	24 517	24 980	26 430	29 000
Current index	100	123.8	138.6	148.2	161.7	177.5	196.6	206	226	264
Constant index	100	110.5	116	119.2	124.1	129	142.1	145	153	168

EMPLOYMENT

(thousands)	471.7	500.2	483.2	480.5	464	480.1	487.5	488	489	490
Index	100	106	102.4	101.8	98.4	101.8	103.3	103.4	103.6	103.8

CONSOLIDATED EUROPEAN PRODUCTION (community level)

Current value	14 137	16 723	18 392	19 269	21 522	24 734	27 511	28 800	31 600	34 800
Constant value	14 137	14 919	15 436	15 553	16 562	18 002	19 914	20 280	21 450	23 600
Current index	100	118.3	130.1	136.3	152.2	174.9	194.6	204	224	246
Constant index	100	105.5	109.2	110	117.1	127.3	140.8	143	152	167

UNCONSOLIDATED EUROPEAN PRODUCTION

Current value	20 394	25 409	28 419	30 179	32 552	35 452	39 950	42 000	46 000	51 000
Breakdown by segment										
- airframes	11 043	13 589	15 386	16 295	17 218	18 177	18 712	19 480	-	
- engines	3 998	5 028	5 642	5 249	5 829	6 649	7 181	7 470	-	
- equipment	4 710	6 017	6 346	7 504	8 195	8 704	11 871	12 470	-	
- space	643	775	1 046	1 132	1 310	1 922	2 186	2 580	-	
Breakdown by market										
-military	14 276	17 834	19 871	20 371	22 170	23 562	25 210	26 300	-	
-civilian	6 118	7 575	8 548	9 808	10 382	11 890	14 740	15 700	-	
% civilian	30	29.8	30.1	32.5	31.9	33.5	36.9	37.4	-	

Source of data : Industrial Associations and DG III of the EC Commission ;
Synthesis and estimates by Euroconsult based on industrial data

1990 forecast : + 5% in volume over 1989 and 1990 - Prices : + 3% a year over 1989 and 1990

AEROSPACE INDUSTRY

Continued Growth of European Aerospace Output

In 1988 Europe's aerospace industry achieved total sales of ECU 39 billion, up 9.7% from 1987 or 5.8% adjusted for inflation. Final total sales of the aerospace sector consolidated at the EC level (with deductions made for sales between EC aerospace companies) totaled ECU 31.6 billion. This development demonstrates the growing importance of the European aerospace industry on the worldwide market, placing it second behind the US aerospace industry yet far ahead of Japan's (see table 1).

Thanks to steady advances in productivity and employee qualification, growth in European aerospace production has been achieved with practically unchanged staff levels. Aerospace employment remained stable in 1988 at 489,000 persons compared to 927,000 in the United States and 35,000 in Japan. Work force stability has been a constant of the European aerospace industry over the past 15 years and contrasts with the fluctuating employment in the United States as a function of market developments (see table 2).

On the whole, in terms of apparent labour productivity, Europe still has a lower ratio of total sales per employee than the United States, although it has been improving steadily, moving up to 85.8% of the US figure in 1987 from 37.5% in 1972 at constant exchange rates.

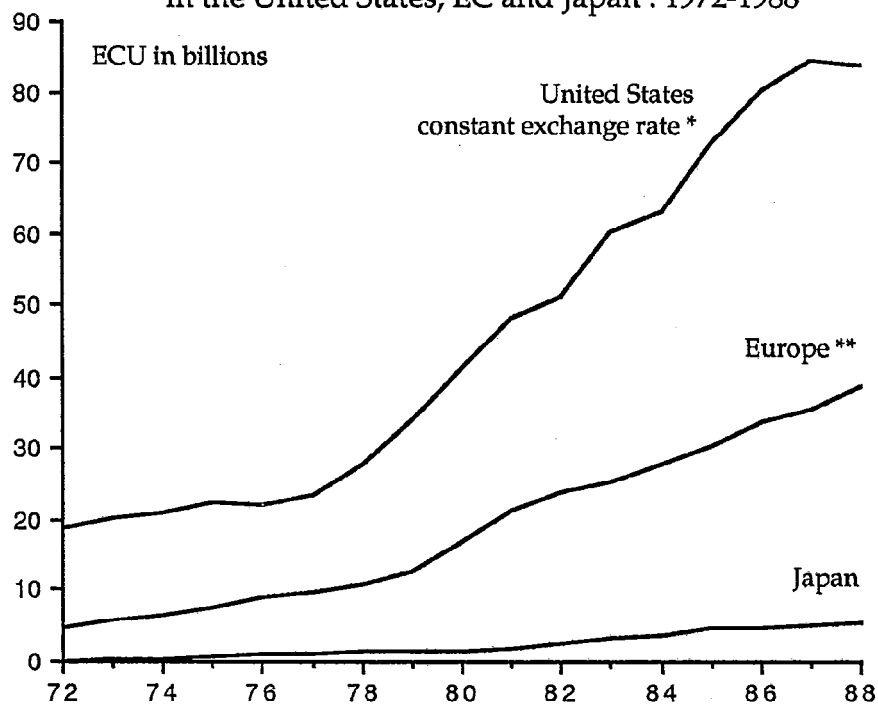
The Differing Importance of the Aerospace Industry Among the EC Countries

Within the European Community, aerospace production is ensured essentially by four countries: Great Britain, France, Germany, and Italy. In terms of total sales Great Britain and France, with 33.5% and 31% of EC production in 1987 respectively, are the two countries that have traditionally been most active in this industry in Europe. However, the German and Italian industries have recently made significant advances, with their turnover accounting for 24% and 8.6% of EC production in 1987 respectively (see table 3).

The Netherlands, Belgium, and Spain whose industry is younger, each account for about 1% of EC production. They are boosting their output essentially as a result of participation in major international cooperative programmes and national programmes for regional transport or training aircraft. The figure for the Netherlands is unusually low, corresponding to the end of production for the first generation programmes. It should increase rapidly with the start-up of production for the second generation programmes (F50 and F100).

Sweden, though not an EC member state, works in close collaboration with EC industry. It achieved total sales in 1987 of ECU 1.22 billion (ECU 1.25 billion in 1988) which represents 2.8 % of European production.

The Growth of Aerospace Industries Sales in the United States, EC and Japan : 1972-1988



Source of data : Euroconsult's ECOSPACE Data Base

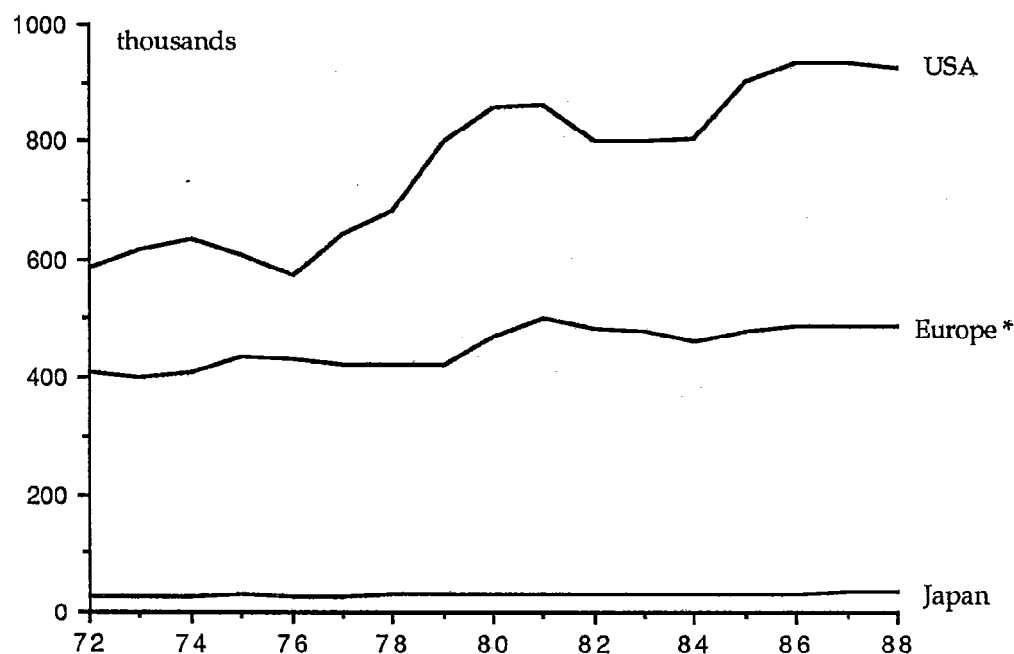
Primary data : AIA, EC Commission, SJAC - synthesis and estimates : Euroconsult

* average exchange rate over the period : ECU 1 = \$ 1.104

Table 1

current ECU for Europe and Japan ** consolidated sales, EC 12 since 1978

Aerospace Employment in the United States, Europe and Japan 1972-1988



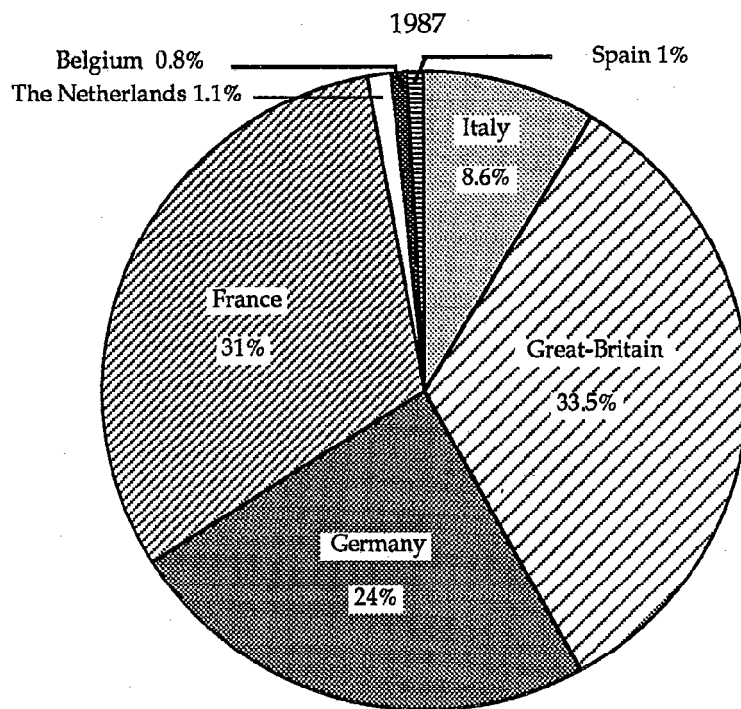
* EC 12 since 1979 Source of data : Euroconsult's ECOSPACE Data Base

Primary data : DG III of the EC Commission, professional organisations

Estimates by Euroconsult for 1987-88 (Europe)

Table 2

EC Countries Share of the European Aerospace Production *



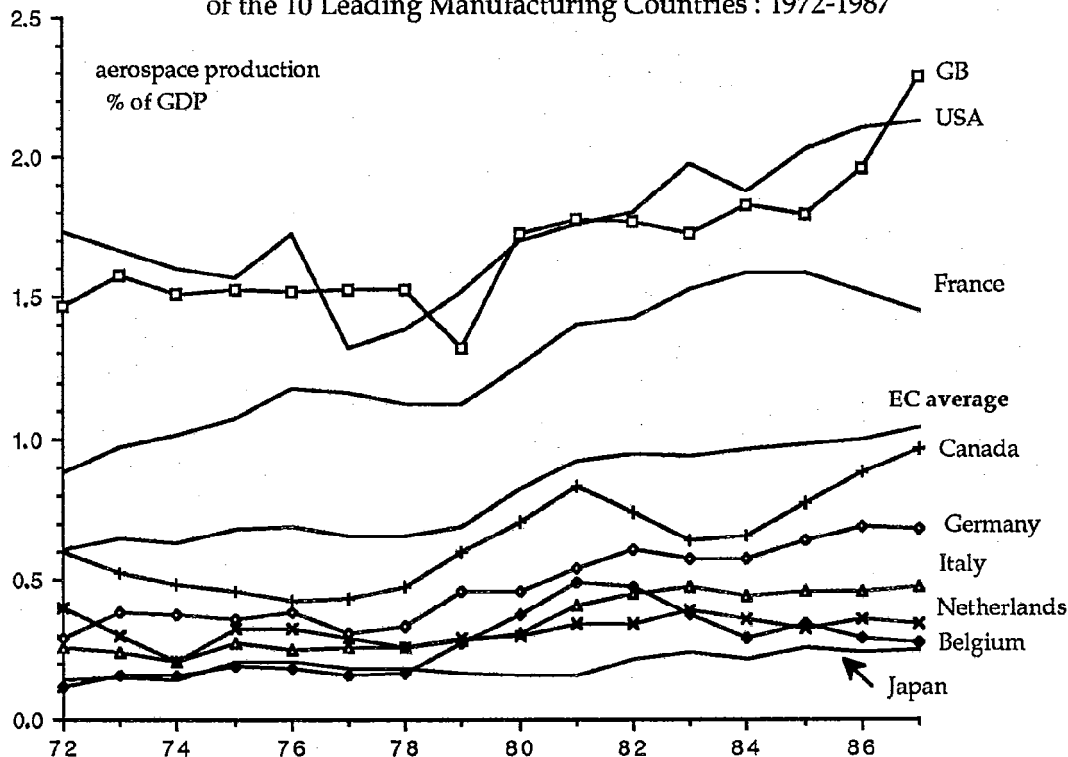
* 1987 total sales (unconsolidated) : 42 billion ECU

Source of data : Euroconsult's ECOSPACE Data Base

Primary data : professional organisations

Table 3

Relative Importance of Aerospace Industries in the National Economies of the 10 Leading Manufacturing Countries : 1972-1987



Source of data : Euroconsult's ECOSPACE Data Base

Primary data : DG III of the EC Commission, professional organisations

Table 4

An Industrial Sector of Growing Importance for the European Community

The relative importance of the aerospace industry has grown steadily in Europe, from 0.6% of GDP in 1972 to 1.04% in 1987, representing a relative importance equal to half that of US industry (2.1%) and four times as great as that of Japan (0.25%). Yet that average value does not reflect the varying situations in the individual member states, (see Table 4).

In Great Britain the relative importance of the aerospace industry is very high and has been growing sharply in recent years. In 1987 it accounted for 2.25% of GDP, surpassing the level of the United States. That contrasts with the situation in Belgium where the relative importance of the aerospace sector is ten times lower at only 0.27% of GDP, a level similar to Japan's.

No country falls close to the EC average, which lies between Britain and France (the two most active countries) and all other countries, whose relative importance is half as great.

Germany is steadily distancing itself from the group of less active countries although the relative importance of its aerospace sector is still only 0.68% of GDP or only one-third as great as in Great Britain. Yet the rapid growth of Germany's aerospace production is not leading to as great a rise in the relative importance of that sector in the national economy due to strong growth in other areas. The lower overall industrial performance of France and Great Britain give their more flourishing aerospace industries a greater relative importance.

An Industry That is Prepared for the Unified European Market of 1992

The creation of the single European market in 1992 will have a minor impact on the European aerospace industry as limitations on trade in aerospace hardware in Europe are practically nonexistent. For many years this sector has been highly instrumental in initiating industrial and technological integration in Europe through the major European cooperative programmes of Airbus Industrie, Panavia, Arianespace and the European Space Agency.

The prospects of integration of the community-wide market will, however, have an impact on the strategies of industrial groups which, in addition to heightened cooperation, are committing themselves to more advanced integration.

Changes in the Different Production Segments

In terms of technical segmentation, output has traditionally been divided into four major categories:

- airframes (of airplanes, helicopters, and missiles)
- engines (essentially turboprops and turbojets)
- equipment (basically electronic and hydraulic)
- space hardware (launch vehicles and satellites).