

REACTION AND TRANSFORMATION OF AIRLINES IN A DEREGULATED ENVIRONMENT: A STRATEGY FOR AIR FRANCE

by

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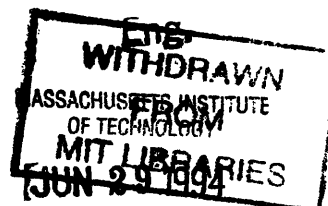
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## ABSTRACT

Air France has consistently opposed European liberalization. This has prevented it from adapting itself to the new environment, while its main competitors, British Airways and Lufthansa, have already started to turn into more cost effective carriers. This fact puts Air France at a big disadvantage.

The likely outcomes from the European liberalization can be deduced from those of the American deregulation. Despite differences between the two markets, the three basic changes will occur towards:

- a more market oriented type of service
- lower costs
- a reorganization of the industry

A revolution has been necessary for most of airlines to adapt themselves to the new regulatory order. Those which have not gone through such a radical change have ceased to operate (Pan Am, Eastern) or have been tremendously scaled down (TWA). Others have emerged as the new leaders (American Airlines, Delta...) In Europe, British Airways has taken an advantage on all the other airlines. Lufthansa is moving in the same direction.

Air France however is virtually bankrupt. It needs to go through a very deep process of change, similar to the one experienced in the eighties by British Airways. This would involve:

- a change in corporate culture, switching from a world of technicians to a world of sellers and managers
- extreme cost consciousness - specially focusing on labor cost -
- complete integration of Air Inter, loosing Air Inter's goodwill but gaining a lot in efficiency
- operation of a hub and spoke system in Europe, taking full advantage of CDG possible extensions
- building a long term commitment with both a US carrier and an Asian carrier.

Air France is in an extremely bad position. It should take advantage of this situation to take all the necessary measures that the industry in all will have to take one day or another. It should remember this quotation from Montaigne: "Faute de changer les événements, change toi toi-même" ("For lack of changing the events, change yourself").

Thesis Advisor: Richard de Neufville  
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## Introduction

Air France is in the midst of political and economical changes. The new regulatory environment and industry structure lead to much fiercer competition. Air France's main competitors - British Airways, Lufthansa and the US carriers on the North Atlantic market - have significantly improved their efficiency, both decreasing their costs and adopting a consumer oriented approach. In 1993, Air France experienced a net loss of more than \$1.2 billion, went through one of the harshest strikes in its history and has not yet really begun the process towards becoming a much more efficient air carrier. Urgent measures have to be undertaken. These measures should not only be remedial or aim to catch up with the competition. On the contrary, Air France should try to overtake its competitors by adopting now the necessary measures that will have to be taken by the whole industry sooner or later.

This thesis does not judge the European liberalization, nor ask for an acceleration or a deceleration of its process. It does not judge the "Comité des Sages" report (Expanding the Horizons, 1994). It simply notes that the European liberalization is happening now and that roll-backs are unlikely. Air France should therefore be prepared to the new environment and to the expected competition.

This thesis aims to provide some few basic points that will have to be tackled by Air France. It tries to avoid excessive details that usually prevent from seeing the global picture. "Air France essentially suffers from two drawbacks: a too diverse fleet and a schedule that poorly makes use of the aircraft and the crew members." (Le Figaro, March 15, 1994). This thesis challenges this view, saying that these disadvantages are real but minor compared to deep impediments such as:

- obsolete corporate culture
- lack of consistent and aggressive strategy
- higher costs than competitors

Chapter I outlines the overall results of the American deregulation, putting the emphasis on the general concepts rather than the details of each company. No attempt has been made to evaluate these effects in terms of consumer benefits<sup>1</sup>.

Chapter II focuses on the European scene. It anticipates the general outcomes of the liberalization and argues that these will be similar to those in America even though the path to get to them and their implementation will differ in detail.

The last Chapter provides recommendations for Air France. It states that Air France should adopt a strong and aggressive strategy rather than move reluctantly on its way to decrease its costs. It should also adopt a much more market-oriented strategy as well as a global approach.

To support these short chapters, eight annexes have been added. They need to be read only by readers lacking knowledge in one or more aspects of the subject. Annexes 1, 2, and 3 give an outlook of the air transport industry as well as the origin of the American deregulation, they could be conveniently read before the first chapter. Annexes 4, 5 and 6 present the European market and its liberalization and can be appropriately read before chapter II. Finally, annexes 7 and 8 deal with the French market and a general presentation of the Air France group and are therefore a pre-requisite for chapter III.

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<sup>1</sup> An interested reader would like to see Winston and Morrison (1992) or Dempsey and Goetz (1992) for two divergent points of view on the subject (see also ANNEX 3 for a short story of it).

## **Chapter I. Lessons Gained from the American Deregulation**

The American deregulation is a convenient starting point to study the effects of European liberalization. Firstly, it provides an interesting experience of the outcomes of such a move in a similar, with limits, market. Secondly, the American deregulation gave birth to highly efficient mega carriers, which compete in the North Atlantic market with the European carriers. This, in turn, forces the European carriers to become as cost effective as these carriers.

Most of the studies have been aimed at answering the basic question " Was the deregulation a good move for the industry and the consumer or not ?" The point of this study is not to try to compare the effects of the deregulation to the would-be state of the industry had the deregulation not occurred. More important is to point out what have been the basic consequences of the new competition. These consequences are likely to occur in Europe too.

The consequences of the competition are fourfold:

- a change in the type of service offered
- a change in the price of this service
- a new technological tool
- a change in the structure of the industry

### **1.1 A Different Service Pattern**

Due to the new competition and to the natural growth of the industry more and more Americans have already taken the plane. Nobody is impressed any more by the achievement of Icarus' dream. Travelers have become more rational and are not ready to pay for a level of service that it is not entirely necessary for their trip. Some people may find it unfortunate but air travel has been reduced to its primary goal: going from point A to point B in the fastest time and in the cheapest way according to your comfort standards.

The air transport industry has adapted itself to this new demand and has offered a new wide range of services. Two important aspects of this change is the rising importance of "no-frill services" -or Southwest-like type of services and the change in the route structure to an hub and spoke type of network.

### *1.1 .1 No-Frill Services*

This new concept is based on the reduction of the air transportation to its basic utility, that is to carry passengers from one point to another. Everything else from checking to meals or beverages is considered as frills. Throughout the eighties lot of new carriers have experimented with this concept (People Express is one of the most famous examples). However, few have succeeded. The main reason for that is that these new entrants could not sustain their price long enough. They were matched by the major carriers and their cost advantage was not sufficient to enable them to compete effectively. On the other hand Southwest has achieved such a cost competitive advantage that it can sustain its extremely low prices long enough to hurt the major carriers. These low prices have also generated a new demand.

No frill services have played a minor role, in terms of market share, up to now. However, they are believed to have a significant importance as more carriers follow Southwest's path and begin to offer Southwest-like type of services such Continental with its new subsidiary Cal-Lite. Southwest accounts now for 8% of US domestic boarding (Feldman 1994).

### *1.1.2. Route Structure*

The change from point to point services to hubs and spokes was accompanied by an increasing hub concentration and quite paradoxically an increasing competition in the non-stop OD markets. Hub and spoke systems are challenged by Southwest, which takes advantage of their drawbacks. However they remain the main type of service and their



advantages offset their incremental costs (PRC Aviation, 1993). Their obvious advantage is that they enable to serve more OD markets than point to point services would do. They enable flights between two small towns that would not justify a direct service. It also permits major carriers to feed their inter-continental flights. On the other hand their main drawback is airport congestion during a few short periods of time during the day, rendering the ground handling equipment and staff inefficient.

## **1.2 A Change in Cost / Price**

### *1.2.1 Cost Structure*

"Labor costs were about 35% of the total 1992 operating expenses of American Airlines, Delta airlines, United Airlines, and USAir - the Big Four. Of an airline's controllable operating costs, however, labor accounts for about 60-65%." (Velocci, 1993). Competition has obliged the airlines to try to reduce their costs and their efforts have concentrated on the labor costs. Labor costs used to be very much higher in the US for several reasons:

- operating airlines was regarded as a highly qualified job (flight attendants were at the beginning registered nurses )
- a premium was added for the risk involved in the job
- another premium was added for the fanciness of the job (the people that fly...)
- very advantageous work rules were put in place to be sure that pilots rest sufficiently between flights...
- regulation enabled wages to increase with no market sanction.

However with the increasing traffic and the generalization of the air transport, none of these justifications are still valid:

- operating an airline although still a qualified job appears not to be more complicated than qualified workers managing highly computerized machines

- the risk has been lowered to a level that it is safer to pilot an airline than to drive a truck (truck drivers are not paid that much)
- air transport has become much more common
- competition condemns cumbersome work rules

Labor costs have decreased through its two main items, wages and benefits, and labor productivity. Although productivity can be obtained gradually, deep cut in the payroll seems to be the most easily feasible through bankruptcy, as Continental and TWA did.

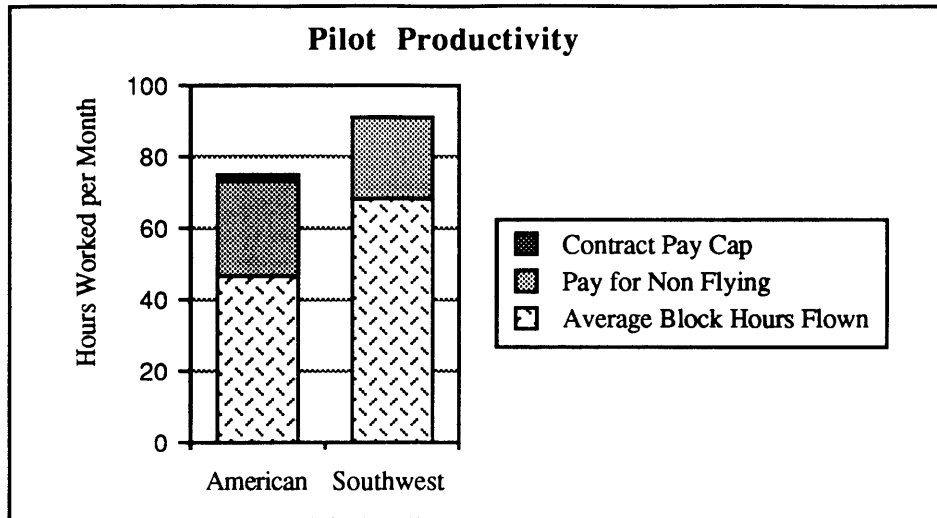
Table 1.1 and 1.2 show the difference between American Airlines still embedded in its old cost structure, and Continental with much lower wages and Southwest with a much higher productivity:

Table 1.1: Gross Pay in 1992 US \$ for an American and Continental Employee in each labor group with eight years seniority.

Jobs	American	Continental	% Higher than CO
Pilots	146,766	79,752	84.0%
Flight Attendants	24,081	21,445	12.3%
Line Mechanics	49,515	35,706	38.7%
Fleet Service Clerks	30,819	23,437	31.5%
Reservation Agents	28,786	17,281	66.6%
Airport Agents	29,067	20,086	44.7%

Source: PRC Aviation (1993)

Table 1.2: Pilot's Productivity at Southwest and American Airline



Source: PRC Aviation (1993)

### 1.2.2 Prices

Cost structures are therefore very different from one airline to another. The cheapest airlines impose the lowest prices on the market forcing, in turn, the largest more expensive airlines to cut their costs. This downward spiral benefits the consumer but terribly endangers airline profitability. Bob Crandall, CEO of American Airline, is reported to have said "This industry is always in the hand of its dumbest competitors". Maybe not dumbest but cheapest for sure.

### 1.3 Computerization of the Management Systems

The most recent technological development of the air transport industry is rather intangible. Big steps have been made in the past with the introduction of jet engines and then wide body aircraft, those steps were highly visible and therefore adopted by the major carriers rapidly. The eighties have not witnessed such a move in the hardware, however the software -the tools to manage those aircraft - have changed dramatically. Deregulation has created an incentive to optimize one's revenue by an adequate pricing. This pricing has in

turn forced the airlines to manage carefully a seat inventory system and thus improved their reservation systems. Those systems would have been improved without the deregulation in terms of network integration, but their real value for the airline i.e. the information provided to system analysts is a pure product of deregulation.

The development of these systems in the US is far ahead of their European counterparts -Sabre being the most sophisticated one-. Out of the two modules that composed this system, the CRS which provides the data and the seat inventory that analyses the data, the former is usually highly available through affiliation whereas the latter is a much more strategic tool that airlines tend to develop for themselves.

Highly important also to the management is the schedule optimization software that optimizes the schedule of the flight crews and attendants with the constraint of providing the service.

## **1.4 A Change in the Industry Structure**

### *1.4.1. Concentration*

Consolidations, mergers, new entries and bankruptcies have occurred regularly since 1978 (see Table 1.3). In 1993, the result was the rising of an oligopoly dominated by a few global carriers. However, three main types of carriers remain from these ten years of competition:

- Global Carriers
- National Carriers
- Regional Carriers

Table 1.3: Major Air Carrier Mergers, Acquisitions, Purchases, and Consolidations in the United States since 1978 as of December 1991.

	Market Share (%)		
	1987	1990	1993
American _____ AMERICAN	13.8	17.5	20.4
Air Cal _____			
TWA (London Routes) _____			
Eastern (Latin American Routes) _____			
United _____ UNITED	16.9	17.2	21.2
Pan Am (Transpacific, Latin America & London Routes) _____			
Air Wisconsin _____			
Delta _____ DELTA	12.2	13.4	17.4
Western _____			
Pan Am (European Routes and NY Shuttle) _____			
Northwest _____ NORTHWEST	10.3	11.7	12.2
North Central _____ Republic _____			
Southern _____			
Hughes Airwest _____			
Texas International _____ TEXAS AIR(a)	1.9	12.7	8.9
Continental _____			
New York Air _____			
Frontier _____ People Express _____			
Britt _____			
PBA _____			
Braniff (Latin America) _____ Eastern _____			
Rocky Mountain _____			
USAir _____ USAIR	7.1	8.1	7.4
PSA _____			
Empire _____ Piedmont _____			
Henson _____			
Midway (Philadelphia gates and Canadian routes) _____			
TWA _____ TWA	8.2	7.8	4.8
Ozark _____			
Pan Am (b) _____ PAN AM	6.3	7	0
National _____			
Ransome _____			

Note (a) renamed Continental Airline Holdings  
(b) ceased to operate in 1991

### *1.4.2. The Global Carriers*

This market is increasingly dominated by the mega carriers, United, Northwest, American and Delta. Although they have really entered the international market recently at the expense of Pan Am and TWA, their market shares in the international arena is impressive. Delta is the smallest of this group in the international market but carries twice as many passengers as Continental, the next largest carrier. However strong their position in the international market, their main market in terms of passengers-kilometers remains the domestic market. With exception of Northwest, these airlines are also the strongest on the domestic market outperforming the other airlines by a factor of at least two.

There seems not to be a general rule on how to become a mega carrier. Northwest with the purchase of Republic has grown externally, by acquisition. On the other hand, American has mainly grown through inside growth with the purchase only of routes. It should be noted that Continental, despite its numerous acquisitions, has not yet reached the critical mass to be a mega carrier.

They base their strategy on the competitive advantages due to their size. These competitive advantages can be summarized as follows:

- Economies of scale - maintenance, hub operations, frequencies...-
- Economies of scope - attractiveness of their network, Frequent Flyer Program, CRS...-
- Market power to deal with the aircraft manufacturers, airports, sale agents...
- Political power: decision to serve or not certain communities.

These carriers have been struck by the 1991 recession and suffered heavy losses in 1992. However, losses are expected to be smaller in 1993. They are badly hurt on the domestic market by the low cost carriers but still benefit from a favorable international environment where they are the most efficient airlines and where they will go on expanding in the short run. Like Pan Am those carriers should not be regarded as eternal, Northwest is still close to bankruptcy, and the financial situation of American Airline is still weak.

### 1.4.3 *The Continental / National Carriers*

In this category fall the second tier airlines: TWA, Continental, USAir and Southwest. TWA and Continental are classified here although they have a significant number of international routes. However Continental has emerged from bankruptcy as a low cost carrier and wants to compete with Southwest on cost; it is currently focusing on the domestic market. TWA's strategy is unclear. It seems to struggle to stay alive more than everything else.

USAir and Southwest have little international routes. Their competitive advantages in the domestic market are very different: USAir bases its strategy on:

- a long established position in the North East
- an hub and spoke system
- its size - CRS, Frequent Flyer Program ..-
- Alliances -with British Airways -

On the other hand Southwest bases its strategy on:

- low cost
- point to point service
- no-frill type of service
- no interlining

Even though USAir is nearly double the size of Southwest, the latter appears to be much more profitable and challenges the former in its own hubs. "USAir is facing new competition from the likes of Southwest Airlines, which offered a \$49 one way to Cleveland with no restrictions when entered a former USAir stronghold at the Baltimore-Washington International Airport in September. Before Southwest arrived, USAir charged several hundred dollars for the flight..." (Adam, 1993). Southwest's achievements in 1993 were impressive. It dominates 7 of the 25 first OD markets in the Second Quarter 1993, more than any other carriers (Aviation Daily, 1994). This is partly due to the fact that the entrance of Southwest on a market increases the size of this market. Would you imagine

that the 14th OD domestic market in the US is Los Angeles-Phoenix ? In 1992 it had 2.9 % of the US market share including international routes, it has jumped this year to 3.5 % (an increase of 20%). Prudential Securities rated Southwest their "Single Best Idea" for 1994 (McAdoo and Prestil, 1994).

Southwest is the only low cost entry to have been successful. However several factors have favored new entries very recently:

- congestion of hubs favoring point to point strategy
- over supply of workers
- over supply of planes with prices of second hand dropping down (when seeing the number of aircraft parked in the Mojave desert, it is predictable)

This category of carriers may well be dominated by low cost carriers in the future, with USAir either completely disappearing or being integrated with BA in a new mega carrier. The move from Continental to create Cal-Lite can be interpreted as a move to be an actor in this new market. The more the domestic market will be dominated by low cost carriers the more mega carriers will be aggressive internationally to retain their market share.

#### *1.4.4 The Regional Carriers*

Small airlines with fleets of turboprops, they have two missions:

- carrying passengers from small towns to hubs (small towns to small towns being made by the way of hubs)
- feeding intercontinental or continental carriers at their hubs

This second mission makes them increasingly dependent on one of the major airlines. The major benefits from more flexible work rules and lower wages of the small carrier whereas the latter carries passengers that will eventually go beyond the hub. It also takes advantage of the confusion in the passenger's mind created by an identical livery for the two carriers. Most of the customers think they are subsidiaries. This group includes American Eagle, United Express...



## **Chapter II Expectations from the European Liberalization**

The European liberalization is taking place more than a decade after the American deregulation. Recognizing some of the adverse effects of the American deregulation it is taking a slightly different direction. However, bringing competition into a market will have similar impacts across Atlantic even though some of effects may be translated in the European context. The reasons for that are threefold:

- European liberalization will render the European market very similar to the American one
- Effects of the American deregulation are spilling across the ocean as the market is global
- In the medium term Europe will be much more integrated, thus having even more similarities with the US

Therefore, this chapter adopts the same divisions as the first emphasizing the similarities and the possible differences.

### **2.1. A Change in the Service Pattern**

#### *2.1.1. The End of the Charter Era*

Out of the three passengers segments- business, friends and relative visiting<sup>2</sup> (FRV) and leisure -Only the FRV differs significantly from the US: in the short or medium run the personal relations across borders will remain scarce. The two other segments will benefit significantly from the liberalization. Business people will be offered more routes and more frequencies. However the main change may come from the leisure segment. This segment is dominated by the charter operations - four out five passengers from England to Spain board charters (ITA, 1993). The whole concept of charters may disappear as

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<sup>2</sup> This segment can be included in the leisure segment, in the States however it is often treated separately to better catch its specificity.

scheduled airlines will be allowed to reallocate their capacity according to the demand more easily and adapt their tariffs and services to the leisure segment. The charters may then either disappear or be the precursors of what could be European low cost "no-frill" carriers.

### 2.1.2. Route Structure

Table 2.1: New Routes Opened during the First Three Months of the European Third Package (Jan. - Mar 1993)<sup>3</sup>

<b>New "3rd Package" Sectors</b>	<b>Airline</b>	<b>Type</b>	<b>Freq/Week</b>
[Paris -] Turin Bari	Air France	Cabotage	7
[Paris-] Thessaloniki - Athens	Air France	Cabotage	3
[Milan-] Valencia - Malaga	Alitalia	Cabotage	3
Paris -Munich	BA [op by TAT]	EEC 5th	2 1
Paris - Copenhagen	BA [op by TAT]	EEC 5th	2 1
Paris - Stockholm	BA [op by TAT]	EEC 5th	1 4
[London -] Hanover - Leipzig	BA	Cabotage	7
[Frankfurt-] Genoa - Naples	Lufthansa	Cabotage	7
[Munich -] Rome - Bari	Lufthansa	Cabotage	7
[Munich -] Naples -Palermo	Lufthansa	Cabotage	7
[Copenhagen -] Hamburg - Leipzig	SAS	Cabotage	6
[Copenhagen -] Brussels - Lyon	SAS	Cabotage	5
[Copenhagen-] Stuttgart - Thessaloniki	SAS	Cabotage	6

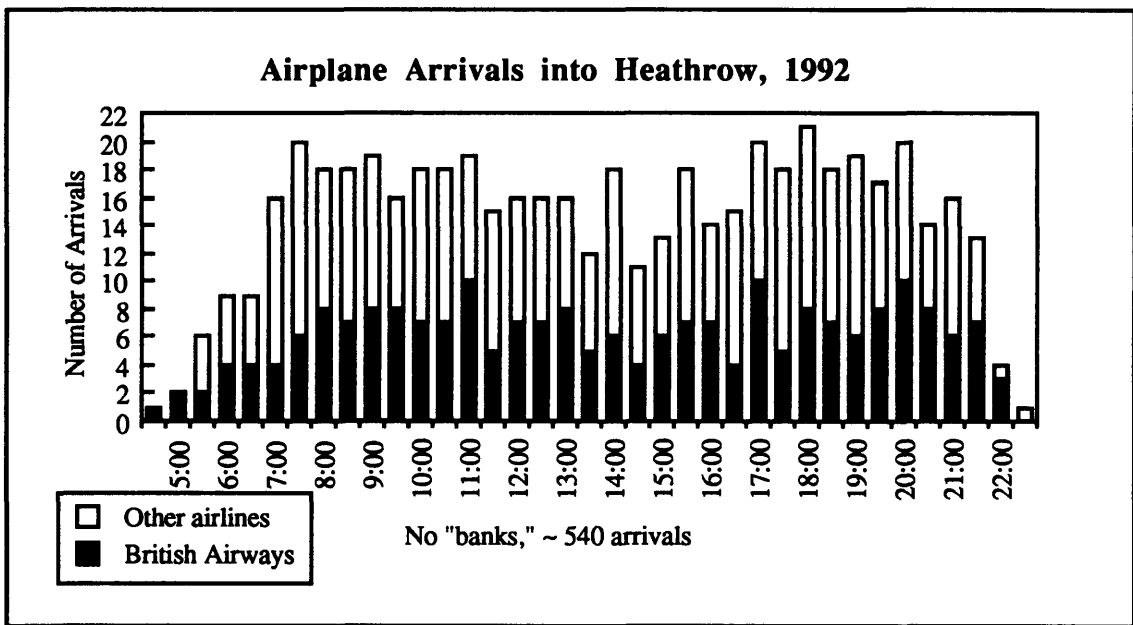
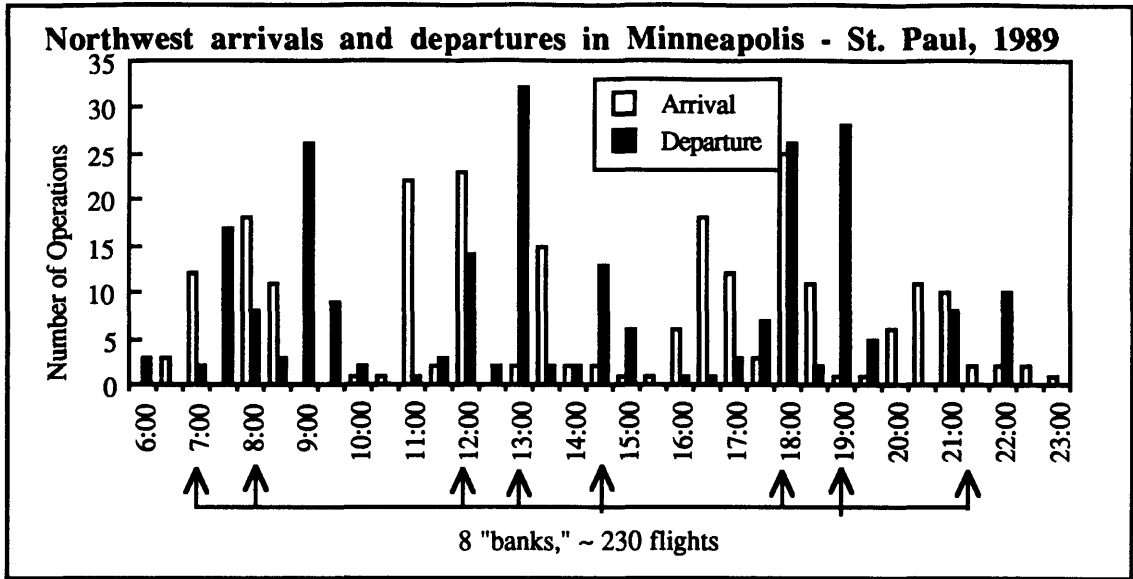
Source: Airline / Aircraft Projects

Table 2.1 provides a few examples of new routes opened since the beginning of the deregulation. Most of them are continuations of previous existing routes or new services offered by BA. According to some internal papers, most of them are unprofitable. The main changes have not occurred yet.

Hubs and spoke systems have proven their efficiencies in the US (see PRC, 1993). Their advantages offset their drawbacks and seem the only way to connect second tier cities profitably.

<sup>3</sup> Cabotage here is EC cabotage meaning a continuing flight from one place in the EC to another town, is subject to the 50% seat share rule

Table 2.2.: Airline Operations with and without Hub and Spoke: Two Examples



Source: McKinsey Global Institute (1992)

However, as table 2.2 shows, a typical European airport is far from being operated as an hub<sup>4</sup>. Equally important to the schedule are the facilities put in place to ease connections between two flights -Bob Crandall has recently announced that it would operate a "continuous hub in Chicago O'Hare, meaning that he will not pay attention to the schedule assuming that there is sufficient frequency to any city but that he would emphasize easier connections-. Although no data are available to demonstrate the point, experience suggests that American airports are much more "connection-oriented" than their European counterparts.

The American hub and spoke system is very complex with multiple different hubs serving specific markets (East Coast, West Coast, Trans continental flights). It is the results of a clear will from the US airlines to control as many airports as possible, partly to prevent the other carriers from doing so. Due to its smaller size -Europe is one fifth of the US - the European system may end up being simpler with a few hubs placed in the center of Europe (such as Paris, Brussels, Frankfurt, or Zurich). These hubs would enable to offer one stop flights from Bergen to Barcelona, or Cork to Leipzig.

## **2.2. A Change in Pricing**

### *2.2.1. Costs*

In 1981, British Airways led by Lord King started its complete reorganization and reform in order to drive costs down. Six years later, it was privatized and began to dominate the European market. Thirteen years later, it is looking of new ways of increasing efficiency and saving money. The main reforms undertaken after 1987 to achieve this result was to:

- sell 50 planes
- cease 62 unprofitable routes

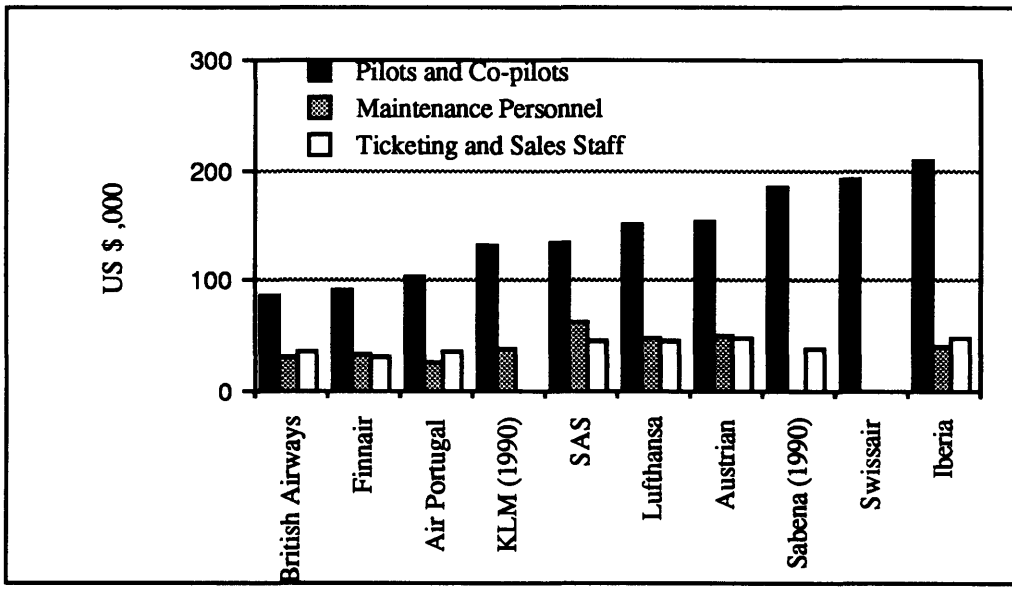
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<sup>4</sup> Operating a hub goes far beyond feeding its international routes with regional ones as many European carriers do.

- reduce the number of staff from 53,000 in 1981 to 36,000 in 1984 (a decrease of more than 30% !)
- partially freeze wages
- chase the inefficiency everywhere, maintenance...
- replace old administrators by new comers from industry

This gives now a huge cost advantage to BA in the European scene. Its productivity in RPKs per employee is twice as much as Lufthansa's one for example (see Table 3.3). Moreover its wages are the lowest in the industry as shown by Table 2.3.

Table 2.3: Average Annual Staff Remuneration, European Airlines 1991



Source: ICAO Digest of Statistics, Series F-P. Fleet and Personnel<sup>5</sup>

BA's extensions to continental Europe through TAT and Deutsche BA directly affect its main competitors Lufthansa and Air France. So pressure on cost comes from both inside Europe and is imported from the US through the North Atlantic market. Recently, the BA recipe has been more or less followed by KLM and very recently by Lufthansa. This will increase tremendously in 1997 as the liberalization will be total and the recovery

<sup>5</sup> Air France statistics were not available

of the airline industry will permit even more aggressive moves from the more efficient carriers.

On a broader scale, pressure from the global market will oblige Europe to lower its airport and en route fees as well as prevent it from applying the VAT to air transportation. How important those measures may be they will not be substitute for a steep downward cost spiral.

### *2.2.2. Prices*

As a result, prices will decrease. This may take some time due to the inability of carriers to exploit their new rights fully. However one cannot imagine how BA with much lower costs than the rest of the European airlines will not manage, one way or another, to decrease prices on all the European market, (for instance by using efficiently its recently acquired TAT and Deutsche BA). This is true both in the domestic European market and in the international market.

## **2.3. Highly Computerized Management Systems**

Yield management systems have been very slowly introduced in Europe. For fear of becoming dependent to the US carriers, European ones have tried to develop their own systems. Although no data are available, it seems that these attempts lack both funds and support from the management. As a result, neither Galileo nor Amadeus matches Sabre or Apollo in terms of data provided to the airlines. As liberalization is put in place, pressure on the European carriers to affiliate themselves to an American system and thus benefit to their advantages will increase. The future of the two European CRS is therefore unsure. Either a European consortium will spend an enormous amount of money upgrading and integrating both of them -an effort similar to the one done with Airbus- or carriers will seek for more and more connections with the US systems. Because of the way Sabre is structured -it is managed by an independent subsidiary of American Airline- it may be the major beneficiary of this switch.

As for the yield management itself, that is the actual seat allocation and pricing, BA is said to have the best system in Europe second only to American Airlines in the world (Katz, 1994). Apart from BA, it is still a relatively new subject in Europe. Most of them are still very "manual". The development of yield management is almost inevitable. As for the CRSs, other European companies may find it cheaper to directly import from the States a system, either from the carriers or from consulting firms specialized in seats inventory. The implementation of such systems in Europe is thus expected to be very fast, as soon as liberalization makes their use indispensable.

## **2.4. A Change in the Industry Structure**

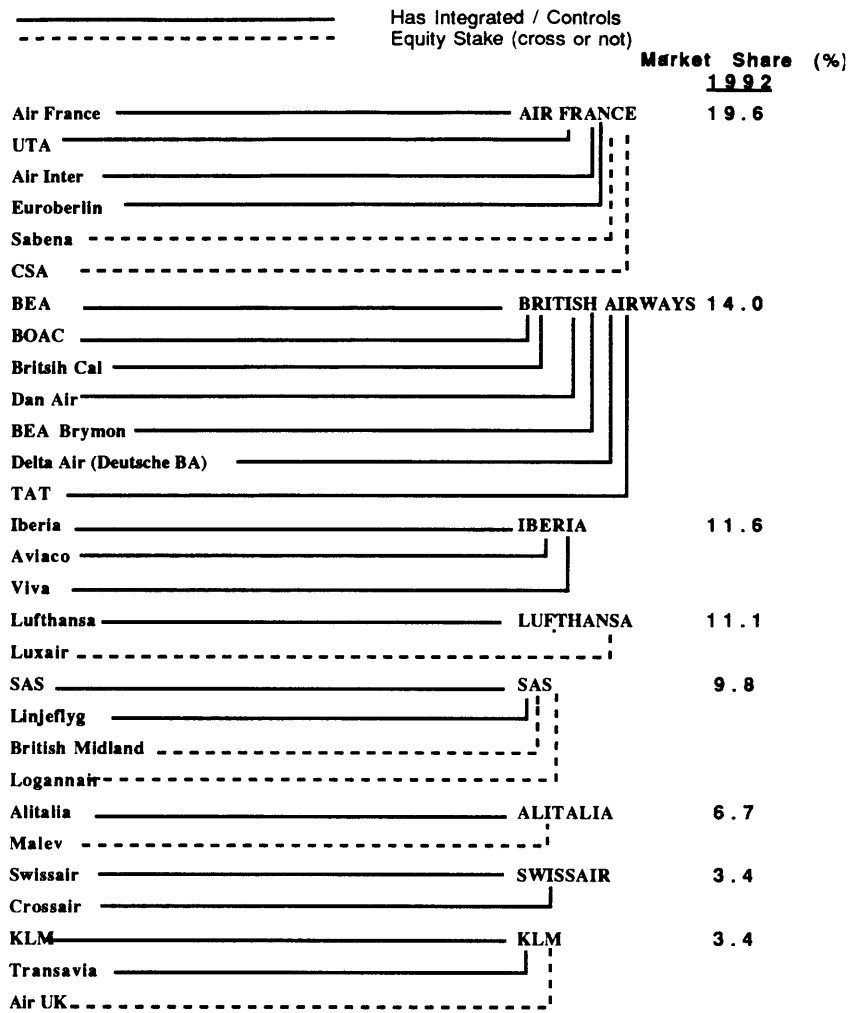
### *2.4.1. Concentration*

As shown by Table 2.4, the globalization as well as the concentration of the European carriers has begun far before the European liberalization, partly to anticipate it and partly to respond to the US moves. In Europe BA comes from the merger of BEA and BOAC in 1974, and has successively absorbed British Caledonian and Dan Air. Air France has merged with UTA and Air Inter. In 1992, the six largest groups generated around 73% of the scheduled intra-European and domestic passenger traffic as opposed to 60% in 1986 (Doganis, 1994).

No major flag carriers have yet disappeared. It is unlikely to happen in the very short run: the political impact would be too much of a burden for the concerned government. Europe may therefore witness more cross equity sharing or alliances than LBOs. This, however, may not be the case in the long run: the Belgians have partly given the control of their flag carrier to Air France and one should remember that Pan Am - now defunct - was also viewed by the public as "eternal".

Global alliances are also created with BA ahead of the rest of Europe with its network of partners covering the three main markets (Qantas in Australia, USAir in the US) and its two subsidiaries on the continent (TAT and Deutsche BA).

Table 2.4: Major Air Carrier Mergers, Acquisitions, Purchases, and Consolidation in Europe as of December 1992



Source: Doganis (1994)



## 2.4.2 Global Carriers

The increasing concentration has given birth to European global carriers. These carriers are not mega carriers, as their size is about a third of the size of their American counterparts in terms passengers carried. However they are global because they compete in the main international markets. This strategy have been adopted so far by the three major carriers in Europe namely British Airways, Lufthansa and Air France and by KLM.

Two major components characterize this strategy as illustrated by British Airways. Firstly a pure European component: to benefit from the new liberalization without having to actually set a new subsidiary in a foreign country, British Airways has acquired TAT and Delta Air (renamed Deutsche BA). These acquisitions enable BA to compete more directly against other European airlines and for BA to take full advantage of its cost structure. Secondly, in order to become a truly mega carrier British Airways has taken a foothold in each of the other two main markets with stakes in USAir and Qantas. KLM, which is following the same strategy is integrating itself even more tightly with Northwest.

Up to now, neither of these two steps have been financially profitable for the concerned airlines. The reasons are threefold:

- TAT and Deutsche BA have not yet fully benefited from British Airways structure
- the market is not fully liberalized yet
- USAir and Northwest are in a very bad financial health

However, these kind of alliances will undoubtedly continue in order to:

- benefit from a denser and a wider network
- realize some economies of scale and scope

An interesting attempt has been made in 1993 by Austrian, Swissair, SAS and KLM to build a new global airline. This has mainly failed because KLM had already too many commitments. Austrian, Swissair and SAS have the options of trying to rebuild a new alliance or getting closer ties with one or another of the global carrier. None of them seems ready to turn into a low cost carrier.

### *2.4.3. European Local Players*

A strategy that would only focus on Europe is rather unexplored. However, the expected fall of the charters may favor its emergence. One can witness some signs of rising of such airlines such as AOM in France. Two different strategies can be envisaged at this point. Either being controlled or allied to a major and thus benefiting from its expertise as well as certain economies of scale or scope. The second strategy would be to become a European low cost carrier. It may prove to be much harder in Europe than in the US for there is no high density routes that are not currently served by a non-stop service. One of the places where such an airline could develop would be in France where the domestic market is appropriate and the congestion at the airports is low.

Some more drastic moves may be expected if a carrier managed to have some costs in line with those of Southwest. It could then generate a totally new demand.

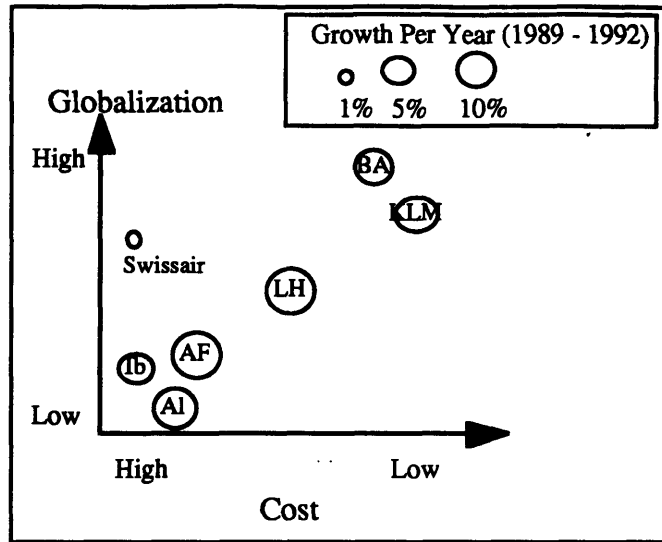
## **Chapter III Recommendations for Air France**

### **3.1 Where Does Air France Stand ?**

Air France has sustained a 12% growth during the last three years due to the acquisition of Air Inter and UTA as compared to the Air France, Air Inter and UTA traffic combined in 1989 the growth would be less than 1% on average per year. However this integration has neither induced some major cost savings nor favored a globalization of Air France. Costs per ASK are among the highest in Europe and Air France has no major alliances with any US or Asian carriers. On the contrary, the poor integration of Air France's three components as well as an obsolete structure have led to major losses throughout the nineties. In the same time, British Airways was profitable and Lufthansa was on its way to recovery (see Table 3.1)

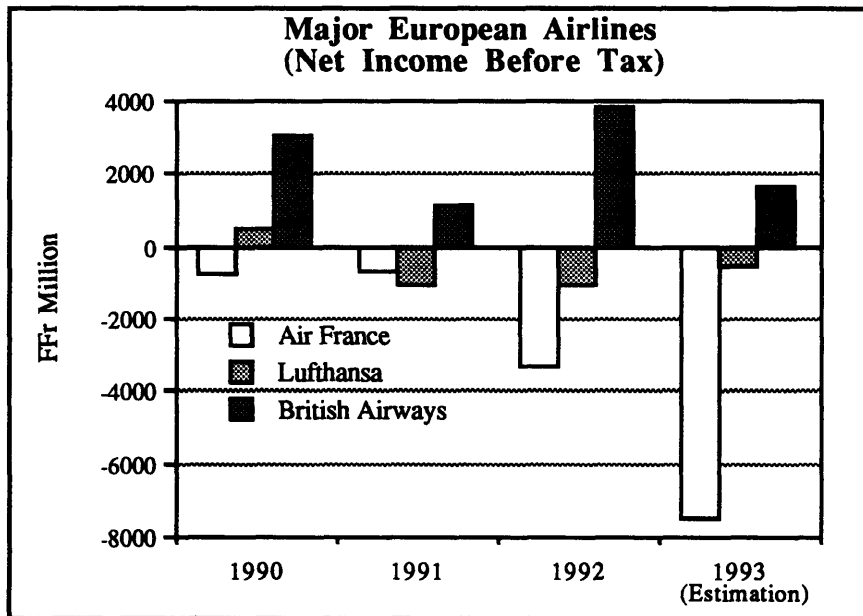
Air France needs a profound reorganization that goes far beyond a few adjustments. It has to experience a revolution as important as that of British Airways in the eighties. It is the only way Air France will catch up even with Lufthansa which itself is going through major changes.

Figure 3.1. Strategic Map for Air France



Source: IATA World Statistics

Table 3.1: Comparative Financial Results for Air France



Source: Alberganti (1993)

### 3.2. Cap 1993

The "Cap 1993" plan (On Course for 1993), launched in 1991, was supposed to give Air France a competitive advantage over its competitors. The plan was reinforced in October 1992 by the "Plan de Retour à l'Equilibre" (Return to Profitability as officially translated but a more closer translation could be Return to Break Even..). This plan was backed by the French Government.

Table 3.2. Comparison Between the Cap 1993 Plan and Other Carriers Achievement

<b>Actions on:</b>	<b>Air France Cap 93</b>	<b>British Airways</b>	<b>Lufthansa</b>
<i>Labor</i>			
Overstaffing	Weak	Very High	High
Wages	Moderate	High	Moderate
Workrules	Moderate	High	High
<i>Routes</i>			
Hub Structure	High	High	Moderate
Global Network	Weak	Very High	High
<i>Marketing</i>			
Image	High	High	Moderate
Pricing	Weak	Very High	High
<i>Management</i>			
Corporate Culture	Weak	Very High	High
Organization	Moderate	High	Moderate
Computerization	Weak	Very High	Weak

Source:

Air France: Attali (1994)

British Airways: Reed (1990)

Lufthansa: Velocci (1993), Genthial (1993)

The "Cap 1993" plan was far less drastic than British Airways' actions in the eighties and was comparable to the plan now being followed by Lufthansa. The weakest points were:

- cost consciousness and cutting was not enough emphasized;

- shift in corporate culture was not sufficient;
- effort on yield management was not sufficient.

Due to lots of reasons, the plan was not accepted by the unions. This, in turn, led to the October 1993 strike. The government stepped in, dismissed Bernard Attali as CEO, promised to abandon the plan and appointed as new CEO Christian Blanc, who has been cited for the strength he showed as CEO of the RATP, the Parisian public transportation system. However he had no experience whatsoever in the airline industry and unlike Colin Marshall at British Airways does not come from a harsh competitive environment.

### **3.3. A Change in Service Pattern**

#### *3.3.1. A New Service for a New Image*

Air France used to benefit from its image as a luxury carrier. However, this image has changed to that of an expensive and inefficient carrier. This image has been badly hurt both by the October strike and the publicity made around the poor results of the airline, not talking about the FFr 20 billion that Air France may get from the tax payer. In contrast, British Airways is viewed as the winner (Katz, 1994) and Lufthansa as going through a successful reorganization.

Air France will not turn into a "no-frill" carrier. On the contrary, it has to improve its image by improving its services. Which begins by a pure marketing campaign that emphasizes the new market-oriented attitude. But it has to go beyond that and a campaign should be launched among the employees and the passengers to identify areas which need improvement.

#### *3.3.2. A more Efficient Route Structure*

Air France benefits from the most promising airport in Europe. No airports come near CDG in terms of extension possibilities: 3 more runways can be built (Shearman, 1993). With the building of CDG 2, Air France has the opportunity of creating the first hub

in Europe. The increasing difficulties to build new airports in Europe where the nimby "not in my back yard" philosophy prevails, will ensure CDG a long term competitive advantage. Special attention should be brought to the organization of the terminal. CDG 2, which would group Air France, Air Inter and its allies, should be organized so as to facilitate all the connections between two flights. Schedules have to be adapted to take fully advantage of hub operations. CDG is conveniently located for the North Atlantic flights and all the flights UK / Scandinavia - Spain / Italy. Moreover an efficient hub will enable Air France to regain the market share it has lost to "sixth freedom" carriers such as KLM in the market originating from the French provinces.

Air France may want to find a second hub in Europe better to serve flights crossing Eastern Europe (Brussels seems to be too close to Paris for that purpose). Prague may have been the right choice, Vienna or Varsaw could be a new one. This hub would conveniently serve all flights from western to eastern Europe as well as flights from Scandinavia to Greece / Turkey. The best way to do it would be to form a close alliance with any of the airlines controlling these airports. The alliance with CSA has come to an end (Le Monde, 1994), Air France should therefore find a new ally to be present in Eastern Europe.

Having the two hubs will not be sufficient unless the whole restructure is re-built, with a new schedule, new services offered or closed. Air France has recently opened some new routes to Italy all of them unprofitable. One answer to that may be to feed those routes with some travelers from Manchester or Bergen...

### **3.4. Costs, Costs, Costs**

#### *3.4.1. Develop a Cost Consciousness Culture*

"BA appears to have been more successful than most carriers in spreading a culture of cost-consciousness throughout the company" (Katz, 1994). The success of BA seems no miracle. On the top of having considerably reduced its number of staff, BA has

installed some cost saving programs: each director is required to defend its budget, and exercises are launched to encourage staff to make suggestions on how to save money in their departments (Katz 1994). Air France has to develop this cost consciousness by changing the way it is managed. The first step however is to make the necessary big cuts.

### *3.4.2 Labor Costs*

As previously stated, labor cost represents the major part of the controllable cost of the airline and also a significant part of total cost. Labor cost is composed of wages and benefits as well as labor productivity. Wages at Air France have increased tremendously during the last twenty years for the same reasons as in the whole air transport industry as well as because Air France was a French champion and therefore benefited from multiple State aids and supports. Many pilots are still paid more than the CEO (Gallacher 1994). In 1990, pilot salaries including benefits were ranging from FFr 280 000 to FFr 870 000 for less than 80 hours of work per month. Total labor cost in Air France amounted to 41.8% of total turnover in 1990 as opposed to 32.3% at Lufthansa and 24.2% at British Airways (Problèmes Economiques # 2300, 1992). Lufthansa has reached a number under 25% in 1993 (Gallacher 1994)

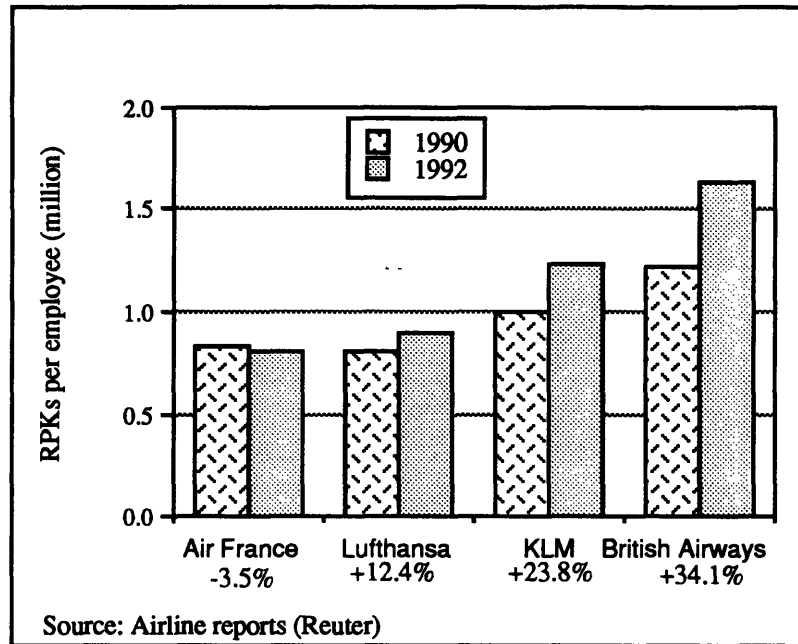
More important to the cost structure of Air France is the steady increase in the gap between Air France and its main competitors. KLM and British Airways were in 1990 far more efficient than Air France and have increased their efficiency in the following two years whereas Air France has experienced a decline! (See Table 3.3) British Airways is going on with more reforms and reorganizations. The American example shows that there is lots of room for even more efficiency.

In order to fill the gap between itself and its competitors - as wished by Christian Blanc - Air France has to take even more painful and drastic measures than those undertaken by Lufthansa. Lufthansa cut more than 6,100 jobs and is continuing to scale down its work force. Although firing people is certainly not enjoyable, Air France should



target a down scaling of at least this magnitude. Air France should also adopt some new work rules in order to increase the number of block hours performed by it staff per month.

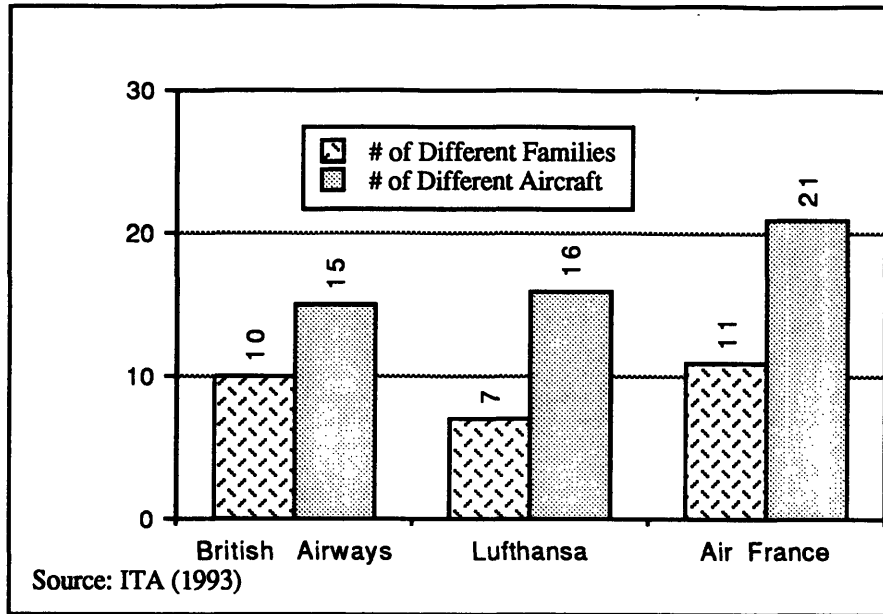
Table 3.3.: Labor Productivity in Different European Airlines



### 3.4.3 Maintenance costs

Another reason for high costs at Air France is the extreme diversity in its fleet. (See Table 3.4) Lufthansa with only 7 types of family seems to have a competitive advantage. However, the difference is far smaller than that witnessed in labor productivity. Therefore, if fleet diversity should decrease, it is not the core of the problem.

Table 3.4. Fleet Diversity of the three Major Airlines in Europe



### 3.5 Catching up with the most Advanced Technologies

The cost and benefits of upgrading Amadeus has to be closely compared with the two other solutions: negotiating a technology transfer agreement with Sabre or Apollo and being affiliated with one of the two. This, would implicitly recognize the failure of Amadeus but it would be better to negotiate a technology transfer agreement and to establish close contacts with a leading US system than to invest in an outdated technology. This will enable Air France to benefit more easily from the major breakthroughs that are expected in the near future.

As for the yield management itself, Air France tried to set one but it does not work properly (some say it does not work at all). For this part too, a technology transfer or a licensing agreement may be less costly than to actually (try to) build a new one. Which needs a huge amount of money that Air France does not have.

## **3.6 A More Aggressive Strategy**

### *3.6.1. Change in Corporate Culture*

Air Transport has long been seen as a highly technological industry. Although aircraft are still so, passengers do not feel this way any more. There is a need to change the corporate culture to switch from a company that was capable of operating the Concorde to a company capable of inventing new marketing tools to attract new clients. The most recent invention of British Airways was the Business Class. American Airlines launched the Frequent Flyer program. On a smaller scale, companies are producing new marketing devices every week. Air France usually tries to catch up.

The example of British Airways in the eighties is very insightful. When Lord King came into power in 1981 and Colin Marshall in 1983, they appointed lots of new managers coming from much more competitive and much more consumer oriented industries, Colin Marshall himself coming from Avis. This change in turn has re-oriented the company. They have spent millions in finding a new livery, in engineering better seats. The privatization was organized as a tremendous show. And the carrier was in much better shape. (Reed 1990) In a less drastic way Lufthansa is going through same process.

This culture change may therefore mean a change in the recruiting process, targeting more business oriented managers (either by their education or their previous experiences) and less towards "pure" engineers.

This culture change should, in turn, lead to a more aggressive airline. The likely outcome of the liberalization is an increasing competition among the players. In this classic game theory framework, Air France does not want to be the only one collaborating while the other are competing...

### *3.6.2 Integrate Air Inter*

Air France is in a unique situation of controlling 72% of an airline whose size is roughly equivalent to its own. British Airways emerged from the merger of BEA and

BOAC. This merger was difficult because the two corporate cultures were very different: BOAC had a long-haul network and considered itself as an extension off the foreign office whereas BEA was more commercially oriented (Reed, 1990). The two cultures remained for a while creating lots of inefficiencies. Having learned the lesson, British Airways when taking over BCal totally incorporated this much smaller firm within a few days. Numerous examples have shown how painful such mergers can be for the employees but how dangerous it is for a company to have two different entities as the example of Pan Am and National illustrates. Therefore Air France should entirely integrate Air Inter, gaining in efficiency and consistency. This real merger is all the more urgent since the two networks begin to overlap each other creating sources of conflict. This merger will have to be preceded by a total purchase of Air Inter by Air France or by SNCF accepting some shares of the new entity.

### *3.6.3. Secure the Domestic Market*

The French domestic market is by far the biggest in Europe (see Annex 7). Air France has therefore a competitive advantage over its competitors by controlling this market. However, it has to fight against two different type of competitions:

- New entrants on domestic routes such as AOM on Paris Nice
- the TGV

The TGV is optimum for a distances ranging from 400 to 600 kilometers. It is favored by the French government which continuously aids SNCF. However on longer routes, Air Inter should be able to retain most of its market share. On shorter route, where Air Inter would have some difficulties in maintaining it shares, some joint ventures with some airlines may be possible ("France Express"). Taking into account the specificity of the French market with a potentially dense high speed network, Air France should also reach some agreements with SNCF in order to facilitate the connections between the TGV and Air France's flights.

#### *3.6.4. Build a Consistent Network throughout Europe*

Europe is a much more fragmented entity than the US. De localizing one's fleet or employees is very costly . The only way of taking advantage of the airline new rights and to build a consistent network serving all Europe is to acquire new airlines abroad (or stakes).

British Airways has done that with TAT and Deutsche BA. Air France's network was composed of CSA, Sabena and Euroberlin. However, none of the three is very promising. CSA was undoubtedly a good strategic option with a good location of Prague, a window opened towards the Eastern European market. The Czech Republic was one of the most promising States in Eastern Europe. However the project was not flawless and the bride was not as efficient as expected. Furthermore, the increasing nationalistic movement in the Czech Republic forced its government to ask Air France to divest its shares. An agreement was signed on the divestiture on March 22, 1994 (Le Monde, 1994). The Sabena deal was a pure defensive move in order to prevent BA from having a hub 300 km from Paris. However the future of this alliance may be questionable as no synergy whatsoever exists between the two airlines. Lastly Euroberlin which appeared at first to be a good investment has become much more inadequate since it competes with Lufthansa, its second main shareholder.

Air France should therefore reconsider some new partners. Austrian with a hub in Vienna would be a good option if not already engaged with Lufthansa and Swissair. Other Eastern Europe carriers could be considered such as LOT in Poland, which is doing reasonably well. A broad alliance with Lufthansa is unlikely to happen as the two markets are far too much overlapping.

#### *3.6.5. Become Truly Global*

Air France falls behind its European competitors in terms of building alliances. However such alliances are important because they are the only way for a European carrier

to propose a wide range a destinations in the three main markets: Europe, North America and the Pacific Rim. Moreover, it is essential that their intercontinental flights are fed with established carriers in those markets.

KLM has a very integrated alliance with Northwest, British Airways has stakes both in USAir and Qantas and Lufthansa begins an alliance with United. Air France has some special relationships with Continental and Air Canada as well as a foothold in Vietnam airlines. However, none of those alliances are definitive nor effective. The choice of an American partner is tricky, three main points have to be considered:

- synergy of the network (without any overlapping)
- good will of the partner
- its financial health

When comparing two possible options such as American Airlines and Continental: American Airlines has a wider and denser network than Continental, although with some overlaps with Air France. It is in a much better financial health, Continental has just gone through several bankruptcies and its future may rely on the success of the operation Cal Lite. It can also bring in the deal its CRS and pricing system which Air France lacks. On the other hand American Airline may be suspected of using Air France to invade the European market without any deep commitment to follow up on the agreement. The question is therefore: does Air France want to be the leader in a second tier team or the follower in a first tier group ?

British Airways has chosen its "Continental" with USAir, although a little bigger, and has to pay for its poor results with the fear of a possible bankruptcy. In the long run, however it may give British Airways the entire control of an American Airline. Lufthansa has chosen its "American" with United, which involves the risk of not controlling the outcome of the agreement.

As for the pacific Rim, Air France has some talks with Vietnam Airline, however this Airline is certainly not a major one in the region. Very few Asian carriers are in close

relations with a European one with the exception of Qantas with BA and Singapore with Swissair. The door is therefore opened to any kind of new partner.

### **3.7. Summary of the Recommendations**

Even though Air France may officially condemn the European liberalization, for it is not bringing to the consumer what it should and because Air France is not prepared to compete in such an environment, Air France should anticipate its outcome, knowing that its claims will at most delay certain aspects of the liberalization. It should anticipate a competition as fierce as the one experienced in the US. The lack of competition in the beginning of the European liberalization is due to the recession and some technical problems such as airport and air traffic congestion.

This new competition will bring, a much more market-oriented way of doing business with efficiency as the key word. This in turn will put pressure on cost, will force a re-design of each airline's network, will make the latest technological tools necessary and will oblige flag carriers to become more global. British Airways has started to anticipate those changes, Lufthansa makes it clear that it wants to catch up. Air France should also make such a commitment.

To anticipate these changes and be ready when the effects of the liberalization will be more present, Air France should complete these necessary reforms:

- a change in corporate culture, switching from a world of technicians to a world of sellers and managers
- extreme cost consciousness - specially focusing on labor cost -
- complete integration of Air Inter, losing Air Inter's goodwill but gaining a lot in efficiency
- operation of a hub and spoke system in Europe, taking full advantage of CDG possible extensions
- acquisition of the latest technological tool: CRSs, seat inventory systems,

- building a long term commitment with both a US carrier and an Asian carrier.

Air France has lost a few years as compared to its closest competitors. It did so by wasting energy in fighting the European liberalization. This thesis has proposed a much more pragmatic approach based on this quotation from Montaigne " Faute de changer les événements, change toi toi-même" (" For lack of changing the events, change yourself"). None of the competitive disadvantages are definitive and Air France may well be ahead of the competition by the year 2010 with CDG being the major hub in Europe.



## **ANNEX 1: Industry Outlook**

### *General Context*

The context of the airline industry is characterized by the clash of three industrial cultures within an increasingly liberalized and global aviation market (Kevin, 1994).

- the liberal laissez-faire culture which is prevailing in the US, the UK and the Netherlands. Their carriers are mainly private, profit driven and have become highly efficient. Those countries tend to welcome deregulation and open skies
- the social market view, airlines are viewed as a close partner to the State, they are expected to support the welfare programs supported by the government as well as employment. Ownership is therefore mixed - public, private -, examples are Germany, Switzerland and Sweden
- the state ownership, centralized culture where firms operate as extensions of government policy. They should provide employment as well as infrastructure and technology development. Ownership is usually public. Fall in this category France, Italy, Belgium and Spain.

These cultures, in turn, have a tremendous effect on the cost structure of the airlines and their efficiency, labor costs and working rules being major components of the airline cost structure.

As flag carriers became too expensive and pressure for privatization and deregulation increase, the State owned culture tends to lose ground to the other two. State Aids are more and more attacked in courts (The Reuter European Community Report, 1994). The "Comité des Sages" report that has been revealed at the end of January 1994 calls for a last shot aid, calls for more privatizations and denounces any temptation to roll back in the agenda of the European liberalization (Barber, Rachel and Ridding, 1994).

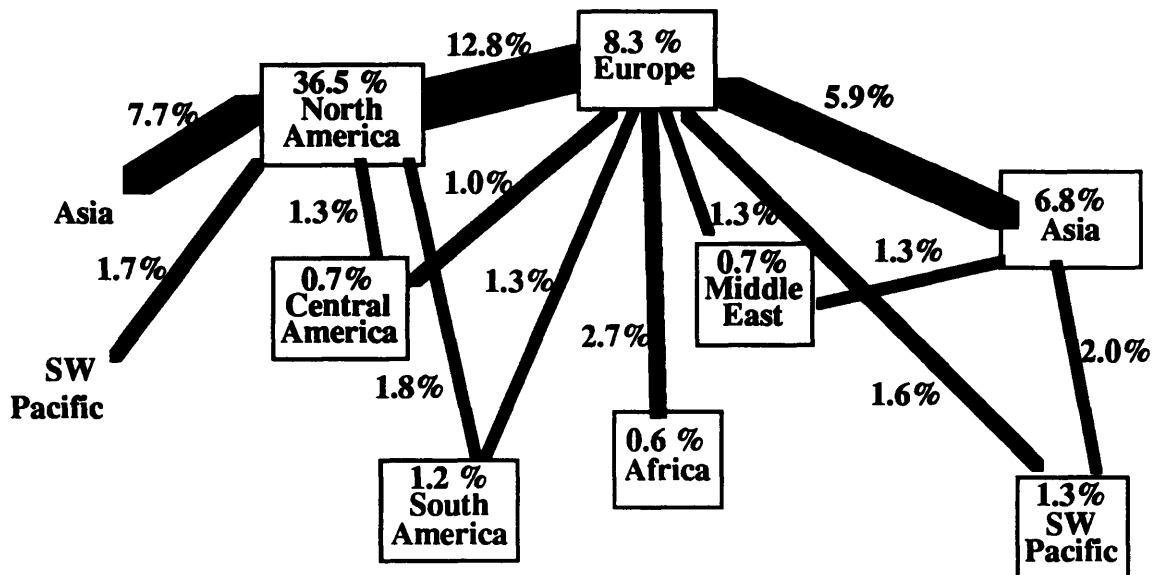
Crucial for the next few years is the conflict between the two remaining cultures - the liberal laissez-faire and the social market one -. The outcome of this battle is not

straight forward. The two cultures may both survive, with on one hand more and more synergy between the labor and the management to improve competitiveness in the social market culture and on the other hand more pragmatism in the liberal ideology to accommodate economical realities of Europe (unemployment, social practices..).

**Market**

*Regional Segmentation*

The world's airlines carried an estimated total of 1.2 billion passengers on scheduled services in 1992. International passengers (300 million, an increase of 13 percent over 1991) represented 26 percent of the total. Domestic traffic remained steady at 867 million passengers (IATA, 1992). The segmentation of the market is as shown on Figure A1.1.: Major Traffic Flows Between Regions in 1992



- Notes:
- 1. Percent of IATA Total Schedule Traffic - RPKs
  - 1. Traffic flows between regions less than 1% are not shown
  - 2. Traffic within regions shown in boxes

Source: World Air Transport Statistics, IATA 1992

The American market dominates the world with more than one third of the traffic. It should be noted that this market is closed for non American firms. Comes second the North Atlantic market open to both European and American. then the European market heavily regulated and also protected and finally the American Asian market. The American carriers have access to more 60 % of the market while a European firm would play in 36 % of the market (assuming that the liberalization has occurred in all Europe, giving fifth freedom and cabotage to all the carriers as due April 1, 1997). It is noticeable that the traffic Europe - rest of the world is exactly the same as the traffic North America - rest of the world (26.3% of the market).

Table A1.1 Traffic Growth per Region

<b>Region</b>	<b>1976-80</b>	<b>1981-85</b>	<b>1986-90</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Europe	8.2	3.5	7.6	2.8	4.4	4.7
Africa	13.5	4.7	2.9	5.9	6.2	6.5
Asia & Pacific	17.0	7.8	11.1	9.3	10.4	10.6
South America	14.6	2.7	5.7	5.9	7.1	7.9
Middle East	24.7	10.1	4.5	6.9	6.5	6.8
North America	11.0	5.6	7.5	6.1	6.6	7.0

*1994 - 1996: projections*

Source: ICAO Aviation Statistics of the World

As far as growth is concerned, Asia comes first both in past growth and in future prospect. Europe and the US are more mature market. Finally, the inter-continental market seems to be the most growing market, with Asia catching up with Europe and the States as an attractive pole.

### **Passenger Segmentation**

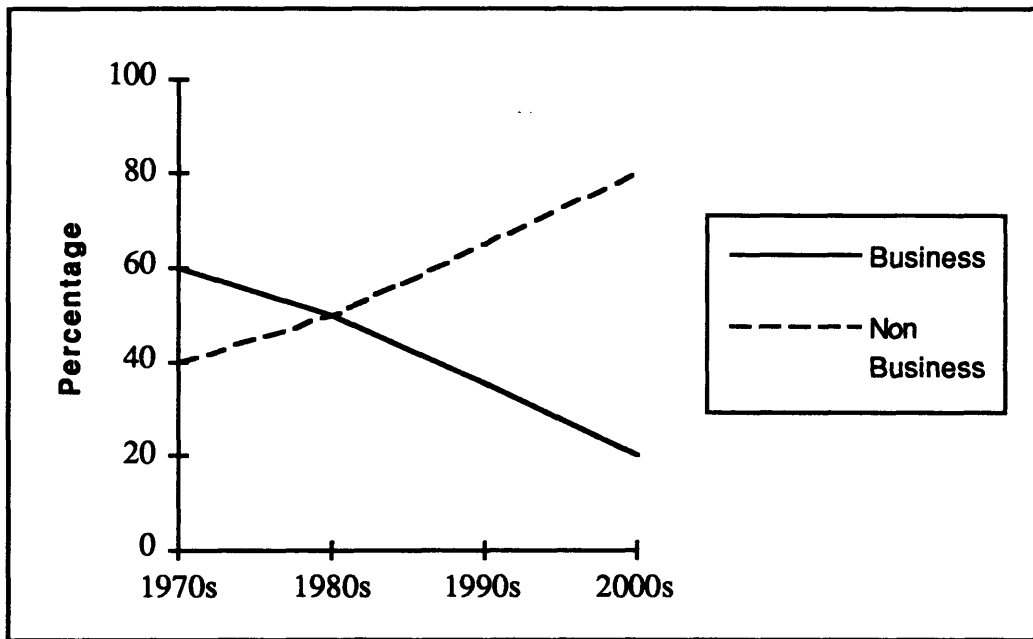
Common practice divides the passengers into two broad segments:

- Business Travelers, who demand high flexibility in terms of refund and schedule change, plus a reasonable comfort. Some are driven by the "not my own money economy" (such as big firms, lawyers) and will be frequent flyers addicted ( a true

bribe in that case), other will have either strict internal rule or are coming from small firms and will ask for the smallest price given this flexibility.

- Non-Business very price-sensitive and ready for less flexibility (non re fundability, strange schedule...). This group is also usually divided between the pure leisure group and the friends and relatives visitors (FRV).

Table A1.2: Passenger Segmentation



Source: Shearman, 1992

The trend is towards more and more leisure travelers. This is bad news for the airlines as far as fares and yield are concerned. This is probably bad news for business travelers who would have to pay a higher premium for the flexibility and the comfort.

## Major Players<sup>6</sup>

The industry is heavily concentrated with the 10 biggest players accounting for more than 45% of the industry total revenue. All these major players are either competitors of Air France on some routes or potential partners in case of US domestic players.

Table A1.3. The 20 Largest Airline Companies by Revenue (1992)

	Country	Revenues (a) <i>\$millions</i>	% Change	Profits <i>\$ millions</i>	PKs <i>millions</i>	TKs <i>millions</i>
1 AMR	US	14,495	11.6	(935.0)	156,737	1,636
2 UAL	US	12,889	9.7	(956.8)	148,841	1,930
3 Air France (b)	France	12,300	4.0	(616.8)	52,349	3,769
4 Lufthansa	Germany	11,075	14.0	(248.7)	48,661	4,284
5 Delta Air Lines	US	10,837	18.2	(506.3)	129,541	1,197
6 Japan Airlines	Japan	10,421	(1.9)	383.6	55,090	3,229
7 British Airways	UK	9,416	9.9	301.1	72,491	2,461
8 Northwest Airlines	US	7,963	5.7	(386.2)	94,345	2,694
9 Federal Express	US	7,550	(1.8)	(113.8)	-	5,768
10 All Nippon Airways	Japan	7,159	7.9	(9.4)	38,310	627
11 USAir Group	US	6,696	2.5	(1,228.9)	56,482	215
12 SAS	Sweden	5,909	10.6	(149.4)	15,699	390
13 Alitalia	Italy	5,673	19.8	(11.9)	27,390	1,268
14 Continental Airlines Holdings	US	5,575	0.4	(125.3)	69,317	560
15 Swire Pacific	Hong Kong	5,029	16.2	570.9	27,466	1,670
16 KLM	Netherlands	4,663	11.6	(318.7)	31,054	2,392
17 Swissair	Switzerland	4,415	3.1	80.3	16,154	1,063
18 Iberia Airlines	Spain	4,389	15.5	(343.7)	23,857	575
19 Trans World Airlines	US	3,634	(1.4)	(317.7)	46,689	534
20 Singapore Airlines (c)	Singapore	3,468	18.9	513.0	37,105	2,306
Total.....		150,088	9.2	(4,420)	1,147,578	38,568

Note (a) Consolidated operating revenues include those for non transportation activities

(b) Air France Group comprises Air France, UTA, Air Inter

(c) from World Air Transport Statistics, IATA 1992

Source: Fortune August 23, 1993 and IATA World Air Transport Statistics, 1992

Revenues are highly dependent on volatile exchange rates and may not be a good basis for a ranking, however they are the only way to aggregate all the different activities of the airlines. Air carriers are not competing only in terms of passengers kilometers but also on the freight market and some of them on other traveling facilities (hotels, tour operators..).

The US dominates the market with 8 companies in this top 20. It becomes even more striking when looking at the passengers kilometers with 7 US companies in the top

<sup>6</sup> In this paragraph we have chosen to disregard Aeroflot for which the data are unclear.

10. A company as American Airlines has as many passengers kilometers as nearly BA, Air France and Lufthansa all together and more in terms of passengers carried.

US companies have, on average a lower revenue per Passenger Kilometer as shown in the table than the European ones. That may have two reasons, European Airlines may be more diversified or they may charge a higher price per passenger kilometers.

Financial results are dreadful. There are twenty airlines companies in the top 50 transportation companies analyzed by Fortune Magazine. They have eight out of the ten worst results (the two others being SNCF and Deutsche Bundesbahn which have other priorities than making profit). However they are not equally dreadful, the American companies have suffered the most (even though they have also changed their accounting practice which has, in turn, deepened their lost), the three Asian companies have good results, and the European are in between with the noticeable example of BA on the good side and Air France on the bad side.

**Table A1.4 The 20 Largest Airline Companies by Revenues (1992) at a Glance**

Companies	Country	Comments
1 AMR	US	Has grown up through acquisitions and internally, Alliance with Cathay Pacific
2 UAL	US	Has increased its market share in the Pacific Rim Try to enter the European market, an alliance with Lufthansa
3 Air France Group	France	In deep financial trouble, has to integrate Air Inter and UTA Has a good network of alliances, CSA, Sabena, Aeromexico...
4 Lufthansa	Germany	In reorganization, is the major beneficiary of the Eastern Europe market, Alliance with United
5 Delta Air Lines	US	Has difficulty in entering the European market with Hub in Frankfurt, Alliance with Singapore and swissair
6 Japan Airlines	Japan	Huge international growth, is currently under a reorganization plan
7 British Airways	UK	In the black ink for a few year, the only large privatized airline in Europe Stake in USAir, TAT, Qantas...
8 Northwest Airlines	US	Strong in the Pacific Rim, Never far way from bankruptcy Strong equity swap with KLM
9 Federal Express	US	The largest air freight carrier in the world
10 All Nippon Airways	Japan	Dominates the domestic Japanese Market Has started routes towards the US and Europe, Alliance with SAS
11 USAir Group	US	In deep financial trouble, good presence on the East Cost Alliance with British Airways
12 SAS	Sweden	High quality carriers Alliance addicted, mainly with Swissair and Austrian
13 Alitalia	Italy	Has to be reorganized before privatization No major Alliance
14 Continental Airlines Holdings	US	Back and forth in bankruptcy, has emerged as a new low cost carrier equity owned by SAS
15 Swire Pacific (Cathay)	Hong Kong	Tries to dominate the South East Asian market Alliance with American Airlines
16 KLM	Netherlands	Strong commitment towards liberalization Owns 49% of Northwest
17 Swissair	Switzerland	High quality service Alliances with Delta, Singapore, Austrian, SAS...
18 Iberia Airlines	Spain	Handicapped by the badly managed hub in Madrid, Strong in South America, with the possible purchase of Aerolinas
19 Trans World Airlines	US	Back and forth in bankruptcy Alliance with ANA and Air Canada
20 Singapore Airlines	Singapore	High Quality and profitable Alliance with Delta and Swissair

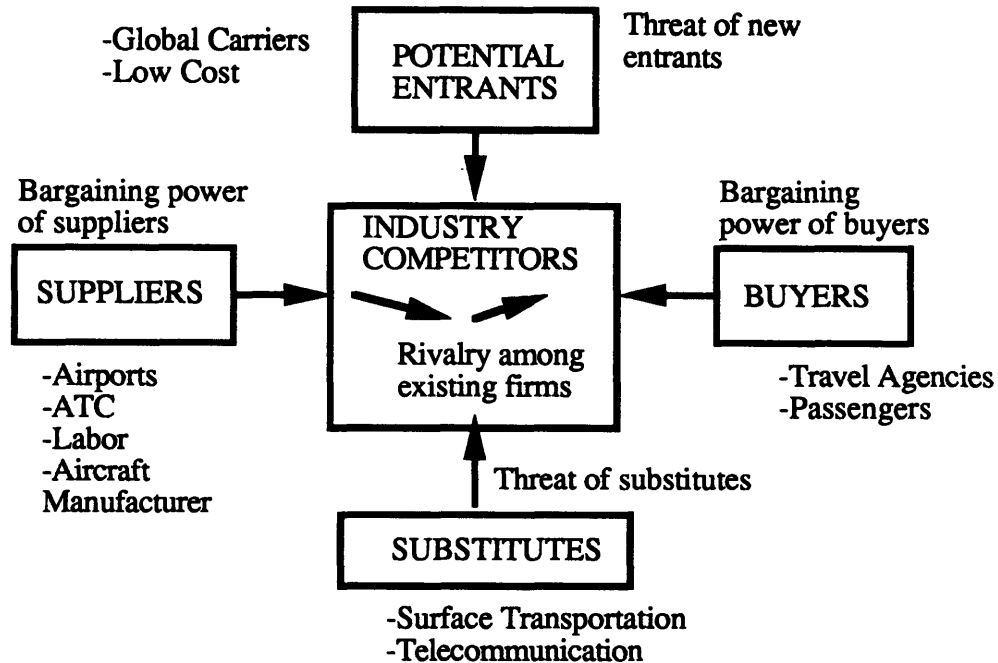
Source: Various Articles in "Aviation Week and Technology" and in "Air Transport World"

## ANNEX 2: Airline Industry Structural Analysis

### General Framework

The framework adopted is the now classical Porter's industry analysis framework (Porter, 1980).

Figure A2.1: Framework for each of the markets (Europe, US, Pacific Rim)



### Rivalry Amongst Players

#### *Regulatory Order*

1944: Chicago

Central to the mode of competition is the regulatory order. The framework has evolved since 1944, when the first agreements were signed in Chicago. During this conference, two different points of view were expressed:

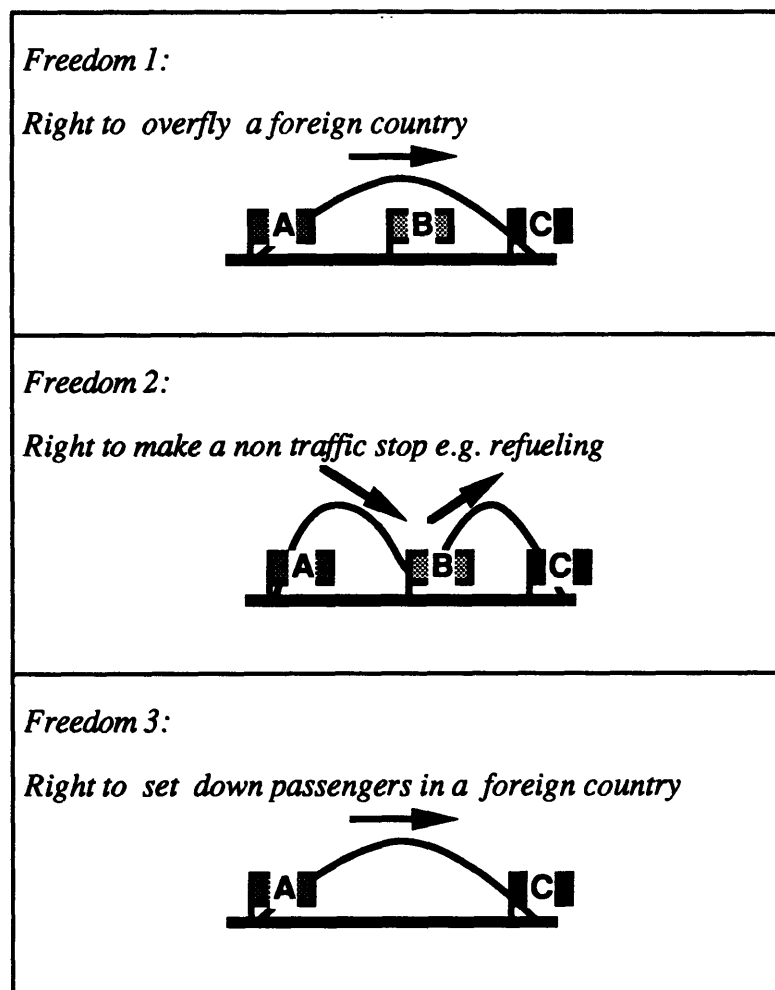
- Great Britain and most of the European countries favored the creation of a centralized body to regulate and coordinate air transportation



- The US favored bilateral or multilateral agreements, with no loss of sovereignty from Nations.

The US seemed to have won the debates as the ICAO (International Civil Aviation Organization) has a very limited role and most of the agreements are bilateral. Five degrees of freedom have been defined during this conference and out of the five only the two first have been agreed and signed. These two are technical and can not be considered as commercial.

Figure A2.2: The Freedom Rights, based on an airline registered in country A



*Freedom 4:*

*Right to pick up passengers from a foreign country*



*Freedom 5:*

*The right to carry passengers between two foreign countries*



*Cabotage:*

*The right to carry passengers within a foreign country*



Source: Shearman, 1992

Since then numerous bilateral agreements have been signed, the major ones being Bermuda I and Bermuda II. Each country has managed to keep control on which and how often carriers are allowed to land on their airports. (Noting that Great Britain had enjoyed during this period one of the most restrictive agreement with the United States).

## **Distribution**

Distribution is divided into two sub groups whose relative share of the market changes over time and space. This two groups are :

- Travel Agents (70-90% of the market)
- Direct Sale (10 - 30% of the market)

Deregulation of the market as well as the boom of the CRS (see below) have increased the relative market share of travel agencies from 60 % in the beginning of the 70s to 90 % percent now in the US (Shearman, 1992). They operate in two different ways:

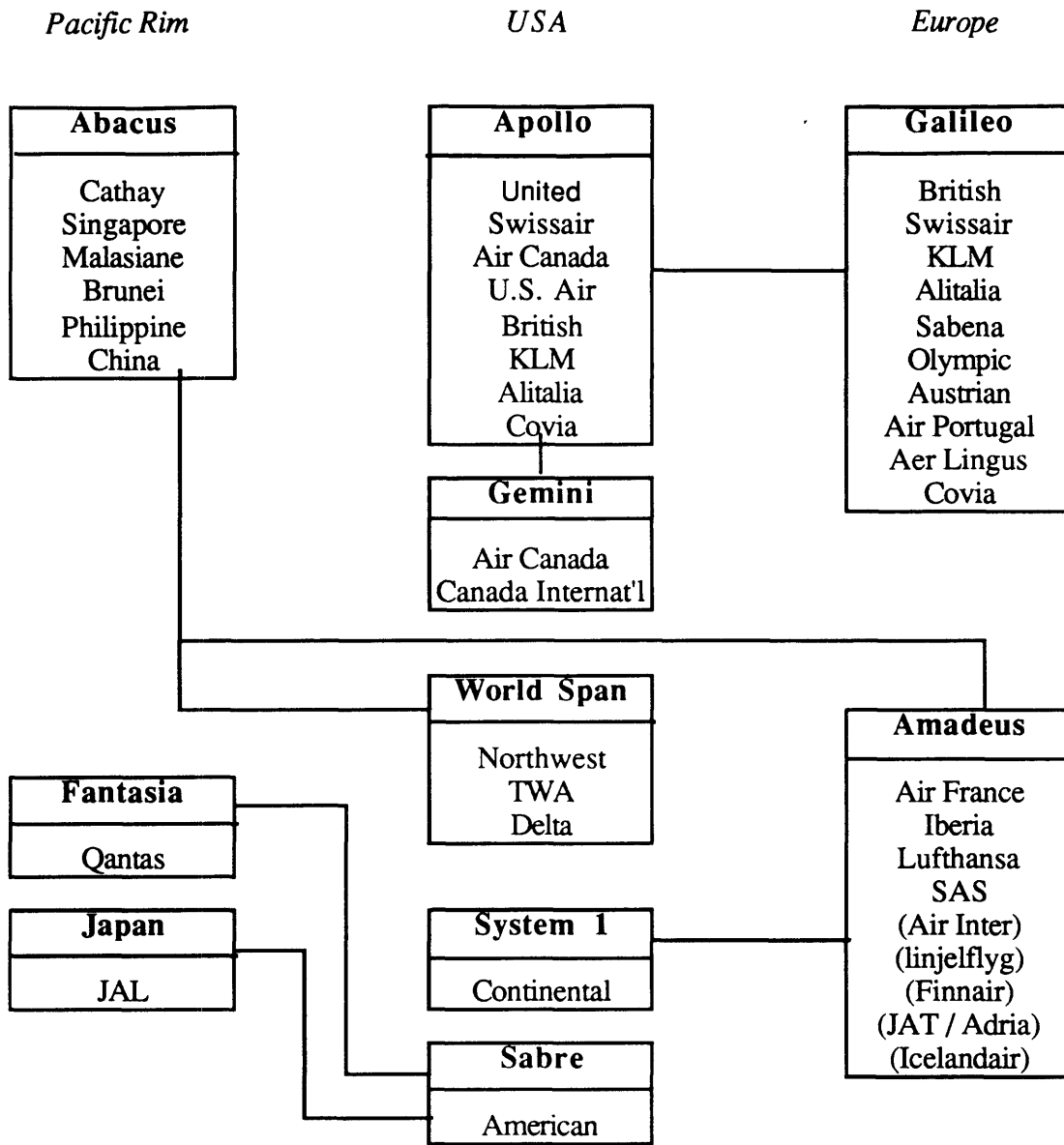
- They can book reservations on behalf of the customer, collect the price of the ticket and pay back a Central Bank which in turn re-distributes the money to the airlines (the Bank Settlement Plan system). In this system the agency receives a commission from the airline on each ticket sold.
- They can buy a block of seats in a flight up front and sell it back with their own mark-up such as all inclusive package, taking the risk of wrong forecast. This method is appreciated by the charter and the small companies. (This system is used in France more than anywhere else)

The future of the booking system depends on the success of the information highways. New networks will allow the airlines to increase their direct sales, with new more friendly personal computer based reservation systems. In the short term in Europe, the trend towards more and more sales through travel agencies should continue as the price system becomes more elaborate.

### *The Computerized Reservation System*

The two major CRS in the US are Sabre and Apollo. In Europe two main consortiums have built their own Galileo and Amadeus, Galileo has been later linked with Apollo, and Amadeus with System one the small CRS operated by Continental (see Figure A2.3).

Figure A2.3. Major CRS Networks Worldwide



Source: Swissair Document

The format of these CRSs and the way they operate have been attacked for several reasons:

- they used to discriminate the other airline by putting in the first screen only flights from the owner of the system even though they could either more expensive or less convenient for the customer;
- they tend to favor the price competition as the program to find the cheapest way is usually included, whereas you can not ask only flights with hot meals;
- they favor the globalization of the airlines and the concept of code sharing, which is not associated with a much better schedule coordination is simply misleading for the customer.

Code sharing and ownership of CRS proved to be useful as studied have shown than most of the flights are booked after the first screen (83%).

### **Suppliers**

They include:

- aircraft
- labor
- fuel
- airports
- air traffic control

### **Aircraft**

The final agreement the Uruguay round of the GATT in December 1993 was viewed as the best deal countries could achieve though it remains very loose (Rodier, 1993). The agreement puts a threshold of direct aids (33 % of any particular project for more than 100 seat planes) and 4% of indirect aids.

The industry is very well structured with Boeing having enjoyed a dominant situation for a long time, Airbus arriving second in market share and having commands similar to the ones of Boeing, finally Mc Donnell Douglas arriving third.

The aircraft industry is of such an importance that most governments have stepped in to protect their industry. This issue leads to bitter statements between the US and Europe, each accusing the other party to be “unfair”.

Aircraft manufacturers’ market power has tremendously decreased due to:

- High competition and oversupply
- Decreasing number of buyers due to the rising of leasing companies

However, first move advantages are important for several reasons:

- spare parts account for more than half of the price of an airplane during its life
- there is an expensive switching price due to retraining
- for cost sake airlines tend to homogenize their fleet.

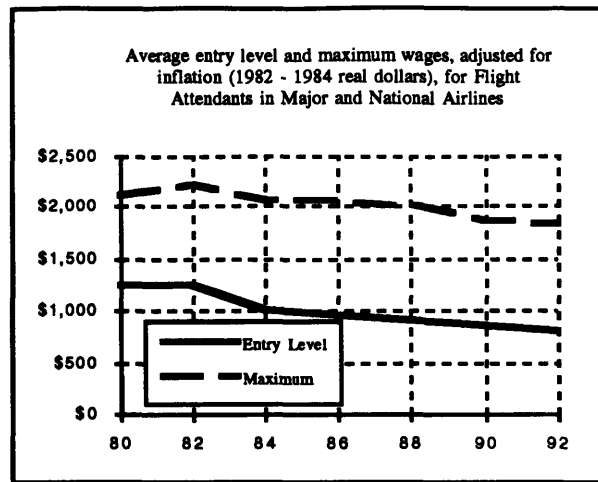
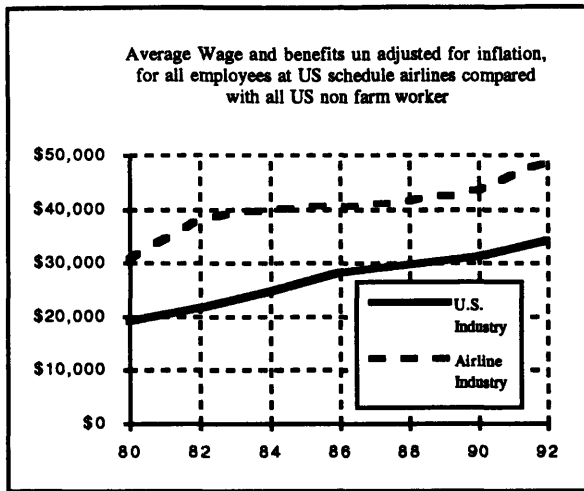
This in turn leads to harsh battles either to capture a new comer -such as Air Vietnam- or to make one big player switch for one manufacturer to the other as the \$500 million grant of Airbus for Northwest has proven.

The situation will remain similar as long as there is an over supply of aircraft and as no major technological breakthrough occurs.

### Labor:

Labor forces in air transportation have traditionally enjoyed one of the highest salaries in the industry. This was particularly true for cabin crews and pilots. However, since the deregulation in the US and the move towards more cost concerns, the salaries have been reduced in real terms.

Table A2.1: Average wages in US airlines as compared with US workers



Sources: New York Times (1993)

These reductions have been the results of different events:

- implementation of a two-tier system for new employees (United and American)
- non unionized entrants
- exchange of salary cuts with corporate shares(TWA, Northwest, United and now Air France ? Lufthansa...)
- wage freezes

Important among those measures is the exchange of equity share against labor concessions. United Airlines has proposed to sell the majority of the shares to employees and to give them three seats at the board of directors with a veto power on major issues. This experience will certainly be interesting. As stated in Le Monde "the US is reinventing socialism". This solution although not free from internal contradictions (Izraelewicz, 1994) has already been experienced in the air transport industry (such as with United Parcel Service). If it happens to be successful, lots of airlines among which Air France will be tempted to follow the same path.

The relative power of airline workers and their management varies a lot according to context in which the airline operates. One extreme is Air France where employees can

dismiss the CEO by going in the street and the other extreme is Frank Lorenzo's numerous ex-air carriers where unions were consistently clashed.

### Fuel:

Fuel has historically accounted from 8 to 20% of a ticket cost. It is regarded as an external factor, and the power is in neither hand: the price is externally fixed. However a new issue has appeared when claims have been made on the fuel tax. Government can be willing to exempt the air carriers from this tax to enable them to have a competitive advantage over other carriers. Currently fuel in Europe is significantly higher than in the States, giving a disadvantage to carriers with hub in Europe.

### Air Traffic Control

This activity has been carried out traditionally by State agencies, mostly due to the necessary coordination with the military air control. In the US, the role falls in the hands of the FAA, in Europe each country has its own rules and sometimes its own system of measure(See Annex 4).

The roles of the Air traffic Control are twofold:

- on the spot ensuring that there is no collision
- to regulate the flow of traffic so no sector becomes overcrowded.

These two tasks are carried out amazingly manually, with the air traffic controllers making decisions in real time for the less than fifteen planes they have on their screen. The help from the computer is still marginal.

The second task explains why one can be stuck in Amsterdam on his way to Barcelona for traffic jam even though the runway is empty. The reason is that the sky above Aix en Provence is forecast to be overcrowded by the time his plane arrives there. (Aix en Provence has one of the busiest skies in summer time...) When forecasting such a



problem the air traffic controllers phone the different airports to inform them of the situation.

Recognizing the need to change the structure of ATC to improve its efficiency, several options have been proposed. The first one named "ICARE" aims to give much more control to the pilot. He will be responsible for most of the decisions regarding passing over. He will be helped by the latest technological advances in terms of radar and avionics. The second solution is to give the entire power to the ground staff. The planes will respond automatically to their orders, no pilot will be needed for the routine operations.

In the short term, privatization may help to increase the efficiency as well as accelerate the homogenization within the European Union and later on, between the EU and the US.

### Airports

Airports are supposed to be one of the major constraints in the future airline industry. They are already heavily congested in Europe (see Annex 4) and are near saturation in the US. The last airport to have been built in the US is the new Denver airport that was promoted by the present Secretary of Transport, former city mayor of this town. In Europe a project exists in Athens but is far from completion.

Airports are being funded both by the airlines and the passengers:

- the passengers pay a ticket tax for the use of the airport, this one is fixed by the airport within a certain range.
- the airlines pay the landing fee for each of their landing or taking off. Its price system is somehow awkward, proportional to the weight of the plane - and not to the congestion provoked by the usage of the runway -. As seen in the LA case where the airport has tremendously increased its landing fees, little can be do against an airport's decision. However these landing fees can be a competitive tool to attract airlines.

Slots have usually been inherited by airlines as grandfather rights - slots are virtually part the airline companies assets -. New slots are attributed by the airport authority. As the level of concentration increased, some airports have been increasingly linked to dominant carriers. This has been always true in Europe where national airports and flag carriers are closely related.

## **Substitutes**

### *Surface Transportation*

Cars or buses compete with planes on either very short haul (less than 200 km) or on the back pack segment. However it is not regarded as a major threat even to short haul services.

Trains however and particularly, high speed rails are a serious threat. The potential impact of high speed services is optimum between 400 and 600 km. The future of the high speed rail in the US is uncertain whereas it is supposed to be a major transportation means in Europe (see ANNEX 4).

### **Telecommunication**

If traveling by plane will constitute an hassle due to the over congestion during the convenient times, traveling may become less fashionable (whatever they say, business travelers tend to like their time spent abroad), then telecommunication may turn out to be a good substitute for air travelers. We are supposed to be at an edge of the development of telecommunication. However most of the new instruments will remain in the short run intra firms and will not replace the actual negotiations and client meeting where the physical presence of both parties will remain necessary for a while. Furthermore, these new techniques will certainly encourage the firms to develop more internationally and thus increasing the need for air trips.

### **ANNEX 3: American Deregulation: the origin**

Numerous books have been written and yet the total results of the American deregulation are unclear. Quoting Alfred E Khan, the mastermind of the deregulation, in a recent interview (Velocci, 1993). "Clearly, some of my predictions have not been correct. That's because I'm an academician, and I made the mistake of getting into the political process. But on balance, I am proud of what I did." In the same trend the Brookings Institution has launched a number of \$6 billion that deregulation has saved to traveling public. On the other hand, several books have been written against deregulation. One of the last, and not the least virulent being "Airline Deregulation and Laissez Faire Mythology" (Dempsey and Goetz, 1992). Speaking of the whole transport system: "Before deregulation, our transportation system was universally acclaimed to be the world's finest. Since then, the deterioration in our transportation infrastructure, public and private, would embarrass a Third World nation. The potholes we dodge on the highways and the aging jets in which we fly are symptoms of a malignant illness."

Amazingly, would say the opponents of deregulation, the airlines were first regulated by the Kelly Act (1925) and the Civil Aeronautics Act (1938) to protect them against destructive competition. In a simplistic manner, they would say "take away these protections and here are we again with the destructive competition." The roles of the CAB included:

- Determination of which carriers could provide service
- Which routes they could fly
- What fares they would charge for these services
- Responsibility for maintaining air safety standards

Carriers then in service were granted "grandfather certificates" on those routes they then served. Afterwards, the CAB had complete control of any new or expanded service (Bennewitz 1993).

The Congress passed the Federal Aviation Act to transfer the safety responsibility to the Federal Aviation Administration (FAA) in 1958. The two kinds of regulations, societal which organizes the way an industry operates and economical which regulates how firms are competing among themselves were clearly separated. This very fact has simplified the work of the congress in its move toward more and more functional regulation and less and less economical regulations in the end of the seventies.

The CAB had really a heavy hand on the industry and was not rubber stamping all the demands. In the last decade before 1978, the Board received 1500 route applications and approved only 120 or 8% (US Congress, Report 95-631, 1978). The CAB also used to deny the exit of city pairs that were supposed to be of public interest. Fares were also controlled, that is the Board could impose an airline that was charging too high or too low fares, to set reasonable fares, reasonable in the sense that they supposedly provide sufficient revenue for the airline without robbing the customer. Finally the Board had a close look on the competition, preventing mergers, or aggressive competition.

The system turned out to be highly inappropriate in the seventies and could not cope with the increasing demand. As stated by Alfred Kahn, the CAB regulation had :

- caused air fares to be considerably higher than they otherwise would be;
- resulted in serious mis-allocation of resources
- encouraged carrier inefficiency
- denied consumers the range of price/service options they would prefer
- created a chronic tendency toward excess capacity

Air carriers owned inconsistent networks with a proportion of high profitable routes with unprofitable ones. As they could not compete on fares, they competed on service, providing unnecessary high level of service. Moreover, experiences in California or in Texas in a more deregulated environment, (the Board had no power on intrastate routes) proved that there was a demand for cheaper flights (Southwest for instance). In addition to this empirical evidence, theoretical studies had shown that:

- the air industry was no longer infant and did not need protection
- economies of scale were not sufficient to be afraid of a monopolistic situation
- destructive competition could appear in the short run but an equilibrium in the long run

This, in turn has led to the now famous Aviation Deregulation Act of 1978 that asked the Board to place "...maximum reliance on competitive market forces and on actual and potential competition (A) to provide the needed air transportation system, and (B) to encourage efficient and well managed carriers to earn adequate and to attract capital" (Public Law 95.504 sec 102.a.4).

## **ANNEX 4: Specificity of the European Market**

### **Market**

#### *An association of countries vs. a nation*

This difference remains very important. It has implication in the entire regulatory order and thus in the industry itself. The European liberalization can only be an international treaty signed by the members, it deals with bilateral or multilateral issues and not only with pricing or routes award. Thus countries have their own point of view on what should be the eventual result of the liberalization. As a matter of fact two countries have emerged as the major leaders: France and UK, each one trying to get the support of the rest of the countries.

#### *A highly concentrated place vs. an open space*

The EFTA states cumulates 374 million inhabitants on 3.5 million square kilometers whereas the USA has 255 million inhabitants spread over more than 9.3 million square kilometers. This geographical fact added to the poor mobility of workers across Europe makes the demand for air transport far less important in Europe than in the States, the business segment and the FRV which account for 72% of the non business market are less important.

## Players

*A much more state controlled industry*

Table A4.1: The Eight major Players and their status regarding privatization as of 1993

Companies	Percent Owned by Government	Future Prospects
Air France Group	90.2%	On the list of the companies to be privatized
Lufthansa	50.7%	To be privatized as soon as possible
British Airways	0%	Privatized in 1987
SAS	50%	
Alitalia	81%	Will be privatized along with its holding IRI
Swissair	22%	No change
KLM	39%	The government wants to keep its shares at this level
Iberia	100%	

Source: Shearman (1992), Le Monde (1994),

As opposed to their American counterparts even before the deregulation, the European airlines are all except British Airways, more or less publicly owned.

## Suppliers

### *Labor*

The labor productivity in Europe is much lower than in the states:

Table A4.2. Labor Productivity and Costs in the US and in Europe

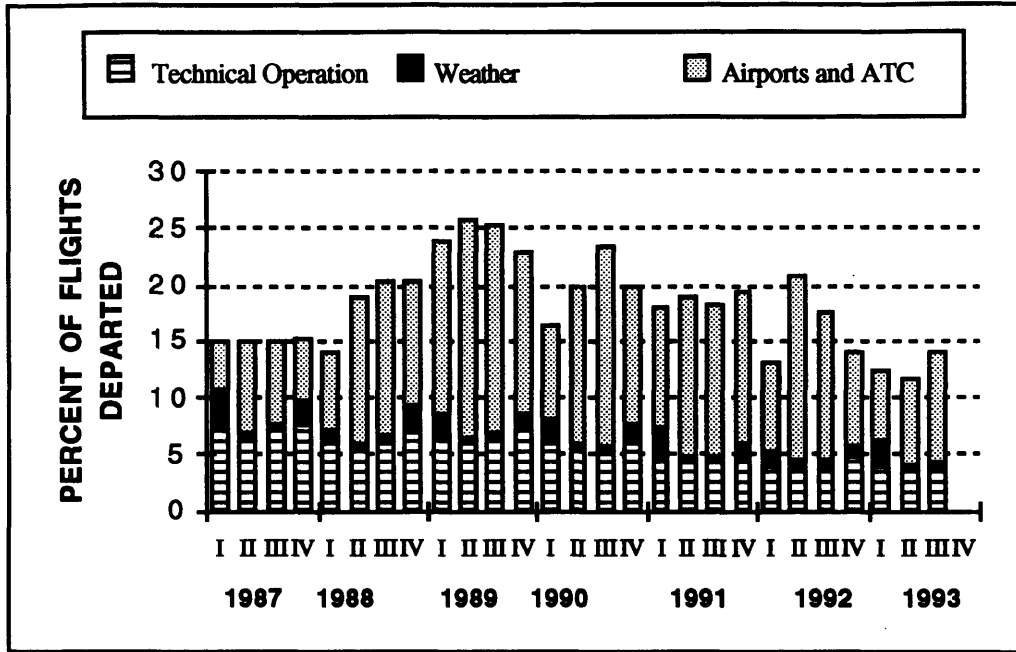
<b>Analysis of European versus US labour costs and productivity</b>			
	<b>US Airlines</b>	<b>European Airlines</b>	<b>Percentage Change</b>
<b>Financial Measurements (US \$)</b>			
Gross salaries per employee	40,353	44,493	-10.26%
Social charges per employee	11,722	10,573	9.80%
Total Labour Cost	52,257	55,066	-5.38%
Total Labour Cost per ATK (cents)	15.55	21.27	-36.78%
Social costs as percentage of total	22%	19%	14.40%
<b>Physical Productivity</b>			
ATKs per Employee	336,019	258,908	22.95%
Departure per employee	13.24	6.28	52.57%
Block Hours per Employee	27.15	12.98	52.19%
<i>Source : Avmark</i>			

European carriers have a competitive disadvantage as opposed to the American carriers. However, the competitive disadvantage is mostly due to a difference in productivity more than a difference in wages or social charges (Social charges are actually higher in the US). Therefore, it is up to the European companies to fill the gap by adopting more efficient structures and more flexible rules.



*Air Traffic Control*

Table A4.3: International Short and Medium Haul Flights Delayed more than 15 Minutes

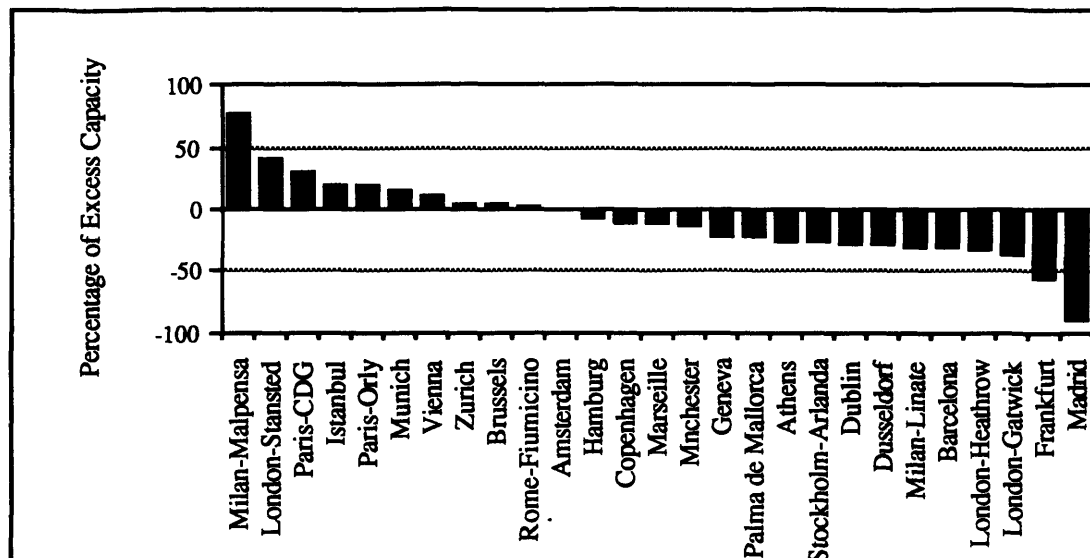


Source: AEA

Air Traffic control in Europe is run from 52 different centers. Some of these systems are not linked to each other, which create lots of inefficiencies which, in turn, are responsible for number of delays (see table A4.2) and an extra cost for the carriers. The "Comité des Sages" has asked for a profound reform of the system and the creation of a single unified system in Europe.

## Airports

Table A4.4 European Airport Congestion by Year 2000



Source: SRI International Report for IATA, 1991

Airports in Europe are especially congested. Without enhancements, 16 airports will be capacity constraints by year 2000. Because of the nimby syndrome (not in my back yard), new constructions are not expected to arise. Secondary airports may become more and more important. however congestion will increase steadily.

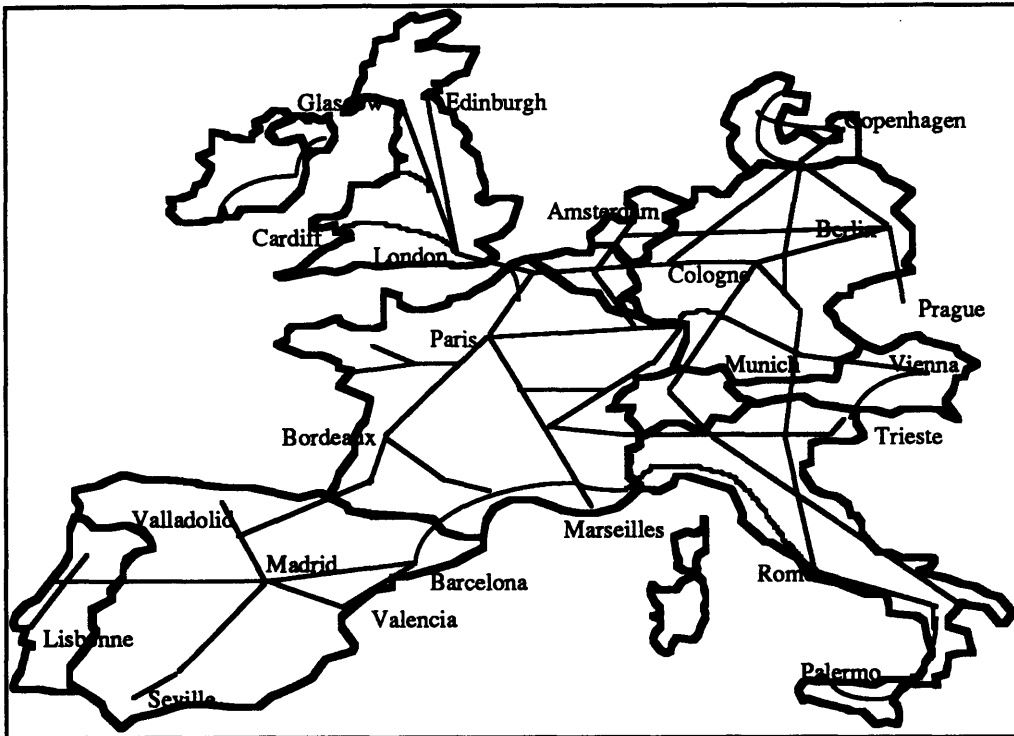
As congestion increases in most of the airports, pressure for more efficiency will also increase. That means pressure for bigger planes -revising the price structure -, organizational improvements - which may or may not need a form of privatization. However the least congested airports as CDG - will have a chance to play an increasing role.

Substitutes

*Surface Transportation*

High-speed rail is on the top of the European agenda. It has been clearly recognized as the future trans European means of transport with an ambitious scheme for the development of its network:

Figure A4.1: EC Plan for high-speed rail network



Source: Financial Times Supplement, August 1991

Examples in France have shown the expected impact: on the Paris - Lyon liaison the TGV has taken approximately 40 % of the air traffic (Reed, 1993). "The 'Chunnel' train operators envision taking 70% of passenger traffic from the airlines on the London-Brussels-Paris route" (Reed, 1993). The reason of the competitive advantage of the train vis-à-vis airlines are mainly rooted in the subsidies that trains are receiving from the States. However, as previously stated, there is a clear political consensus in Europe to promote the usage of trains. They will therefore be continuously subsidized for a long period.

## **ANNEX 5: European Three Packages**

### *Legislation Adopted before 1987*

Air Transport was specifically excluded from the common transport policy (see Article 84 of the Rome Treaty). Even as regard to the competition rules, air transport was deliberately omitted until mid-1980's. The sector was regulated by bilateral agreements Chicago, Bermuda I and II, and the EC itself have not played any role.

At about the same time as the US in the 70s, Europe went through the exercise of evaluating the premium that passengers have to pay due to this regulatory environment, it came up with an average of 10%. In 1979 the commission initiated a wide-ranging debate leading to the approval of a few directives:

- Cooperation and mutual assistance in air accident investigation
- Noise emissions from subsonic aircraft
- Relations between member states and third countries
- Carriage of express low weight cargo by air
- Inter - Regional air services

In 1984 however, the Commission submitted a second Memorandum on civil aviation that set up the main lines along which all the European liberalization was going to take place:

- improvement of the competition inside the EC, leaving until later the problems of improving links with third countries
- control of State aids to company
- development of air freight
- harmonization of charter transport

In this report the Commission decided not to follow the American deregulation model. Note that it was long before all the controversy on the American experience.

Finally in 1986, the European Court of Justice in the now famous "Nouvelles Frontières" case confirmed the application to air transport, of the rules on competition of

the Rome Treaty (Articles 85 and 86) and specified the procedures for their implementation in the absence of an implementing Regulation.

### *Legislation Adopted After 1987*

The "Nouvelles Frontières" case is usually considered as the starting point of the European liberalization of air transport. Although it has had a tremendous psychological and public impact, the future of liberalization was unsure until December 1987 when the council adopted the first package of Commission proposals for air transport liberalization.

From this date on, new legislation will be continuously adopted by the Council. They can be divided into two broad categories:

- operations rules
  - competition rules
- (a) Operation rules
- Air Traffic Congestion: Creation of EUROCONTROL to replace the eight systems presently operating in the EC so as to increase the efficiency of the ATC and prevent congestion (see chapter on ATC)
  - Aircraft Noise Emission Limitation: to ban progressively all the aircraft which do not comply with the standards set out under chapter 3 of the Chicago Convention on Civil Aviation
  - International air transport negotiations: The Commission introduced a proposal in 1990 to transfer the competence for negotiating air transport agreements with third countries from individual member States to the European Commission. This process should strengthen EC airlines negotiating position on routes in third countries. Some transitional periods have been set up such as the obligation for the Member States to submit their negotiated bilateral agreements before signing them for approval.

- Personnel licenses: To increase the efficiency and improve the labor mobility, the Member States have been required to recognize licenses issued in other Member States.
- Working conditions of airline crews: Their harmonization is all the more important to ensure common safety standards and fare competition between carriers
- Over-booking: Common rules are also necessary to ensure proper competition
- Aircraft safety and technical standards
- Aircraft accidents and incidents

#### (b) Competition

The "Nouvelles Frontières" case opened a new era of competition within the air industry in Europe. In 1987, the Community adopted the first package which mainly concerns:

- relaxation of the rules governing fares: The abolition of the restrictions on cheap promotional fares and the introduction of a Community arbitration procedure facilitating the variation of prices without the consent of competitors
- greater freedom as for capacity sharing (the prevailing rule was a fifty-fifty share)
- greater access to routes: recognition of the fifth freedom, cabotage was postponed until 1993 (eventually it has been postponed till April 1, 1997)
- procedure for applying Community competition rules to air transport

In 1988, new competition regulations were adopted concerning:

- commercial agreements between airlines
- computer reservation systems
- ground facilities

In April 1989, the liberalization process was confirmed by the European Court of Justice in the "Saeed" case. confirming the "Nouvelles Frontières" case, this decision applied the competition rules to the new Community provisions resulting from the implementation of the first liberalization package.

"In July 1989, the commission reached consensus on the second phase of deregulation. this stage was designed to build on achievement secured during the first phase of liberalization in 1987 and was aimed specifically at encouraging cheaper air fares and at increasing the pressure on Europe's airline cartels." (Coopers and Lybrand, 1994)

Finally in July 1992 the third and last package of air transport measures was adopted. It is supposed to put an end to the process of liberalization now completed. However it has postponed the right of cabotage until April 1, 1997. At this time the implementation will have come to an end. The third package establishes rules regarding operating licenses, route access and fare pricing detailed below.

#### *The current rules as January 1, 1993*

In this last paragraph are summarized the current rules regarding some specific aspects of the competition:

##### (a) Fares

- "• Member States may request air carriers to file their new air fares 24 hours (including a working day) before they are due to come into effect. If the fare is to match an existing fare, only prior notification is required
- Until April 1997 fares, on routes where competition is limited i.e. where the route is operated by only one carrier or two carriers under a joint agreement, will have to be filed at least one working day but less than one month before they come into effect
- The system of "double disapproval" was extended to all fares from January 1993. A new fare submitted by an air carrier will be authorized unless both the Member States of departure and arrival disapprove it. the Commission will intervene where a member State opposes a fare change one route." (Coopers and Lybrand)

**(b) Access to Service Routes**

- Fifth freedom rights are granted to any Community air carriers within the community with no restrictions
- No capacity sharing on routes between Member States
- the authorization of cabotage will be delivered to all carriers, April 1, 1997

**(c) Slot Allocation at Airports**

A fairly comprehensive regulation was adopted on December 7, 1992 to prevail until June 30, 1998. It is designed to increase competition between airlines and open up congested airports. The procedure is as follows:

- A pool is created with all the vacant slots - newly created, surrendered by airlines or under utilized (less than 80% of utilization) -
- half of the pool is earmarked for new entrants i.e. with less than four slots a day
- if the pool is not sufficient, the airport authority can force airlines using small planes (less than more 200 seats) and with more than six slots a day to divest these slots
- slots awarded to new entrants may not be exchanged between carriers for two seasons to prevent larger airlines to buy them
- a Member State can prevent another State airline to increase its flights if the contrary is not possible

**(d) Joint Planning and Coordination of Schedules**

These measures are prevailing until June 30, 1998:

- airlines can coordinate schedules to provide services during off-peak hours or to improve connection times
- a smaller airline can receive marketing and financial support from another airline with restrictions on time, capacity, networks...



**(e) Tariff Consultation**

They are allowed until June 30, 1998 on several conditions such as:

- they concern only airfares and not the capacity for which those fares are available
- they are open to any airline serving the route and the concerned Member States and not binding
- a report is submitted to the Commission

**(f) Computer Reservation System (CRS)**

A code of conduct was adopted in July 1989 and slightly amended in November 1993. This code applies to all CRS operating in the EC regardless of their status or nationality. Here what it says:

- a system vendor must allow any carrier to participate on a non-discriminatory basis and for a reasonable fee within the capacity of the system
- a system vendor may not manipulate data provided by the carriers in a discriminatory way, the display should be clear and also non discriminatory
- these rules do not apply for third carriers in the case they are not respecting them in their home countries`
- joint agreements are allowed - with restrictions - to develop CRS even though it could have adverse effect on competition

**(g) Ground Handling Services**

The Commission initiated a wide ranging consultation procedure on stopover services in airports in the European Union with a view of total liberalization. Currently, the ground handling facilities is still monopolistic in most airports with charges varying a lot.

**(h) Liberalization of air Freight**

**Fifth freedom is granted to Community Carriers within the community and to third carriers if community carriers have the same right in this carrier's home base. Nothing is agreed as for cabotage rights. Fares are by in large free as well as route access.**

## **ANNEX 6: Major Players in the European Market**

### *British Airways*

Nicknamed "Bloody Awful" at the beginning of the 80s, British Airways turned out to be one of the most profitable airline in 1992, with a consistent worldwide network and a solid anchor in the United States. This growth was mainly external with acquisitions of British Caledonian, Dan Air as well as equity in USAir, TAT.

Two managers have to be given credit for this enormous transformation John King, later Lord King of Wartnaby. He was appointed as CEO by Margaret Thatcher in 1982 in order to clean up the company before its privatization. He later appointed Sir Colin Marshall as chief executive in 1983 who brought its long experience in service industry acquired with Hertz and Avis.

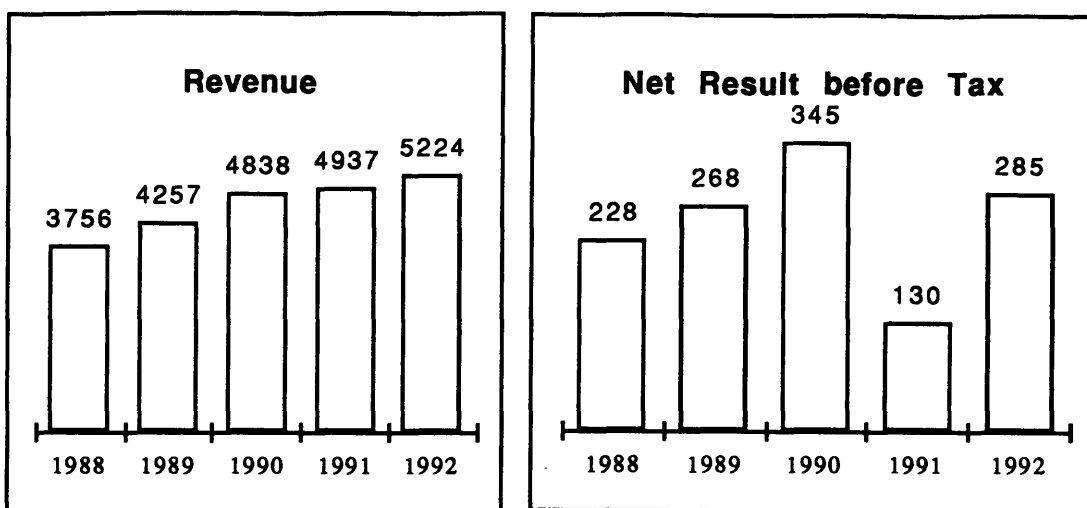
BA was created by the mergers of BEA (British European Airways) and BOAC (British Overseas Airways Corporation) in 1974. Through the seventies it has enjoyed the easy life of a flag carrier, governmentally owned with no commercial driving forces...

To complete its clean up task, John King decided to make a revolution:

- sells 50 planes
- ceased 62 unprofitable routes
- reduced the number of staff from 53,000 in 1981 to 36,000 in 1984
- replace old administrators by new comers from the industry
- launch an aggressive marketing campaign and a new concept (the Business class)

The results almost immediately improved from a loss of almost \$ 200 million in 1981, it goes to a profit of a \$ 150 million the year after and more than \$ 300 million in 1983. Since then the results are impressive, regarding the market share, the turnover or the net incomes.

Table A6.1 British Airways' Revenues and Results 1988 - 1992 (in £ million)



Source: Le Figaro (1993)

This growth has been sustained through a reduction cost plan launched in 1991 - the gap closure - . £ 150 million have been saved in 1991 and another £ 150 million in 1992. 5000 jobs have been cut, productivity was increased by 12% in 991 and 22% in the first 1992 semester. Unit cost have been decreased by 7.4%.

### Strategy

To become a global company in a deregulated world through a vast network of alliances, to take full advantage of the competitive advantages it enjoys:

1987 acquisition of British Caledonian Airways

1988 acquisition of Dan Air

1989 enters into contact with United Airlines, no success

creates Sabena World Airlines with KLM and Sabena, this poll with an interesting hub in Brussels, has been dismantled by the EC in December 1990 for antitrust reasons (with Air France stepping in)

1990 failure with Interflug (East Germany) and German Wings (West Germany)

1991 no success whatsoever with Sabena and Air New Zealand

1992 failure with KLM

creation with Aeroflot of "Air Russia", the new flag carrier of the new Russia

participation in USAir

acquisition of Delta Air (Germany) renamed Deutsche BA

participation (49.9%) in TAT European Airlines

acquisition of 25 % of Qantas

### The Strategic Position of BA in the Different market

#### *UK*

Controls the UK market, has more than 40% of the slots in Heathrow, 90% of the London - Paris route ( among the UK companies). Other companies are:

- Virgin Atlantic in the North Atlantic market (its CEO regularly announces the creation on Virgin European Airways to operate on the European routes).
- British Midland An active company in Europe (mostly central Europe), owned at 24.9% by SAS
- Air UK owned at 15% by KLM

#### *European Union*

BA tries heavily to establish itself on the Continent. However since the dismantled of the Sabena World Airways, its presence is still relatively weak. Deutsche BA managed to make Germany BA's third market with a big grasp on London - Frankfurt and TAT controls 3.8 % of the domestic traffic in France.

The European Commission has hampered the growth of BA on the Continent putting restrictions to acquisition such divestment of some rights on certain routes (for instance Gatwick Paris when purchasing British Caledonian). BA still holds 52.2% of the London - Paris (1992) as compared to 32.9 % for Air France.

### *Eastern Europe*

BA has taken the riskiest choice by investing with the dying Aeroflot, the risks are:

- commercial, a failure
- political, BA can be expropriated

This joint venture can however turn out to be a great strategic move if the Russian market boom and eastern Europe recovers in a peaceful manner.

### *North Atlantic market*

This market is BA first market representing one third of its operating profits. However it faces an increasing competition from the American Airlines (7 have landing slots in Heathrow). To counter them BA acquired 21% of the voting rights of USAir. This alliance is one of the best possible for BA (or any European carrier). Despite its current problems, USAir is still the fourth domestic air carrier in the States serving more than 200 towns in the US with hubs at Charlotte, Pittsburgh. Although these are not very convenient gateways for the North Atlantic market, USAir can still feed most of the BA planes, besides USAir has very few international routes thus preventing any internal competition in the alliance.

This possible merger is fought by American, United and Delta. These companies also lobby for an open sky between the two countries before the merger be authorized and a fairer competition at the Heathrow Airport where BA has taken all the good slots. On the other side, the two merging airlines threat to acquire only Airbus aircraft if the American government does not allow their merger.

### *Asia*

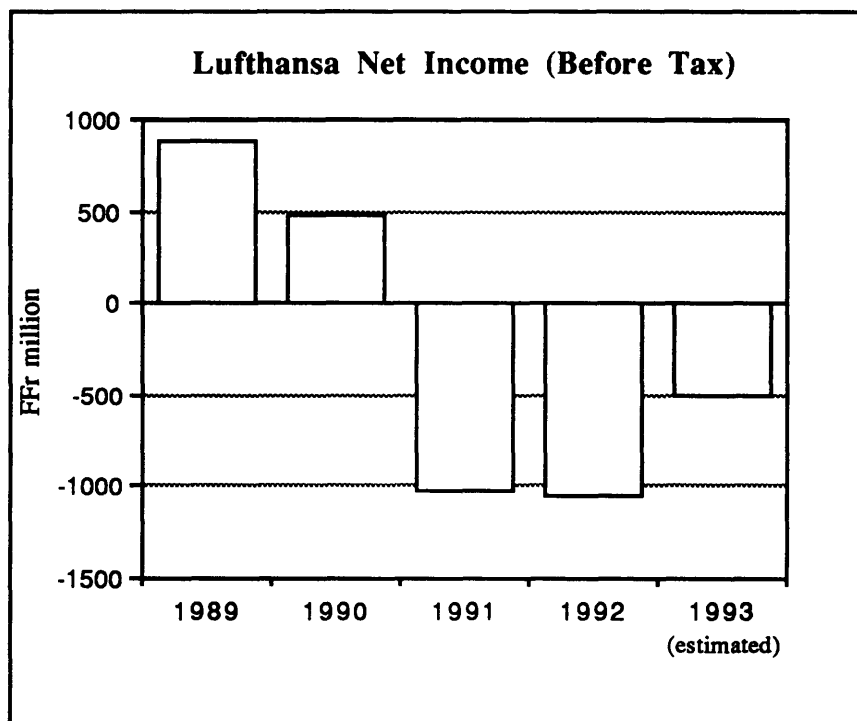
British Airways has recently acquired 25% of Qantas, which gives it a foothold in the Pacific Rim. Results of this alliance are still uncertain.

## Lufthansa

### *Presentation*

The German publicly owned (51.6%) company is second by revenue to Air France in Europe. In 1991, it posted its first loss in 20 years - \$315 million - (Velocci, 1993). Its newly appointed chairman Jürgen Weber has vowed to return Lufthansa to profitability in 1995, at the latest. (Velocci, 1994). Its early successes have provided an example for Air France management as a way to operate a reorganization.

Table A6.2: Lufthansa Results 1989 - 1993 (FFr million)



Source: Alberganti (1993)

The main actions undertaken to achieve this result were:

- implementation of a new corporate culture
- 15% cut in the work force (that is 8 000 positions), to be completed at the end of 1994
- wage freeze in 1993, 2.7 % increase in 1994 plus a one time premium of 1 000 Marks in January 1994
- change in the organization structure with fewer levels

- fewer expatriations.

### *International Strategy*

In Europe, Lufthansa has acquired some shares of Luxair, giving it partial control of Cargolux the first European freight carrier. A long time allied of Air France, it has 49% of their joint venture Euroberlin. A joint venture should also have been signed between their two Hotel Chains (Meridien, Kempinski). No agreement has been signed and Lufthansa finally sold its chain as part of its plan -Air France is in the process of doing so-. Recently the relations between the two carriers have deteriorated with Lufthansa launching an unexpected war fare in January 1993 and turning to new allies such as Austrian.

On the North Atlantic market, Lufthansa has finally chosen its US partner, United Airlines. This will provide Lufthansa access to the large US domestic market. On the other hand, conflict of interests may rise between the two partners as United Airline has a strong commitment in the North Atlantic market.

In the Pacific Rim, no formal alliances have been passed between Lufthansa and any Asian carriers. However, talks with JAL and Garuda have been held.



## **KLM Royal Dutch Airlines**

KLM is still a public company with 38.2% of its stakes publicly owned. The very recent capital increase has not changed the equilibrium since the State has acquired some of the shares. KLM is second to BA in Europe in efficiency (see p29) and is often regarded as a BA follower. In 1989 it has formed an alliance with British Airways and Sabena to create Sabena World Airways, this combination was eventually broken up by the Commission the 31 December 1990. In 1992 another unsuccessful attempt with BA has occurred.

However, its strategy very much looks like BA's:

- (a) to control the domestic market KLM acquired 80% of Transavia, 30% of Martinair and 40% of ALM.
- (b) to get a foothold in the other European Markets. For that purpose KLM acquired 15% of Air UK and Air Littoral in France (it has eventually decided to get rid of its stakes in Air Littoral as the company was making losses corresponding to one quarter of its revenues)
- (c) to pass an agreement with one of the major US companies. KLM has 20% of Wings Holding which owns Northwest Airlines. This agreement is regarded as the tightest one between two companies of this size. It concerns a wide range of subject from code sharing, marketing to joint maintenance. The original point is the open sky agreement between the States and Holland. This open sky agreement enables KLM to fly anywhere in the States, but does not grant it with cabotage rights. Similarly, US carriers can fly anywhere in Netherlands. As BA with USAir, KLM loses lots of money in the operation so far, as Northwest has consistently lost some money over the last few years- KLM has stated that its all investment has been swallowed-. However, the agreement is regarded by the experts as a model of what could be done in the future.

This BA-like strategy changed in 1993. At this time, Europe saw slowly the prospective of a fourth mega carrier named Alcazar after a fortress in Spain with four dominant towers. This joint venture should have boosted SAS, Swissair, Austrian and

KLM. Alcazar was not a "natural step" for KLM whose strategy was clearly not to build a global European carrier. KLM was therefore not ready to make any concession to the other partners. As stated by Bouw, KLM was taking part of the talk "without our backs to the wall" (Reed, 1994). The project has been quite far in terms of joint operations, but it has failed when it counters KLM's overall strategy. After this failure KLM went on with its previous strategy.

KLM seems to be willing to increase its share market in freight, it has some agreements with Nippon Cargo Airlines, Singapore Airlines and Garuda Indonesia on that matter. Northwest is also particularly active in this business too. Therefore KLM has bought a convertible Boeing 747, has extended its freight zone at Schiphol and has increased its handling capacity to 1 million of tons.

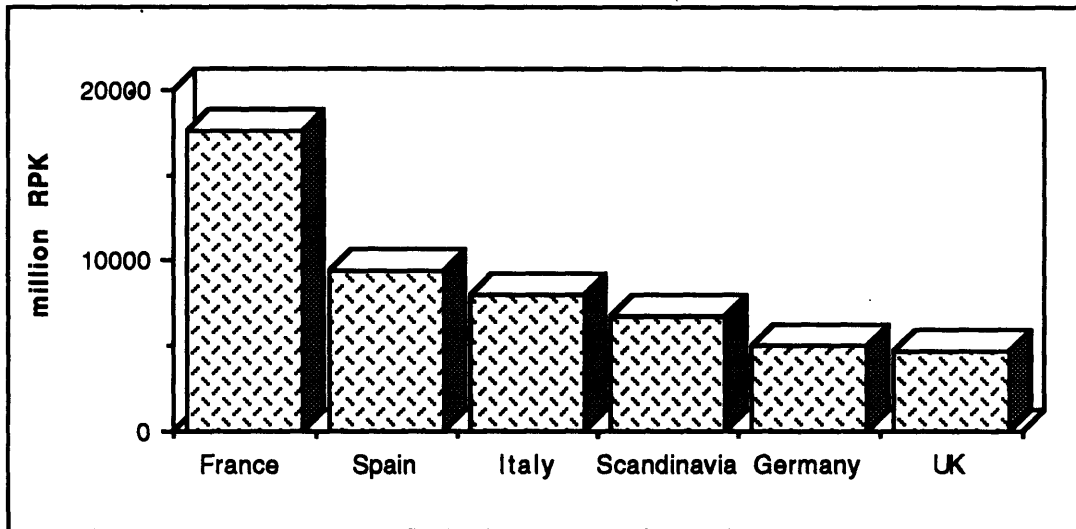
Last but not least, KLM has a strong competitive advantage given by Schiphol one of the few unsaturated airports in Europe and whose growing importance will serve the interests of KLM.

## ANNEX 7: French Market

### Domestic

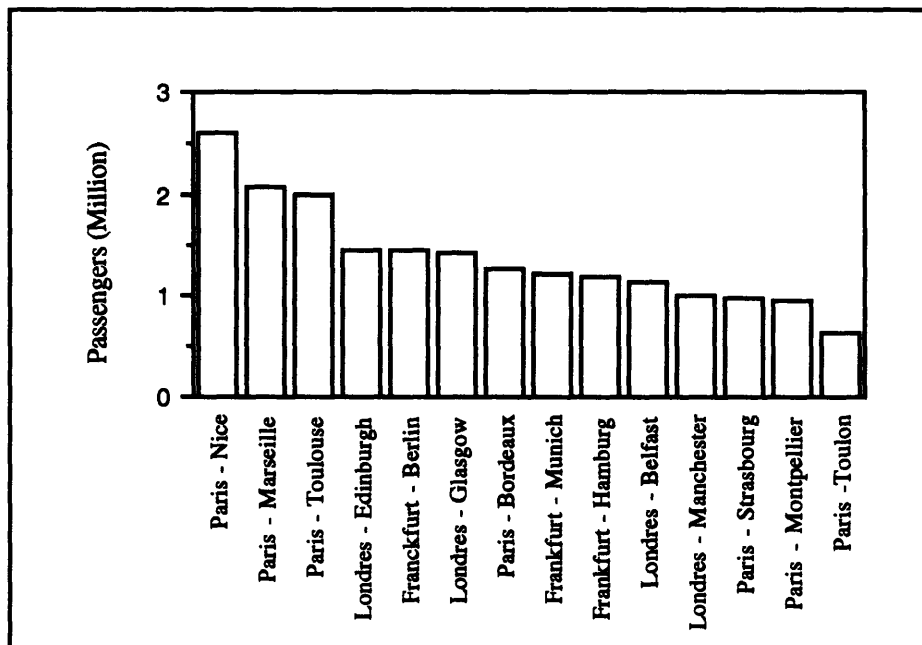
The major domestic market in Europe:

Table A7.1. Domestic Schedule Traffic (1991)



Source: ICAO (1992)

Table A7.2. Passenger Traffic from Paris / Frankfurt / London (1991)

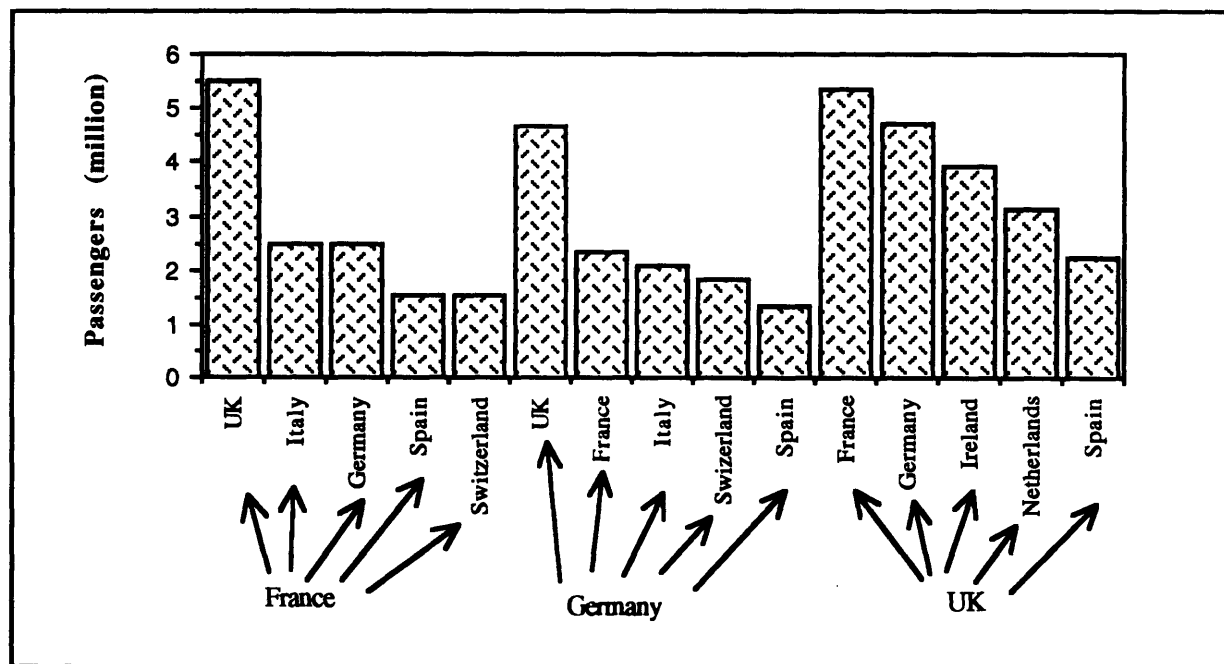


Source: Civil Aviation / ITA Data Base (1993)

France has the major domestic market in Europe. This market is entirely dominated by Air Inter with regional airlines playing only a minor role. However this market is threatened by the increasing market share of the TGV. This phenomenon has been studied for the European market as the high speed rail network is supposed to spread over Europe very rapidly. Some markets such as Paris Strasbourg will completely disappear. France will still have some of the major routes in Europe such as Paris - Nice, more than 2.5 million passengers in 1991 or Paris Marseilles with 2 million. For those routes the high speed train is less a threat as the distance between the cities exceeds 700 kilometers. These routes have been recently opened to competition and there still some struggles on the subject and the harsh way used by Air Inter to prevent those entries (often wished by the people of the cities) show the potential threat that they constitute.

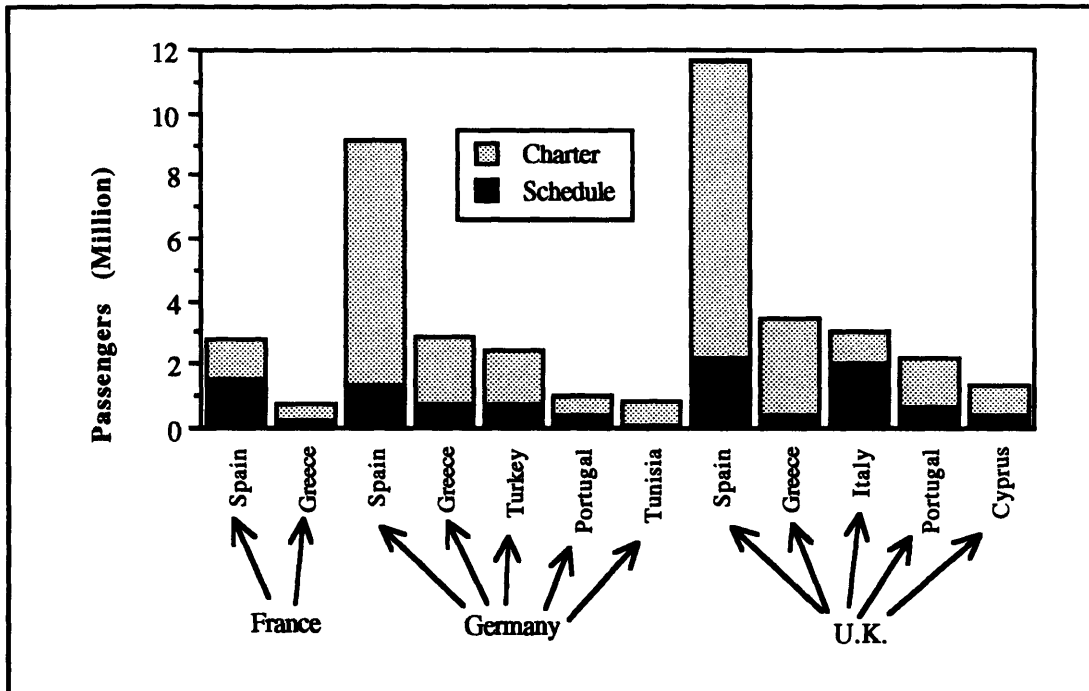
*France - Europe*

Table A7.3. Passenger Schedule Traffic between France, Germany and UK and their Five Major Partners



Source: ITA 1993

Table A7.4: Schedule Traffic vs. Charter Traffic on Main Vacation Routes (1991)



Source: ITA 1993

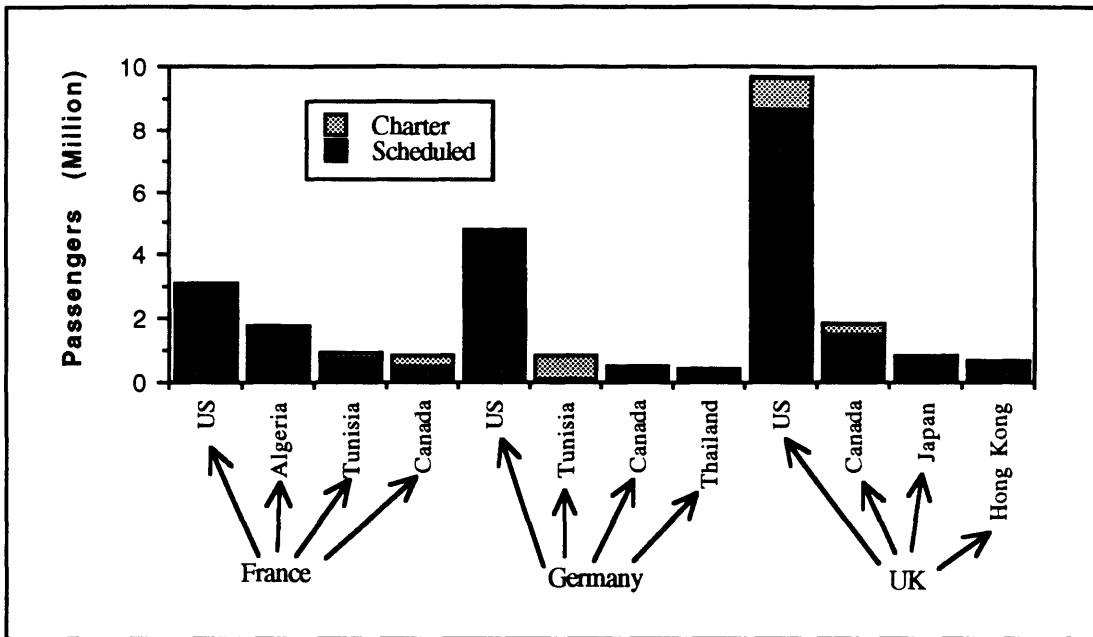
The traffic between France and the rest of Europe as shown by table A7.4 and A7.5 is characterized by:

- A schedule traffic in line with the major European countries
- A very small leisure segment

The very small leisure segment is consistent with the fact that France is a supplier in terms of vacation sites and French people do not travel abroad for their vacation. In terms of total traffic Spain is the first destination both for German and English people.

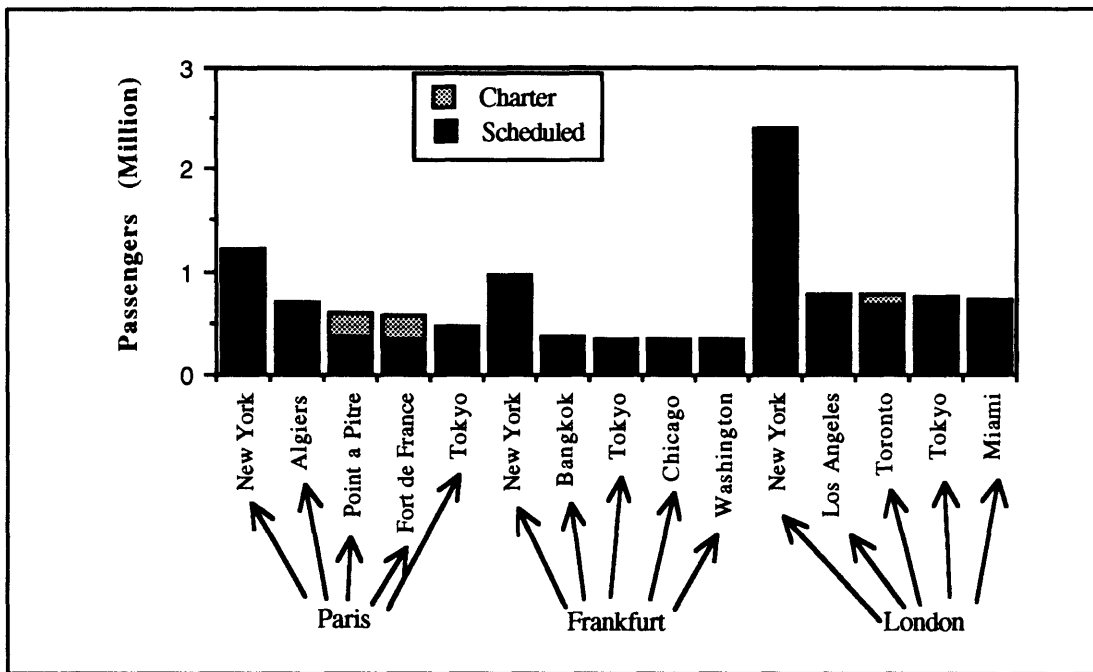
France - Rest of the World (Outside Europe)

Table A7.4: Major OD Markets outside Europe from France, Germany and the UK.



Source: ITA 1993

Table A7.5 Major OD Markets outside Europe from Paris, Frankfurt, London



Source: ITA 1993

The traffic between France and the rest of the world (note that Point a Pitre and Fort de France is counted as domestic traffic) is characterized by:

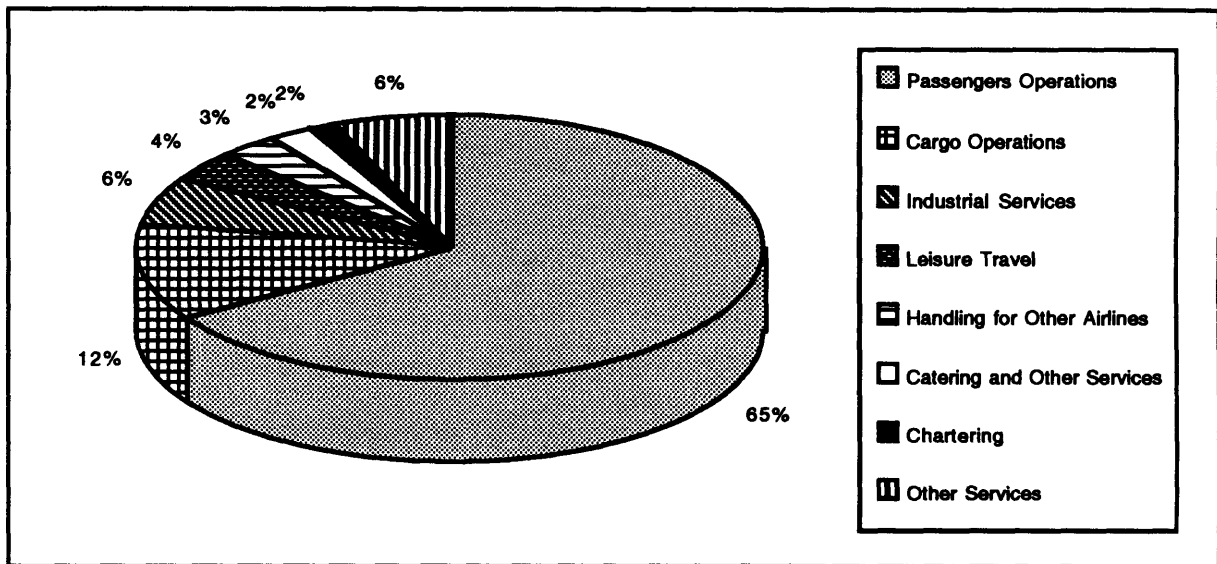
- an overall traffic far smaller than the UK
- some specific destinations (North Africa, French territories)
- an overlapping market with Germany and the UK on the North Atlantic (US and Canada) and to a lesser extent to Japan (Tokyo). In each of this three markets, the British have the biggest share.

## ANNEX 8: Air France Group

### A general presentation

Air France is a huge group, ranking third among airlines by revenue in 1993. 20% of its activities are non core activities ranging from catering to a flying school.

Figure A8.1 : Consolidated Turnover According to Activity in 1992



Source: Air France Annual Report (1992)



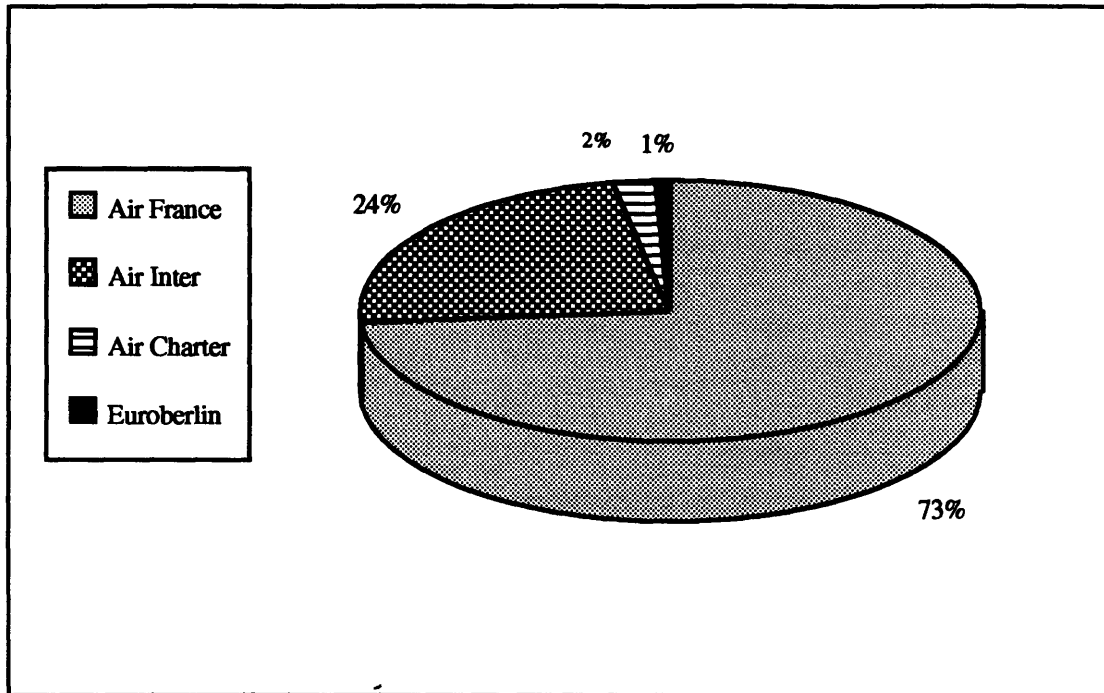
Table A8.2: Major Companies of Air France Group

Air France:	The main company whose focus is in the medium or long haul flight primarily in the international arena (the only domestic flights of Air France are routes to the French overseas territories)
UTA:	Former main Air France competitor with focus on Africa and Tahiti (via Los Angeles), has been taken over by Air France in 1990 and finally merged with it on December 29, 1992. (Although formally UTA took over Air France and then was renamed Air France)
Air Inter:	The French domestic carrier also taken over by Air France in 1990, as a result of the take over of UTA, moves towards a European carrier specialized in medium haul as competition and the TGV pushes it out of the French domestic market.
Air Charter:	Air France charter's company focuses primarily on medium-haul operation (Morocco, Turkey and Tunisia...) It has to compete against lower cost charters
Euroberlin:	Joint Venture with Lufthansa (51% Air France - 49% Lufthansa) serves primarily Berlin to inner cities of Germany, its future is uncertain due to Lufthansa stepping in its market
Meridien:	Managed 58 luxury hotels all over the world, rumors announce its imminent sale to raise cash
Sotair:	Tour Operator offering leisure travel products under the brand names Jet Tours, Eldorador, Jumbo Kit and Jumbo Charter. In the near future, it should regroup all its activities under its main brand name - Jet Tour -.
Servair:	Catering, has a wide range activities from airline or train catering to the famous "Fromages Androuet" -the most luxury cheese seller in Paris-. Every activity that is not directly related to air transport could be sold.

### *Airline Operations*

Total operating income amounted for FFr 45,343 million in 1992 decomposed as follows:

Table A8.2: Breakdown of Passenger Traffic Turnover (1992)



Source: Air France Annual Report (1992)

Air France and Air Inter are the two dominant components of Air France Group air transport operations sharing the turnover on a 3/4 - 1/4 basis.

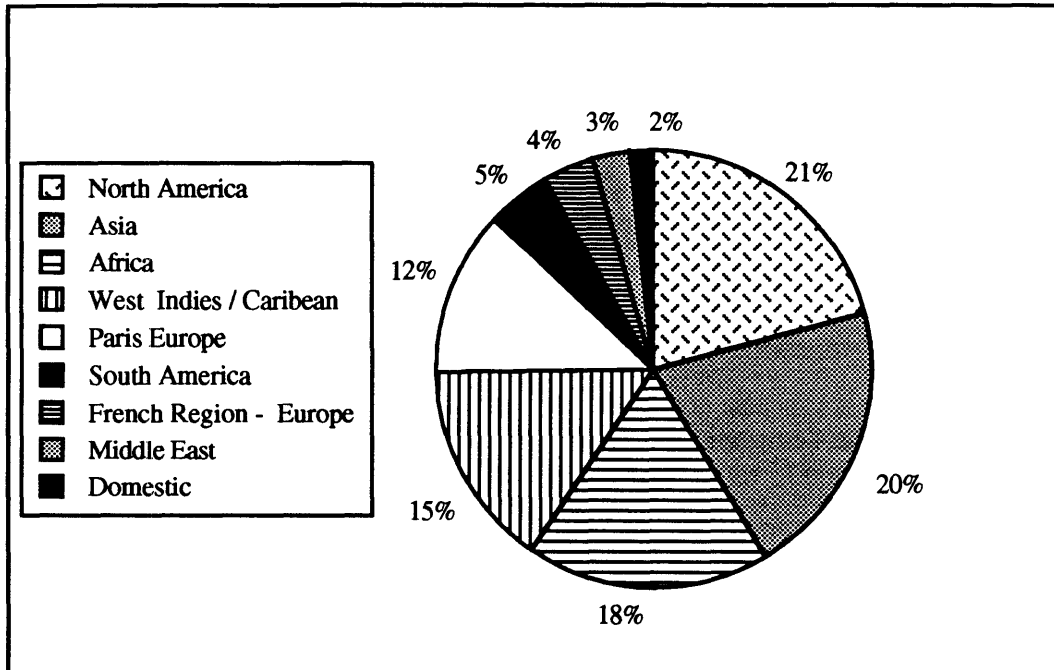
### *Financial Result*

1993 results for the group are expected to be extremely bad with a loss of FFr 7.5 billion (\$1.3 billion) after its FFr 3.7 billion loss in 1992 and FFr 2 billion deficit in 1991. Moreover it has a debt of FFr 36 billion (\$6.1 billion). The carrier is said to spent FFr 117 for every FFr 100 earned on the North Atlantic market, in Europe FFr 110, Asia FFr 108, and South America FFr 111 (Gallacher 1994). Air France Group revenues are not covering its pay roll nor the interest expenses. No results were shown for Air France airline only in 1992 as the merger of UTA and Air France which has taken place October 1st, 1992 has split the year into two preventing any consolidation.

**Air France (alone)**

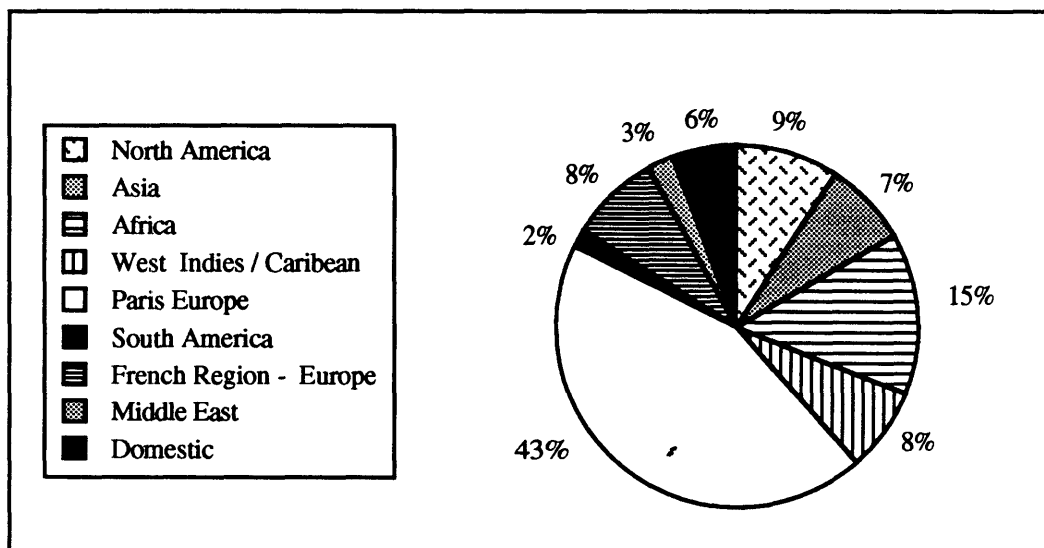
*Traffic*

Table A8.3: Air France Traffic by RPK (1992)



Source: Air France Annual Report (1992)

Table A8.4: Air France Traffic in Passengers (1992)

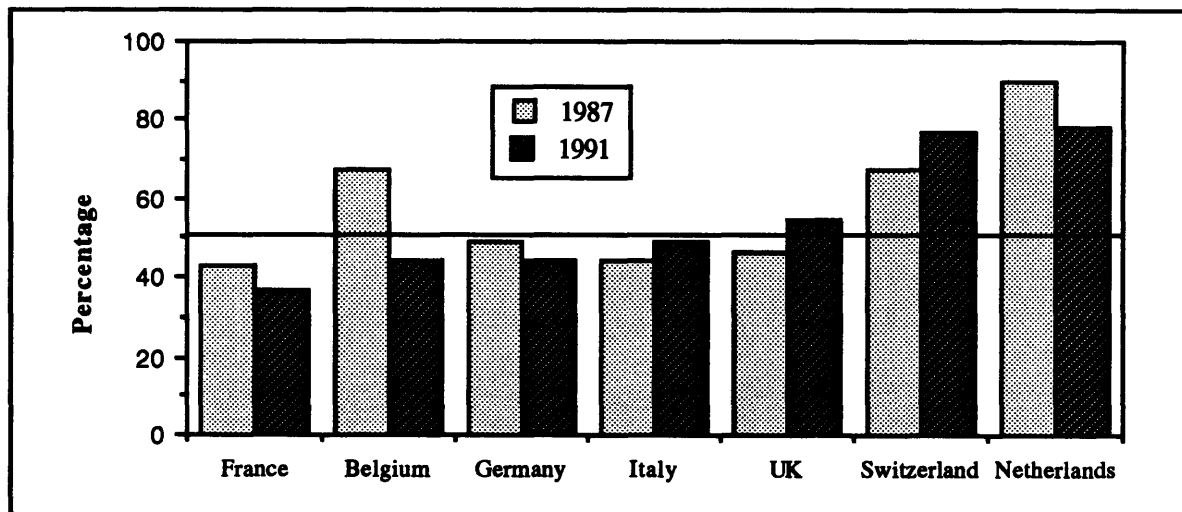


Source: Air France Annual Report 1992

Europe is the major market by far in terms of passengers but as for the RPK<sup>7</sup> the traffic is much more evenly split between the main markets (North America being the leader with 21% followed by Asia (20%) and Africa (18%)). Note the importance of the West Indies Market for Air France, this lucrative market can be lost to low cost entries. Taking into account the fact that the Asian market is booming whereas the African market stagnates, Air France will have to put more and more pressure on the Asian market. As average stage length for this market is the highest (8 311 Km), it is the most vulnerable market against "Sixth Freedom" carriers.

*Analysis of the North American market*

Table A8.5: Market Share of the European Carriers from the US to Europe



Source: ITA 1993

Analyzing the share of the European carrier in its main market - towards North America - Air France appears to have the lowest share. This is due to:

- the former liberal agreement between France and the US allowing the US carrier to have whatever traffic they want (as opposed to the more strict agreement between the

<sup>7</sup> RPK = Revenue Passenger Kilometer - number of passenger \* number of kilometers flown per passenger.

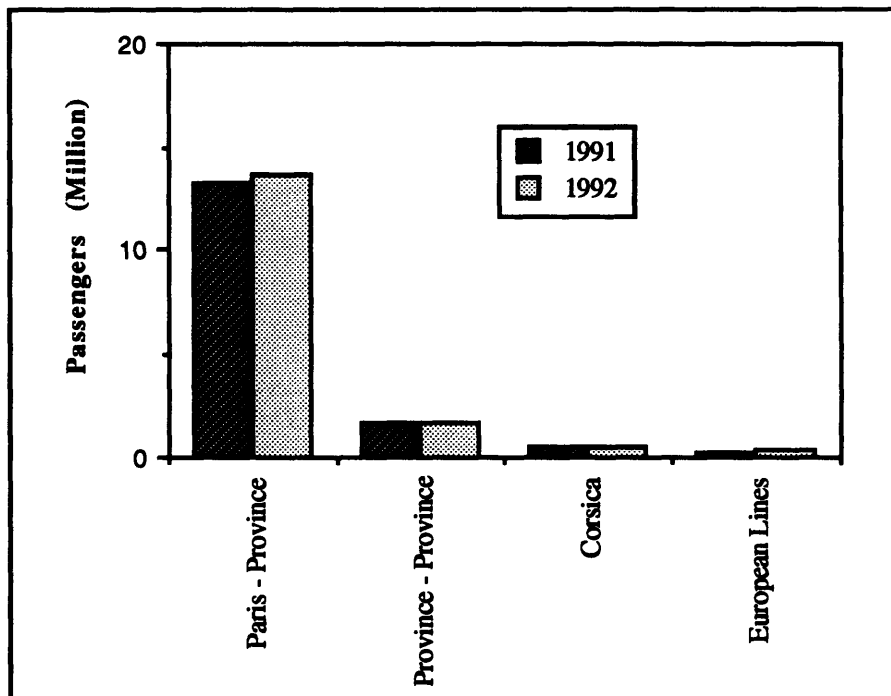
US and UK). However this agreement has been abrogated in 1993 by Paris and now each change has to be negotiated on a reciprocity basis.

- a competitive disadvantage of Air France with higher costs than the US carriers.

## Air Inter

### Market

Table A8.6: Air Inter Traffic in Passengers



The traffic of Air Inter is mainly radial to and from Paris. In Paris, it used to operate only at Orly airport but as of 1993, has moved some of its flights to Roissy to increase the connections between the two airlines.

### Connections with Air France

Main Stake holders of Air Inter:

Air France	72.34%
SNCF	12.32%

Air France took control of Air Inter while taking over UTA. Before that both airlines had minority interests in Air Inter. However there has never been a real synergy between the two airlines. This is due to:

- the poor connections between their main airports in Paris
- their markets are different and not complementary up to now
- two different corporate cultures

For those reasons Bernard Attali has been often criticized for having taken over Air Inter. As for the future two interesting recent moves may well be premonitions. Air France now serves Paris (CDG) - Nice and Air Inter has an increasing number of European routes (a 50% growth between 1991 and 1992) such as Paris Ibiza, Paris Venice, Paris Brussels...The two markets will soon overlap creating sources of conflict. On the other hand Air Inter is increasing its presence at CDG (+17.3% passengers in 1993) which could mean tighter links with Air France.

### **What is going on ?**

The present situation of Air France must be faced. Christian Blanc unveiled his restructuring plan on March 12, 1994. It calls for FFr 20 billion in State Aid which would be given in three tranches. The first one to be received as soon as the unions have approved the plan, the two subsequent will be closely related to the success of the restructuring plan.

This plan asks for a 30% increase of the productivity mainly achieved through organizational improvements, wage freezes and layoffs. It also proposes to sell part of Air France capital in exchange for labor concessions. This plan first met the labor unions' disapproval but received more than 80% of the votes in a referendum that took place in the first week of April.

The plan will have to be approved by the European commission before being implemented. Strong opposition is expected from BA, KLM and to a lesser extent from Lufthansa. The most likely outcome is that Brussels will scale down the aid and impose

some restrictions on the future move of Air France to ensure that this aid will not distort the market. The effect on Air France will then be ambiguous. It will certainly help it survive but may have two adverse effects:

- it may delay the necessary measures and by pulling it out from a desperate position will diminish the ability by the management to take drastic measures
- it may diminish the ability of Air France to compete with the other European Airlines as it will be denied certain rights, certainly the right to control its domestic market.

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