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# The Performance of the European Liberalisation Process

An evaluation of the  
scheduled air transportation market

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**THE PERFORMANCE OF THE EUROPEAN  
LIBERALISATION PROCESS**  
an evaluation of the scheduled air transportation market

by

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## ABSTRACT

Aiming to put into practice the directives of the Rome Treaty concerning the free mobility of people, goods and capital within Europe, the European Union has decided to implement, throughout Europe, a common regulatory framework for air transportation.

The Liberalisation process, as it is commonly known, was carried out in three phases, from late 1880s until late 1990s. From a fragmented and highly regulated environment, the European air transportation market has moved, thanks to these legislative measures, towards a single common market in which all European air carriers are subject to the same rules, rights and obligations. Understandably, important changes have been occurring since the beginning of the Liberalisation process.

This Thesis intends to share with the academic community an economic discussion about the Performance of the European Liberalisation process, in light of a theoretical model - the Structure Conduct Performance Paradigm. Each phase of the Liberalisation process will be explored, aiming to, on the one hand, discuss whether the legal actions that were taken can lead the market to accomplish the initial purposes inherent to the Liberalisation process, and, on the other hand, understand how the market has successively reacted to the new legal framework and whether it has confirmed what had been previously predicted.

This analysis reveals that some of the initial goals have not been fully accomplished, and, moreover, some other non-desired results have not been properly predicted and, therefore, have not been prevented. Furthermore, this process coincided with a rather adverse macro-economic environment, which, together with a growing non-European competition, has diminished the strength and influence of the whole of the Liberalisation process. Therefore, the consolidation of the Liberalisation process was incomplete.

## RESUMO

Com o propósito de satisfazer os objectivos previstos no Tratado de Roma de 1957, segundo o qual as pessoas, bens e capital deveriam beneficiar de mobilidade total dentro do espaço comunitário, a União Europeia decidiu nos anos oitenta implementar regras comuns a todos os serviços aéreos de passageiros dentro de União Europeia.

Este processo, usualmente denominado por Liberalização, decorreu em três fases entre os finais dos anos oitenta e os finais dos anos noventa. Em cada fase, foi adoptado um conjunto - denominado por Pacote - de medidas legislativas, implementando, de modo gradual, um quadro normativo comum a todos os serviços aéreos realizados dentro da União Europeia e por operadores Europeus. Profundas alterações ocorreram durante este período.

Nesta Tese são desenvolvidas algumas reflexões de índole económica, à luz de um modelo teórico - *Structure Conduct Performance model*, com o objectivo de inferir sobre a *performance* do processo de Liberalização Europeu. Cada uma das três fases é estudada com o duplo propósito de, em primeiro, analisar se as medidas legislativas adoptadas foram devidamente elaboradas de modo a que fossem estabelecidas as condições necessárias para o cumprimento dos objectivos iniciais, e em segundo, analisar como o mercado reagiu às diversas medidas legislativas.

Das análises efectuadas verificou-se que dos objectivos inicialmente propostos alguns não foram atingidos, notando-se ainda o aparecimento no mercado de comportamentos não esperados. Verificou-se ainda que outros factores condicionaram de sobremaneira a reacção do mercado, provavelmente superior à própria Liberalização; destes, convém destacar o ambiente macro-económico adverso e a crescente competição de mercados não Europeus. Sendo assim, a *performance* do processo de Liberalização foi apenas parcial.

## RESUME

Afin de mettre en pratique les directives du Traité de Rome concernant la libre circulation des personnes, des biens et du capital en Europe, l'Union Européenne a décidé de mettre en place dans les années quatre-vingt des règlements communs pour les services aériens de passagers.

Ce processus communément appelé Libéralisation s'est déroulé en 3 phases entre la fin des années quatre-vingt et la fin des années quatre-vingt-dix. A chaque phase correspond un ensemble de mesures législatives établissant progressivement un cadre normatif commun aux services aériens effectués à l'intérieur de l'Union Européenne par des opérateurs européens. De profonds changements ont donc eu lieu lors de cette période.

Cette Thèse a pour objectif d'entamer une analyse économique autour de la performance du processus de Libéralisation de l'Espace Communautaire Européen à la lumière du modèle théorique " Structure Conduct Performance Paradigm ". Chaque phase est étudiée dans un premier temps pour analyser si les mesures législatives adoptées ont permis la mise en place des conditions nécessaires à l'accomplissement des objectifs initiaux et dans un deuxième temps analyser la réaction du marché aux diverses mesures prises.

Nous vérifierons ainsi que certains objectifs initiaux ne furent pas atteints tandis que des comportements non prévus sont eux apparus. De même, certains facteurs ont eu des conséquences inattendues sur le marché, quelquefois plus importantes que la propre Libéralisation : parmi eux, l'environnement macro-économique défavorable et la concurrence accrue des marchés non européens qui expliquent, entre autres facteurs, une performance partielle du processus de Libéralisation.



# 1 INTRODUCTION

*The flywheel for the engine of the world's industry.*

*Sir Colin Marshall, former British Airways chairman*

At the beginning of the twentieth century, road networks were, in many countries, limited, and the transportation technology was only taking its first steps. Mobility of people and goods was, therefore, rather limited. The rise and development of the air transportation industry has changed many of the social, political and economic aspects of human activities.

Soon all the scheduled services<sup>1</sup> were directly subjected to governmental orders, with all services severely restricted and bounded - air transportation was considered public utility. The other non-scheduled services<sup>2</sup> had a more flexible framework, because their mission was seen as less prominent<sup>3</sup>.

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<sup>1</sup> Scheduled services or flights are those that are performed for remuneration according to a published timetable, or so regular or frequent as to constitute a recognisably systematic series, and which are open to direct booking by members of the public (AEA - Yearbook, 2003).

<sup>2</sup> Non-scheduled services or flights are those that are performed for remuneration on an irregular basis, including empty flights and blocked-off charters (when the whole capacity of an aircraft is reserved for charter sale on flights published as scheduled but carried out as charter flights on the same or similar routing and timetable), and other than those reported under scheduled services (AEA - Yearbook, 2003).

<sup>3</sup> Charter flights and air taxi operations were few and limited, and the business of package tours involving air transportation had not yet been created. In practical terms, their operations were non-relevant.



Regulation was always seen as the most suitable framework to serve both state and public interests (Table 1.1), although there was no consensus on the nature of this industry's actual market. While some argued that the air transportation market was a natural monopoly and, therefore, regulation was needed to avoid abuses from the dominant companies and reductions in the security patterns, others said that, even if it was strongly oligopolistic, regulation was still required, because unregulated competitive market forces would lead to fierce competition with adverse consequences for the general public (Doganis, 2002).

Table 1.1 - Some examples of reasons for Regulation

Public interests	<ul style="list-style-type: none"> <li>◆ maintain market stability and safety standards</li> <li>◆ protect population from market failures <sup>(a)</sup></li> <li>◆ provide a comprehensive network of services</li> </ul>
State interests	<ul style="list-style-type: none"> <li>◆ maintain flag carrier</li> <li>◆ provide international projection</li> <li>◆ increase and expand national economy</li> <li>◆ meet military criteria – sovereignty reasons</li> <li>◆ exportation of aviation services</li> <li>◆ grant status and market presence</li> </ul>

<sup>(a)</sup> for instance: monopolistic competition or market power.

Adapted from AEA (2002) and Doganis (2002)

Another argument in favour of regulation was the competition of non-scheduled companies, which, operating in a far less restrictive environment, were in position to offer lower fares than the scheduled ones. If the market was open, this could result in strong competition on certain routes, with possible disastrous financial results for the companies with scheduled prices. Thus, by forbidding competition, these companies' success would be guaranteed.

State-owned carriers or private-owned carriers operating within a restrictive regulated environment were the two methods used by governments to control their domestic markets. Routes, frequencies, capacities and fares were political issues. In normal conditions, one company, possibly two, were allowed to operate on each route. The service was based exclusively on the routes by themselves (from origin to destination), and they were not integrated, and thus the point-to-point network was the common design for the carriers' networks. Moreover, companies did not have the power to set tariffs or prices, as these were governmental matters.

As regards the international market, an attempt to establish a relaxed and open regime was made at the 1944 Chicago Convention, where 52 countries gathered to

debate three main topics: air traffic rights, control of fares, and control of capacity (Pels, 2000). The participants were hoping to reach a multilateral agreement, however, negotiations failed and there was no consensus<sup>4</sup>. Nonetheless, some improvements concerning standardization and regulation of international services were achieved. Firstly, a set of rights and permissions called “Freedoms of the Skies”<sup>5</sup> was developed, with all participants granting automatically the first and second freedom rights. These freedoms have been the basis for all subsequent agreements. Secondly, two international organizations were created: ICAO - International Civil Aviation Organization, under auspices of the United Nations, and IATA - International Air Transportation Association. ICAO is an intergovernmental agency mainly concerned with the improvement of the civil aviation industry and unification of the air transportation market worldwide. IATA is a much more technical organization concerned with the practical issues of the civil aviation industry<sup>6</sup>.

After the Chicago Convention, countries have developed a complex web of bilateral agreements<sup>7</sup> that have been ruling all (international) market operations. These

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<sup>4</sup> First, governments claimed absolute sovereignty over the airspace above their territories (AEA, 2002). Second, the United States had a strong and powerful fleet avid for new markets, which intimidated both European and other less-developed countries. The former with their economies near ruin and with extensive damage due to World War II fearing that their aviation industry would be overthrown if they had to compete against United States counterparts. The latter without any air transportation industry feared that they would be permanently excluded from futures developments (Good *et al.*, 1993).

<sup>5</sup> Freedoms of the Skies. International aviation rights of passage:

- First freedom. The right of an airline of one country to fly over the territory of another country without landing.
- Second freedom. The right of an airline of one country to land in another country for non-traffic reasons, such as maintenance or refueling, while en route to another country.
- Third freedom. The right of an airline of one country to carry traffic from its country of registry to another country
- Fourth freedom. The right of an airline of one country to carry traffic from another country to its own country of registry.
- Fifth freedom. The right of an airline of one country to carry traffic between two countries outside its own country of registry as long as the flight originates or terminates in its own country of registry.
- Sixth freedom. The right of an airline of one country to carry traffic between two foreign countries via its own country of registry. This is a combination of the third and fourth freedoms.
- Seventh freedom. The right of an airline to operate stand-alone services entirely outside the territory of its home state, to carry traffic between two foreign states.
- Eighth freedom. The right of an airline to carry traffic between two points within the territory of a foreign state (cabotage).

<sup>6</sup> Among other issues, IATA helps countries to negotiate their bilateral agreements (through the definition of capacities, frequencies and fares), establishes common standards and recommends practises for virtually every aspect within aviation industry, and works as a pressure group representing the interests of companies. See Doganis (2002) for a more detailed explanation.

<sup>7</sup> Which were related only to the scheduled services. As explained in footnote 3, charter operations were not important or relevant, and by the time of the Chicago Convention it was thought that they would continue to be so, thus, a more liberal approach was adopted. In practical terms, the authorization for

agreements were ratified at governmental level under the auspices of IATA. Thus, although the exact terms varied considerably, they usually had similar formats<sup>8</sup>.

The key issues regulated by the bilateral agreements are presented in Table 1.2. Usually, only one public or national private company could operate on routes previously defined and on a point-to-point basis. Capacities and flight frequencies were established at governmental level, and fares were agreed at IATA conferences (but governments had the final decision). Furthermore, the pooling of revenues was a common situation: for instance, if one company had 60 per cent of revenues, it was forced to share 10 per cent with the other.

Table 1.2 - Common features of the bilateral agreements

Issue	Common features
Designation	♦ single designation
Routes	♦ point-to-point routes ♦ governmentally defined
Capacity	♦ fifty per cent for each country
Fares	♦ decided at IATA tariff conferences
Ownership	♦ public-owned ♦ private owned by national companies
Revenues	♦ obligatory 50 : 50 per cent revenue pooling

Adapted from AEA (2002), Button (1998a), Doganis (2002), EC (1997)

For more than 30 years, the civil aviation industry has evolved within this environment. The outcome was a stagnant market, with many companies depending on subsidies to survive. The absence of competition, the inflexibility of rules and the lack of stimuli have led companies into a dead end, with enormous deficits and low efficiency. Other problems of regulation included the restriction on trade, distortion of the overall pattern of services, absence of incentives to modernization or improvement, and the less importance given to travellers. Carriers have repeatedly reported low load factors, and many were undercapitalised, inefficient and unprofitable (Forsyth, 1998).

By that time, in the United States, the civil aviation industry reached an unsustainable situation, with the government forced to inject huge amounts of capital in order to keep the carriers working. Furthermore, some voices, supported by several

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non-scheduled services was left at the discretion of individual states. Each country has followed its own policy and attitudes towards charter operations, which vary considerably among them. For further details see EC (1997).

<sup>8</sup> Especially because most bilateral agreements are based on the one signed between the United States and the United Kingdom in 1946 – known as the Bermuda Agreement.

studies and reports stating the problems and weaknesses of regulation, questioned the regulatory framework. The airline markets were expected to be quite competitive, and even those markets where the competition would be low, the threat of new companies would keep costs and prices down. The Civil Aeronautics Board conducted some research and found that regulation had no apparent advantages. On the contrary, it advocated that, to some degree, deregulation could be positive. This situation culminated in the signing of the Airline Deregulation Act in 24 October 1978, by President Carter, which fully deregulated the United States' domestic market<sup>9</sup>.

After deregulation, the market has undergone some distressing times, with many volatile new companies and adaptation problems for the incumbents. The increased competition, the "boom" in air travel and the fall in fares were other short term effects of deregulation (Forsyth, 1998). New entrepreneurial carriers have appeared, offering innovative products, such as frequent flyer programs or promotional fares. Incumbents have followed their lead and have also adopted a commercial driven business attitude, becoming more competitive. However, only a decade later, many of the new companies as well as some incumbents were forced into bankruptcy and an oligopolistic market has again developed with a decrease in real competition (Button, 1998a and Sinha, 1999).

The star shaped network, known as hub and spoke, has become the common configuration for the scheduled companies reducing the number of direct flights. Furthermore, many unprofitable routes have disappeared, reducing the number of the places served. As regards the quality of service, an overall reduction of the quality of food, legroom and in-flight service has occurred. Moreover, overbooking and "bumping" of passengers have become relatively frequent (Sinha, 1999).

Despite these troubled times and all the problems that were mentioned above, in general terms deregulation has been advantageous. After a decade of deregulation, fares fell by about 7 per cent on major routes, passenger boarding rose by 55 per cent, scheduled revenue passengers miles grew by over 60 per cent and employment increased by 32 per cent. In 1977, 37 per cent of all passengers were offered discounts, and this value increased to 91 per cent in 1987 (Sinha, 1999).

After having opened its internal market, the United States have also engaged in broadening its international one. In 1978, various liberal bilateral agreements were

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<sup>9</sup> See Button *et al.* (1993) or Sinha (1999) for a more detailed explanation.

signed with European countries: the Netherlands, Germany, Belgium, etc; and in the following two years with various Asian countries: Thailand, Singapore, Korea, etc.

In other regions of the World, countries have been following the United States' model and have been opening their domestic and international markets - Canada, Australia and New Zealand are a few examples of this. Yet, the most relevant development concerning civil aviation market rules has occurred in Europe, when in late 1980s the European Union members<sup>10</sup> have agreed to open their national markets to other member states' companies. The move towards the establishment of the single market, the so called Liberalisation process, was carried out in three phases between 1988 and 1997; in each phase a set of legislative measures - Liberalisation Package - was implemented gradually by removing the former restrictions and implementing standardized rules across European Union members states<sup>11</sup>. After the Liberalisation process, a truly single and economically driven market has been established, in which all European companies are subject to the same rules, obligations and rights.

By contrast with the United States, the main driving force behind the European Liberalisation process has been the accomplishment of the directives of the 1957 Treaty of Rome, which predicted free mobility of people and goods within the European region, and not economic issues, despite these having played an important role.

Hence, a non-distressful and gradual establishment of the common market throughout Europe has been the primordial goal underlying the Liberalisation process. Other important goals have included: in the short run, **i)** an overall increase in the competition level, which would result in **ii)** an increase in the efficiency levels and **iii)** a decrease of costs with a consequent **iv)** reduction in fares; furthermore, the rise of a commercially driven environment would stimulate companies **v)** to grow and **vi)** to pursue profits. In the long run, the objectives were **vii)** an increase in the employment level and **viii)** a contribution towards a greater coherence and cohesion of the European Union (EC, 1997).

The establishment of a common European market has had a profound impact in the entire European civil aviation market with all companies changing their behaviour in

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<sup>10</sup> From 1994 onwards, the region has been enlarged, by including the members of the Economic European Area.

<sup>11</sup> In this Thesis, the terms Europe, European Union, European Community and Economic European Area all refer to the same concept.

presence of the new conditions. Some of these changes are in accordance with what had been foreseen, and others clearly are not.

## 1.1 OBJECTIVE

The Liberalisation process was the most relevant act for the European construction concerning the civil aviation market. Therefore, a full comprehension of all related issues is of utmost importance. Both the European Union and the academic community have conducted major efforts in order to achieve a full understanding of the actual impact and extension of the Liberalisation process in the changes that the market has been experiencing.

The purpose of this Thesis is to share some thoughts about the *economic impacts of the performance of the European Liberalisation process on the scheduled market within the European Union.*

This performance may be evaluated by comparing the results obtained (or, preferably, the impact felt), with the explicit objectives of the programme - Liberalisation process; therefore, a programme achieves a high Performance when the final results are close to (or, ideally, match) the initial objectives. Applying this definition to the Thesis: with the purpose of evaluating the Performance of the European Liberalisation process, the changes that have occurred in the market during and after the Liberalisation period are studied in the light of an economic model, aiming to understand if they have been a direct consequence of the Liberalisation process and whether they are in accordance with the initial goals of this same process.

As regards the market considered in this research study, it has been considered the transportation of passengers by air within the single European market and by European Community air carriers. So, routes ending in non-European countries and non-European companies are not included. Furthermore, only scheduled commercial aviation was studied. Therefore, the charter (non-scheduled) segment will not be analysed in detail, except when it interacts with the scheduled segment or in situations where its behaviour is important for the discussion.

The restrictions imposed on the market can originate some problems that may undermine the final conclusions of the Thesis, but it was impossible to avoid these restrictions in order to do a feasible and realistic research. The first restriction has to do with the exclusion of other means of transportation that may have competed directly (or indirectly) with air transportation. With large distances or major natural obstacles (like seas or mountains) air transportation is the only viable mean, however, for short distances (until 800 km) there are other competitive means of transportation, as for instance, cars and trains<sup>12</sup> - this type of competition was not studied. This was not considered to be a relevant source of distortion, since the competition of cars is only significant for short distances, which is not relevant in the European market; as regards trains, there were only few high-speed trains at the time of the study, and, therefore, its importance in terms of competition was also insignificant. Secondly, the exclusion of charter companies that may have changed their commercial strategy and entered the commercial business aviation (since their product is equal to the scheduled ones). The analyses revealed that they have not been successful in the scheduled segment, and that their natural segment is very specific and does not extend beyond the scheduled one at a considerable extension. Furthermore, they had already operated in a far less restrictive environment and the Liberalisation has not had a major effect on their activity. Nevertheless, as written above, whenever necessary they are included in the discussion. Thirdly, the exclusion of the non-European market. This market represented, for some European carriers, more than 40 per cent of all traffic (EC, 1997), and since the Liberalisation has not modified the agreements each member state had with non-European countries, companies might have restrained or changed their response. In order to minimize this drawback, the potential influence of this market has been considered during the analyses and is presented whenever relevant.

Although these problems might have complicated the analyses to some extent, it is strongly believed that the final discussions of the Thesis are still valid and meaningful.

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<sup>12</sup> In France, the TGV train does compete with airline companies. For instance, the TGV line between Paris and Brussels, which is used by Air France to feed its long-haul flights, clearly competes with the airlines that operate on this route; also, since the beginning of the TGV line between Paris and Lyon, the air traffic on that route has stopped growing. (Button, 1996).

## 1.2 METHODOLOGY

A two-phase methodology was followed to accomplish the main goal of this Thesis.

The first phase concerned the choice of the economic model. Among the various theories, the Structure Conduct Performance paradigm has been considered the most suitable for this analysis. This model is supported by a vast theory and offers a wide range of concepts that exceeds the purposes of this Thesis. Being so, the model has been previously applied to both the European Liberalisation process and the civil aviation market, with the purpose of understanding and choosing the most relevant attributes.

In the second phase, this “filtered” model will be applied to the European Liberalisation process. This strategy will follow the common method: each dimension of the market is studied independently and consecutively, starting with the explanation of the changes in Public Policies, which were originated by the European Liberalisation process. Then, the two market dimensions - Market Structure and Market Conduct - directly influenced by changes in Public Policies changes are analysed on two levels: firstly, on a theoretical level, studying the changes in the legal framework with the purpose of understanding whether the conditions for accomplishing the goals of the Liberalisation process were in fact created; and secondly, whenever possible, on a more practical level, studying the market changes with the purpose of understanding whether the goals of the Liberalisation process were in fact accomplished. Finally, the last market dimension - Market Performance - is analysed only on a practical level, aiming to understand whether the market outcome has been in accordance with what was foreseen, and thus, to draw conclusions on the Performance of the Liberalisation process.

Since there are other forces that might have been important for the changes within the market, a great deal of attention was made to distinguish between the responses that were actually caused by the Liberalisation process and those that were not.



### 1.3 THESIS CONTENTS

Following the Methodology presented above and aiming to offer a clear and fluid presentation of the contents - theory, data, analyses and discussions - this Thesis has been divided into four chapters (Figure 1.1).

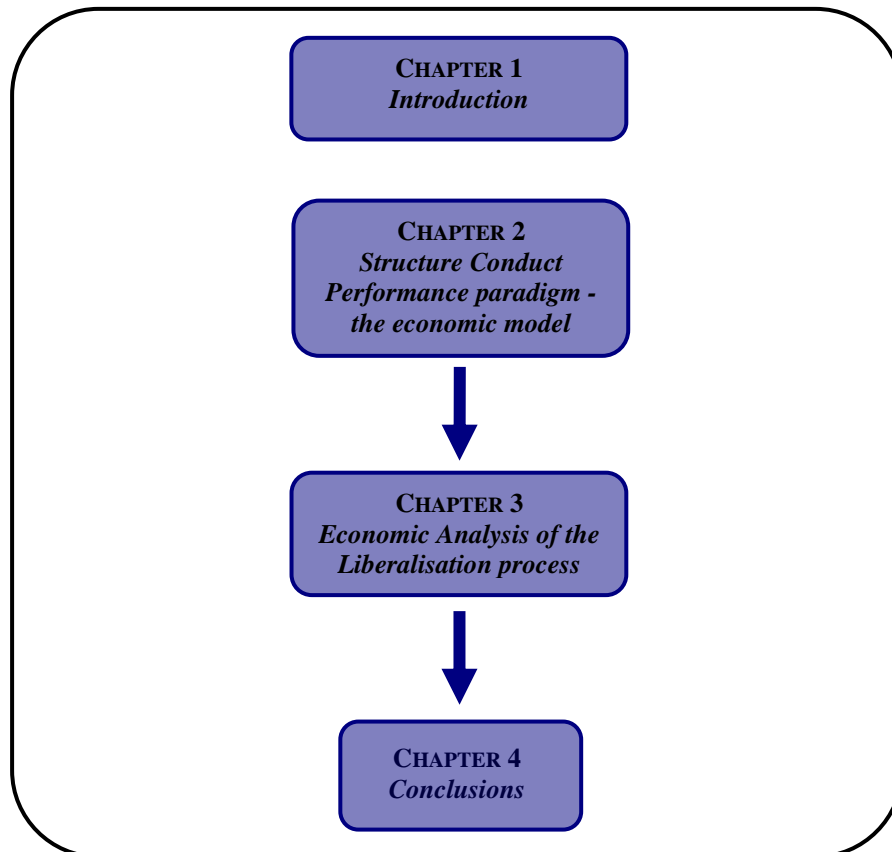


Figure 1.1 - Layout of the Thesis

Chapter 1 is the current one and describes the objective of the Thesis, the methodology used to fulfil the purpose of the research work and the layout of the document.

The following chapter - Chapter 2 - is mainly theoretical, presenting in detail the economic model used in this Thesis - the Structure Conduct Performance paradigm.

In Chapter 3, the economic model is employed to draw conclusions on the Performance of the European Liberalisation process. It begins with a short description of the background against which the Liberalisation process was conducted. Next, each of the four levels of the Structure Conduct Performance Model - Public Policies, Market Structure, Market Conduct and Market Performance - are analysed in detail.

The last chapter - Chapter 4 - summarises the findings drawn in the previous chapter concerning the Performance of the Liberalisation process. In the end, a few guidelines for future research in this field are presented.



## **2 STRUCTURE CONDUCT PERFORMANCE PARADIGM - THE ECONOMIC MODEL**

The economic nature of the discussion intended for this Thesis implies the use of an economic model. As the object in study - the civil aviation market - is a non-perfectly competitive market, the model had to be selected from the branches of economy that study these markets. Among the various existing models, the Structure Conduct Performance paradigm has been chosen due to its simplicity, clearness of results and flexibility.

The Structure Conduct Performance paradigm presents a wide applicability and vast theoretical background that exceeds by far the necessary amount of information to conduct the research intended for this Thesis<sup>13</sup>, thus a first approach at the civil aviation market has been made in order to determine and chose the most relevant and accurate attributes. Being so, the model presented in this Thesis is the original one filtered for the civil aviation market.

This model was first conceived by Edward S. Mason (1939, 1949), during the late 1930s, and elaborated later by many scholars, which the most prominent ones were

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<sup>13</sup> For a detail explanation about the Structure Conduct Performance paradigm see Church *et al.* (2000) , Pepall *et al.* (2001), or Scherer *et al.* (1992).

Bain, Clark, Caves, and Scherer, with the purpose of providing a comprehensive framework to find eventual relationships between the different market dimensions.

Figure 2.1 presents the layout of the Structure Conduct Performance analysis. According to this approach, Market Structure determines Market Conduct, which in turn determines ultimate Market Performance - the relationship is assumed stable and casual over time. There are two more market dimensions: Basic Conditions and Public Policies. The former includes all those attributes that have a direct or indirect influence over Market Structure definition (black arrow in Figure 2.1); the later includes all those attributes that are defined by the governments or regulatory boards and influences the different market levels (yellow arrows in Figure 2.1), in the present research it refers to the changes in the European civil aviation market rules - the Liberalisation process.

The first models have assumed a unidirectional relationship from Market Structure through Market Conduct to Market Performance (blue arrows in Figure 2.1), and market was considered stable and immutable over time. Later studies have proved important feedbacks from Market Performance through Market Conduct to Market Structure and Basic Condition (green arrows in Figure 2.1). Those studies have showed that market changes over time and that past Market Performance might be linked with current Market Conduct and/or Structure, which in turn would determine current Market Conduct and Performance. Therefore, the unidirectional relationships have been replaced by bidirectional ones.

The Structure Conduct Performance paradigm has provided many important insights on empirical regulations across markets and within markets, bringing light to some dark branches of industry analyses. This approach is primarily descriptive providing a very general way to organize a study of Industrial Organisation. Furthermore, it is a simple and broad model that with a correct choice of variables can be applied to any industry. The results have established a set of tables allowing the identification and classification of some complex phenomena of our industrial society, which have been providing managers with guidelines on what structural characteristics make markets profitable and what kinds of conduct is conducive to profitability (Scherer *at al.*, 1992).

However, as any model, the Structure Conduct Performance approach presents some limitations. Comparing with the traditional model, the most important issue was the assumed causality amongst Market Structure, Market Conduct and Market Performance.

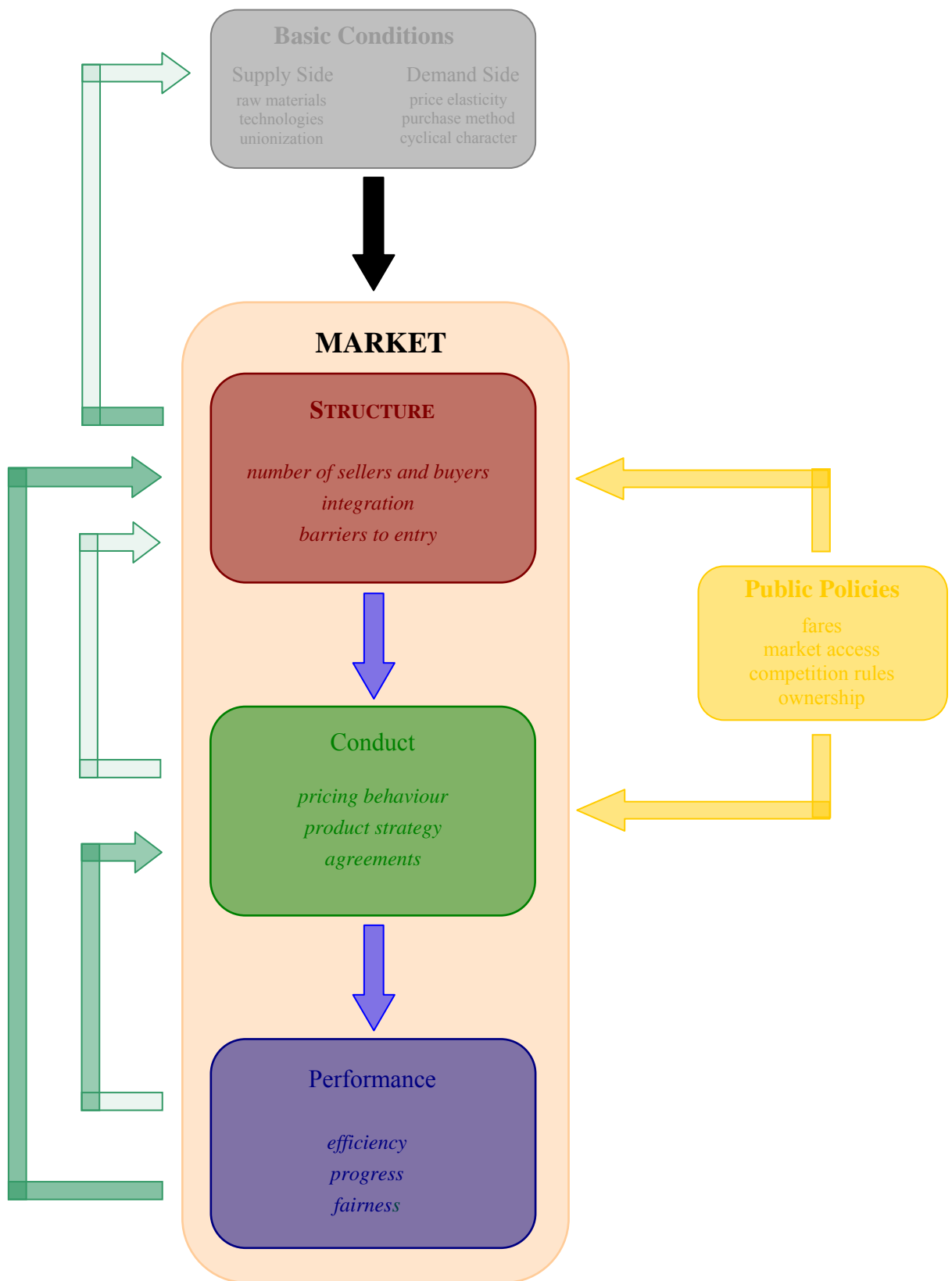


Figure 2.1 - Structure Conduct Performance paradigm

This drawback was overcome in the more recent approach, as explained before. Other problems include the inability to effectively capture the heterogeneity of the structural characteristics among and across industries, and the difficulty to generalize some results, since usually only few variables are used.

Nevertheless, the Structure Conduct Performance paradigm is powerful and useful for organizing theories and facts and these were the reasons for its use in this Thesis.

## 2.1 PUBLIC POLICIES

Public Policies encompass all those variables defined by the governments (or regulatory boards) that influence or constrain market activity compelling stakeholders to run their activity in a certain way. The implementation of Public Policies is justified either to end with existing market failures or prevent future ones<sup>14</sup>, or to protect some market activities from undesired competition<sup>15</sup>.

The modifications introduced by the Liberalisation process have been at the Public Policies level since it has redefined the legal framework that ruled the air transportation activities within Europe. The changes have been introduced at four levels<sup>16</sup> (Figure 2.2): fares, market access, competition rules (antitrust) and ownership. Being so, the attributes to characterise the Public Policies dimension of the Structure Conduct Performance paradigm have been chosen accordingly, as Figure 2.1 shows.

The **Ownership** level comprises the conditions in which a company may be acquired, and the rules that define the requirements companies must fulfil in order to be authorised to enter into the market. The **Market Access** level includes the rules that define and frame the companies' transport services within the market. The **Fare** level encompasses the different authorities and mechanisms involved in the definition of air transportation tariffs. Finally, the **Competition Rules** level comprises the legal competition rules that air companies are subjected to.

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<sup>14</sup> For instance, in case of monopoly governments may legislate in order to avoid the company does not take advantage of its dominant position.

<sup>15</sup> This is the case of the civil aviation market on which governments in order to protect their companies have taken measures to avoid other companies to enter into market.

<sup>16</sup> See Chapter 3.2 for further details.

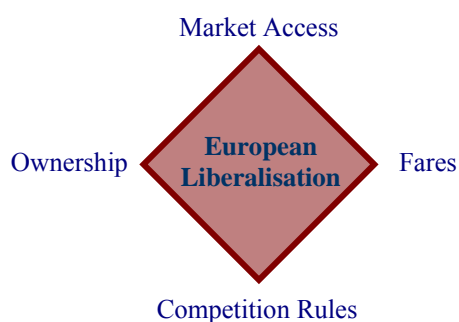


Figure 2.2 - Levels of European Liberalisation

## 2.2 MARKET STRUCTURE

Market Structure is taken to include those attributes that influence the nature of the competitive process of the market. The nature of the competitive process depends on the stakeholders - number and dimension - and the relationships among them. So, all those variables that allow to infer about competition issues are suitable to be used in Market Structure analysis. It may be said that Market Structure encloses all variables that contribute for the definition of the market's "layout". In this way, three variables have been chosen to describe the European civil aviation Market Structure (Figure 2.1). One characterises the stakeholders - Number of Sellers and Buyers - and the other two the relationships among them - Integration and Barriers to Entry.

**Number of Sellers and Buyers** is one of the most important attributes, as it provides an overview about the dimension and distribution of firms within market. Furthermore, it allows to infer about the degree of market concentration, which is the attribute commonly used in real case applications. At some degree, market concentration is related with both the degree of competitiveness in an industry - high concentration is usually synonymous of low competitiveness; and with the market power<sup>17</sup> of the companies - increase in concentration commonly leads to an increase of company's market power.

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<sup>17</sup> Market power is the ability of a firm to raise profitability price above marginal costs. Some firms are able to capture part of the buyers' surplus. This stems from the impossibility of customers to buy from another firm or from the presence of imperfect information - less informed customers are willing to pay more. Market power can be regarded as the ultimate goal of companies, because it represents the power to control prices and markets. When a firm owns a high market share, it may be a market leader and so control prices.



Market concentration is typically measured as a function of the market shares of some or all of the firms in a market using statistical measures<sup>18</sup>. The most common statistical measure is the Herfindahl-Hirschman Index<sup>19</sup> (HHI).

The following Market Structure attribute is **Integration**. An act of Integration (Figure 2.3) refers to any sort of alliance or merger between two or more companies, involving exchange of shares, that either produce the same product or service - Horizontal Integration, or are sellers or buyers of each other - Vertical Integration. This attribute characterizes the strength and types of ties within market - it includes all types of mergers or alliances.

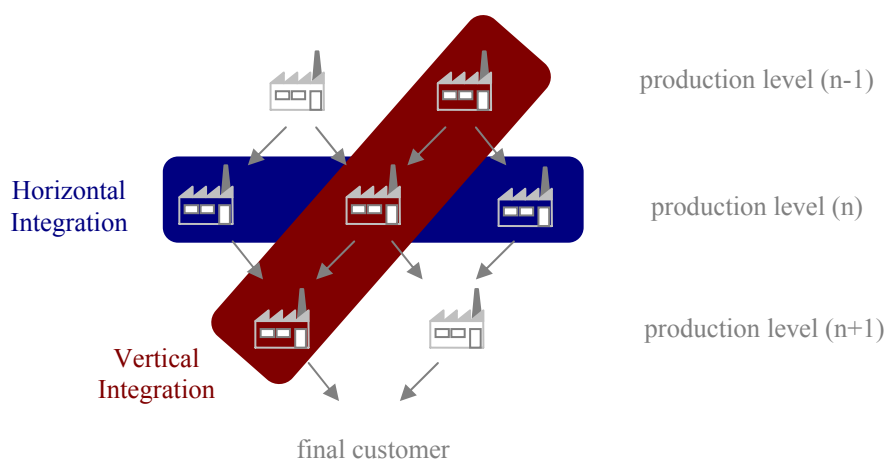


Figure 2.3 - Vertical and Horizontal Integration

When companies are integrated they stop to act individually or compete against each other and start to cooperate pursuing a common objective. This can leave to important

<sup>18</sup> The use of statistical measures requires some attention, since incomplete (or not correct) results may be obtained, undermining all subsequent analyses. For a review about the problems and precautions of using statistical measures see Carlton *et al.* (1999). Nevertheless, the fact that most Market Structure investigation has been done using statistical measures gives some degree of confidence to use them in this Thesis, naturally taking the necessary precautions to ensure the results' accuracy.

<sup>19</sup> HHI is defined as the sum of the squared values of firms' shares:

$$HHI = \sum_{i=1}^n x_i^2$$

HHI - Herfindahl-Hirschman Index for a certain market;

$x_i$  - market shares of the firms;

$n$  - number of firms competing on a certain market.

Usually this indicator is applied to all firms in a market, yet, it can be applied at the  $m$  larger firms. HHI can take any value from zero to one. When it approaches zero, the market is considered to be less concentrated, indicating the existence of strong competition between industries. When it approaches one, there is a higher market concentration and less competition. The inverse of HHI ( $1/HHI$ ) represents the number of real competitors within market.

changes in market behaviour depending on the type of Integration, but inevitably increases both market concentration and companies' market power.

Table 2.1 presents the main gains stakeholders obtain with Integration. All of them are, with a certain degree, related to market power and price control, or costs reduction.

Table 2.1 - Some examples of reasons to Vertical and Horizontal Integration

Vertical Integration	Horizontal Integration
Increase Barriers to Entry	
Control over prices	
Increase monopoly profit	
Assure supply	Eliminate direct competition
Facilitate price discrimination	Increase size and dimension
Internalize externalities	

Adapted from Clarkson *et al.* (1982)

In relation to vertical Integration, for instance, buying a supplier allows for some internalization of externalities<sup>20</sup>, and avoids the problem of fluctuations in supplying. At the same time, by entering into a new market the company will reduce competition, as the other existing firms will not be able to negotiate, any more, with it - thus, merger conducts to an increase of Barriers to Entry. In relation to horizontal Integration, for instance, in markets where there are economies of scale, the increase of size can be extremely important for companies. Moreover, by purchasing rivals, the company reduces direct competition, increasing its market power. This will grant the company an excellent bargain power with the supplier, and the possibility to act as a monopoly in relation to buyers.

The following attribute is **Barriers to Entry** that represents all forces and/or difficulties that hinder, delay or prevent potential competitors to enter into market in a free and equal basis (some examples are presented in Table 2.2). There are two sources of Barriers to Entry: exogenous and endogenous. Exogenous Barriers to Entry refer to those barriers that are beyond companies' managerial control (in other words they are not created by any stakeholder); these barriers rise due to the normal market activity and depend upon market characteristics. On the other hand, endogenous Barriers to Entry refer to those barriers that are within incumbents' managerial control; so, they are

<sup>20</sup> For example, by eliminating: contract revisions, specifications, etc.

directly forged by the incumbents with the purpose of gain some competitive advantages.

Barriers to Entry allow checking for eventual stakeholders’ dominant positions or competitive advantages. It also provides useful insights about the possibility of stakeholder eventually forge competitive advantages.

Table 2.2 - Some examples of Barriers to Entry

Exogenous Barriers	Endogenous Barriers
Sunk costs	Loyalty of customers
Technology	Product differentiation
Governmental restrictions	Predator behaviour
Economies of scale, scope and density	Excess of capacity
Market experience	Privilege access to resources

Concerning the exogenous Barriers to Entry. In presence of high sunk costs, new competitors may face some difficulties to enter due to the high amount of capital to set up business<sup>21</sup>. New technology is also a barrier to entry because, it might be rather difficult to find and gather the necessary qualified human and material resources<sup>22</sup>. Government restrictions include all legal barriers that prevent new competitors to enter freely. The presence of economies of scale, scope and density also represents a barrier to entry, because, on the one hand, if new competitors enter on a cost competitive base, first, it would be very expensive and, second, it may result in price depreciation, thus, making entry unprofitable. On the other hand, if new competitors enter on a small scale they would face major costs disadvantages, and, thus, making once again entry unprofitable. (Church *et al.*, 2000). A last Barrier to Entry concerns incumbents’ market experience. Since they are already inside market, having a deep knowledge about it, they are in a privileged position to predict or take decisions about (future) market fluctuations and changes.

Concerning the endogenous Barriers to Entry. A common barrier is by getting the loyalty of customers that reduces their mobility and avoids them to escape to rivals.

<sup>21</sup> In civil aviation this can be a rather important barrier since, first, newcomers in order to compete directly with the incumbents, must enter into market offering at least an identical service - identical frequencies. Second, the most interesting routes usually involve congested airports at one or both end served at high frequencies by the incumbents. Third, there is always a development period characterized by low levels of profitability, past experiences show that the initial efforts of mount a route are at best returned only after two or three years (CAA, 1998).

<sup>22</sup> In civil aviation, this is not a major barrier since the most important developments have already occurred some decades ago and now technology is available to all carriers.

Companies use several schemes to get customers' loyalty, for example, through commercial and discount programmes, strong advertisement campaigns, or by setting up a brand image. In such situations, new firms after entering will strive to convince customers to switch brands<sup>23</sup>, which may raise costs to unbearable levels, resulting in withdrawal. This barrier is directly linked with product differentiation by which a firm sells its products convincing customers that they are different and unique (even being more expensive). The new and unknown competitors will again have to expend important resources to pursue customers. Predator behaviour<sup>24</sup> or dumping are other examples, in which incumbents lower prices below marginal costs so that new competitors are obliged to leave market. Investment in excess capacity is also used - the incumbent holds in stock excess of products until a new firm enters, then he uses the extra capacity to flood market in order to reduce prices and avoid other company to sell their products (Church *et al.*, 2000). Finally, incumbents may have privilege access to some resources, for instance, through exclusive contracts with suppliers, which can create difficulties to access market.

### 2.3 MARKET CONDUCT

Market Conduct encompasses those variables that characterize firms' competitive behaviour in market, including all sorts of actions, schemes and tactics that may be done in order to survive and earn profits. Following the Structure Conduct Performance paradigm, current Market Conduct is built on Market Structure (and Public Policies), which will define Market Performance.

To describe the Market Conduct of the civil aviation market, three variables have been chosen (Figure 2.1): Pricing Behaviour, Product Strategy and Agreements.

The first one is **Pricing Behaviour** that refers to all tactics and methods used by companies to price their products and services, with the final purpose of maximizing their total surplus (light green area of Figure 2.4). This is a crucial element in the companies' management, particularly, for those to which customers are price sensitive, since a change in price leads to a change in the number of buyers.

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<sup>23</sup> For instance: by either offering better terms of trade or engaging in strong advertising campaigns.

<sup>24</sup> It is a practise by which a company sacrifices profits in the short term aiming to eliminate rivals or deter (or delay) entry so that greater profits may be achieved in the long run.

Pricing Behaviour may vary considerably within a market, with companies presenting different approaches. In civil aviation industry, price discrimination is widely used and consists in offering various prices (targeted at different types of customers) for the same (or similar) products<sup>25</sup> (Figure 2.4).

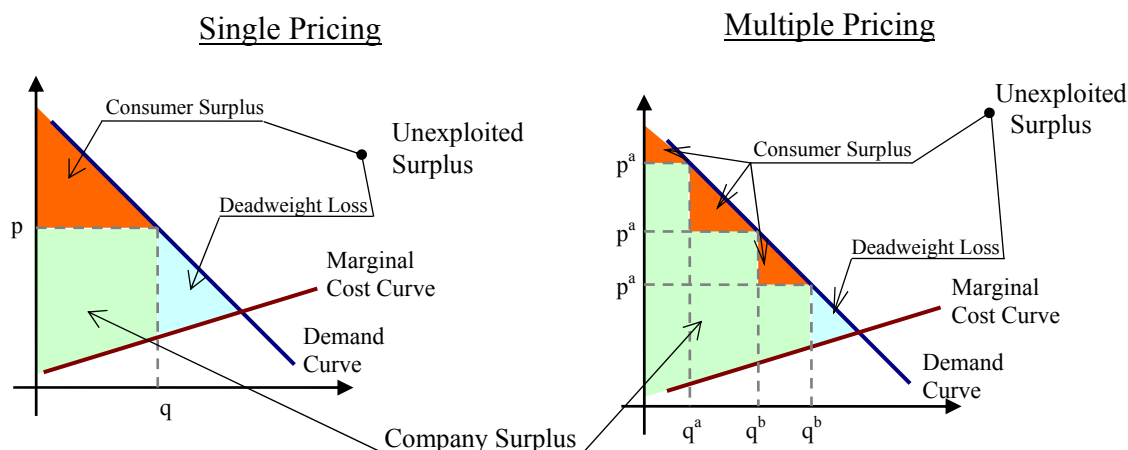


Figure 2.4 - Unexploited surplus in case single pricing and of multiple pricing

The firm's **Product Strategy** refers to the firm's business philosophy - it represents the way firm faces and runs its own business. Decisions about what product features to offer customers (or which products features to offer in each market segment) depend upon each company's Product Strategy.

The firm may seek to offer a group of different products to different classes of customers, or offer a brand product for a certain market niche. The choice depends on several factors, such as the dimension of the market, the presence of other rivals, the firm's capacity and future perspectives. Product Strategy may pass either for the creation of a distinctive brand, or for the development of entirely new or substantially improved products. In every case, the goal is to guarantee that company gains some sort of competitive advantage, and thus, is able to increase their benefits and revenues.

The last Market Conduct variable refers to the **Agreements** that is any sort of intentional or non-intentional arrangement set between two or more companies that

<sup>25</sup> Figure 2.4 presents the price discrimination approach that is widely used by companies whenever they have some market power (since it is necessary to fix different prices for the same or similar products) and it is possible to differentiate types of customers (since each price aims a different type of customer) - this happens often in civil aviation market, in which companies have some sort of market power since market it is not perfectly competitive, and market is segmented since there are customers with different needs and willingness to pay (for instance: leisure and business passengers - Figure 3.8).

agree in cooperate or act together in one or various aspects. There is a large variety of Agreements, ranging from simply commercial agreements with low level of commitment, until complex strategic alliances obliging to profound restructurings of the companies.

Table 2.3 - Some examples of reasons to Agreements

Strategic perspective
Access new markets
Increase market power
Decrease Costs

There is a wide range of reasons for co-operation between companies (Table 2.3). Some times, Agreements are used by companies to enter into new markets (or regions) that otherwise would be rather difficult to enter, because either they do not have the necessary dimension or means, or the existing Barriers to Entry prevent a profitable entry. Other times, they form part of a wider and long-term strategic philosophy, on which companies seek for dimension, stability, or access to new resources. Furthermore, companies can increase their dominance (market power) by joining forces, and thus, forge entry deterrence. Other important advantage is related with cost reductions, as companies can better coordinate and optimize, among them, the available resources; this is especially relevant in those markets with economies of scale, scope or density.

## 2.4 MARKET PERFORMANCE

Market Performance represents the economic welfare produced by the market for the society in general - it may be considered as the outcome of the industry's activity. Market performance can be evaluated either by measuring the success and quality of all industries in producing benefits for buyers, sellers and rest of society, or by measuring the general success, profit and appreciation of each individual firm.

From the various Market Performance attributes, the following three (Figure 2.1) have been chosen as the most relevant to characterize the civil aviation market: Efficiency, Progress and Fairness.

**Efficiency** is a central concept in the assessment of Market Performance. This concept evaluates how market has been using the scarce available resources to produce

welfare to market (buyers and producers) and society as a whole. High levels of Efficiency are achieved when that market gets the most out of a limited supply of resources for a minimum of waste. There are two forms of efficiency: *Allocative Efficiency* and *Productive Efficiency*.

Allocative Efficiency means that from the existing allocation it is not possible to increase economic welfare - the output level is optimal. In economy, allocative Efficiency is measured by market total surplus (total blue area of Figure 2.5). Therefore, maximum allocative Efficiency is attained when efficiency loss (light green area of Figure 2.5) is null - point ( $p^*$ ,  $q^*$ ). Allocative Efficiency is achieved either in perfect competitive markets in which the competitive pressure leads price to equal marginal costs; or in imperfect competitive (or in monopolies) markets with public policies fixing prices equal to costs, since in these markets the presence of market power allows companies to raise profitably prices above marginal costs.

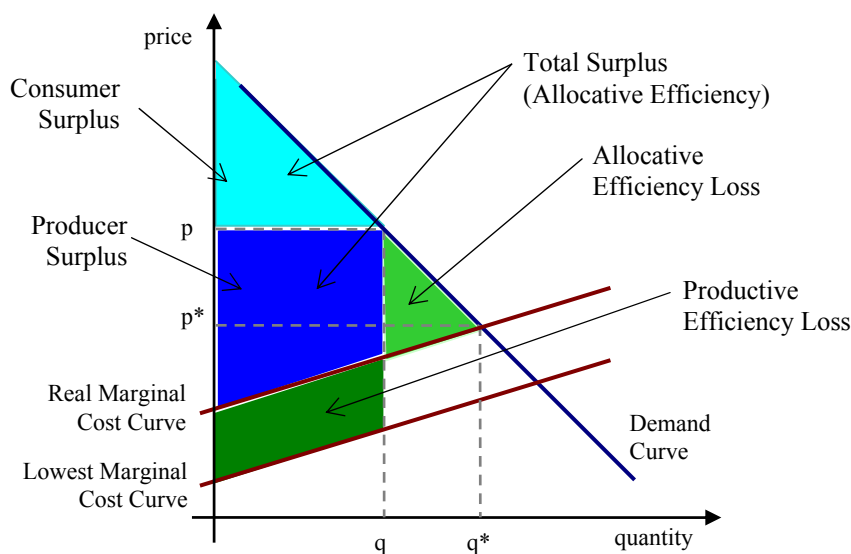


Figure 2.5 - Economic Efficiency

Productive Efficiency concerns how close the current production cost is the lowest possible one; in other words, how efficiently the inputs are being used in the production of the outputs. Maximum productive Efficiency is achieved when firms run their business at the minimum possible costs, which in economics terms means that the real marginal curve is equal to the lowest marginal costs curve. In Figure 2.5, the dark green area represents the productive Efficiency loss. Thus, this efficiency in practise refers to the “distance” the firm’s costs are from the minimum possible. Contrary to Allocative Efficiency, the Productive Efficiency is not achieved only in a pure competitive

environment, but it may be achieved in other market structures. In some industries economies of scale are never exhausted and, this requires the presence of only one or few enterprises - natural monopoly, such as the railroad infrastructures.

Measuring the gains in allocative and productive Efficiency is complex, since it requires to quantify, respectively, the surplus and the reductions in costs. Not only what really did happen, but what would have happened if the market had been perfect (it is necessary a benchmark situation to do some comparisons). If the first requirement is not always easy to get, the second is impossible, since it is a hypothetical situation. Therefore, it is necessary to make compromises in measuring Efficiency. In this Thesis (and such as researchers often do) proxies have been used: prices to infer about the allocative Efficiency, and (labour) costs<sup>26</sup> to infer about the productive Efficiency.

**Progress** is another key feature in market performance. More than merely transform resources into goods, companies have a major responsibility in the development of the traditional methods and products by, for instance, embodying new technological advances or innovative products in their production chains. Generally, the innovative processes are external to market - exogenous. Science is responsible for this task; market should support and take advantage of the opportunities created by the use of these inventions.

Progress can offer important competitive advantages to companies, for example, through the development of new techniques that can reduce the costs of production and/or increase the productivity and efficiency levels; or through the discovery of new products allowing companies to diversify their offer.

**Fairness** is the last market performance attribute, it refers to how equitably market distributes the economic benefits among participants. Basically, in a fair market no stakeholder secures more economics benefits - surplus - than those that are strictly needed to cover the costs of the service supplied. In essence, Fairness requires that at the end, every market participant should be better off after trading than before. Market

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<sup>26</sup> A special attention must be made concerning analyses or inferences about costs and in particularly labour costs, because they are different over time and across companies. Commonly, companies outsourcing some tasks that can be different each year and different companies can outsource different activities. Thus, either comparisons between companies or in different years are not always straightforward. In respect to labour costs, companies, for example, could reduce labour force and keep the output levels, which results in an increase of output per employee; furthermore, usually the first employees to leave are the less paid, thus, the unit costs per employee tends to increase (as the remaining are the well paid). Therefore, cross analyses should be carried out in order to eliminate deviations.



power usually reduces market Fairness, as the dominant stakeholder tends to get some of the other participants surplus. Fairness reaches its highest level in perfect competitive market and its lowest level in monopoly markets. In oligopoly markets fairness level changes in function of the existing market distortion and market power.

There are two forms of fairness: *Fairness in Process*, and *Fairness in Outcome*. As the name suggests, Fairness in process refers to equity during market activity, which encompasses the fulfilment of two requisites. First, participation should be voluntary - all firms run business freely and without barriers. Second, all stakeholders should have equal rights in accessing market - no firm is in disadvantage from the start. Both conditions are quite easy to check. Often governments regulate and control economic activity to ensure that these requirements are fulfilled. Fairness in outcome refers to equity in the distribution of the final economic welfare. The maximum Fairness is reached when the division of the surplus is proportional to the influence and share of each participant within market, which happens solely in perfect competitive markets.

## **3 ECONOMIC ANALYSIS OF THE EUROPEAN LIBERALISATION PROCESS**

In this chapter a discussion about the performance of the European Liberalisation process is carried out following the Structure Conduct Performance paradigm presented in the last chapter. However, before employing the economic model a short assessment of the background against which the Liberalisation process has occurred is conducted with the purpose of highlighting some other driving forces that could have also played an important role in the market changes.

In order to clarify and ease the analyses, 5 phases have been considered (Figure 3.1). Phase 1 ends in 1988 when the First Package entered into force and refers to the period before the Liberalisation process. Phases 2, 3 and 4 correspond, respectively, to the First, Second and Third Package. The Phase 5 starts with the end of the Liberalisation process.

### **3.1 BACKGROUND**

The European Liberalisation has been one of the most important institutional change that has occurred within the European air transportation; however, not all modifications market has undergone might be imputed exclusively to that process. After all,

Liberalisation has not been introduced in vacuum and other forces have certainly played a role in market's reactions. This is especially relevant for an industry like the transportation one that relies a great deal of its existence on the behaviour of other industries.

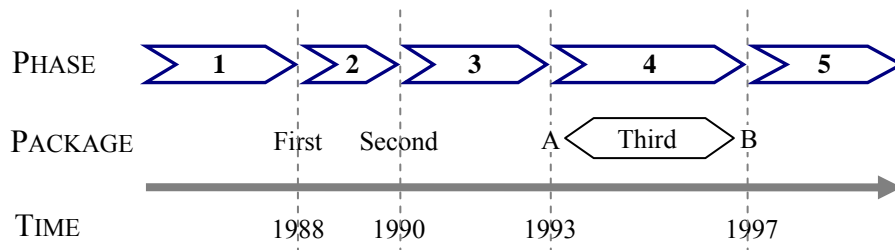


Figure 3.1 - Phases considered

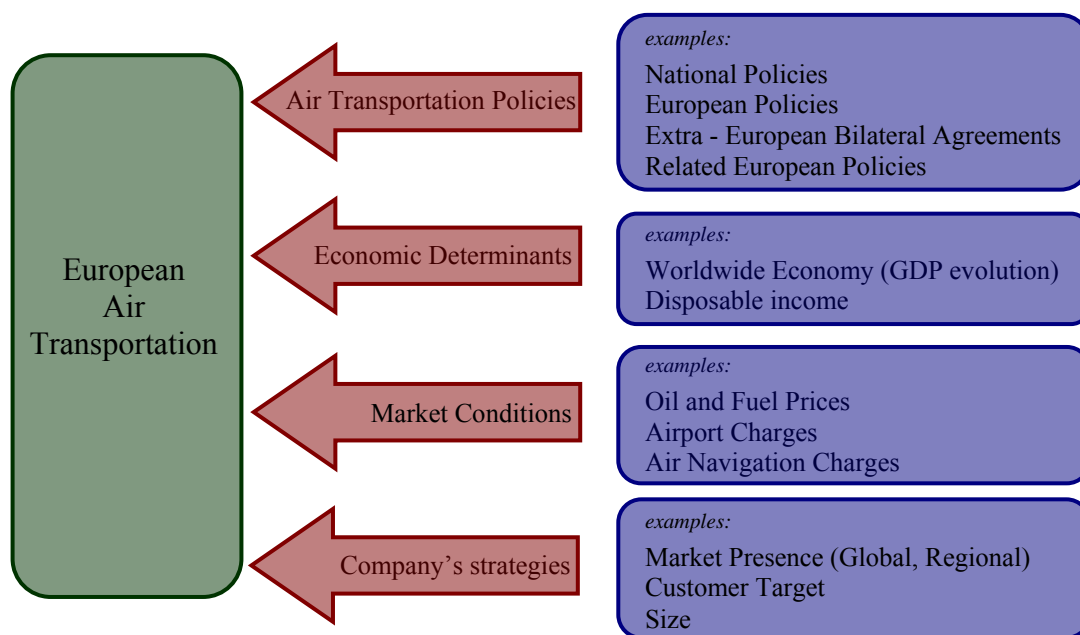
Therefore, it is important to be aware about other driving forces that could have had influence, so that the conclusions taken from the model are not misleading. In Figure 3.2, a general overview on the driving forces of the European air transportation is presented, the intention is to show the multiplicity of forces and not to provide a broad and accurately picture about them<sup>27</sup>. The Liberalisation process fits within the European Policies and more broadly within Air Transportation Policy. Among the various factors, there is two of special relevance: market presence and worldwide economy.

In respect to market presence, some European companies had a strong presence in non-European countries with a great amount of their revenues being generated from those markets. As Figure 3.3 shows, non-European markets were rather important for the bigger European companies.

Therefore, these companies may have changed their behaviour due to changes in those markets and not necessarily due to the European Liberalization process. Furthermore, the Liberalisation process has not changed the non-European bilateral agreements and since national owning was a key element in the bilateral agreements, some reactions and/or moves might have been postponed.

So, as already written in Chapter 1.1, during the analysis, the importance of the non-European markets is always present and whenever necessary some considerations are done.

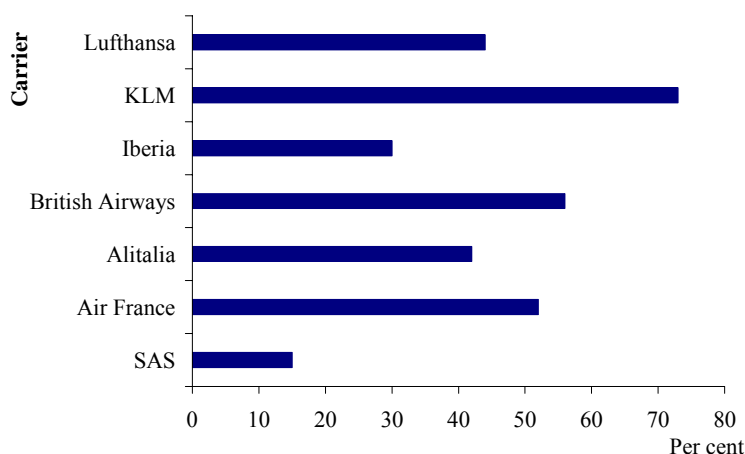
<sup>27</sup> Since, this is not the purpose of the thesis. For more details see, for instance, Button (1998).



Adapted from Button (1998), EC (1997)

Figure 3.2 - Factors influencing European Air Transportation

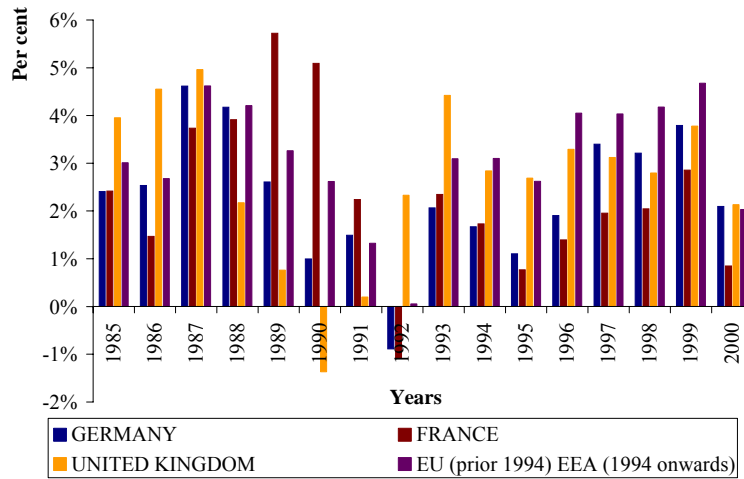
In what concerns the worldwide economy, the behaviour of both civil aviation industry and world economy are highly connected - in times of economic upturn people travel more and civil aviation records profits, while in times of economic downturn people avoid to travel and civil aviation records losses. Thus, the understanding of the economic status spanning the Liberalisation process is relevant, since many responses of the market might have been influenced by existing economic situation.



Adapted from EC (1997)

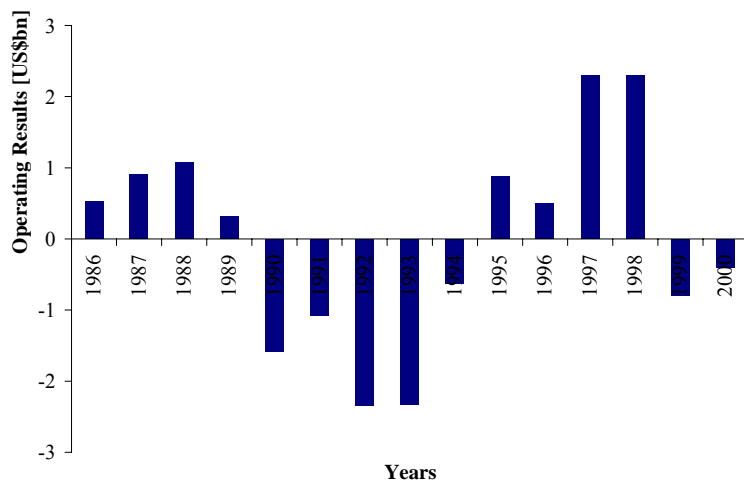
Figure 3.3 - Non-European revenues for some European airlines in 1992

Figure 3.4 shows the change in real Gross Domestic Product (GDP) for the three main European countries and European Union (EU) prior 1994 and European Economic Area (EEA) hereafter; and Figure 3.5 the operating results of the airline members of the Association of European Airline (AEA).



Source: Organisation for Economic Co-operation and Development

Figure 3.4 - Changes in some European countries' GDP



Source: AEA Yearbook (several years)

Figure 3.5 - Operating profit or loss of AEA member airlines

The Liberalisation period crossed different types of economical environments, which are reflected in the airlines performance. The First Package began in a very profitable period - the late 1980s, especially 1987 and 1988 - with most companies enjoying huge profits (Figure 3.5). However, the earlier 1990s - Second Package - saw a major downturn in world's economy and airlines recorded huge losses (Figure 3.5). The Third

Package was introduced at the beginning of the economic turn-round in 1993 and companies started to record positive results again (Figure 3.5)<sup>28</sup>.

### 3.2 PUBLIC POLICIES - THE EVOLUTION OF THE EUROPEAN AIR TRANSPORTATION

The European construction has started almost fifty years ago, when in 1957 six countries<sup>29</sup> signed the Treaty of Rome establishing the foundations of the European Community. The Treaty envisaged free mobility within Europe, however, for more than thirty years, the air transportation sector was kept apart and only in the late 1980s market was released from those governmental regulation bounds<sup>30</sup>. Ending the governmental market distortions, market has been developing towards a competitive open system, enjoying from its inherent welfares. Table 3.1 summarizes the main aviation policy events conducting to the European market Liberalisation.

Table 3.1 – Principal events in European air market Liberalisation

Year	Events
1954	♦ European Civil Aviation Conference (ECAC) is established by the European Community Council of Ministers
1956	♦ ECAC multilateral agreement on non-scheduled operations
1957	♦ European Community consisting of six Member States established by the Treaty of Rome
1961	♦ European Community Council of Ministers excluded sea and air transportation from the competition rules of the Rome Treaty until a policy could be developed
1967	♦ ECAC multilateral agreement on scheduled service tariffs
1974	♦ Merchant Seamen case at European Court of Justice
1978	♦ United States and several European countries liberal agreements signed
1979	♦ European Commission (EC) Civil Memorandum n.º 1 published, which set out general objectives regarding air transportation policy
1980	♦ EC put forward proposal to the council regarding inter-regional services
1981	♦ EC report on scheduled air fares within the Community published
1982	♦ United States and ECAC Memorandum of Understanding introduction a multilateral agreement on non-intervention zones for North Atlantic tariffs ♦ ECAC COMPAS Report on Competition in European Air Services published
1983	♦ EC inter-Regional Air Services Directive issued by council

<sup>28</sup> This analysis refers to the market outcome - Market Performance - that, on principle, should be carried out solely in Chapter 3.5. However, as explained before, due to the markets' dynamic, past Market Performance can influence present Market Structure and Market Conduct. So, the understanding of past Market Performance is rather important for the analyses of the Market Structure and Market Conduct performed in Chapter 3.3 and Chapter 3.4.

<sup>29</sup> Belgium, France, Italy, Luxemburg, The Netherlands and West Germany.

<sup>30</sup> This does not mean that there are no regulations governing airline activities, but instead what is normally called economic regulation (for example: controls over prices and capacity) was removed.

Table 3.1 (continuation) - Principal events in European air market Liberalisation

Year	Events
1984	<ul style="list-style-type: none"> <li>◆ EC Civil Memorandum n.º 2 published, which advocated the harmonization and Liberalisation of intra-European bilateral, and the introduction of competition rules with certain exemptions</li> <li>◆ United Kingdom (UK) and the Netherlands, UK and Federal Republic of Germany liberal agreements signed</li> </ul>
1986	<ul style="list-style-type: none"> <li>◆ EC Single European Act signed by the Council</li> <li>◆ <i>Nouvelles Frontières</i> case at European Court of Justice reiterated the urgency of establishing an appropriate Community framework</li> <li>◆ EC put forward proposal to amend 1983 directive on inter-regional services</li> <li>◆ ECAC Memorandum of Understanding, involving representatives of several States, on capacity sharing and tariffs but not market entry</li> <li>◆ UK and Italy, France and Federal Republic of Germany liberal bilateral agreements signed</li> </ul>
1987	<ul style="list-style-type: none"> <li>◆ EC Single European Act implemented, which made unanimous approval of council decisions no longer necessary, only a qualified majority</li> <li>◆ First Package of Liberalisation approved by council</li> </ul>
1988	<ul style="list-style-type: none"> <li>◆ First Package enters into force</li> <li>◆ Sorensen Plan discussed, which envisaged the Commission gradually taking over responsibility for Air Services Agreements of the twelve Member States</li> </ul>
1989	<ul style="list-style-type: none"> <li>◆ Court of Justice decision in Ahmed Saheed case, declaring null and void ipso jure agreements on tariffs applicable to schedule routes</li> <li>◆ Second Package of Liberalisation measure approved by council</li> </ul>
1990	<ul style="list-style-type: none"> <li>◆ Second Package enters into force</li> </ul>
1991	<ul style="list-style-type: none"> <li>◆ Third Package of Liberalisation measures approved by council</li> </ul>
1992	<ul style="list-style-type: none"> <li>◆ Council of ministers approved third stage measures</li> </ul>
1993	<ul style="list-style-type: none"> <li>◆ Third Package enters into force</li> </ul>
1997	<ul style="list-style-type: none"> <li>◆ Cabotage unrestricted from 1 April 1997</li> </ul>

Source: AEA (2002), CEC (1994), Chang *et al.* (2002), Dearden (1994), Garcia (1999)

The evolution of the European air transportation industry was similar to elsewhere, with countries regulating their own domestic aviation and celebrating bilateral agreements with other countries. These bilateral agreements that governed the international air transportation, have evolved from the 1944 Chicago Convention.

This framework has developed until 1957 when the Rome Treaty was signed. The Treaty represents the beginning of the European Community instituting the rules for a Common Market, and Economic and Monetary Union. Moreover, the Treaty envisaged free mobility for people, goods, services and capital within the European Community calling for the elimination of all protective barriers and obstacles. In its context, all regulatory distortions should also be removed. The importance of transportation, for European Community development and cohesion, was foreseen in the Treaty. The European transportation policies were defined from articles 70 to 80 under the Title V - "Transportation" in Part Three - "Community Policies", establishing the European

Common Transportation Policy. Article 70 states that “the objectives of this Treaty shall, in matters governed by this title, be pursued by Member States within the framework of a Common Transportation Policy”.

Under the Treaty’s philosophy, the existing system of air transportation regulation was unsustainable, as the current system of airline regulation was anti-competitive and in opposition with the competitive spirit of the Treaty, furthermore, market access or price-fixing restrictions were against the idea of freedom to supply services (Button *et al.*, 2002).

The European Commission was charged with the implementation of the Treaty. However, at the outset, the mission was quite complicated as the forces favoured the existing regulatory system. Three main reasons can be pointed out. First, transports have had a different position, under the Treaty, than the other services. Title V (articles 71 and 80) relinquishes to the Council of the European Union the decision to rule and to legislate about the Common Transportation Policy. Second, the air and maritime transportation were not initially included in the Common Transportation Policy (n.º 1 of article 80). Third, countries and industry, like some of the flag carriers, were also favourable to the existing system and the status quo. These features have reduced the European Commission’s authority and albeit all initiatives the market has remained heavily regulated for more several years. Changes have arrived slowly and in different ways.

In face of a continuous absence of change in the European policies, some countries have reformed their own domestic markets. The United Kingdom was the most active one, and from 1984 until 1987 has relaxed its bilateral agreements. Table 3.2 presents various liberal bilateral agreements features.

The first responses to Liberalisation have been rather positive, with newcomers entering and incumbents responding accordingly<sup>31</sup>. Furthermore, European Commission and scholars have presented several reports and studies<sup>32</sup>, which have emphasized the inefficiencies of the European air market and benefits of a more competitive market.

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<sup>31</sup> Evidence from the Irish - United Kingdom Liberalisation point to benefits estimated at £25 for the existing passengers and to an additional 1.3 millions passengers generated (Button *et al.*, 2002). Evidence from the Netherlands – United Kingdom Liberalisation point to a 3 to 5 percent increase on air traffic, and to a significant decrease in the lowest discount fare available (however, both normal economy and business fares have increased) (EC, 1997).

<sup>32</sup> See AEA (2002), Barret (1987) or CEC (1981) for a more detailed explanation.



The small unit costs of the developed European charter industry<sup>33</sup> and the United States deregulation were also used as evidences to prove potential benefits of Liberalisation.

Table 3.2 - Liberal bilateral agreements

Countries (date)	Features
United Kingdom – the Netherlands (1984)	<ul style="list-style-type: none"> <li>◆ Liberal route access and capacity with consultations</li> <li>◆ Country of origin fares rules</li> </ul>
United Kingdom – Luxemburg (1985)	<ul style="list-style-type: none"> <li>◆ Liberal route access and capacity</li> <li>◆ Double disapproval on fares</li> </ul>
United Kingdom – France (1985)	<ul style="list-style-type: none"> <li>◆ 55:45 on capacity</li> <li>◆ Liberal access</li> <li>◆ No changes on fares</li> </ul>
United Kingdom – Belgium (1985)	<ul style="list-style-type: none"> <li>◆ Liberal route access and capacity</li> <li>◆ Double disapproval on fares</li> </ul>
United Kingdom – Switzerland (1985)	<ul style="list-style-type: none"> <li>◆ Liberal route access and capacity</li> <li>◆ Country of origin rules only for discount fares</li> <li>◆ Minimum conditions for special fares</li> </ul>
France – Federal Republic of Germany (1986)	<ul style="list-style-type: none"> <li>◆ Only greater freedom for route access</li> </ul>

Adapted from EC (1997)

The European Court of Justice has also taken an important role in the change of the European transportation policy (Table 3.1). In 1974, with the *French Merchant Seamen* case declaring that rules governing competition in the Rome Treaty should be applied to air transportation; and in 1986, with the *Nouvelles Frontieres* declaring that national rules should be in conformity with the European laws. Its deliberations, against the Council and the existing regulatory system, have strengthened the voice of the European Commission.

A very important change occurred in 1979, when for the first time the European Parliament was directly elected rather than being representatives of national parliament. This has enhanced its authority and soon it has put forward a far reaching draft Treaty of Europe Union. This has led to an intergovernmental conference and although, member states have not entirely agreed with Parliament's proposal, they have recognize the importance of an open and closer economic union (Button *et al.*, 2002). Commission seeing these initiatives, has put forward its proposals in the Civil Aviation Memorandum 1 of 1979 calling for a Liberalisation of the bilateral restrictions and a review of states subsidies, albeit at a rather modest level. Five years late, the European

<sup>33</sup> Albeit the inherent differences between non-scheduled and scheduled companies, the existing gap showed that it was enough space for the latter reduce its costs (AEA, 2002).

Commission presented a second set of proposals in the Civil Aviation Memorandum 2 of 1984, now much more specific.

The first actual measure introduced by the European Union concerning air transportation Liberalisation was the 1983 Council Directive on Inter-regional air services. However, due to countries opposing air transportation Liberalisation, the Directive was rather limitative<sup>34</sup>, and the overall impacts have been rather limited. Nevertheless, the pace towards Liberalisation was in move and it was a question of time until it happen. This has led to the 1986 Single European Act, which was the public commitment to open market until the end of 1992.

The European Council, which was forced to open the market, decided to introduce Liberalisation slowly and by phases. The underlying philosophy was to introduce evolution rather than revolution within air transportation market (AEA, 2002), such as happened within United States domestic market in 1978. The Council determined that Liberalisation would take place in three steps. In each one, a set or “Package” of legislative rules<sup>35</sup> would be defined aiming the establishment of a free and competitive market akin to that within the United States. The First Package was introduced in 1988, the Second Package in 1990 and the Third Package in 1993, with a transition period until 1 April 1997.

Table 3.3 presents the relevant legislation of each package; and the Figure 3.6 summarizes the European Liberalisation process, presenting the measures adopted for each package. Each measure is also labelled in order to simplify the analysis at the Liberalisation process that will be conducted in the following chapters.

### **3.2.1 THE FIRST PACKAGE**

This Package brought into the air transportation industry the Treaty’s rules on competition (measure 1CR - n.º 1 of article 1 of Council Regulation n.º 3975/87), enabling, for the first time, the Commission to apply antitrust policies directly to the airline services. One of the most important developments was concerned with the

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<sup>34</sup> The Directive authorized air services between second and third level airports and subjected to aircrafts with less than 70 seats, distances not exceeding 400 kilometers, and if it would not affect other services.

<sup>35</sup> Council Regulations, Decisions and Directives.

establishment of the notion of Community air carrier<sup>36</sup>, since only the Community carriers could have used the freedoms and rights of the Liberalisation process.

In what concerns Fares, an automatically approval fares system was introduced with any tariff falling within a given range, defined in Table 3.4, being automatically approved and, thus, not needing of governmental approval (measure: 1F). In respect to the other fares, this Package did not change the existing approval mechanism that usually was the double approval<sup>37</sup> on the international routes.

Table 3.3 – Relevant legislation of the Liberalisation process

Phase	Legislation	Into Force	Scope
First	Council Regulation 3975/87	1 - Jan - 1988	♦ laying down the procedure for the application of the rules on competition to undertakings in the air transportation sector
	Council Regulation 3976/87	1 - Jan - 1988	♦ on the application of the Treaty to certain categories of agreements and concerted practises in the air transportation sector
	Council Directive 87/601/EEC	-	♦ on fares for scheduled air services between Member States
	Council Decision 87/602/EEC	-	♦ on the sharing of passenger capacity between air carriers on scheduled air services between Member States and on access for air carriers to scheduled air-service routes between Member States
Second	Council Regulation 2342/90	1 - Nov - 1990	♦ on fares for scheduled air services
	Council Regulation 2343/90	1 - Nov - 1990	♦ on access for air carriers to scheduled intra-Community air service routes and on the sharing of passenger capacity between air carriers on scheduled air services between Member States
	Council Regulation 2344/90	12 - Aug - 1990	♦ on the application of the treaty to certain categories of agreements and concerted practises in the air transportation sector
Third	Council Regulation 2407/92	1 - Jan – 1993	♦ on licensing of air carriers
	Council Regulation 2408/92	1 - Jan – 1993	♦ on access for Community air carriers to intra-Community air routes
	Council Regulation 2409/92	25 - Aug - 1992	♦ on fares and rates for air services
	Council Regulation 2410/92	25 - Aug - 1992	♦ laying down the procedure for the application of the rules on competition to undertakings in the air transportation sector
	Council Regulation 2411/92	27 - Aug - 1992	♦ on the application of the Treaty to certain categories of agreements and concerted practises in the air transportation sector

Source: AEA (2002), Council Regulations, Decision, Directive

<sup>36</sup> A carrier that is member state owned or nationals member state owned, and with the central administration or principal place of business in the European Community.

<sup>37</sup> A fare to be approved has to be authorised by both governments.

PUBLIC POLICIES	FIRST PACKAGE	SECOND PACKAGE	(A) THIRD PACKAGE	(B)																														
<b>FARES</b>	<p><b>MEASURE: 1F</b></p> <table border="1"> <thead> <tr> <th>Fare Type</th> <th>% of ref. Fare</th> <th>Approval Mechanism</th> </tr> </thead> <tbody> <tr> <td>Discount</td> <td>66 - 90</td> <td>Automatically</td> </tr> <tr> <td>Deep Discount</td> <td>45 - 65</td> <td>Automatically</td> </tr> <tr> <td>All others</td> <td></td> <td>Double Approval</td> </tr> </tbody> </table>	Fare Type	% of ref. Fare	Approval Mechanism	Discount	66 - 90	Automatically	Deep Discount	45 - 65	Automatically	All others		Double Approval	<p><b>MEASURE: 2F</b></p> <table border="1"> <thead> <tr> <th>Fare Type</th> <th>% of ref. Fare</th> <th>Approval Mechanism</th> </tr> </thead> <tbody> <tr> <td>Fully Flexible</td> <td>66 - 90</td> <td>Double disapproval</td> </tr> <tr> <td>Discount</td> <td>45 - 65</td> <td>Automatically</td> </tr> <tr> <td>Deep Discount</td> <td>45 - 65</td> <td>Automatically</td> </tr> <tr> <td>Normal Economy</td> <td>45 - 65</td> <td>Automatically</td> </tr> <tr> <td>All others</td> <td></td> <td>Double Approval</td> </tr> </tbody> </table>	Fare Type	% of ref. Fare	Approval Mechanism	Fully Flexible	66 - 90	Double disapproval	Discount	45 - 65	Automatically	Deep Discount	45 - 65	Automatically	Normal Economy	45 - 65	Automatically	All others		Double Approval	<p><b>MEASURE: 3F</b></p> <p>Provisions made for the States and/or Commission to intervene against:</p> <ul style="list-style-type: none"> <li>♦ excessive basic fares, in relation to long term fully allocated costs;</li> <li>♦ sustained downward development of fares.</li> </ul>	
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<b>MARKET ACCESS</b>	<p><b>MEASURE: 1D</b></p> <p>Multiple designation by a State allowed if:</p> <ul style="list-style-type: none"> <li>♦ 250000 passengers - 1<sup>st</sup> year;</li> <li>♦ 200000 passengers - 2<sup>nd</sup> year;</li> <li>♦ 180000 passengers - 3<sup>rd</sup> year.</li> </ul>	<p><b>MEASURE: 2D</b></p> <p>Multiple designation by a State allowed if:</p> <ul style="list-style-type: none"> <li>♦ 140000 passengers - 1<sup>st</sup> year;</li> <li>♦ 100000 passengers - 2<sup>nd</sup> year.</li> </ul>	<p><b>MEASURE: 3D</b></p> <p>No Longer Applicable</p>																															
	<p><b>MEASURE: 1C</b></p> <p>Capacity shares between Sates:</p> <ul style="list-style-type: none"> <li>♦ 45 / 55% - from January 1998;</li> <li>♦ 40 / 60% - from October 1989.</li> </ul>	<p><b>MEASURE: 2C</b></p> <p>Capacity shares of a State of up to 60%; Capacity can be increased by 7.5% point per year.</p>	<p><b>MEASURE: 3C</b></p> <p>Unrestricted</p>																															
	<p><b>MEASURE: 1RA</b></p> <p>3<sup>rd</sup> and 4<sup>th</sup> rights permitted - routes between regional and major airports; 5<sup>th</sup> rights allowed up to 30% of capacity; Additional 5<sup>th</sup> rights for Irish and Portuguese; Some exemptions.</p>	<p><b>MEASURE: 2RA</b></p> <p>3<sup>rd</sup> and 4<sup>th</sup> rights permitted - routes between regional and major airports; 5<sup>th</sup> rights allowed up to 30% of capacity; Additional 5<sup>th</sup> rights for Irish and Portuguese; Some exemptions.</p>	<p><b>MEASURE: 3RA</b></p> <p>Full access to International and Domestic within the EU (some exemption); Restricted cabotage allowed for up 50% of capacity; Reformed Public Service Obligations and some protection for new thin regional routes; More scope for traffic distribution rules and restrictions related to congestion and environment protection.</p>	<p><b>MEASURE: 4RA</b></p> <p>Unrestricted cabotage.</p>																														
<b>COMPETITION RULES</b>	<p><b>MEASURE: 1CR</b></p> <p>Application of the competition rules to International Air Transport.</p> <p><b>MEASURE: 1CRE</b></p> <p>Ground exemption regarding (see Table 3.6)</p>	<p><b>MEASURE: 2CRE</b></p> <p>Ground exemption regarding (see Table 3.6)</p>	<p><b>MEASURE: 2CR</b></p> <p>Application of the competition rules to Domestic Air Transport.</p> <p><b>MEASURE: 3CRE</b></p> <p>Ground exemption regarding (see Table 3.9)</p>																															
<b>OWNERSHIP</b>	<p>Not provided for in 1<sup>st</sup> Package.</p>	<p>Not provided for in 2<sup>nd</sup> Package.</p>	<p><b>MEASURE: O</b></p> <p>Concept of Community Ownership and control replaces national ownership and control; Requirement for financial fitness control; Small carriers subjected to looser regulatory requirements; Uniform conditions of Licensing Air carriers.</p>																															

Adapted from EC (1997)

Figure 3.6 - The Liberalisation Packages and the Measures considered

Table 3.4 – Fares on the First Package

Fare Type	Fare/Reference Fare	Approval Mechanism
Discount	66 % to 90 %	Automatically
Deep Discount	45 to 65 %	Automatically
All other	-	Double Approval

Source: Council Directive 87/601/EEC and AEA (2002)

Furthermore, this Package recommended that the approval or disapproval of fares should be based on economic reasons and not on the state of registration of the company. Therefore, the fact of a proposed air fare be lower than others was no longer reason for withdrawal; instead, approval should be related to the costs of the carrier (article 3 of Council Directive 87/601/EEC). Finally, automatic approval of fares was granted whenever a carrier matched the air fares already existent (n.º 4 of article 4 of Council Directive 87/601/EEC ).

Market Access rules were also reviewed<sup>38</sup>. The rigid 50 per cent capacity share per route system was replaced by a more flexible one. From 1 January 1988 companies were allowed to adapt their capacity within a range from 45 to 55 per cent of share, these limits were expanded on 1 October 1989 to a range between 40 to 60 per cent of share (measure: 1C - article 3 of Council Directive 87/602/EEC).

Multiple designation on a country to country basis was introduced: third and fourth traffics rights were granted to all companies operating between a major and a regional airport<sup>39</sup> of other member state, and fifth traffic right was allowed up to 30 per cent of capacity and as an extension (or as a preliminary) of a service from (or to) the state of registration<sup>40</sup> (measure: 1RA). Multiple designation on a city to city basis was also granted but subjected to minimum passenger traffic (measure: 1D - Table 3.5).

Although these improvements towards Liberalisation, important issues were left untouched by this package (measure: 1CRE). First, only the international operations within Europe were covered, the national and to third countries services have remained under control of member states (n.º 2 of article 1 of Council Regulation n.º 3975/87). Second, licensing of air carriers remained subject to each member country rules. Third, certain categories of agreements, decisions, and concerted practises between

<sup>38</sup> Exemptions for Greek islands, autonomous region of the Azores and Porto, and suspension for the Gibraltar Airport (article 1 of Council Directives 86/216/EEC and 87/602/EEC).

<sup>39</sup> Some exemptions, see n.º 2 of article 2 of Council Directive 87/602/EEC.

<sup>40</sup> Additional rights for Ireland and Portugal.

stakeholders were also left untouched, Table 3.6 presents the block of exemptions granted by the First Package.

Table 3.5 – Minimum annual passenger traffic to grant multiple designation

Date <sup>(a)</sup>	Minimum passenger traffic
1 year	250 000
2 years	200 000
3 years	180 000

<sup>(a)</sup> after Council Directive 87/602/EEC has been adopted by member states.

Source: Council Directive 87/602/EEC

This First Package has introduced only minor changes with limited scope into the European air transportation market, leaving the rigid bilateral framework almost intact. Nevertheless, by having introduced, for the first time, the competition spirit envisaged in the Treaty of Rome, this Package has represented a major breakthrough for European civil aviation business.

Table 3.6 – Allowed agreements

♦ Joint planning and coordination of the capacity to be provided on scheduled air services
♦ Sharing of revenue from scheduled air services
♦ Consultations for common preparation of proposals on tariffs, fares and conditions for the carriage of passengers and baggage on scheduled services
♦ Slot allocation at airports and airport scheduling
♦ Common purchase, development and operation of computer reservation systems relating to timetabling, reservations and ticketing by air transportation undertakings
♦ Technical and operational ground handling at airports
♦ Handling of passengers, mail, freight and baggage at airports
♦ Services for the provision of in-flight catering

Adapted from Council Regulation 3976/87

### 3.2.2 THE SECOND PACKAGE

Two years after the First Package a new one entered into force. The main goal of the Second Package was to further relax the existing regulatory framework and to prepare industry to full Liberalisation.

Although the First Package had introduced some freedom into market, member states have continued to have excessive control over Fares. The restrict number of automatically approved fares and the double approval mechanism of fares has prevented carriers to introduce different fares into market (article 4 of Council Regulation

2342/90). With the Second Package, the number of fares and approval range was revised and enlarged, and a double disapproval mechanism<sup>41</sup> was introduced (measure: 2F - Table 3.7).

Table 3.7 – Fares on the Second Package

Fare Type	Fare/Reference Fare	Approval Mechanism
Fully Flexible	106 % or plus	double disapproval
Normal Economy	95 to 105 %	Automatically
Discount Zone	80 to 94 %	Automatically
Deep Discount	30 to 79 %	Automatically
All other	-	double approval

Source: Council Regulation 2342/90 and AEA (2002)

In respect of Market Access, this Package relaxed the existing limits of the shares of capacity, envisaging an unrestricted market in 1993. Carriers could increase capacity for any season by 7.5 per cent when compared with the previous corresponding season, but in any event carriers could claim a capacity share of 60 percent (measure: 2C)

Multiple designation limits (on a city to city basis) were also reviewed and new ones were introduced (measure: 2D - Table 3.8). Third and fourth freedoms between all airports and to any air licensed carrier in a member state were granted<sup>42</sup>; and fifth freedom was allowed up to 50 per cent of capacity and as extension (or as a preliminary) of a service from (or to) the state of registration (measure: 2RA) articles 4, 5 and 8 of Council Regulation 2343/90). Finally, the obligation of public ownership was abolished, but companies have had to remain under national control.

Table 3.8 – Multiple designation acceptance

Date	Limits
1 January 1990	route with more than 140000 passengers carried; or route with more than 800 return flights per annum.
1 January 1992	route with more than 100000 passengers carried; or route with more than 600 return flights per annum.

Source: Council Regulation 2343/90 and AEA (2002)

In order to avoid withdrawal from thinner routes and to ensure environmental protection, the public service obligations and safety, and environmental issues were reviewed (articles 5 and 10 of Council Regulation 2343/90), giving governments the

<sup>41</sup> For a fare to not be approved both countries have to disagree.

<sup>42</sup> Exemptions for Greek islands, autonomous region of the Azores and Porto Airport, and suspension for the Gibraltar Airport (n.º 3, 4 and 5 of article 1 of Council Regulation n.º 2343/90)

power to decide and limit the number of carriers and type of services to be provided on those routes.

Albeit these developments towards a free market, some distortions still remained, as the block of exemption granted in the First Package (Table 3.6) remained unchanged (measure: 2CRE - Council regulation 2344/90) and rules to market access remained under member states decision (article 3 of Council Regulation 2343/90).

The Second Package has revealed to be a simply extension of the First Package since, basically, it relaxed the previously adopted measures and did not introduce new ones. The public service obligation and safety, and environmental protection were revised giving more power to governments to control their markets, which could be used to protect the national carriers to the detriment of the foreign companies. Nevertheless, the existing framework was further more relaxed with companies being able to enjoy from a less restrictive environment.

### **3.2.3 THE THIRD PACKAGE**

The Third and last Package removed most of the still existing barriers and introduced new brand features, establishing a common regulatory frame throughout Europe.

An important development was the extension of the Liberalisation rules into the member states' domestic market (measure: 2CR - article 1 of Council Regulation n.º 2410/92) - all markets within Europe have become under the same legal framework. Until then, the Liberalisation process was solely applied to the international services within Europe.

Another two important actions were, first, the introduction of the notion of European Ownership by which any European company could buy any other European company, and, second, the establishment of a framework that defines the necessary requirements and conditions for companies to be allowed to access the market<sup>43</sup> (measure: O). The creation of this framework, common throughout Europe, laid down the foundation for a truly single European market.

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<sup>43</sup> In other words, market access became equal to all European companies and dependent upon the possession of a valid Air Operator's Certificate, which specifies the company's qualifications (article 9 of Council Regulation n.º 2407/92).



Concerning Fares, scheduled and non-scheduled carriers became free to set fares. Member states and European Commission could only intervene to protect both users by withdrawing excessive high basic fare in relation to the long term costs, and companies against predatory behaviours or excessive competition by stopping further fare decreases whenever significant downward deviations from common seasonal pricing occurred (measure: 3F - articles 1, 5 and 6 of Council Regulation n.º 2409/92).

In respect to Market Access, scheduled and non-scheduled carriers became free to operate in any international and domestic route within Europe<sup>44</sup>. Although, until April 1997, cabotage was restricted up to 50 per cent of the capacity and as an extension (or as a preliminary) of a service from (or to) the state of registration, and member states could regulate access to routes (measures: 3RA and 4RA - articles 1, 3, 4, 6, 8 and 9 of Council Regulation n.º 2408/92). Moreover, capacity restrictions ended (measure: 3C) and multiple designation was no longer applicable (measure: 3D).

The Third Package has in fact eliminated most of the existing barriers, establishing simultaneously a common regulatory frame. However, some barriers and market distortions were left untouched (measure: 3CRE), while others were created. First, the relationships with non-European countries were not affected. Second, some restrictions concerning Market Access remained: the public service was reformed and revised, some protection was defined for the regional connections and new environmental restrictions and traffic distribution rules were introduced, with most of the power of decision about these issues remaining on member states' hands. Third, the block of exemptions were revised but not eliminated (Table 3.9).

Table 3.9 – Permitted agreements

♦ Joint planning and coordination of airline schedules.
♦ Consultation on tariffs.
♦ Joint operations on new less busy routes.
♦ Slot allocation at airports and airport scheduling.
♦ Common computer reservation systems.

Source: Council Regulation 2411/92 and AEA (2002)

This final legislative package has introduced a free and uniform environment within European market, with most of the former governmental market distortions effectively removed. After this Package has entered into force, all European Community carriers

<sup>44</sup> Exemptions for Greek islands and autonomous region of the Azores, and suspension for the Gibraltar Airport (n.º 3 and 4 of article 1 of Council Regulation n.º 2408/92)

have had the absolute right to provide air services stand-alone to, from or within another member state's territory. However, not all barriers were removed and at the end some still persisted, which might have reduced the performance of the Liberalisation process.

### **3.2.4 CONCLUSIONS**

The European Liberalisation process has deeply changed the rules of the civil aviation market within Europe. From a situation in which the market was ruled by an amalgam of domestic markets frameworks and a set of piece-meal bilateral agreements, the Liberalisation process has gradually establish a common legal framework across Europe (regulating both national and international markets) creating the basis for the development of a commercially driven market.

The First Package introduced rather limited changes on the market framework and only at international level within Europe. The changes were introduced at Fare, Market Access and Competition Rules levels, but, due to their limitations the legal framework has remained, in practice, the same. However, by introducing the competition spirit within European market, this package represented a major breakthrough for the European air transportation market.

The Second Package did not introduced new freedoms, instead it further relaxed those introduced by the previous one. With the introducing of this Package, companies could have enjoyed from a freer environment.

The last Package introduced the most significant changes, it ended with most of the existing restrictions and extended into domestic market the new European rules, establishing the foundations for the creation of a commercially driven market. Furthermore, the notion of European Ownership was created allowing companies to buy other European companies without governmental barriers. More important than the economic benefits, the European Ownership was a major contribution for the construction of a closer and truly European air transportation market.

However, the Liberalisation process presented some drawbacks undermining, at some extend, its potential and scope. First, the block of exemptions granted that by opening the doors to companies to collude reduced the competitiveness of the market - this decision went directly against the initial thought of a free and competitive market. Most probably, this has happened due to member countries' lobbies that seeing their

powers being removed and wishing to protect their flag companies, had seen on alliances a very good way to flag carriers keep their dominant position. Second, member states remained with the power to decide about the public service routes and the traffic limits in order to protect the environment, which they might use as a source of market manipulation, preventing companies to enter freely into market. Third, the Liberalisation package did not change the relationship with non-European countries, which might have hindered some companies from acquire others. Since most bilateral agreements with non-European countries required national Ownership, if a European company was acquired by other, it would loose its nationality and consequently the right to fly to the non-European country.

Nonetheless, the emergent market was much more free and egalitarian than the previous one with companies enjoying from freedoms and rights never existent before.

### 3.3 MARKET STRUCTURE

In this research, the Market Structure that defines the European civil aviation market is a function between the type of the passengers and the type of routes (Figure 3.7).

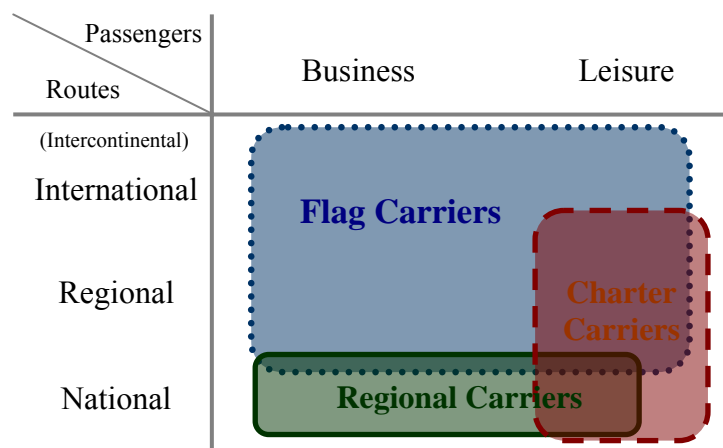
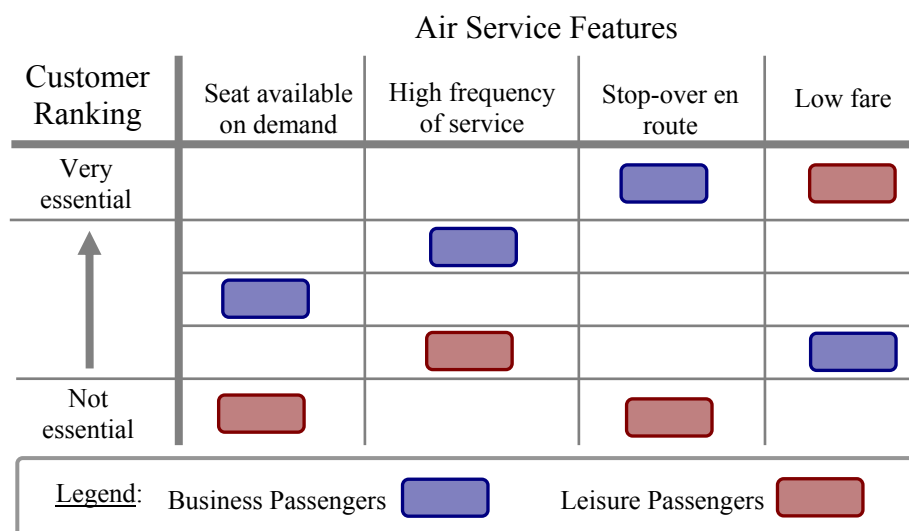


Figure 3.7 - European Market Structure prior to Liberalisation

Concerning the passengers (Figure 3.8), two categories have been chosen: business and leisure. The business passengers are characterized by rather high non-elastic price behaviour and a high willingness for travel; furthermore, these passengers fly usually in the upper level classes - more expensive but with better conditions and more flexibility. The leisure passengers are quite the opposite, with very high elastic price behaviour

price behaviour - in fact, in most cases, they fly only when fares drop below a certain level. Consequently, they usually choose the lower level classes, which are cheaper but rather restrictive and less flexible<sup>45</sup>.



Source: Doganis (2002)

Figure 3.8 - Passenger's Behaviour

As regards the routes, three types have been categorized according to their origin and destination points: international (and intercontinental), regional and national. The international (and intercontinental) routes refer to those starting within Europe and ending outside it. These routes, in particular the intercontinental ones, tended to be highly profitable. A route is regional when the ending points correspond to two different European member states. Finally, when a route has its ending points in a same member state, it is called national.

The position of the stakeholders within this Market Structure is presented in Figure 3.7. The flag carriers were responsible for the international and regional markets and the most important national routes. Due to the bilateral agreements' obligations, most of these carriers were state-owned<sup>46</sup> and the only ones allowed operating outside the country, and, therefore, all passengers had to fly with them. As a consequence, they had a wide spectrum of passengers ranging from business to leisure ones. The regional carriers were in charge of the national connections between the minor airports and the

<sup>45</sup> See Doganis (2002) for further details.

<sup>46</sup> In Europe, the major exception was British Airways, which was fully privatised in mid-1980s.

flag carriers' main airports, and whenever possible<sup>47</sup>, they operated on some non-national routes. Both these two stakeholders were scheduled operators.

The remaining stakeholders, operating on a non-scheduled basis<sup>48</sup>, are the charter companies. These companies were in most cases closely linked to a tour operator, and only responsible for the air transportation<sup>49</sup>. Therefore, their passengers were mainly tourists - belonging to the leisure type. They had a wide range of destinations, and in Europe they were the main companies in terms of transportation of tourist passengers from the North to the South - national and regional routes - and outside Europe, also transporting passengers to tourism destinations (for example, Northern Africa) - international routes.

The changes in the legal framework introduced by the Liberalisation process have naturally led to modifications of the European Market Structure. Following the Structure Conduct Performance paradigm, Table 3.10 summarizes the evolution of the European Market Structure during the Liberalisation process, including also the relevant measures adopted in each Package.

### 3.3.1 NUMBER OF SELLERS AND BUYERS

In order to simplify the analysis, two attributes have been considered: Number of Sellers and Number of Buyers.

During Phase 1, all features directly linked to the Number of Sellers variable like entries (in market or on routes) and exits, route assignments, fares, licensing of air carriers and competition rules were in the rulers' hands. At international level, routes between two countries were assigned on an *ad hoc* basis, and whenever necessary both countries set up a bilateral agreement - these bilateral agreements were usually quite restrictive. At national level, the scenario was identical, but the decisions were taken by the national government or regulatory board<sup>50</sup>. Therefore, in this phase, few companies were allowed to operate within the market.

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<sup>47</sup> Only the liberal bilateral agreements allowed more than one from each country (see Table 2.4 for some examples).

<sup>48</sup> Some had scheduled traffic, but they were rare exceptions.

<sup>49</sup> The tour operator was in charge of all other issues concerning the selling of tickets, for instance: advertising, selling, complaints, etc.

<sup>50</sup> See Chapter 1.1 for more details.

Table 3.10 - Market Structure and measures adopted in each phase and Package

PHASES and PACKAGES	NUMBER OF SELLERS	NUMBER OF BUYERS	INTEGRATION		BARRIERS TO ENTRY
			VERTICAL	HORIZONTAL	
Phase 1	few	variable	high	low	very high
1 <sup>st</sup> Package	1D 1RA 1CR 1CRE	1F 1C 1CRE	1CR 1CRE	none	1F 1D 1C 1RA 1C 1CRE
Phase 2	few / some	variable	high / medium	medium / low	high
2 <sup>nd</sup> Package	2D 2RA 2CRE	2F 2C 2CRE	2CRE	none	2F 2D 2C 2RA 2CRE
Phase 3	some	variable	high / medium	medium / low	high
3 <sup>rd</sup> Package (A)	3D 3RA 2CR 3CRE O	3F 3CRE	2CR 3CRE	O	3F 3D 3C 3RA 2C 3CRE O
Phase 4	many	all	low	high	medium
3 <sup>rd</sup> Package (B)	4RA	none	none	none	4RA
Phase 5	many	all	low	high	medium

Legend: Market Structure characterization, Measures adopted.

The Liberalisation process has brought about a new stimulus to the civil aviation market. In the first place, it should be mentioned the application of articles 85 and 86 of the Treaty of Rome to air transportation services (all CR measures). For the first time ever, the civil aviation market was controlled by the European competition rules, and the European Commission was finally able to apply the Rome Treaty's spirit to aviation. However, by allowing some types of agreements (all CRE measures), legislation has left an open door for companies to continue to make tacit agreements. In Phase 2, regulation was applied only to the international air transportation between European Community airports (measure: 1CR), but in Phase 4 it was broadened to all air transportation within the European Commission (measure: 2CR).

A second and very important feature has been the elimination of the designation system, which was preventing other carriers beyond those previously chosen to enter the market (all D measures). After 1988 - Phase 2 - a rather restrictive multiple designation system was introduced (measure: 1D). Nevertheless, countries could no longer prevent other companies from accessing the market based solely on their nationality or on their low fares. This initial system became less rigid in Phase 3 (measure: 2D), which

introduced more flexible limits, and was eliminated in Phase 4 (measure: 3D) after the Third Package (A) came into force.

A third issue is related to access to routes (all RA measures). In Phase 2, third and fourth air freedoms between some airports and fifth air freedom were permitted to some degree (measure: 1RA), and these permissions were further reinforced in Phase 3 (measure: 2RA). Phase 4 put an end to all restraints except one (measure: 3RA), but even the remaining restriction was only partial, and was finally removed in Phase 5 (measure: 4RA).

A decisive step was taken in Phase 4 (measure: O) with the establishment of uniform conditions across the European Union as regards the licensing of air carriers. This feature eliminated potential differences in the conditions of licensing for air companies between countries as well as possible discriminations against foreign carriers. Countries could not continue to prevent carriers from starting their businesses by setting up impossible or impracticable start-up conditions.

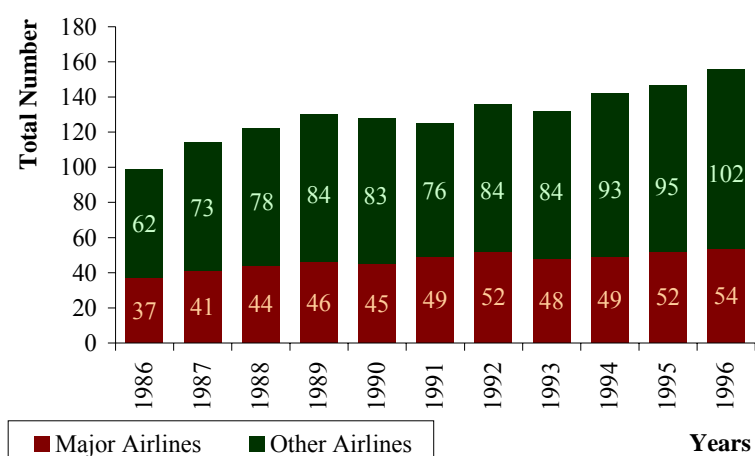
In terms of Number of Sellers, the Liberalisation process was able to change the market from a deeply regulated into a free and uniform one. Slowly, incumbents were able to adapt themselves to a non-protected environment and had the necessary time to prepare for it - it is clear that the idea was to minimize potential damages caused to the market with these changes. During Phases 2 and 3, the market was gradually opened to newcomers, and governments and regulatory boards had their influence over the market reduced, but the most important Package was the Third Package (A), putting an end to the most relevant restriction. The Third Package (B) did not play a relevant role in the Liberalisation process.

Summarizing (Table 3.10), from Phase 1 to 3, there was a continuous trend towards an open market, and gradually new companies were allowed to enter the routes and the governments' control was reduced. The Third Package was a turning point in the Liberalisation process due to the number and scope of the changes that were introduced. From Phase 4 onwards, all governmental control was, in theory, cancelled, annulling all restrictions to the number of companies allowed, but, however, reality showed that this was not entirely true, as some restrictions and limitations were still present. These

obstacles arose from the presence of Barriers to Entry<sup>51</sup> that the legislation was not able to eliminate.

There are some visible changes in Market Structure just after the First Package came into force. Enjoying the new freedoms, some companies have either entered the busiest intra-European scheduled routes or increased their capacity and changed fares. Air Europe or Ryanair are two examples of new companies that were allowed to enter the market (CAA, 1993).

Figure 3.9 presents the evolution of the number of air carriers operating within the European Community. Although there is a small growth in the number of stakeholders, no major entries have occurred with Liberalisation and there is a drop after the introduction of the Second Package. The total average growth between 1989 and 1993 was of 0.4% (the average growth in the major and other airlines was of 1.1% and 0.0% respectively).



Source: CEC (1996)

Figure 3.9 - Total number of Community air carriers operating in scheduled airlines

The small number of new carriers indicates that the Number of Sellers within the European Union has not undergone significant changes, which in turn suggests that, in principle, overall competition has slightly (or not) increased with Liberalisation. However, and since competition in the air transportation industry occurs at route level

<sup>51</sup> See Chapter 3.3.3 for further details.



and not at market level<sup>52</sup>, these analyses are not very effective; instead, it is preferable to analyse the competition at route level.

The weekly average frequencies offered on all intra-European routes increased from 13.9 departures in 1989 to 15.5 in 1992, decreasing thereafter to 15.0 in 1994 and 14.5 in 1995. The increase in the frequencies, in the first period, indicates an increase in competition, and so does the subsequent decrease, since this has been the result of the addition of new non-stop regional services with below-average frequencies (EC, 1997).

Table 3.11<sup>53</sup> presents from Phase 3 to 5 the number of routes with one, two or more competitors on both international and national domestic scheduled city-pair routes, and Figure 3.10 presents the evolution of the number of carriers per route from Phase 2 until Phase 4.

Table 3.11 - Number of regional and domestic scheduled city-pair routes

		Regional Scheduled City-Pair Routes			Domestic Scheduled City-Pair Routes		
		One or Two Competitors	Three or more competitors	TOTAL	One Competitor	Two or more competitors	TOTAL
Routes	December 1992	478	22	500	673	73	746
		(105)	(14)	(119)	90%	10%	100%
	December 1997	96%	4%	100%			
		(88%)	(12%)	(100%)			
Flights	December 1992	529	37	566	675	154	829
		(88)	(31)	(119)	81%	19%	100%
	December 1997	93%	7%	100%			
		(74%)	(26%)	(100%)			
Flights	December 1992	38 686	8 406	47 092	51 885	18 557	70 442
		(15 576)	(6 962)	(22 538)	74%	26%	100%
	December 1997	82%	18%	100%			
		(69%)	(31%)	(100%)			
Flights	December 1992	50 118	15 149	65 267	47 874	44 300	92 174
		(16 432)	(14 677)	(31 109)	52%	48%	100%
	December 1997	77%	23%	100%			
		(53%)	(47%)	(100%)			

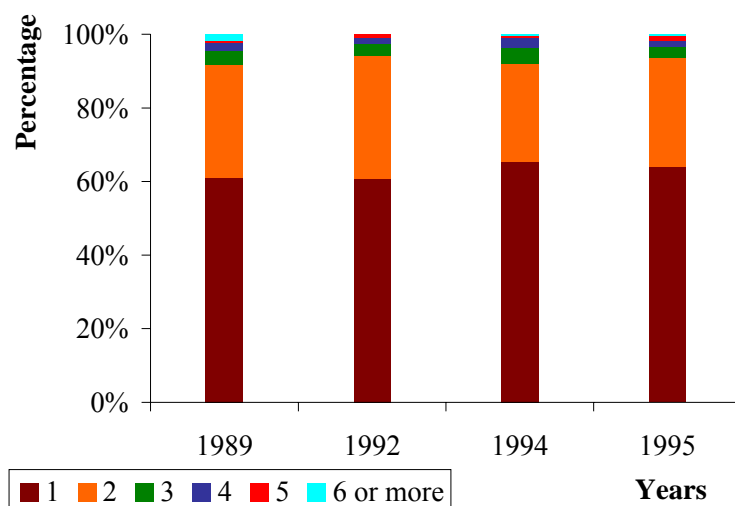
Note: Values in brackets refer to the busiest routes.

Source: CAA (1998)

<sup>52</sup> Because, on the one hand, companies can enter the market creating their own routes and thus not competing against other carriers; and on the other hand, the existing companies, enjoying the new freedoms, might have restructured their networks increasing the overall level of competition.

<sup>53</sup> It refers to a sample of European routes, which were chosen according to their relevance and geographic location. For further details, see CAA (1998).

From the analysis of the data, it is clear that the structure of the European market has changed, although most routes have continued to operate on a monopoly or duopoly basis (Table 3.11 and Figure 3.10).



Note: The results refer to the hundred most busy routes within Europe  
Adapted from EC (1997)

Figure 3.10 - Number of carriers per route

At regional level, entries in all routes are visible, especially regarding the busiest routes with three or more companies. The share of these routes increased from 12 per cent in 1992 to 26 per cent in 1997; nonetheless, they have continued to represent a minority of the total routes (Table 3.11). In the national markets, although the number of monopoly routes has not greatly decreased (Table 3.11), many new carriers have entered. The most important entries have occurred on the routes with more than one carrier, which have increased from 10 per cent in 1992 to 19 per cent in 1997. These data reveal an overall increase in the competition level at both national and regional levels, particularly on the most competitive and busiest routes; nonetheless, the majority of the routes continued to be operated in a monopoly or duopoly basis, on which competition is inexistent or very low.

Janic (1997) studied the concentration levels and market shares, from 1989 to 1993, on some of the most important European routes. He found, in 1989, a value of 0,524 for the HHI index<sup>54</sup> concentration, and 32.2% for the market share on a route; in 1991, these values were of 0,500 and 30.2% respectively; and in 1993 of 0,537 and 32,1%

<sup>54</sup> See footnote 19 for more details.

respectively. The small variation of these results shows that the European market has witnessed only small changes. However, the increase in the HHI index reveals an increase in concentration and thus a reduction in the competition, which goes against the data presented in Table 3.11.

There were few fifth freedom services, and generally they were used by the smaller national carriers, particularly those from member states geographically positioned on the periphery of Europe - in 1995, Finnair, TAP - Air Portugal and Olympic provided 40% of these services but only accounted for only 10% of total scheduled output in Europe. In 1993, in Europe, there were only 14 fifth freedom services, and in 1996 this value increased to 30 (CAA, 1998). Fifth freedom services demand high operational constraints<sup>55</sup>, are more expensive, and customers do not appreciate the multiple stopovers, so scheduled companies tend to avoid them.

The seventh air freedom has not been widely used as well. The most enthusiastic companies were the former charter carriers that used this freedom to transport leisure travellers - an example of a scheduled service occurred with Air Viva (an Iberia subsidiary) that launched a service between Paris and Lisbon, in 1993.

The eighth freedom (cabotage) services were null in 1991, 12 in 1993 and 20 in 1996 (CEC, 1996), which also reveals that companies were rather indifferent to this kind of service.

In summary, during the Liberalisation period the Number of Sellers has remained practically steady, as few new carriers have entered into market. Furthermore, the evolution of the number of companies within the market (Figure 3.9) indicates that the Liberalisation period might have played a secondary role in the development of the Number of Sellers. The new freedoms were expected to motivate an increase in the number of carriers, however this did not occur and there was even a decrease during Phase 3<sup>56</sup>.

Therefore, there are probably other reasons for this lack of new carriers, weakening the success of the Liberalisation process. Amongst these, the world economy's performance and the companies' Product Strategy ought to have played the most

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<sup>55</sup> For example, it is necessary to coordinate slots in the various airports.

<sup>56</sup> Even considering that the minimum necessary conditions to newcomers were implemented in Phase 4, no major changes are visible.

relevant role. As regards the former, there is a clear correspondence between the world economy's performance (Figure 3.4) and the evolution of the number of carriers; in years of economic growth (until 1989 and after 1992) an increase in the number of companies is visible, while in years of recession (from 1990 until 1992) there is a decrease in the number of airlines. As to the latter, the incumbents have protected the most interesting routes and markets leaving the less profitable routes (or markets) for the newcomers, which might have reduced the scope for new entries<sup>57</sup>.

With regard to competition, the small change in the number of carriers suggests that it might not have increased (or just slightly increased) with Liberalisation. This is supported by the analyses at route level that show that the majority of the European routes have continued to be operated on a monopoly or duopoly basis - on these routes, actual competition is inexistent or insignificant. However, an overall increase in competition might have happened, especially on the busiest routes, since the number of routes with three or more carriers on the regional routes and the number of routes with two or more competitors in the case of national routes have increased considerably.

In terms of Number of Buyers, the Liberalisation process was highly influential. During Phase 1, regulation heavily manipulated the number of passengers that each carrier could transport, forcing them to follow a previously determined capacity, in such a way that they could not adapt their capacity to the real market's needs; usually, regulation enforced an equal share of seats among all carriers operating on a route. At the international and regional level, normally only two companies could operate, sharing 50 per cent of the market; at national level, usually only one company could operate, dominating the market. Therefore, the number of buyers was already defined at the beginning and companies were passive players with no influence on their own operations. Moreover, companies were also powerless to set fares, as they were commonly subject to governmental approval - this happened in both international and national markets. By imposing a single fare or few fares, companies were unable to adjust themselves to the market needs and/or adopt a commercial business attitude. Therefore, during Phase 1, the Number of Buyers each company could attain and transport was very high controlled and depended on the number of existing sellers for each route.

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<sup>57</sup> See Chapter 3.4.2 for a detailed discussion.

The various Liberalisation Packages have made this framework more open. An important feature of the Liberalisation process is related to the change of the rigid capacity system (all C measures). On Phase 2, companies were able to adjust their capacity according to market needs, albeit in a rather limited range (measure: 1C) - not significantly reducing the existing market restrictions. The second package - Phase 3, made this initial range a little more flexible (measure: 2C), giving more freedom to the companies. Even so, the range that the companies could use to set their capacity was rather limited and did not allow for great adjustments. Finally, the Third Package (A) ended with all capacity restraints (measure: 3C), granting companies the power to adjust their capacity according to market needs. Lastly, the Third Package (B) did not bring anything new, as the Third Package (A) had already removed all barriers.

Liberalisation has also changed the fares approval system, introducing a more liberal and free scheme (all F measures). Phase 2 initiated an innovative automatic approval mechanism, albeit only for few types of fares (measure: 1F). Phase 3, besides improving and increasing the number and type of automatically approved fares, introduced the double disapproval mechanism (measure: 2F), which was a major step towards the ending of the governmental discrimination and protectionism, as now both governments have to deny the entry of a company while before one government was enough. All these restrictions were eliminated with the Third Package (A) (measure: 3F), from which countries could only intervene against market failures. Once again, the Third Package (B) had no influence.

The Liberalisation process has freed companies from the straitjacket of legislation, enabling them to reach the majority of buyers within the market. However, due to the presence of Barriers to Entry<sup>58</sup>, which prevent companies to participate in some markets, free and full access to all market buyers has not been possible.

In summary (see Table 3.10), from Phase 1 to 3 there was a slow, steady reduction of the existing restrictions. However, in practical terms, no great changes were introduced and governments continued having a decisive control over the market. The most important changes were brought about once again by the Third Package (A), which ended most of the restrictions and governments' powers to intervene in the market. The Third Package (B) had no influence over this attribute.

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<sup>58</sup> See below the detailed discussion about Barriers to Entry (see Chapter 3.3.3 for further details).

### 3.3.2 INTEGRATION

The European civil air transportation market has moved from a closed and protected environment, in which companies were not threatened in any way whatsoever, into an open and competitive environment, in which carriers, in order to survive have, had to be competitive. The drastic changes in the conditions have forced stakeholders to adapt accordingly, and there were also important modifications at the Integration level.

As written in Chapter 2, during Phase 1, the market was heavily regulated and companies had little space and power to run their business autonomously. They operated within a “protective bubble”, with no incentives to adopt a commercial business operation. Over the years, this environment has produced a very static and orthodox market, with companies usually offering a narrow range of products and/or services. In this Phase, commonly all air related companies were state-owned, as for instance catering, handling, maintenance, etc, and usually managed under the same administration board with the same brand - invariably the flag carrier’s one. Hence, in this phase the vertical Integration level was very high.

On the other hand, horizontal Integration tended to be low and simple because governments commonly did not approve these kinds of action. At international level, air companies were not allowed to come into foreign markets or buy foreign companies (even though agreements were stimulated), and at national level takeovers were usually forbidden; furthermore, companies, not suffering from any kind of threat, did not need to integrate other companies and/or markets.

After the Liberalisation, most of the former restrictions have been removed and important changes have happened. With reference to vertical Integration, many of the existing bonds<sup>59</sup> between companies and other stakeholders became illegal under the European competition laws, since they were important sources of market power and thus, sources of unfair competitive advantage. With the application of the European competition rules during Phases 2 and 3 to the international air transportation (measure: 1CR), and during Phase 4 onwards to the national air transportation (measure: 2CR), companies were forced to end these non-legal relationships, which has decreased the overall level of vertical Integration. However, the level has not greatly decreased, since

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<sup>59</sup> For example: consultation of tariffs, privileged access to airports’ slot, ownership of ground handler companies (in many cases the only one operating on the airport).

the Liberalisation process has granted exemption to several agreements (all CRE measures) and, although the block of exemptions has become less effective throughout the various phases, companies could still be able to make tacit agreements.

Therefore, the market has moved, thanks to the Packages, from a situation of high level of vertical Integration in Phase 1 to a less relevant level in Phase 5. The results were probably not as impressive as the Commission had foreseen (due to the block of exemptions), but the level of vertical Integration was undoubtedly minor than before the Liberalisation.

The horizontal Integration level, on the other hand, has followed an opposite path, although truly changes have only occurred in Phase 4. Until then, all horizontal Integration issues were defined by each member state that had had a rather restrictive approach, preventing any horizontal Integration move. The Third Package (A) established the notion of European ownership (measure: O), with all European carriers authorized to integrate other European carriers (as long as it didn't go against the competition rules).

As Table 3.12 shows, there have been some acquisitions, interestingly all of them between major carriers and regional carriers. No mergers between major carriers have happened on Phase 4 or in the first years of Phase 5. There are various advantages in buying regional carriers<sup>60</sup>. If they are from other member state the advantages are: to penetrate into the regional carriers' markets, to acquire a reliable demand for the return flights and to begin an indirect competition with the other flags on their domestic markets. On the other hand, if they are national regional carriers, the benefits are: to secure feeder services and to prevent the appearance of other major carriers in its own market. In both situations, the ultimate goal is to acquire and increase the market power, in other words, to create Barriers to Entry<sup>61</sup>.

Most of the acquisitions have involved takeovers on other member states' carriers, which was only possible in Phase 4 after the establishment of the European Ownership. It is visible that major carriers have been waiting for permission to acquire foreign

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<sup>60</sup> The advantages are similar to those provided by Alliances (see Chapter 3.4.3), except for being more stable as they involve acquisition.

<sup>61</sup> See Chapter 3.3.3 for further details.

companies: for instance, British Airways, which had 49.9% of Deutsche BA before Phase 4, was keen to acquire all 100% afterwards.

Table 3.12 - Changes in flag carrier' stakes from 1990 to 1998

Company (buyer)	Company (bought)		Company	Company (bought)	
	Increased or New Stake	Years 1990 - 1993 - 1998		Increased or New Stake	Years 1990 - 1993 - 1998
Aer Lingus	Futura	25% - 25% - 85%		Air UK	15% - 15% - 100%
Austrian	Tyrolean Airways	0% - 0% - 85.7 %	KLM	Martinair	(-) - 35% - 100%
	Lauda	(-) - 26.5% - 36%		Braathens	0 % - 0% - 30%
British Airways	Brymon	(-) - 49.9% - 100%	Sabena	DAT	(-) - 79% - 90%
	Air Liberté	0% - 0% - 70%		City Bird	0 % - 0% - 11.2%
	Deutsche BA	0% - 49.9% - 65%	SAS	Air Botnia	0 % - 0% - 100%
				Wideroe's	0 % - 0% - 63.2%

Note: The symbol (-) means that that value is unknown

Source: CAA (1998), EC(1997)

In summary, both vertical and horizontal Integration levels have suffered important changes, even though following different directions. Concerning vertical Integration, the application of the European competition laws - First Package and Third Package (A) - has inevitably led to a reduction in its level, since some of the existing relationships were illegal and had to end. However, it has not decreased greatly, as blocks of exemptions have been granted to companies. Concerning horizontal Integration, the most important change came with the Third Package (A) and the establishment of the European ownership allowing companies to purchase others. Before this Package, the restrictive environment did not allow companies to integrate others and the horizontal Integration level was rather low, although some minor takeovers had occurred, probably due to the companies' anticipation of the coming opening. From Phase 4 onwards, there were various acquisitions, which have increased the horizontal Integration level. Those integration moves have essentially included different sized companies, which has clearly been a bigger companies' move to gain competitive advantage and to increase the Barriers to Entry.

### 3.3.3 BARRIERS TO ENTRY

The last Market Structure variable is Barriers to Entry. As described in Chapter 2.2, this variable represents all kinds of limitations preventing newcomers from freely entering the market.



Before 1988 - in Phase 1 - in Europe and other continents, most market activities relied on governmental decisions. In most cases, the major company was state-owned and was the only one allowed to operate on international and main national routes. Furthermore, the state company was safe from bankruptcy, due to governmental financing. Wherever there were regional companies operating (state or private owned), they were usually relegated to minor national routes or as flag carrier's feeders. In this context, the Barriers to Entry were very high and mainly exogenous (Table 3.10), as their source was governmental. Endogenous Barriers to Entry did not exist and were not necessary, since incumbents were already protected and had no need to create any further barriers.

The Liberalisation deeply changed the status quo. A very important action was the gradual application of competition rules of the Treaty of Rome to air transportation services (all CR measures): in the first stage - First Package - only to the international air transportation within Europe, and in a second stage - Third Package (A) - to all European air transportation. This change had two main consequences - on the one hand, it has clearly defined the position of the air transportation market under the European Regulations, and on the other hand it has greatly reduced the national members' powers over air transportation market.

The establishment of a common licensing of air carriers within Europe (measure: O) was another vital measure, since it established a common framework in which all carriers had the same opportunities and conditions to set up their own operations, putting an end to the previous structure, in which the market access was defined by each member state, which understandably protected their own companies.

Finally, a set of actions aiming at a gradual reduction of the member states' powers was introduced. In the first place, the abolishment of the rigid capacity system (all C measures) by which all companies were obliged to offer a similar capacity. Secondly, the elimination of the existing fare definition system (all F measures), by which all fares were governmentally defined. Thirdly, the end of the designation system (all D measures), which defined the carriers that were allowed to operate on routes. And, fourthly, the establishment of an unrestricted region in which all air freedom rights are granted to all European carriers (all RA measures).

In general, all these measures have contributed to a gradual reduction of the member states' powers and for the establishment of a fair and unrestricted market. Furthermore, all incumbents were granted a period of time destined to prepare the arrival of this new environment. Strictly speaking, the European Liberalisation has achieved a relevant success, as all measures were taken step by step, maintaining the market's stability.

Despite the success of these measures, various Barriers to Entry can be identified during and after the whole process. Some of them were already present before the Liberalisation and were not solved, while others have appeared afterwards.

Table 3.13 presents these exogenous and endogenous Barriers to Entry of the European civil aviation market considered most relevant during and after the Liberalisation period. The table also shows how these barriers have been affected (or not) by the Liberalisation process. The Barriers to Entry were considered to be affected when their intensity and effect has changed due to the legal changes introduced by the Liberalisation process.

Table 3.13 - Barriers to entry

exogenous		endogenous	
not affected by Liberalisation	affected by Liberalisation	not affected by Liberalisation	affected by Liberalisation
<ul style="list-style-type: none"> <li>◆ sunk costs</li> <li>◆ market experience</li> <li>◆ economies of scale, scope and density</li> </ul>	<ul style="list-style-type: none"> <li>◆ governmental interferences</li> </ul>	<ul style="list-style-type: none"> <li>◆ frequent flyer programs</li> <li>◆ computer reservation systems</li> <li>◆ excess capacity</li> <li>◆ slot allocation</li> <li>◆ airport congestion</li> </ul>	<ul style="list-style-type: none"> <li>◆ privileged access to resources</li> </ul>

From the Barriers to Entry that the Liberalisation process has effectively reduced or eliminated, *governmental interference* is the most important, since it was one of the main goals of the whole process (ending the governmental barriers and establishing a common and free market); other affected barriers include the *privileged access to resources*.

As regards the exogenous barriers arising from *governmental interferences*, the Liberalisation process was rather effective in ending them. However, despite the efforts made to define a framework in which governments could no longer interfere, there was no regulation capable of putting an end to the strong bonds that existed between governments and incumbents, as apparently time and constant supervision are the only

solutions for that problem. This has been visible during the Liberalisation process, as some governments were reluctant to give up their control and power, and for some years they have endeavoured to keep them. Some companies have reported difficulties in accessing routes<sup>62</sup> and/or airports, or taking advantage of the new freedoms - especially during Phases 2 and 3, when some of the regulatory powers were still in the governments' hands. Moreover, most airports and ground handlers were state-owned, which might have led to some discriminatory actions in favour of the national companies (for instance, by fixing prohibitive ground handling fees and thus preventing non-incumbents from entering them).

Apart from these (not always legal) actions, the three Packages left governments with a significant amount of power to legally limit the new access rights. By imposing public service obligations and measures to cope with airport congestion and environmental problems (all RA measures), governments were able to camouflage their helping the national flags.

Another important barrier is related to state funding, which was particularly significant during Phases 3 and 4<sup>63</sup>. Governments allocated, several times, large amounts of money to their flag carriers aiming to avoid their insolvency (Table 3.14). Other carriers, particularly privately-owned airlines or state-owned carriers that received no help from their respective governments have continued to struggle in order to survive. Furthermore, these funds could be used to finance expansions or acquisitions or to offer unjustifiably low fares rather than to tackle the causes of chronic unprofitability, originating serious distortions of competition. The Liberalisation failed in terms of public funding, and the Commission tried to solve this problem by announcing new guidelines in November 1994.

As regards endogenous Barriers to Entry, the Liberalisation process has reduced to some extent the strength of the *privilege access to resources* barrier, by applying the European competition rules to the air transportation market<sup>64</sup> (all CR measures), since

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<sup>62</sup> In 1993 the French government refused permission for Air Viva to operate between Paris and Madrid. See CAA (1998) for further details.

<sup>63</sup> This period coincided with a very unfavourable macro-economic situation, with most flag carriers suffering huge losses.

<sup>64</sup> There was an important connection between the flag company and the local ground handler, which in most cases belonged to the same owner, and thus tended to favour the carriers. Some times, they present prohibitive prices to newcomers, which in practical terms prevents them from entering the market. Furthermore, in Phase 2 and 3, air companies and ground handlers were able to set agreements (measures:

some of the existing relationships were not legal under the European competition rules. However, companies were allowed to make tacit agreements thanks to the block of exemptions (all CRE measures).

Table 3.14 - State Aid

Member State	Airline	Period	Amount in national currency [millions]	Amount in Euros <sup>(a)</sup> [millions]
Belgium	Sabena	1991 - 95	65 400 BEF	1 600
Spain	Iberia	1991	120 000 ESP	900
Ireland	Aer Lingus	1993	175 IEP	200
France	Air France	1994 - 96	20 000 FRF	3 000
Portugal	TAP - Air Portugal	1994 - 97	180 000 PTE	900
Greece	Olympic	1994 - 97	545 000 GRD	1 900
Italy	Alitalia	1997	2750 000 ITL	1 400

<sup>(a)</sup> Converted at the annual average rate for the starting year

Source: CAA (1998), EC (1997)

With regard to the Barriers to Entry the Liberalisation process has not changed, there are exogenous barriers: *sunk costs*, *market experience* and *economies of scale, scope and density*, and endogenous barriers: *frequent flyer program*, *computer reservation system*, *excess capacity*, *slot allocation* and *airport congestion*.

As these barriers were not changed, it is likely that their importance has increased over time, with incumbents using them to defend their own interests<sup>65</sup>. *Economies of scale, scope and density* has been a widely used barrier, since most companies have either come to diverse Agreements with other companies<sup>66</sup>, or integrated other companies<sup>67</sup> during and after the Liberalisation process, aiming to increase their size or entering new markets (scope).

Those endogenous Barriers to Entry that were not changed by the Liberalisation Packages have become important weapons to incumbents. The *frequent flyer program* became a major asset and a powerful tool that was used to gain the customers' loyalty

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1CRE and 2CRE), putting newcomers in a highly disadvantageous situation. From Phase 4 onwards, these kinds of agreement were eliminated (measure: 3CRE), but even so, incumbents remained in an advantageous position. The European Commission proposed a directive on ground handling covering all airports in Europe, in 1994, in order to reduce this barrier.

<sup>65</sup> It should be noted that the reduction or elimination of those natural barriers would be rather complex since they arise from the normal market activity and are present whenever incumbents run their operations, and hardly could any legal text reduce their strength or put an end to their influence.

<sup>66</sup> For further details, see Chapter 3.4.3.

<sup>67</sup> For further details, see Chapter 3.3.2.

and to prevent costumers from changing to other companies<sup>68</sup>. With the Liberalisation process, the flag companies have developed and further increased their own Frequent Flyer Programs. In order to bridge the gap, the regional companies' strategy was to join the flag carriers' Frequent Flyer Programs<sup>69</sup>, or to create their own in association with other regional carriers.

The *computer reservation system* was the most important tool for companies to sell their tickets to travel agents and passengers. Although they were primarily developed by the major companies, later other companies have been allowed to display their flights for a determined fee. Since the Computer Reservation Systems were owned by some companies, the display was biased in favour of the owners' flights, relegating other companies' flights to the last positions in the output displays – this obviously represented a major Barrier to Entry. The Liberalisation process, apart from not having changed the existing framework, has also allowed companies to have common Computer Reservation Systems (all CRE measures), helping incumbents creating real cartels. The European Commission was eager to change the existing situation, and in 1989 and 1993 sent out two Directives<sup>70</sup> that successfully removed most forms of Computer Reservation Systems bias. Even so, incumbents were still in advantage - firstly, they owned the system, and so they could access important data (number of flights and seats, fleet, etc.), and secondly, they paid less than their competitors, since part of the costs were returned in terms of profits. In order to overcome this situation, some of the newcomers - notably the regional low cost companies - have avoided the Computer Reservation Systems by directly selling their tickets to final customers (for example, through the Internet).

The *excess capacity*, as explained in Chapter 2.2, occurs when the incumbent floods market with products, forcing newcomers to match the levels of productions. In air transportation, frequency is the most important factor to achieve success. Incumbents

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<sup>68</sup> Customers that are already enrolled in some Frequent Flyer Program are not willing to lose their credits and benefits in favour of a new unknown company that often does not have their own Frequent Flyer Program. Furthermore, the Frequent Flyer Program of a major company is more attractive than a smaller one, since it usually has a broad variety of destinations, in special tourist destinations as the smaller companies tend to concentrate, at least initially, predominantly on the business routes.

<sup>69</sup> For example, British Midlands has established its Frequent Flyer Programs jointly with SAS and Virgin Express (CAA, 1998).

<sup>70</sup> Council Regulations n.° 2299/89 (O.J. L 220 of 29-07-1989) on a code of conduct for computerized reservation systems; and 3089/93 (O.J. L 278 of 11-11-1993) amending Regulation n.° 2299/89.

are likely to have used this strategy<sup>71</sup> to protect their most profitable routes, since a reinforcement on the most profitable routes (international) and a withdrawal from the thinner ones (regional routes) has been visible during the Liberalisation and in the following years<sup>72</sup>. Furthermore, by using high frequencies, incumbents reduce the available airport slots at the end of the routes, thus increasing the barriers.

As regards the *slot allocation* barriers, before the deregulation governments and regulatory boards were usually the ones deciding how slots should be allocated; with the Liberalisation, those decisions have moved to the airports. The lack of common regulation to slot allocation could have led to preferential treatment of some carriers, particularly flag carriers, since most airports were state-owned. The Liberalisation process has also not taken any measure to prevent possible market distortions, but the Commission wanted to deal with this problem and, in 1993, a common and transparent slot allocation system was established throughout Europe<sup>73</sup>. Nevertheless, the system was not entirely fair or open. This new slot allocation system used the former “grandfather rights system” by which a company can keep its slots from one season to another<sup>74</sup>. As the majority of the slots were frequently in the hands of the major carriers, which only in very favourable conditions exchanged (all CRE measures) or sold them, this system has prevented many newcomers from freely entering the market. Thus, the “grandfather rights system” represents a major Barrier to Entry, since newcomers are not allowed to acquire new slots. Liberalisation has opened the skies to newcomers but has forgotten to open airports, closing the gateway to the market.

The final Barrier to Entry is *airport congestion*<sup>75</sup>, which is particularly relevant in the major European airports. These airports, due to their location (and dimension), were the most interesting ones for the newcomers that strove to have a part in the routes ending there. In situations of congestion, there are few slots available and when there are any, usually it is not possible to mount a new daily scheduled service because the slots are either dispersed along the week or are located at non-profitable hours. Furthermore,

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<sup>71</sup> Especially during Phases 2 and 3, a period in which there was excess capacity due to the economic recession.

<sup>72</sup> See Chapters 3.4.2 for further details.

<sup>73</sup> Council Regulation no. 95/93 (O.J. L 14 of 22-01-1993) on common rules for the allocation of slots aiming to ensure non-discriminatory decision-making.

<sup>74</sup> In practical terms, after a company acquires a slot, no one can take it, unless the slot is not used.

<sup>75</sup> This situation stems from the shortages of runways capacity, insufficient terminal capacity and aircraft stands, and problems of surface access (CAA, 1993).

airports contribute to the monopolist situation, since normally there was only one airport per city, and even when there were more, normally, they were under the same administration, which gave rise to discriminatory actions, particularly due to the special relationship with the incumbent carrier. Moreover, most slots are usually under the incumbents' control. These two situations<sup>76</sup> might have given incumbents a great market power and surely created important Barriers to Entry - during the Liberalisation process, no measures have been taken to solve these problems.

So, the implementation of the Liberalisation process has led to important modifications on the type and scope of the existent Barriers to Entry. Some of the existing barriers have been reduced or eliminated, while others have been created, left unaffected or simply were not foreseen, with carriers taking advantage of them. In any case, the structure of the Barriers to Entry has suffered a major change, with the development of a complex web of Barriers to Entry (Figure 3.11). From an initial situation - Phase 1 - in which the barriers were mainly exogenous, since governments deeply ruled all market activities, the market has evolved into a situation - Phase 5 - in which the most important barriers were endogenous, since a commercially driven market was established and incumbents had the need to forge barriers to protect themselves from the newcomers. Figure 3.11 presents a flow chart of a possible web of relationships between the diverse Barriers to Entry that arise in the aftermath of Liberalisation. The congestion of the busiest airports that originated the slot scarcity problem, along with the existing slot allocation system, have granted local incumbents a great advantage and has created enormous difficulties to newcomers. These barriers, combined with the airports' high fees, routes served with very high frequencies, and sunk costs, have worsened the difficulties of entering the market or participating in routes. Moreover, companies have been allowed to set up a variety of agreements (all CRE measures - in terms of capacity, tariffs<sup>77</sup>, slots, Computer Reservation Systems, etc.) among them, which along with the strong existing bounds amongst all national stakeholders (companies, airports, ground handlers, governments, etc.) have also protected companies against the new carriers' competition. Finally, the combination of the diverse endogenous Barriers to Entry, for example, the ownership of Computer

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<sup>76</sup> Although these situations are beyond the scope of the Liberalisation process, it is in fact a major problem, since it could greatly reduce the benefits of the Liberalisation process.

<sup>77</sup> Tariff consultation is important as it facilitates interlining, which is essential for maintaining high levels of flexibility, but, nonetheless, it can lead to cartelization.

Reservation Systems and Frequent Flyer Programs, the market experience, economies of scale, density and scope, and privileged access to resources, have shielded even more the incumbents from outside competition.

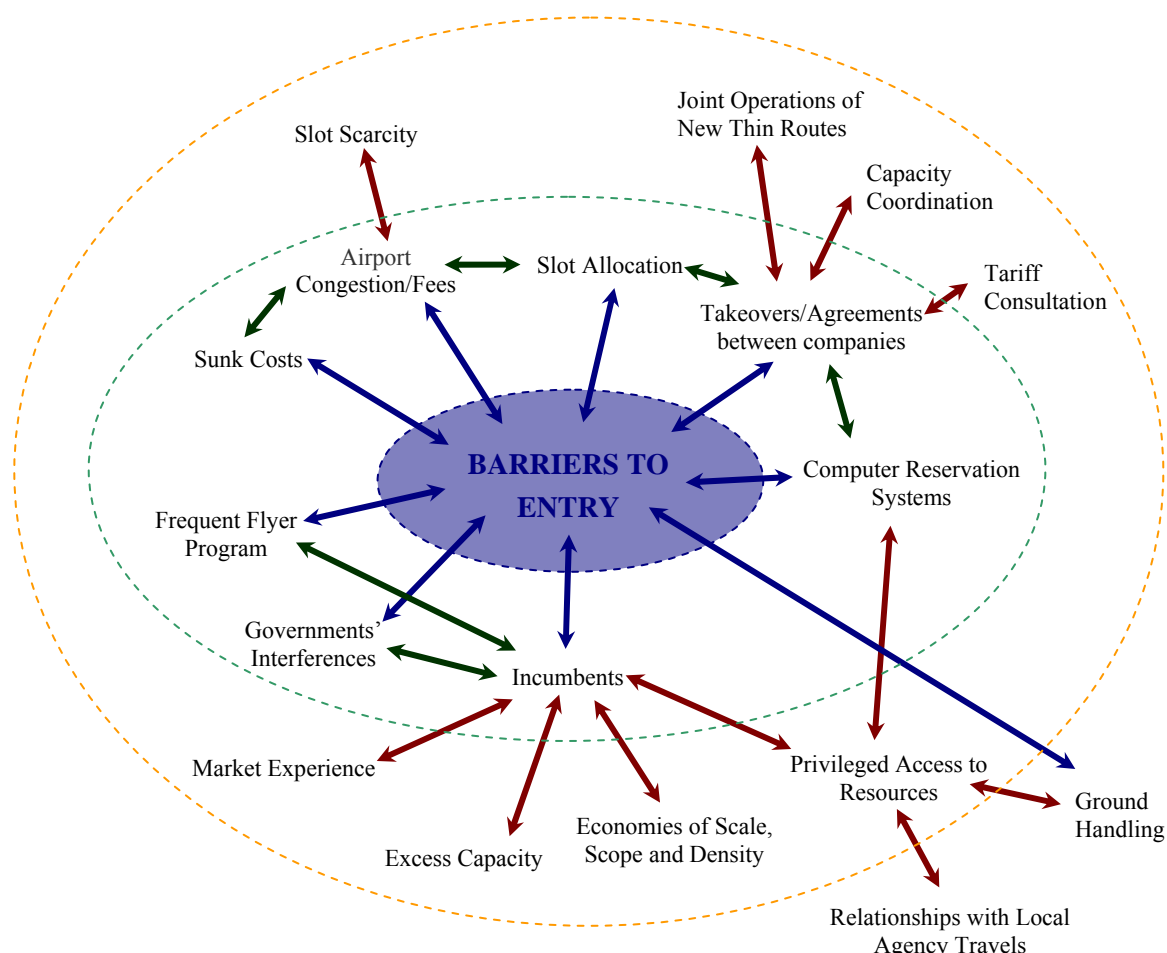


Figure 3.11 - Flow chart of Barriers to Entry in the European air transportation market

In summary (Table 3.10), albeit Liberalisation had aimed to establish a free and open market without major instability, the presence of Barriers to Entry is visible during and after the process - so, Liberalisation has failed one of its main goals. The major changes introduced have not been sufficient to both eliminate the former and prevent the emergence of new Barriers to Entry; nevertheless, important improvements have been perceived.

The market has evolved - Phase 1 - from a situation in which the Barriers to Entry were essentially exogenous, towards a situation - Phase 5 - in which they were predominantly endogenous.



### 3.3.4 CONCLUSIONS

The analysis of the evolution of the regulatory frame that supports the Market Structure reveals a major breakthrough in the European civil aviation legislation. The three Packages have released the European market from most of the legal rules that had restrained and defined its structure, establishing a common commercially driven regulatory framework in all European countries - accomplishing the Treaty of Rome's spirit - and enabling the market to change and develop into a new structure. This major event has been achieved with a minor disturbance of the market.

The Liberalisation process has deeply changed the European rules, and each Package has released some of the existing restrictions introducing new freedoms. The First Package introduced the Liberalisation spirit into Europe, by decreasing some of the former limitations and creating some freedoms. The Second Package, more than introducing significant new freedoms, broadened the First Package's freedoms. The Third Package completed the Liberalisation process by removing most of the former bounds. Companies became free to operate within Europe, and have finally been able to run their business with a commercial spirit. Interestingly, the market has not responded accordingly, since no major changes in the European Market Structure have occurred in the first years following the Liberalisation process. Table 3.15 shows several reasons for this outcome.

Table 3.15 - Some examples of reasons for the absence of market's response

delay in the adjustment to the new rules
unfavourable macro-economic environment
bad performance of the carriers
failure of Liberalisation

Firstly, the market could take some time to adjust itself the new regulations, and, naturally only minor changes have occurred during the first years of Liberalisation.

Secondly, an important period of the Liberalisation process has happened during a major economic downturn, which might have led companies to postpone the exploitation of the new freedoms, and instead of expansion they have given priority to consolidation.

Thirdly, most flag carriers had been presenting huge losses since the beginning of the recession. The combination with the second reason might have left the (major) flag

carriers to retrench and re-think their position<sup>78</sup> in the market, avoiding any potential risky move, such as expanding to new markets or launching new companies.

Fourthly, the failure of the Liberalisation process. On the one hand, after the Liberalisation process, both incumbents and governments kept a substantial power to effectively control the market, causing major difficulties to newcomers. On the other hand, there were still important distortions within the supply chain<sup>79</sup>, which reduced the scope for new entries.

In short, the Liberalisation process was able to reduce or remove most of the former restrictions. However, it failed to establish a completely fair and open market, since important Barriers to Entry (and distortions in the value chain) have remained after that. This failure, together with other environmental constraints, has reduced, or even prevented, the presence of real and strong competition, which has determined the small changes occurred within the European Market Structure during the Liberalisation and in the first subsequent years.

Figure 3.12 presents the Market Structure for the European market in the aftermath of the Liberalisation process.

The flag carriers have focused on the most profitable routes, namely the international (and intercontinental) ones<sup>80</sup>, leaving the thinner and unprofitable ones for the regional carriers. Most of these carriers have become subsidiaries of the bigger ones, expanding their networks to other countries and becoming flag carrier's feeders (on their hubs). In terms of passengers, both segments kept their wide range but now offering a focused service<sup>81</sup>.

Taking advantage from the unrestricted regulatory frame, the charter companies were able to expand their networks freely throughout Europe. However, no changes are expected in terms of passengers, as the few incursions into the scheduled business have

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<sup>78</sup> The analysis of the companies' behaviour has to do with the analysis of the Market Conduct, which will be done in the following chapter.

<sup>79</sup> For example, airports and ground handlers in some countries were state-owned, which might have led them to favour the national flag carrier. For a brief assessment of the distortions in the value chain, see AEA (2002) or Button (2004).

<sup>80</sup> The intercontinental routes remained subject to bilateral agreements, and while prices are fixed at governmental level, these fares tended to be very high.

<sup>81</sup> This aspect has to do with the Market Conduct analyse, as it is related to the companies' behaviour. For further details, see Chapter 3.4.

been unsuccessful, in such a way that all the companies have abandoned that strategy, returning to their traditional business, even more integrated with their operator.

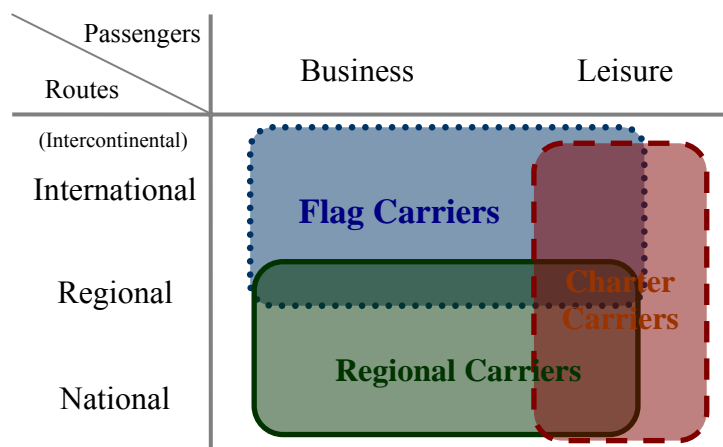


Figure 3.12- European market structure after Liberalisation

### 3.4 MARKET CONDUCT

Before the Liberalisation process, most governments regarded civil aviation not as a commercial industry but, instead, as a public service aiming to provide an egalitarian service to all citizens and to stimulate the countries' economies. Thus, most of them adopted protective Public Policies, which, along with a rigid Market Structure, prevented both flag and regional companies to adopt an entrepreneurial market attitude; basically, the framework was so rigid that many of these companies were merely passive players within the market. Companies were forced to operate on certain routes and forbidden to participate in others. Also, they usually had little to say on fares and definition of service levels. Alliances or agreements were not very common (and unnecessary, since companies were completely protected), although they were usually approved, for being able open the door to new markets. Naturally, in the less regulated markets, companies enjoying more freedom had to adopt a commercial attitude.

The charter companies operating within a far less deregulated environment could behave in a rather different manner than the scheduled companies. Fares were defined directly with the tour operator that re-sold them to final customers (usually integrated in holydays packages). The product was clearly defined: offering trips for the leisure

segments, with no marketing activity needed, since the tickets had to be sold by the tour operator.

The changes in both Market Structure and Public Policies have led to important changes in the Market Conduct. Table 3.16 presents the evolution of each variable of Market Conduct as regards the Structure Conduct Performance paradigm, along with the relevant measures that were taken.

Table 3.16 - Market Conduct and Measures adopted in each phase and Package

PHASES and PACKAGES	PRICING BEHAVIOUR	PRODUCT STRATEGY	ALLIANCES
Phase 1	cost-related	no market orientation (public service oriented)	not acknowledged
	straightforward / simple	servicing the nations' interests	few and restricted
<b>1<sup>st</sup> Package</b>	<b>1F, 1CR, 1CRE</b>	<b>1D, 1C, 1F, 1RA, 1CR, 1CRE</b>	<b>1CR, 1CRE</b>
Phase 2	cost-related / demand-related	public service oriented / market oriented	acknowledged
	straightforward / simple	servicing the nations' interests / servicing the carriers' interests	few and restricted
<b>2<sup>nd</sup> Package</b>	<b>2F, 2CRE</b>	<b>2D, 2C, 2RA, 2CRE</b>	<b>2CRE</b>
Phase 3	cost-related / demand-related	public service oriented / market oriented	important
	various / complex	servicing the nations' interests / servicing the carriers' interests	some and diversified
<b>3<sup>rd</sup> Package (A)</b>	<b>3F, 2CR, 3CRE</b>	<b>3D, 3C, 3RA, 2CR, 3CRE</b>	<b>2CR, 3CRE</b>
Phase 4	cost-related / demand-related	market oriented	very important
	complex / highly complex	servicing the carriers' interests	many and diversified
<b>3<sup>rd</sup> Package (B)</b>	<b>none</b>	<b>4RA</b>	<b>none</b>
Phase 5	cost-related / demand-related	market oriented	vital strategic importance
	complex / highly complex	servicing the carriers' interests	many and diversified

Legend: Market Structure characterization, Measures adopted.

### 3.4.1 PRICING BEHAVIOUR

The companies' Pricing Behaviour is an important issue to control and maximize income. During Phase 1, governments were responsible for most of the business-related decisions, relegating companies to a secondary level. Most decisions were taken according to an egalitarian principle and aiming to motivate the country's economy.

As regards fares, Governments usually only approved few fares and all companies on a given route (both national and international) were obliged to set up the same fares<sup>82</sup>, preventing, or making it rather difficult, to apply any kind of sophisticated pricing strategy. Prices were defined according to the costs of the air services, in order to establish an economically efficient and egalitarian strategy - cost-related price fixing approach.

Liberalisation has deeply changed the status quo. In Phase 2, the introduction of the competition rules to international air transportation within Europe (measure: 1CR) released companies from the straitjacket of regulation, which, along with the introduction of a (limited) fares approval system (measure: 1F) and the definition of some exemptions regarding tariff consultation (measure: 1CRE) gave companies some scope to adapt their pricing system and eventually adopt a more aggressive one. Thus, although rather limitative, these freedoms were very important for companies to start changing their behaviour. The Second Package basically made the First Package measures (measures: 2F and 2CRE) even more flexible, bringing more freedom into the market and compelling companies to adopt a more commercial behaviour. The last Package introduced a free pricing system (measure: 3F), extended the competition rules into the national air transportation within Europe (measure: 2CR), and gave the companies some space to proceed with the consultation of tariffs (measure: 3CRE). With this Package, companies became free to set their own pricing strategy.

The responses at both regulatory framework and Market Structure changes were keen<sup>83</sup>, and soon new types of fare were introduced into the market. However, there were no major disturbances in the European fare system (CEC, 1996), probably due to the minor changes in the market structure, particularly because of the lack of real

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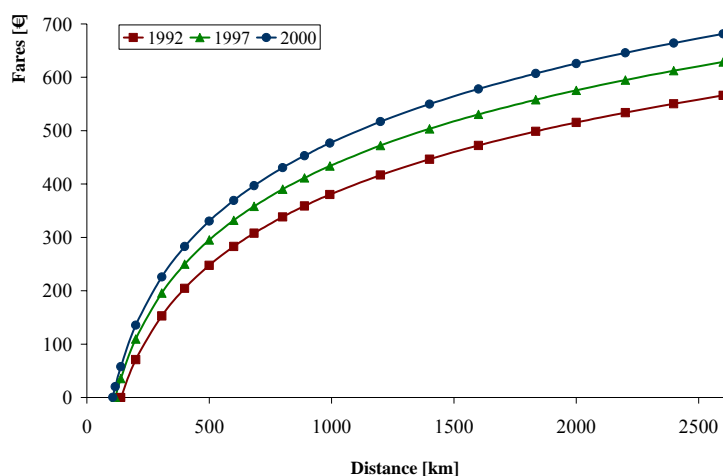
<sup>82</sup> After all, it was not fair that some customers would pay more than others just to generate excess profits or cross-subsidise customers who do not pay enough for the services they use (CAA, 1993).

<sup>83</sup> Lufthansa, at the very beginning of 1993, presented a very simple fare system with three fares to all European destinations (CEC, 1996)

competition on most European routes, and the influence of the economic recession in the early 1990s.

Nevertheless, there have been important changes on fares with two different trends: one concerning the upper level tariffs that have continuously risen since the Liberalisation, and another one concerning the lower level tariffs that have developed in an opposite direction.

The upper level fares are made for business passengers, since they offer exactly what these costumers want (Figure 3.8): high flexibility, reliability and good quality services. Naturally, these are the most profitable customers, and the companies struggle to sell them the maximum possible seats at the highest possible value. As Figure 3.13 reveals, there was a constant increase in these fares during and after the Liberalisation period. The EC (1997) found a similar trend, registering a constant increase of 2 per cent per annum.



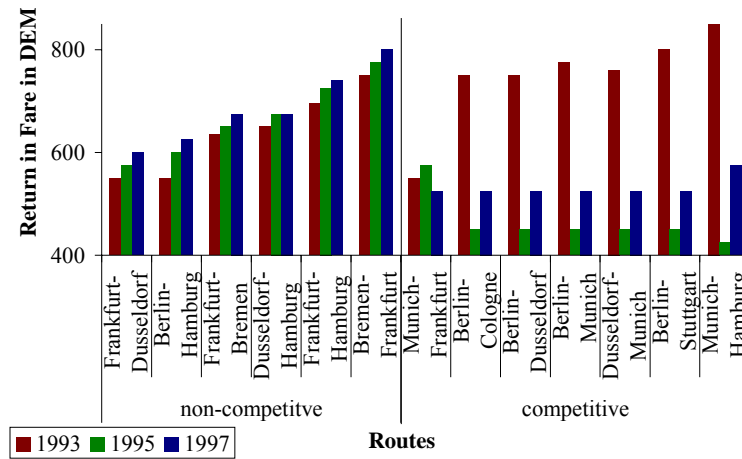
Source: BAE Systems (2000)

Figure 3.13 - Business fares on EEA routes

In trying to deal with the new competitors, and instead of dropping the fully flexible fares, companies have preferred to launch new types of flexible fares (the so called second-level flexible fares) - ranging from 70 to 90 per cent of the traditional fully flexible tariff (CAA, 1998). In fact, these fares have decreased only on those routes with actual competition (with three or more competitors).

Figure 3.14 presents several German routes, some of them having to cope with competition and others not. On the non-competitive ones, fares have been continuously increasing, which is a common trend when there is no competition. In the competitive

market, after an impressive initial decrease in fares, these began to rise, with behaviour similar to a non-competitive market. Nonetheless, the benefits for customers have been significant, since in 1997 the fares were globally lower than in 1993.



Source: CAA (1998)

Figure 3.14 - Lowest fully flexible fares in the German domestic market

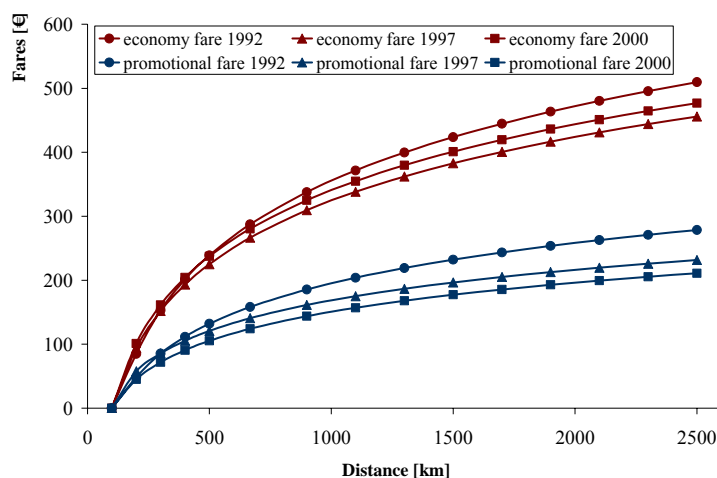
The raise of fares has to do with the attempt made by companies to maintain the revenues during the period in which demand was falling because of the economic recession of early-1990s – these fares increased in subsequent economic upturn. With regard to these fares, the Liberalisation process seems to have had little or no effect, since fares have followed an opposite trend to what had been expected.

The lower level fares<sup>84</sup> have followed an opposite trend (Figure 3.15), even on routes with few competitors. Two reasons can be identified for this outcome: firstly, the new regional low cost carriers that have entered the market offering very low fares and aiming precisely at these customers. Secondly, the drop of fares offered by the incumbents. These carriers were both aiming at capturing these customers and dealing with an increasing competition from the regional low cost companies. Furthermore, since the beginning of the Liberalisation period, these carriers have increased their Efficiency levels<sup>85</sup> and reduced their costs, creating the necessary conditions to decrease fares, maintaining their profits. Incumbents have used different schemes to drop fares:

<sup>84</sup> The target of these fares is leisure customers (Figure 3.8), as they present very high price flexibility, flying when prices are relatively low. These fares, as it has been seen, are very low (even if they do not offer special privileges, which are not important for these customers).

<sup>85</sup> See Chapter 3.5.1 for further details.

either changing their fare system or presenting new, open and creative sales methods (CAA, 1998).



Source: BAE Systems (2000)

Figure 3.15 - Economy and Promotional fares on EEA routes

The low cost carriers are characterised by offering very low fares at high frequencies<sup>86</sup>. These companies have had a deep impact on the market, particularly on the leisure segment. Many people have started to fly due to their low prices, and many other customers left the incumbents (flag and other regional carries). Table 3.17 presents the fares for some markets in April 1998 - the gap in the prices is visible and wide.

Table 3.17 - Examples of lowest return fares of Low Cost Carriers

Low Cost Company	From <b>London</b> (Luton) to	Lowest Return Fare (currency GBP)	National Carrier	Lowest Fare <sup>(a)</sup> (currency GBP)
EasyJet	Barcelona	78	British Airways	124
	Nice	78	British Airways	128
From <b>Dublin</b> to		(currency IEP)		(currency IEP)
Ryanair	London (Stansted/Luton)	49-59	Aer Lingus	76
	Brussels (Charleroi)	49-69	Aer Lingus	99

<sup>(a)</sup> Example of lowest fares offered by national carrier.

Source: CAA (1998)

Janic (1998) studied the thirty-eight European busiest routes and achieved similar conclusions: the non-restricted fares (business fares) rose independently of the existing competition level, while the restricted fares (leisure fares) dropped when competition

<sup>86</sup> Other features include neither in flight service nor connections flights - they develop a point to point network.



increased and increased when competition decreased. The author explains these findings stating that companies avoided dropping the most expensive fares because the business passengers had a highly non-flexible behaviour and the losses that a reduction of fares might imply would not be compensated by the increase of passengers. The willingness of companies to drop the lower level fares would be related to the highly flexible behaviour of these customers and the losses caused by the reduction of fares were surely compensated by the increase of passengers.

Concerning the intermediary fare level, it is not possible to draw consistent conclusions, since there was a mixed behaviour - on some routes there were increases while in others there were decreases. The BAE Systems (2000) found an average decrease from 1992 until 1997 followed by a continuous increase until 2000 (Figure 3.15).

Summarizing (Table 3.16), during Phase 1, Market Conduct was defined by Governments, which regarded on civil aviation a public service and a stimulus to national development. With the Liberalisation, companies have gradually gained control over their business, and have soon developed a very complex and highly developed tariff system aiming to maximise their incomes. Furthermore, two price fixing approaches have appeared: cost-related and demand-related. The former approach refers to those situations in which prices are fixed according to the costs and regardless of the customers' willingness to pay<sup>87</sup> - the underlying philosophy of the companies that follow this approach is to offer the lowest possible fare. The companies that favour this approach were (and are) the regional low cost companies. With regard to the latter approach, the adjustment of prices is intended to get the most out of each customer (Figure 2.4), therefore, they are not related to costs but to the willingness to pay of each customer and the company's degree of market power. This scheme is mostly used by flags and some regional companies. Naturally, in real market the pricing approaches are not so straightforward, and companies tend to use mixed strategies.

Finally, in what concerns the charter companies. These carriers did not witness major changes in their environment, but, nevertheless, had to cope with some competition from the regional companies (particularly from the low cost companies) that have tried

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<sup>87</sup> In theory, it is similar to the philosophy followed by the regulatory boards before Liberalisation, but now carriers are commercially driven, pursuing profits.

to enter the leisure segment. The flag carriers, by focusing on a different market (the long haul) and customers' segment (business) have not been direct competitors. However, potential changes in their pricing behaviour might have been adopted by the tour operators in which they were integrated and not by themselves.

### **3.4.2 PRODUCT STRATEGY**

During Phase 1, the regulatory framework granted companies a significant protection, and state-owned companies hardly ever declared bankruptcy. Companies had neither a real threat nor any incentive to adopt an entrepreneurial business attitude. In countries with a single state-owned carrier, this company acted simultaneously as flag and regional carrier. In the other countries - with more than one state-owned carrier - the major one was the flag carrier, and the other (or others) the regional carrier (or carriers). So, in this phase all players had their **Product Strategy** clearly defined, not on their own initiative, but due to governmental imposition.

The First Package brought about the first changes in the European market. The application of the competition rules to the international air transportation (measure: 1CR), the introduction of some autonomy concerning the approval of fares (measure: 1F); the moderation of the market access rules (measure: 1RA), capacity share levels (measure: 1C), and multiple designation levels (measure: 1D); and the exemption of several competition rules (measure: 1CRE), has enabled companies to take the first steps towards the implementation of its own Product Strategy.

During Phase 3, further improvements were made in terms of the fare approval system, market access, capacity share levels, and multiple designation levels (measures: 2F, 2RA, 2C, 2D). Phase 4, corresponding to the Third Package (A), extended the competition rules to all traffic within the European market (measure: 2CR), ended the remaining fares, capacity and designation restrictions (measures: 3F, 3C, 3D), and almost all route access restrictions (measure: 3RA) that were finally removed in Phase 5 after the Third Package (B) entered into force (measure: 4RA).

The Liberalisation process was able to shift most of the former governments' powers into the hands of companies and to establish a free open market on which companies could freely adopt their own strategy.

The market's reaction was quick and strong, with most companies changing their attitude. On the one hand, newcomers have entered the new markets presenting new strategies. On the other hand, incumbents have also adopted innovative strategies either because were facing an increasing competition (although rather limited at the beginning) or presenting bad performance results, and were therefore forced to change their behaviour, or because they already had a pro-commercial philosophy but were forbidden to adopt it.

Each market player has adopted its own strategy, reflecting the natural differences among them, which were imperceptible because of the regulation - this by itself represented a major breakthrough in the European market.

With regard to the flag carriers, most of their strategic responses have involved the protection of their market by raising Barriers to Entry and the growth of their networks (either by acquisitions or alliances) attempting to take advantage of the benefits that a larger scope offers. Due to the bad financial performance and averse macro-economic environment, these companies have retrenched, focusing their activities on the major international (and intercontinental) and larger national routes (Figure 3.16), and abandoning the thinner ones (Figure 3.17). These companies have concentrated even more their flights on a single airport (the hub airport), adopting a clear hub and spoke strategy - the European average flights' concentration at the hubs has increased from 77 per cent in 1992 to 85 per cent in 1997 (CAA, 1998). However, this trend towards concentration was not confirmed by all authors. G. Burghouwt *et al.* (2003), for example, found a slight decrease in flag carriers network concentration indexes, from 1990 to 1999 (Figure 3.18). They believe that, because of the bilateral agreements, most European national carriers had already a strong star shaped network, and with Liberalisation, companies have probably done only minor adjustments.

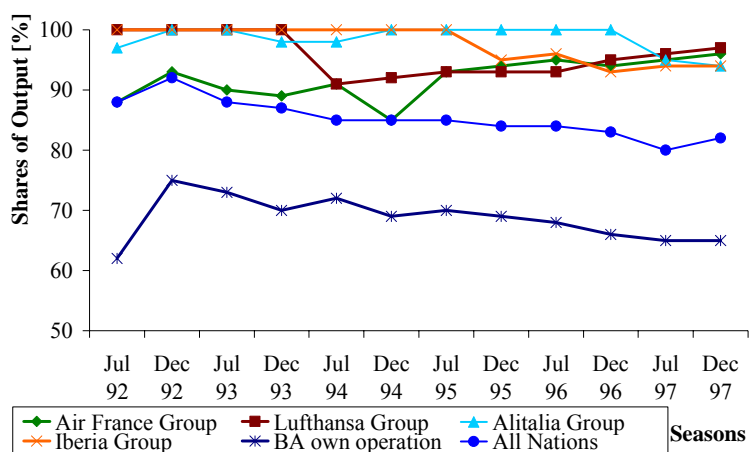
The increase in size and presence on the markets was accomplished either by acquiring other European companies<sup>88</sup> or by establishing commercial alliance agreements<sup>89</sup>. The EC (1997) found three main strategic responses. First, to control the flag carriers' home market by acquiring or establish marketing agreements with the

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<sup>88</sup> Market Structure change. See Chapter 3.3.2 above for more details.

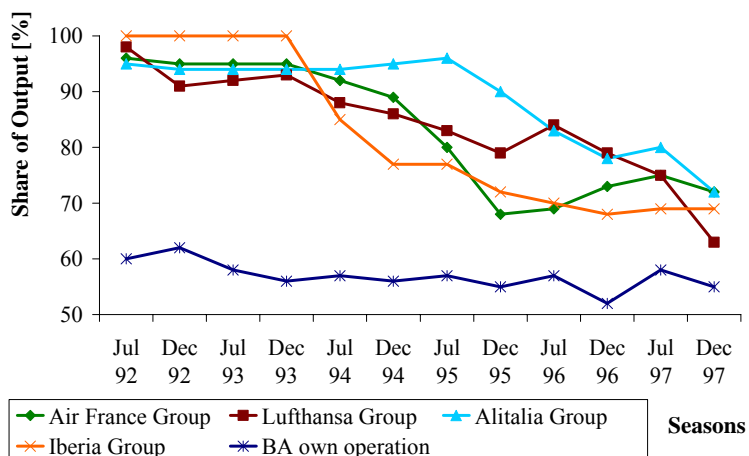
<sup>89</sup> Market Conduct method. See Chapter 3.4.3 below for more details.

regional domestic companies<sup>90</sup>, this has reduced internal competition and prevented other rivals from entering the market. Secondly, to enter other national markets by acquiring foreign regional companies (Table 3.12) or establishing marketing agreements with local regional carriers, with the purpose of getting feed traffic from that market into the carriers' home base airport. Thirdly, to establish a global presence through the establishment of commercial agreements with non-European companies, with the purpose of creating an extensive long haul market, which was the most profitable one.



Source: CAA (1998)

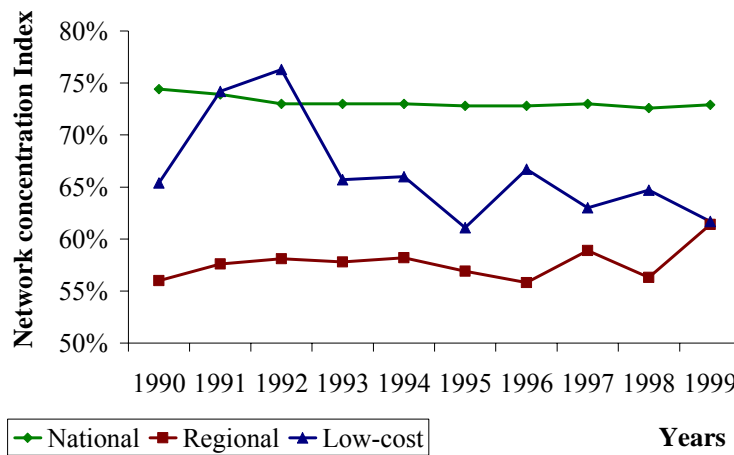
Figure 3.16 - Shares of output of the flag carriers on major international routes



Source: CAA (1998)

Figure 3.17 - Shares of output of the flag carriers on major national routes

<sup>90</sup> For example, Air France has bought two regional French companies: UTA and Air Inter (CAA, 1998). See Table 3.12 for other examples.



Source: G. Burghouwt et al. (2003)

Figure 3.18 - Network Concentration Index evolution for different airlines

With regard to the regional carriers, they were, due to their reduced dimension, unable to compete directly with the major carriers on the busiest routes and markets, and thus they have focused on the national and regional markets. Taking advantage of the new freedoms, most of them expanded their networks into neighbour countries, entering new routes and benefiting from the flag carriers' withdrawal. Most of them have become important feeders for the major companies, changing their network from linear to radial with the central airport being the flag carrier's hub (G. Burghouwt *et al.*, 2003). The others have adopted a mixed strategy having both radial and linear routes.

Although most regional carriers were kept away from the busiest routes, some of them were actually successful, particularly the new brand low cost companies that have entered many routes serving busy markets. They have entered new routes serving the secondary airports of the busiest cities, and in this way competing directly with those carriers serving the main airports. They have also entered tourism routes (particularly from Northern to Southern Europe), and in this way competing with the charter companies. These companies do not have a hub and spoke system, however the G. Burghouwt *et al.* (2003) study found high network concentration values (Figure 3.18), probably because these companies had only one or two main bases, concentrating all flights there. The main difference concerning the hub and spoke system is that they did not do any schedule coordination between flights.

As regards the charter companies, no changes in Product Strategy have occurred, because the few attempts they made to enter the scheduled market were unsuccessful<sup>91</sup> and companies have withdrawn, returning to their core business.

Summarizing (Table 3.16), the Liberalisation process has put an end to a period of several decades in which companies were compelled to follow an imposed Product Strategy, and has established a free environment in which companies could have finally adopted their own Product Strategy. Among the various Packages, the last one was the most relevant one, as it abolished most restrictions.

Naturally, due to the natural differences between stakeholders, important changes have occurred. The flag carriers have established a hub and spoke system focusing on the long regional and international routes and leaving aside the regional routes. The regional carriers have expanded their network to other member states and most of them became flag carriers' feeders. Other regional companies - the low cost carriers - have been successful in entering the busiest routes and competing against the flag carriers. The charter carriers have continued their traditional business.

Regardless of the type of company, all of them have either gradually adopted (in the case of the incumbents) or entered the market (in the case of newcomers) with an oriented Product Strategy.

### **3.4.3 AGREEMENTS**

In aviation, like in any other business, companies combine forces in order to gain competitive advantages over their direct competitors. In Europe, before the Liberalisation, companies did not find necessary to make Agreements with other carriers, given that they operated on a highly protective environment with no real threats<sup>92</sup>. Therefore, Agreements were fairly rare, simplified and usually only at international level, since they could open a door to new markets - governments supported these kinds of action as they would stimulate the nation's economy. The charter companies, operating on a freer environment with real threats soon realized the danger of being alone in the market. However, they preferred not to make alliances with

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<sup>91</sup> Several causes can be pointed out: poor market image, costs higher than what was anticipated, over expansion (EC, 1997).

<sup>92</sup> No other company could enter into market, and governments were always ready to inject capital to overcome potential losses.

other companies, choosing to make arrangements with tour operators, sometimes involving Integration (usually, takeover of the charter company by the tour operator).

The purpose of the Liberalisation process was to create an open free market, but, nevertheless, it has allowed companies to make different kinds of Agreements, throughout and after the entire process. In all phases, companies were given exemption (all CRE measures) from some competition rules (all CR measures), allowing them to make tacit agreements to some degree. As a result, during and after the conclusion of the Liberalisation, airlines had the necessary space to make Agreements, and the number of Agreements in Europe has in fact significantly increased from 59 in 1990 to 149 in 1994 and 171 in 1995 (CEC, 1996).

The various types of Agreements that companies have established can be divided into two broad groups: tactical and strategic, depending on the level of the relationship established between the carriers.

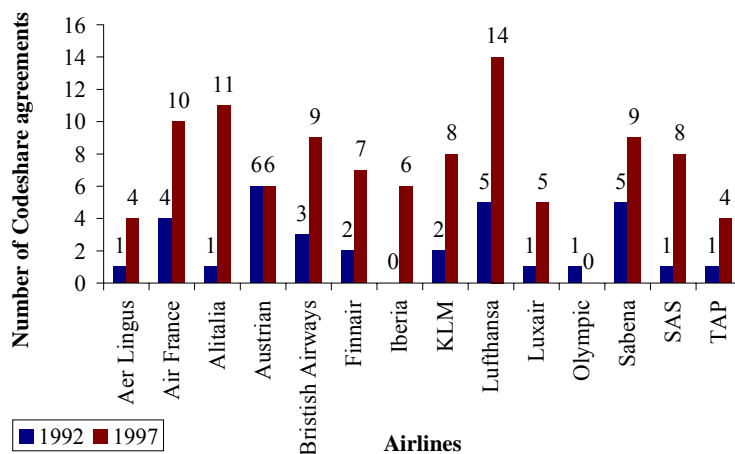
The tactical Agreements refer to those involving a low level of commitment between companies (no acquisition action is involved). They are usually established *ad hoc*, whenever necessary and on a route basis, and tend to be rather volatile – they are usually annulled when they are not profitable. The most common is the codeshare<sup>93</sup> agreement. This agreement is rather simple, requiring a low level of relationship between companies and offering good financial results. Figure 3.19 shows the evolution of the number of codeshare agreements for various flag carriers. All analysed companies (with the exception of Olympic) have increased their number of codeshare agreements, revealing its importance for the companies' strategy. Taking a closer look at the figures<sup>94</sup>, it becomes clear that in 1992 most agreements were made between national companies (there was only one agreement between a national and a non-national carrier) while in 1997 most of the national carrier's agreements were made with regional carriers (twenty agreements between national and non-national carriers). Another interesting fact is that these agreements are highly volatile - between 1992 and 1997 many other agreements have been created and have been annulled later (CAA,

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<sup>93</sup> Code sharing exists when an airline places its flight code or a shared code on a service by the aircraft of another airline (CAA, 1998).

<sup>94</sup> Not shown here. See CAA (1998) for further details.

1998). This has been the consequence of the Product Strategy followed by both flag and regional carriers<sup>95</sup>.



**Note:** agreements between national airlines appear twice, once under each airline.

Adapted from CAA (1998)

Figure 3.19 - Number of national carrier code shares with other European airlines

I of Agreements involving different sized companies. As regards the bigger ones, agreements offer the same operational advantages as Integration<sup>96</sup>, but with a low level of risk, and, also they are more flexible and no special relationship between stakeholders is required. This happens because these agreements do not involve acquisitions or takeovers, and also because they are more suitable for the unique features (discussed below) that characterized (and still characterize) the civil aviation business. As for the smaller companies, they took advantage of the larger airline's sales and distribution network, increasing the number of final destinations and passengers, and fostering the companies' brand.

In the case of Agreements between companies with similar sizes, they both enter new markets with low (initial and operational) costs and risks.

Strategic Agreements are the ones that imply a major level of co-operation between airlines. These Agreements, due to their importance, depth and complexity<sup>97</sup>, tend to be

<sup>95</sup> See the previous Chapter for further details.

<sup>96</sup> See Chapter 3.4.2 for more details.

<sup>97</sup> These Alliances often require an important initial investment, since besides sometimes involving financial transactions between companies (exchange of shares), they usually involve important changes in the airlines' business and services, as for instance changes in the ticketing system the companies' trademarks, the lounges at airports, crew's uniforms, etc.



quite stable over time, as an important part of the companies' strategic philosophy in the long run. In the aftermath of Liberalisation, the market has witnessed the beginning of truly global Agreements because of their size and level of integration (Figure 3.20), involving both European and non-European airlines. The only global Alliance entirely European was the *Qualiflyer* alliance, which, interestingly, was the only one that disappeared after both Swissair and Sabena declared bankruptcy at the end of 2001. By entering those Agreements, carriers gain access to markets that otherwise would have been rather difficult, if not impossible, to enter, either because companies are not big enough (fleet, aircrafts, personal, etc.) or because of the governmental restrictions that prevent companies from entering other countries' markets (see discussion below). Moreover, companies adopt most of the Alliance's features, such as quality patterns, operational procedures, etc, which may promote the companies' trademark. Finally, Agreements increase market power, since companies act together and not individually; for instance: through a common Frequent Flyer Program they offer a range of products and benefits impossible to match if companies were alone in the market; as regards the control over inter-hubs routes, if two companies operate in a same route, they will stop competing; also, this contract increases the companies' bargaining power<sup>98</sup>, since the acquisition of services and/or equipment is performed by the Alliance.

The agreements were successful thanks not only to the economic advantages presented in Chapter 2.3, but also to the unique characteristics of the civil aviation framework that have compelled companies, at least the flag ones, to pursue a strategy of agreements. Firstly, the Liberalisation process concerned only traffic in Europe, the relations with non-European countries have remained under member states' control. As the bilateral agreements required national owning, no company with routes ending in non-European countries could be bought by other European carriers - this would imply losing all possibilities to have non-European routes. Secondly, the acquisition of non-European companies was forbidden by governments, so the only way to enter these markets was by means of agreements. Thirdly, due to the close bonds between governments and flag carriers, the authorities didn't want these companies to be taken over by foreigners. Therefore, Agreements were the best way for companies to overcome all regulatory barriers.

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<sup>98</sup> The bargaining power is much stronger when someone - alliance - wants to buy five hundred planes than when someone - one company only - only wants fifty.

Alliance Name	Number of Companies	Year										
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
STAR ALLIANCE	<b>total</b>						6	6	9	13	13	
	non-European <b>total</b>						4	4	7	9	9	
	European	national						2	2	2	4	4
		regional										
		charter										
<b>total</b>						2	2	2	4	4		
ONEWORLD	<b>total</b>								7	9	8	
	non-European <b>total</b>								4	5	4	
	European	national								3	4	4
		regional										
		charter										
<b>total</b>								3	4	4		
THE QUALIFLYER GROUP	<b>total</b>							7	8	13	12	
	non-European <b>total</b>							0	0	0	0	
	European	national							5	5	6	5
		regional							2	2	3	3
		charter								1	4	4
<b>total</b>							7	8	13	12		
WORLDWIDE	<b>total</b>	2	2	2	2	2	2	2	2	2	2	
	non-European <b>total</b>	1	1	1	1	1	1	1	1	1	1	
	European	national	1	1	1	1	1	1	1	1	1	1
		regional										
		charter										
<b>total</b>	1	1	1	1	1	1	1	1	1	1		

Adapted from AEA Yearbooks (2000, 2001)

Figure 3.20 - Strategic Alliances

The Liberalisation process (Table 3.16) has radically changed the importance of Agreements. In Phase 1, they were unnecessary and the few existing ones tended to be rather simple. However, with the Liberalisation, a commercially driven environment has been established and, in markets with these characteristics, Agreements are very important, since they protect and shield the various companies from outside threats - they are sources of market power. Since Liberalisation has left an open door for companies to establish Agreements (this has most probably been a scheme used by

countries to protect their own carriers), naturally they gradually became widely used, ranging from merely tactical agreements to major and deep strategic Agreements, which were very important for the Product Strategy of the companies.

#### **3.4.4 CONCLUSIONS**

The evolutions of both Public Policies - Liberalisation Process - and Market Structure implied important changes in Market Conduct. These changes and the alterations in terms Market Structure followed a similar pattern. The First Package marked the beginning of a new age in the companies' Market Conduct, by taking the first steps towards a free and open market. The Second Package broadened the existing freedoms, and the last Package removed most of the former restrictions, implementing an almost free and open market.

The various Packages have gradually replaced the former very restrictive regulatory frame for a much freer and open one. The gradual evolution has allowed companies to adapt themselves to the new environment without major disturbances.

The main fault of the process has to do with the exemptions granted. Companies, enjoying this freedom, have created a complex web of Agreements, increasing their market power - and, thus the Barriers to Entry (Figure 3.11) - and reduced the real market competition. Moreover, Agreements restrain the companies' individual moves since they all follow a common direction (which does not always represent the will of all companies but only of the majority or the more powerful ones).

There was also an unwanted outcome in terms of the upper level fares, which have increasing continuously during and after the Liberalisation. This has been a consequence of the development of two types of pricing approaches: cost-related and demand-related. Those companies following the demand-related approach and taking advantage of the business customers' very high willingness to travel have continuously increased their main fares (that were the upper level). Concerning the mid level fares, they presented a mixed behaviour, decreasing and increasing over time. The lower ones have constantly decreased over time. One of the reasons for the decrease of this type of fares can be the fact that the new regional low cost carriers have implemented a cost-related pricing approach offering very low fares.

Nevertheless, it can be concluded that the Liberalisation process has been highly successful, since it has reached most of its initial goals: companies have abandoned their former orthodox and passive position and have been adopting a commercially driven business with a rather pro-active attitude towards the market; and new entrepreneurial companies have entered the market.

The incumbents, which used to perform their operations on a very protective environment, had never been concerned with adopting a commercial driven conduct. With the Liberalisation, the market conditions have changed significantly, a common framework was established and these carriers have lost most of their former privileges. These carriers, having to deal with a new regulatory environment, an increasing and in most situations first-time-ever competition on some routes and markets, and also having to cope with a major economic downturn, were forced to change their previous behaviour, if they were to survive.

As regards flag carriers, they used different strategies to cope with the problem, but, nevertheless, it is still possible to identify some common trends: retrenchment in a main airport (hub) and protection of their core market, and expansion by means of Agreements and/or acquisitions. Moreover, most of them have focused on the long haul routes, either international or long regional, which were, and still are, the most interesting ones. This is one of the reasons underlying the fact that these companies have been losing their market share in the (regional) traffic in Europe; another reason has to do with the increasing competition of low cost carriers (see discussion below).

Regional carriers had to deal with an even bigger challenge, because, on the one hand, they were unable to enter the busiest and most profitable routes (which were completely dominated by the major carriers), while on the other hand, they had to cope with increasing competition, since all newcomers were regional. Soon, they realised that it would be extremely difficult to operate on a stand-alone basis in the market, and most of them have become partners of major carriers, either through Alliances or Integration, taking advantage of the inherent benefits. This move, along with the new freedoms of Liberalisation has led to important changes in their networks and activities. Firstly, the network has changed from a point-to-point to a star shaped one, based on the major companies' hub. Secondly, they have spread their network across neighbouring

countries<sup>99</sup>. These moves reveal a clear position as feeders of the major companies. Those who have remained alone in the market have adopted diverse strategies. Some have specialised in some segments of the market (for instance, high quality for business passengers or low prices for leisure business), others took advantage of the abandonment of thinner routes and entered those routes, while others have become feeders but without formal agreements since they started to operate on the major companies' airport.

Few newcomers have entered and all were regional carriers. Moreover, their effect on the overall Market Conduct has not been as strong and broad as it had been foreseen. The most important newcomers have been the so-called low cost companies, which have in fact made important changes on the routes they have entered. These new companies, offering very high frequencies on a point-to-point network, were able to offer very low fares attracting all passengers with flexible price behaviours and those who had never flown because prices were too high. The successful operation of the low cost companies is a direct consequence of the Liberalisation process.

As regards charter companies, and because of the increasing competition on most of the interesting routes, they were unable to compete directly with both incumbents and newcomers. Despite having made some attempts to enter the scheduled services, sooner or later companies have given up and returned to the previous strategy, reinforcing their bonds with the tour operators and focusing their activity on the leisure market.

### **3.5 MARKET PERFORMANCE**

Following the Structure Conduct Performance paradigm, Market Performance is the outcome of all market activity arising directly from both Market Conduct and Public Policies, and indirectly from Market Structure, with both Basic Conditions and past Market characteristics also playing relevant roles.

Before the Liberalisation process, the rigid Public Policies that had imposed an also rigid Market Structure with all stakeholders being compelled to follow the

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<sup>99</sup> Besides Liberalisation they took advantage of the retrenchment of the major companies, which had left the thinner routes.

government's directives - Market Conduct - has led market to a stalemate, with companies presenting very disappointing results - Market Performance.

The levels of productive Efficiency were very low, with most companies presenting very high unitary costs and very low productive levels. However, allocative Efficiency was very high, since regulatory boards usually fixed prices matching the costs - cost-related price fixing approach.

Having no incentives to implement new and innovative services, companies appeared to be obsolete, showing clear signs of stagnation with few visible innovative services - progress was, then, rather imperceptible.

Moreover, the lack of a free environment reduced Market Fairness. Companies were either obliged to serve routes that they did not want or forbidden to participate in other more interesting ones. Furthermore, governments revealed a clear preference for the major state-owned companies in relation to other minor or privately-owned stakeholders. All these market distortions have eliminated any possibility of a fair division of the (possible) final surplus among stakeholders reducing even more Market Fairness. The exceptions were charter companies, which, operating in a far less regulated environment pursued their activity with very low costs and were able to offer low fares<sup>100</sup>.

Table 3.18 presents the changes that Market Performance has suffered throughout the Liberalisation period.

Table 3.18 - Market Performance in each Phase

<b>PHASES</b>	<b>EFFICIENCY</b>	<b>PROGRESS</b>	<b>FAIRNESS</b>
Phase 1	Allocative Efficiency	very slow	very low
Phase 2	Allocative Efficiency	slow	low
Phase 3	Allocative and Productive Efficiency	slow / fast	low / medium
Phase 4	Allocative and Productive Efficiency	fast	medium / high
Phase 5	Allocative and Productive Efficiency	fast	high

<sup>100</sup> This is a predictable outcome, since their main customer segment was the leisure one, they were forced to offer very low fares and thus have low operating costs.

### 3.5.1 EFFICIENCY

As explained in Chapter 3, Efficiency evaluates the way the market uses the available resources to produce the final products. Usually, in a competitive market, there are high levels of Efficiency, since companies strive to reduce the costs in order to offer the lowest possible prices.

During Phase 1, companies operated in a highly protected environment. Having no need to adopt a commercial driven conduct, they had become passive players. Their unitary costs had become excessively high compared to other markets<sup>101</sup>, revealing low productive levels and consequently low Efficiency performance. K. Ng *et al.* (2001) found that in 1990<sup>102</sup> European carriers presented costs 26 per cent above the level they would attain if they were privately-owned and operated in competition structure similar to the United States'. Furthermore, fares were also very high, reinforcing the low Efficiency level. Fares were high because most regulatory boards followed the cost-related pricing approach, and since civil aviation was considered to be public service, companies did not need to generate profits and fares should only cover costs.

One of the purposes of the Liberalisation was to increase the Efficiency levels aiming to reduce fares and increase European carriers' competitiveness in the Global Arena (in particularly to challenge the United States carriers). In fact, the Liberalisation, by establishing a common regulatory framework, has brought about important changes to the European civil aviation industry; with both Market Structure and mainly Market Conduct undergoing major developments. Therefore, an overall increase of Efficiency is expected. The charter companies have not suffered such pressure, as their costs were already very low as compared to the scheduled companies.

Air Transportation companies incur a variety of costs<sup>103</sup>, some related to their core business (for instance: flight crew salaries and expenses, fuel and oil, maintenance, passengers insurance, etc.) while others are related to non-core activities (for instance: interests on other businesses, loans, etc). Table 3.19 presents the common cost cutting

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<sup>101</sup> European charter carriers and their United States counterparts. For instance, the European carriers had costs 40 per cent higher than the United States'. Also, and although these companies operated in a different structural environment, allowing them to have better performances, the existing gap suggested that European carriers could increase by far their efficiency levels.

<sup>102</sup> Although this year is in the middle of the Liberalisation period (and efficiency might have increased since the first package) this value shows the European carriers' inefficiency.

<sup>103</sup> For further details, see for example Doganis (2002) or Cole *et al.* (2001).

strategies companies have devised. Some of these strategies turned out to be rather painful for the companies, especially for the flag carriers that tended to have very heavy and rigid structures. The regional carriers with lighter internal structures could have experienced these modifications in a more easy way.

Table 3.19 - Cost cutting strategies

Areas	Strategies
Labour Costs	staff reduction
	renegotiations of wage rates and conditions
	contracting out flying services
Operating Costs	setting up low cost subsidiaries
	ending of first class services
Non-aviation Costs	outsourcing services (e.g. catering or engineering)
	reduction of the weight of some services (e.g. agent travel commissions capping)

Adapted from EC (1997)

From the various costs, labour is the largest single airline expense, accounting for about one third of total costs (Doganis, 2002). Therefore, reduction in labour costs may represent important reductions in the overall costs.

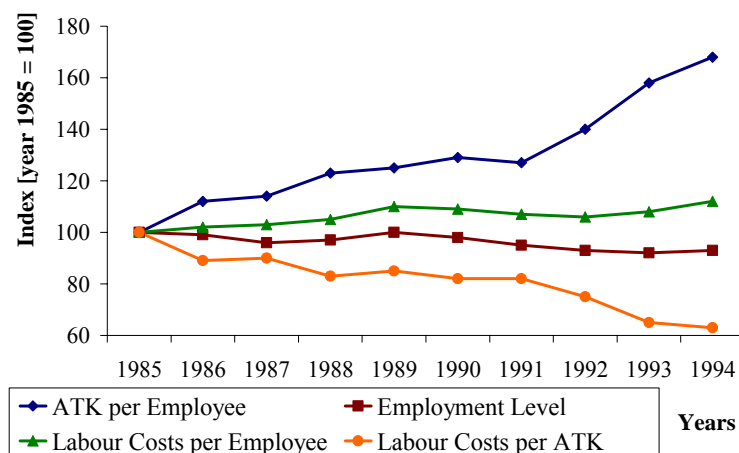
Some data about the European companies' performance before and during the Liberalisation process are presented from Figure 3.21 to Figure 3.24. It becomes clear that companies have not been successful in reducing labour costs (Figure 3.21 and Figure 3.22), which increased 10 percent from 1985 to 1994 - only the period from 1990 to 1992 shows a decrease in labour costs, however, employees have increased their productivity (Figure 3.21 and Figure 3.23) with the ratio Output Unit (Available Tonne Kilometre - ATK) per Employee showing an upward trend, particularly from 1991 onwards. Furthermore, companies have reduced their staff (Figure 3.21). The combination of these changes has led to a reduction of the Labour Costs per Output Unit - ATK (Figure 3.21 and Figure 3.24).

The final outcome of all these improvements has been a reduction in costs and an increase of productivity which resulted in an overall increase of companies productive Efficiency during the Liberalisation period, and especially from 1991 onwards.

Figure 3.21 also reveals that 1991 was a turning point in the companies' attitude. From this year onwards the rate of Efficiency growth is more obvious than before. This year also coincides with both economic recession and Phase 2, which can lead to

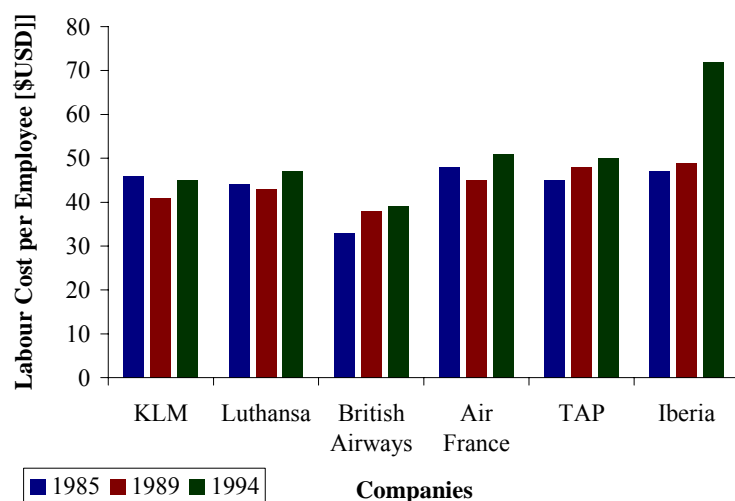


conclude that, besides the Liberalisation process, the macro-economic performance has also played an important role on the Efficiency improvements of the companies.



Source: Alamdari et al. (1997)

Figure 3.21 - Labour Costs per Employee and per ATK (in real terms) and Employment and Productivity Level



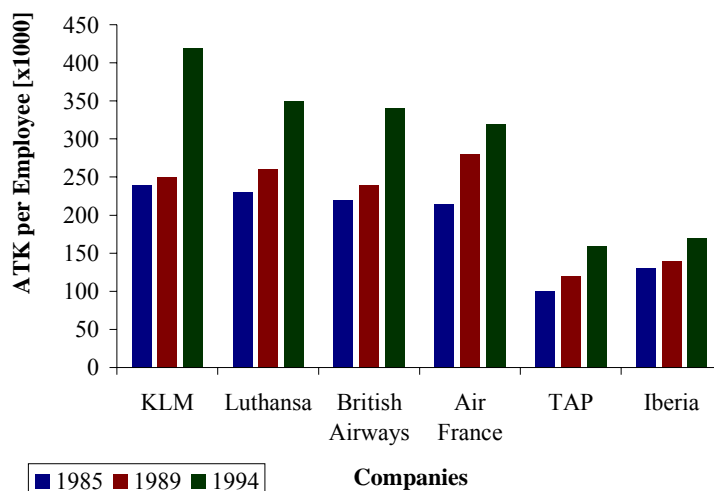
Source: EC (1997)

Figure 3.22 - Average Labour Cost per Employee (1994 prices) using purchasing power parity exchanges rates

K. Ng *et al.* (2001) analysed the employees’ total rents<sup>104</sup> of some major European companies. They found a downward trend in total rents on the sample of airlines, in particular after 1991 (Figure 3.25), showing that employees have either increased their Efficiency levels or had their salaries reduced. However, as Figure 3.21 and Figure 3.22

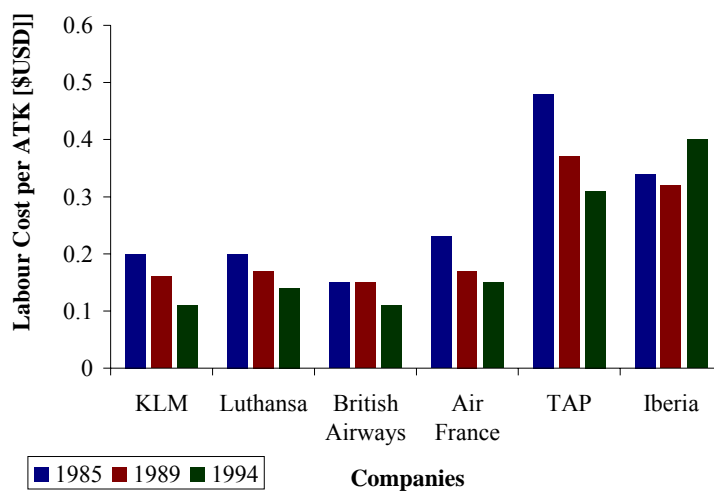
<sup>104</sup> Rents represent the percentage of salary that exceeds a standard salary, corresponding to the fair salary for each type of employee, as defined by these authors.

show, labour costs have increased, and therefore the decrease in rents has been a direct consequence of a rise in Efficiency levels.



Source: EC (1997)

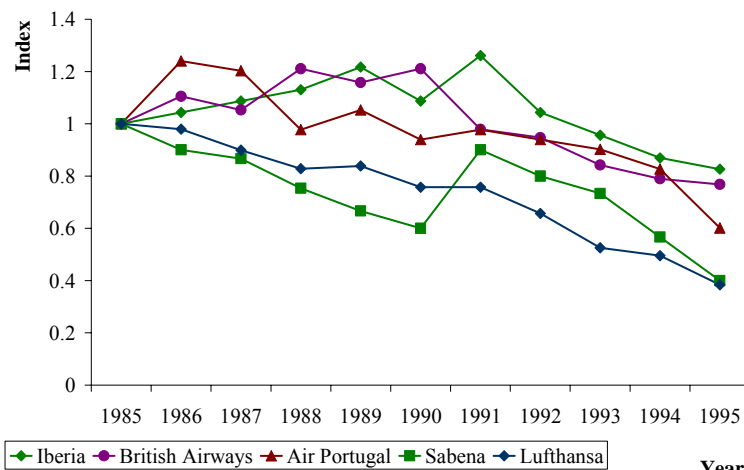
Figure 3.23 - Available Tonne Kilometre (ATK) per Employee



Source: EC (1997)

Figure 3.24 - Average Labour Cost per Available Tonne Kilometre - ATK (1994 prices) using purchasing power parity exchanges rates

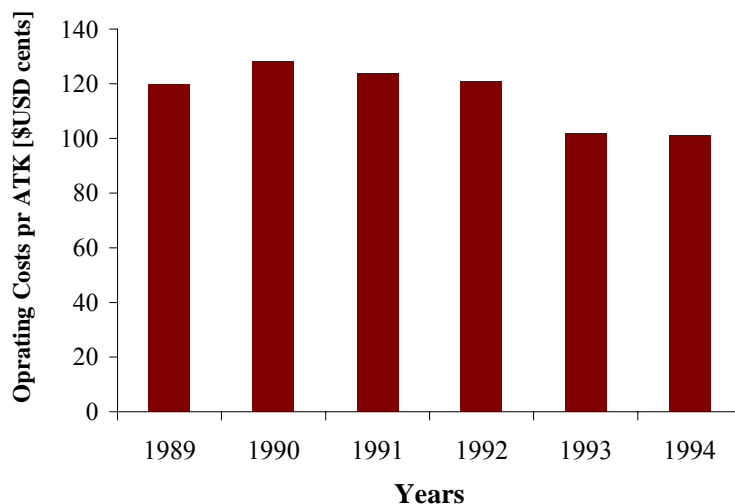
Companies have also been successful in reducing operating costs. In Figure 3.26, a clearly downwards trend in the operating costs per output after 1990 is visible, which indicates that companies have increased their Efficiency.



NOTE: Comparisons of rents across carriers are not possible, they are represented in the same graph due to space restrictions.

Source: K. Ng *et al.* (2001)

Figure 3.25 - Employees' total rent



Source: EC (1997)

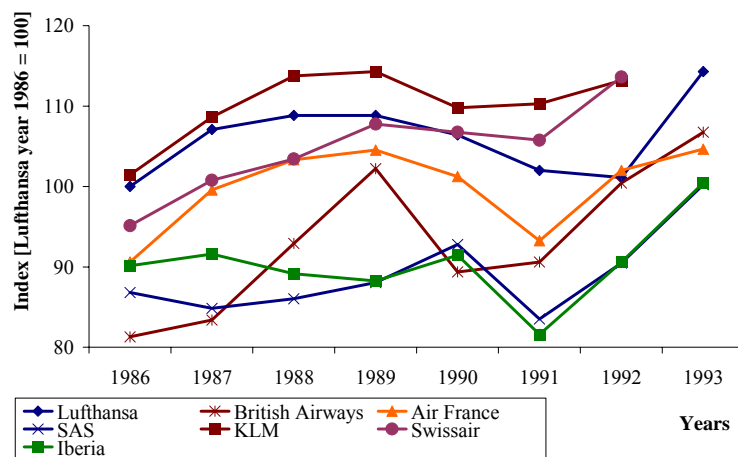
Figure 3.26 - IATA international scheduled services within Europe, unit costs in 1994 prices

There are not many studies focusing on overall Efficiency, because data are understandably hard to compute. Figure 3.27 presents a study conducted by Hoon Oum *et al.* (1995a) where the Total Factor Productivity<sup>105</sup> (TFP) of several European companies is computed. The figures show an overall increase in the TFP index until 1988, and after that there is a slight decrease until 1991, from which a strong increase in TFP index is again visible.

In comparison with the studies presented above, this one reveals a decrease in productivity from 1988 until 1990. The decrease in productivity is ascribed to the

<sup>105</sup> TFP is the weighted average of productivities for all inputs that an airline uses.

excess of capacity<sup>106</sup> and the beginning of the economic recession. Once again, the year 1991 appears to be rather important in the companies' performance evolution.



Adapted from Hoon Oum *et al.* (1995a)

Figure 3.27 - Residual TFP index

These authors also found that, during Phase 1, the United States' companies presented higher rates of TFP index growth than their European counterparts, while from Phase 2 onwards the European carriers had better performances than the Americans. In the period considered, European carriers achieved a rate of TFP growth of 2.9 per cent, while the United States carriers only achieved a rate of TFP growth of 0.7 per cent. The Liberalisation process was considered to be the main stimulus for these changes and performances. Although European carriers have been performing better, these authors also found that these companies were 20 per cent less productive than their United States counterparts.

From all the analyses presented above, it appears that during and after the Liberalisation period, companies were under a major pressure to become more competitive and efficient. This pressure had various sources. Firstly, the Liberalisation process, by establishing an entrepreneurial environment, has introduced competition among European carriers (at least in the long term). The competitive environment has naturally compelled companies to improve their Efficiency levels. Furthermore, the European competition rules forbid any state support, which has forced companies to present positive results. In this matter, good Efficiency levels are fundamental. Secondly, the deterioration of most companies' economic performance, which was

<sup>106</sup> Resulting from the very positive mid-1980s years in which companies have reinforced their fleets.

aggravated by the early 1990s economic downturn, has resulted in financial deficits. The results show a sharp increase in Efficiency from 1990 onwards, which has coincided with the beginning of the economic downturn, therefore, the macro economic performance should have played an important role in the improvement of Market Performance. Thirdly, some authors found that the level of global competition from non-European companies (mainly from the United States) was increasing, putting even more pressure on European companies to improve their productive Efficiency (EC, 1997).

As for allocative Efficiency, it depends on both prices and marginal costs (Figure 2.5), reaching its maximum level when the former equals the latter. Before the Liberalisation, as already discussed, the public service status usually led the boards to impose price caps as close as possible to allocative Efficiency, by eliminating any allocative Efficiency Loss (EAL), at least in theory.

Throughout the Liberalisation period, there were important changes in both prices and costs. As regards costs (unit costs per output), a constant downward trend is visible (Figure 3.21 and Figure 3.24), which in the case of constant prices would lead to a decrease in allocative Efficiency (since the EAL would increase). However, prices have also changed, and there are two visible trends. One of them is related to the upper level fares, which have continuously increased throughout the Liberalisation period (Figure 3.13). This, combined with a decrease in costs, has necessarily led to an increase in EAL (increase in the light green area in Figure 2.5) and, thus, to a decrease in allocative Efficiency.

Another trend is related to the lower level fares, which have continuously fallen during the Liberalisation (Figure 3.15). In this case, there are two possible scenarios (Figure 3.28) according to the situation in Phase 1. On the one hand, considering that initially prices were similar to costs (scenario A) and during the Liberalisation process they stayed the same (scenario A1), then EAL was also constant and close to zero, and thus there were no changes in the allocative Efficiency; however, if costs decreased more than prices (scenario A2), then there was an increase in the EAL, and consequently a decrease in the allocative Efficiency. On the other hand, assuming that there was some EAL during Phase 1 (scenario B) and during Liberalisation, this gap has increased (costs decreased faster than prices – scenario B1), and then there was an

increase in the EAL and thus a decrease in allocative Efficiency; however, if the gap remained constant or decreased (scenario B2), then the existing EAL was reduced or eliminated and allocative Efficiency remained constant or increased

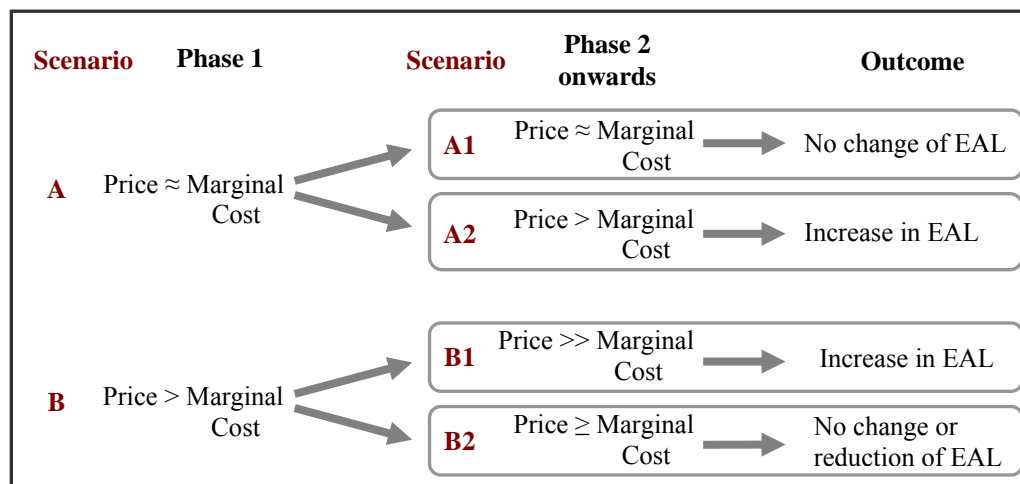


Figure 3.28 – Possible developments of EAL during the Liberalisation process

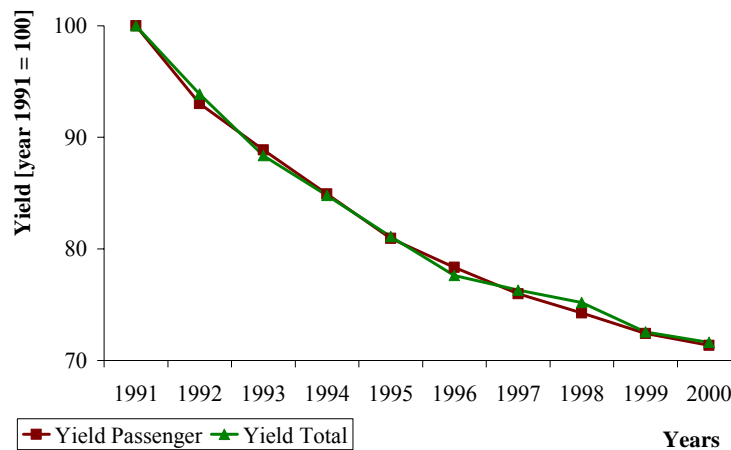
The most reasonable of these scenarios is Scenario B2, in which EAL has probably decreased and where there might have been some gains in allocative Efficiency. This assumption is also supported by the evolution of the yield values.

Yield<sup>107</sup> values can be used to make assumptions on Efficiency, especially in terms of allocative Efficiency, since it represents the revenue that a company gets for each passenger - low values indicate that the price is closer to the cost. The evolution of the yield values for European companies is presented in Figure 3.29 and Figure 3.30. From 1990 onwards, a constant downwards trend is visible indicating a drop in revenues for each passenger. These results indicate that the gap between price and costs has been narrowed, which reveals an increase in overall allocative Efficiency. This conclusion is particularly relevant because the yields presented concern all tariffs, even the business tariffs, which have been increasing, meaning that the other tariffs have been decreasing faster.

All these studies concern essentially flag carriers, however there were other stakeholders in the market. With reference to regional carriers, apparently there are no available studies, nonetheless, the existing regional carriers have most probably

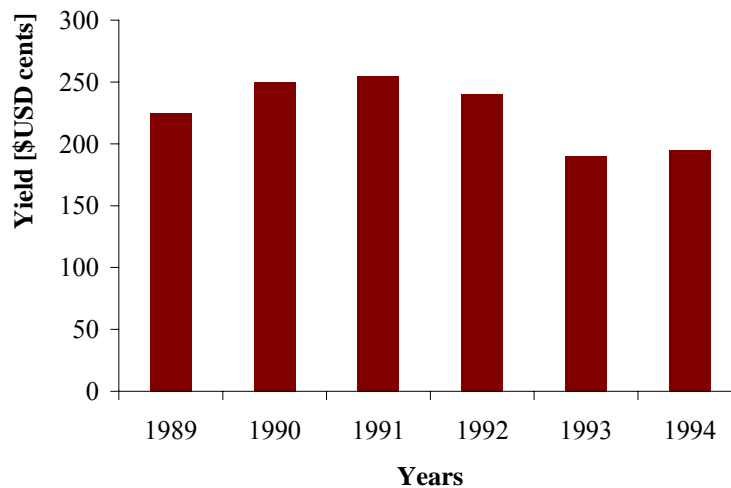
<sup>107</sup> Passenger (or cargo) yield is the average amount of revenue obtained per revenue passenger (or tonne) - kilometer.

followed the major companies' lead and changed according to their strategies. Since most of them have joined alliances with bigger companies, it is expected that they have adopted the bigger companies' strategies. Those that have remained alone in the market surely have also pursued a similar pattern in order to become and stay competitive. Furthermore, they have suffered competitive pressure from the newcomers, particularly from the regional low cost carriers. These companies presented very high Efficiency levels, which enabled them to offer very low fares and still generate profits.



Source: AEA (2003)

Figure 3.29 - Real yields for the Association of European Airline members



Source: EC (1997)

Figure 3.30 - Yields of the scheduled services in Europe (values in 1994 prices)

With regard to charter companies, since they already operated in far less deregulated environments and favoured the leisure market, their Efficiency levels were already high,

with very low unitary costs. The Liberalisation process has not significantly changed their environment, and thus no changes are expected in the charter companies' Efficiency arising from the Liberalisation process.

Summarizing (Table 3.18), before the Liberalisation process high levels of allocative Efficiency were attained because the regulatory boards fixed prices equal to costs; however, productive Efficiency was very low, as the protective environment did not force companies to adopt an entrepreneurial attitude.

With the Liberalisation, the protective environment in which the state-owned companies operated ended. This change, along with an overall increase in the competitive pressure at both European and non-European levels, and the bad performance results, worsened by the earlier 1990s economic downturn, has put European companies under major pressure to become more productive and efficient. In response to this, (incumbent) companies have been increasing their productive Efficiency since the beginning of the Liberalisation process, especially from 1990 onwards. The newcomers have already entered with very high levels of productive Efficiency.

As regards allocative Efficiency, the constant decrease in yields reveals an overall increase in its level. Although there are two visible trends, one concerning the upper level fares in which there has been an overall decrease, and another concerning the lower level fares in which various outcomes are possible, there has probably been an increase.

### **3.5.2 PROGRESS**

Prior Liberalisation, the environment did not offer any incentive for companies to follow a progressive strategy. Although the air transportation industry has suffered major evolutions<sup>108</sup>, companies have simply adopted these innovations.

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<sup>108</sup> During the sixties, engines have undergone major improvements, thus increasing the overall speed of aircrafts; later on, in the seventies, wide-bodied aircrafts have been created; after that, development focused on the enhancement of the existing technology (for example, using lighter composite materials or more aerodynamic shapes). Developments in computer technology in the seventies and eighties have led to major advances in ticketing systems, with the development of the Computer Reservation Systems, which has been used as an important barrier to entry. For more details on civil aviation progresses see, for instance, Doganis (2002).



By introducing a commercial spirit into the European market, the Liberalisation process has deeply changed the companies' attitude towards business. Each Package has removed the various restrictions to the point of establishing a commercial driven market in Europe. New companies have entered the market offering highly innovative services and options to customers. The regional low cost carriers have been a major source of innovative solutions, for example, by offering tickets exclusively through the Internet (with fixed prices or through auctions), or not having tickets at all. The incumbents, facing an increasing competition (although rather limited in the beginning) and an economic recession were forced to react and adopt a more entrepreneurial attitude. They have introduced new services and fares, for instance, by selling tickets also on the Internet or tickets integrated in tourism packages, etc.

Therefore (Table 3.18), the Liberalisation, by introducing an entrepreneurial spirit into the European market, has led incumbents to adopt a commercial driven strategy, which has originated a constant increase in the Market Progress level throughout the whole of the Liberalisation period.

### **3.5.3 FAIRNESS**

Before the Liberalisation process, on the one hand, governments invariably favoured the flag carrier (in terms of market access, subsidies, etc.), while on the other hand, many companies did not provide a free and voluntary service, as they were either obliged to follow the governments' directives and thus to serve routes that they did not want, or forbidden to enter other routes (or other markets). In this environment, Fairness in Process was understandably low.

The Liberalisation has foreseen a free and unrestricted market in which all stakeholders would have the freedom to run their businesses with no barriers and the same rights and opportunities. The three Packages have in fact removed most governmental barriers and restrictions; each of these Packages has eliminated some barriers until reaching an almost free and unrestricted environment. A common legislative environment in all European market has been set, with all companies enjoying the same rights and being able to set up their businesses after fulfilling a (common) set of legal issues. Therefore, the Liberalisation was able to increase Fairness in Process to a large extent.

However, the Liberalisation has not removed all restrictions. Firstly, the definition of public service obligations remained in the hands of the governments, and, thus, they have been able to protect their companies by defining which routes should be taken as public service. Secondly, both environmental and congestion protection rules have been reinforced and are still in the hands of the governments, which has given them the power to control the traffic and define the national airports' traffic levels. Thirdly, the exemptions granted have allowed companies to make tacit agreements (at least, to some degree), increasing market distortions and reducing the smaller carriers' autonomy and ability to take decisions autonomously, because in an alliance or Agreement the decisions are usually taken by the larger companies. Fourthly, other stakeholders in the value chain have remained very powerful and have secured an important level of market power<sup>109</sup> - for instance, most airports were kept under public administration, and in many airports, handling companies were also state-owned, such as the flag carrier, which has probably led the flag carrier to be favoured<sup>110</sup>. This situation has prevented companies from freely entering some routes (and some airports).

These issues have reduced the effectiveness of the Liberalisation measures, decreasing the Fairness in Process. Nevertheless, the framework that emerged after the Liberalisation has been considerably fairer than the previous one.

As regards Fairness in Outcome, before the Liberalisation process, civil aviation was regarded as a special business aiming to serve the countries' interests, and thus profit was not regarded as a primary goal, prices were usually set only to cover costs, which should benefit customers, as they have had only to pay the operational cost, and companies as they had their costs covered. However, companies presented very high costs, consequently fares were also very high (only the business customers were able to afford them), which was clearly unfair to other customers. Furthermore, in some cases, fares did not cover costs and governments (and customers indirectly through taxes) were forced to finance companies, reducing the overall Fairness in Outcome.

The charter segment was rather different. These companies were very active and attractive to costumers. In 1985, 60.5 per cent of passengers used charter low fares to fly

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<sup>109</sup> This situation is beyond the scope of this Thesis, nevertheless, since it has a major influence over the Market Performance, a brief assessment is presented.

<sup>110</sup> At airport level, incumbents have had privileged access to slots (due to grandfather rights), while at ground handling level these companies demanded prohibitive fees to newcomers.

(CEC, 1996). In this segment, both companies and passengers were able to secure some sort of compensation, resulting in a much higher level of Fairness in Outcome.

Therefore, in the scheduled sector Fairness in Outcome was rather limited, as customers and even companies were unable to secure any compensation - the former had to pay very high fees and the latter was usually unable to generate any surplus at all.

The Liberalisation has significantly changed this situation. New companies have entered the market, offering very low fares, although at the beginning on a very limited number of routes, and incumbents had to deal with their first-ever threat. Moreover, the ending of effortless governmental financing has forced companies to increase revenues and/or reduce costs in order to survive. As a consequence, in 1995, 70 per cent of the passengers travelled on scheduled flights with reduced prices, and taking into account the charter segments, this value reached 90 per cent (CEC, 1996). Moreover, the fares have dropped (particularly the lower level tariffs), and (some) companies were able to generate profits. Therefore, both customers and companies have increased their compensations, resulting in an increase of Fairness in Outcome.

The final Market Fairness could have been even better if it was not for the existence of Barriers to Entry that by preventing newcomers to enter the market or routes freely (reduction of Fairness in Process) and enabling incumbents to forge market power<sup>111</sup> (reduction of Fairness in Outcome) has reduced the level of real competition.

In summary (Table 3.18), from a situation with low levels of Fairness, in particularly as regards Fairness in Process, the market has evolved to a higher Fairness level arising from the Liberalisation process. The various Packages have efficiently removed most of the former restrictions preventing higher Fairness levels, and in addition the commercial driven environment stimulated by the Liberalisation has also contributed to an increase of Fairness - Fairness in Outcome.

The final Fairness level has not reached a maximum level due to the presence of market distortions that the Liberalisation was not able to remove. Among them, Barriers to Entry represent a major obstacle to European Fairness. Nevertheless, the Liberalisation has effectively increased overall Fairness.

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<sup>111</sup> That most probably has been used to raise prices above costs.

### 3.5.4 CONCLUSIONS

The environment in which the European air transportation industry had developed its activity has led companies to present disappointing performances. Most carriers, specially flag ones, had very low Efficiency levels and excessive expenditures<sup>112</sup>. Moreover, there were clear indications of stagnation, with companies not searching for innovative services or products. Finally, the operational restrictions, along with the major Barriers to Entry, reduced overall Fairness in Process. Nonetheless, the public service philosophy underlying all market operations was, at least theoretically, a guarantee of Fairness in Outcome, although the high fares would indicate otherwise.

The modifications brought about by the Liberalisation process have effectively laid down the foundations for the development of a high performance market. However, the Liberalisation was not the only moving force behind the improvement of Market Performance. The early 1990s economic recession, which had worsened the already poor financial performance of carriers, and the increasing competition from non-European carriers have led carriers to change their behaviour and adopt a new entrepreneurial policy.

Efficiency has continuously increased over time, especially after 1990. Although labour costs have increased, employees have successfully increased their productivity level, which, together with a reduction of the employment level, has led to an overall decrease in companies' costs, resulting in an increase in productive Efficiency. Furthermore, yields, after growing until 1990 have decreased since then, which reveals that the gap between prices and costs has been closing, resulting in an overall increase in allocative Efficiency, even with the upper level fares rising continuously.

This progress is also visible in the market, with new companies offering brand new services and incumbents struggling to follow their lead. In an entrepreneurial environment, the stakeholders placed at the forefront of progress can have competitive advantages, especially in a market such as the European, which did not present any signs of progress for so long.

Finally, Market Fairness has also increased during the Liberalisation period. The elimination of most governmental restrictions and the establishment of a common

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<sup>112</sup> As fares were fixed following a cost-related approach that theoretically maximised the allocative Efficiency, fares were identically high.

regulatory frame have given all companies the same rights, increasing Fairness in Process; however, this procedure has been weakened by the presence of some Barriers to Entry. As regards Fairness in Outcome, the continuous drop in yield values and the general increase in the carriers' Efficiency have benefited both customers and companies increasing its level.

Although one could argue that some improvements in Market Performance have been caused by other factors besides Liberalisation, the establishment of a common regulatory framework and the elimination of most of the previous barriers must have played a major role in the improvement of Market Performance, similarly to what had happened with Market Structure and Market Conduct. At least, Liberalisation has been a stimulus to other factors, since surely the economic recession would have been far less important if Liberalisation had not occurred. In conclusion, Market Performance has visibly increased throughout the Liberalisation period, with the Liberalisation process playing a major role in the process.

## 4 CONCLUSIONS

Since the late 1980s, the European air transportation market has been experiencing important developments at different levels, ascribable to the European Liberalisation process, at least to some extent.

In this Thesis, an economic model was used to draw inferences about the Performance of the European Liberalisation process. Chapter 2 fully describes the economic model - the Structure Conduct Performance paradigm - which is applied in Chapter 3.

The employment of the Structure Conduct Performance paradigm turned out to be, in some cases, somewhat difficult<sup>113</sup>. Two main limitations were found<sup>114</sup>. Firstly, the model is rigid, and it is necessary to precisely define the boundaries of each market dimension (however, in real world markets there are no exact limits), which created some problems in terms of correspondence between the attributes and the market dimensions. Secondly, this model is, in essence, static, which turned out to be a relevant drawback, since the air transportation market is highly dynamic and the Liberalisation process took 10 years to be finished.

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<sup>113</sup> Some of these difficulties were already pointed out in Chapter 2.

<sup>114</sup> Most likely because of the author's limited experience.

From the analyses carried out in the previous Chapter, various conclusions can be drawn about how the initial goals of the Liberalisation process were accomplished. Figure 4.1 presents the initial purposes of the Liberalisation process (considered in this Thesis) and the market outcome evaluated during the previous analyses.

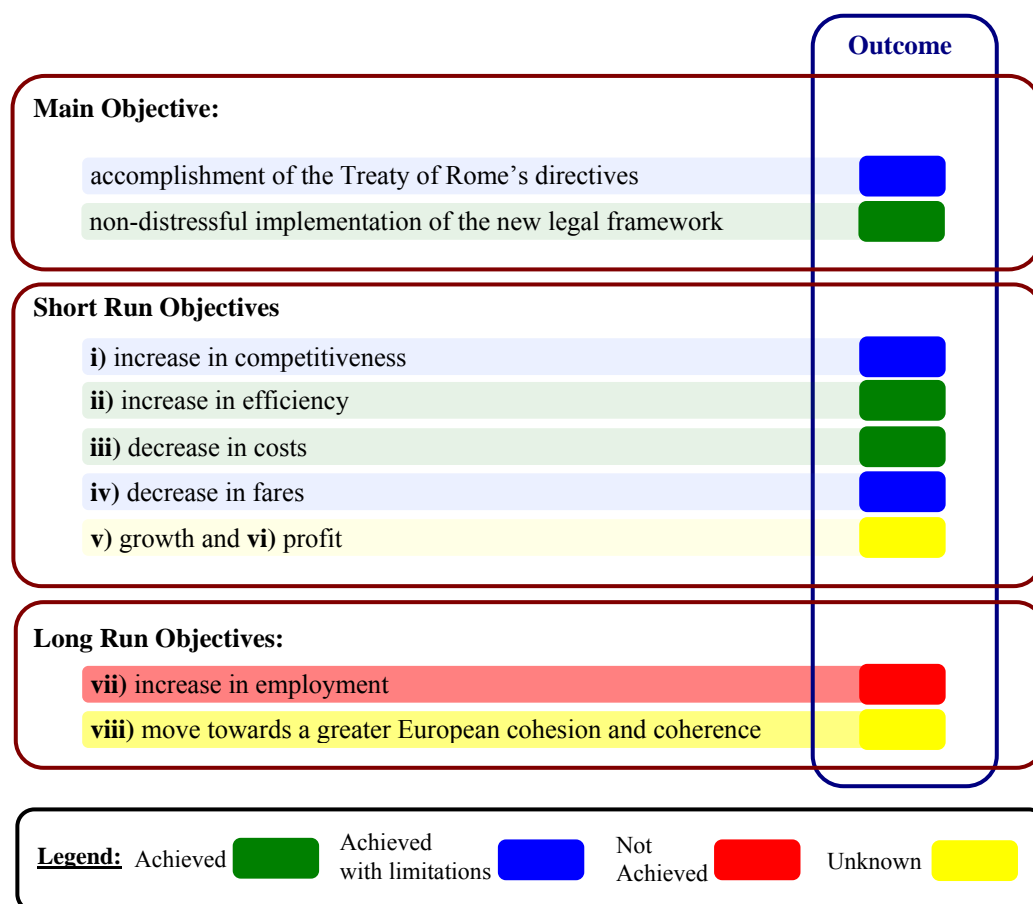


Figure 4.1 - Outcome of the European Liberalisation

The Liberalisation process has defined and implemented a set of uniform market rules across Europe, solving most of the former market distortions and establishing the foundations for the development of a single and commercially driven market in the European region. Furthermore, the new legal framework was implemented gradually and smoothly, in three phases, with time for stakeholders to adapt themselves to the new environment. However, the Liberalisation process failed to establish a completely free and open market. Firstly, not all Barriers to Entry were removed nor the necessary actions were taken to prevent the creation of new ones. Secondly, only the air transportation segment was affected by the process, while the rest of the value-chain regulation remained unchanged. Thirdly, the relationships with non-European countries were not considered in the process. Therefore, although the Liberalisation process has

introduced major changes in the market, relevant sources of market distortions have remained. It appears that the Liberalisation process was not sufficiently ambitious in its actions.

During the Liberalisation process, no major disturbances were found in the market. This was due to both the scarce competition that has arisen (usually focused on the busiest routes), and the few entries and exits that have occurred. The most relevant change in the Market Structure was the development of a new kind of companies: regional low cost companies, only possible due to the freedoms introduced by the process.

Nonetheless, important changes in the Market Conduct have occurred during the Liberalisation process, with incumbents adopting an entrepreneurial philosophy and newcomers presenting a dynamic and pro-active philosophy. These changes cannot be explained only by the slight increase in the level of competition in Europe, and therefore, other factors must have played an important role. Three sources of pressure were found. Firstly, with the end of governmental support, companies understood that they could in fact have to face bankruptcy. Secondly, the adverse macro-economic environment (see discussion below), which, combined with the previous factor, has put incumbents under major pressure. Thirdly, the increasing competition of both non-European carriers (see discussion below) and newcomers (although rather limited in the beginning), which came along with new and innovative services, compelling incumbents to adopt a different market approach.

The adoption of a more commercial behaviour has led to changes in the Market Performance. New and innovative services were introduced and the overall market efficiency has increased considerably. Newcomers presented high levels of efficiency and low expenditures, and incumbents became gradually more efficient. Although these carriers were not successful in reducing labour costs, they fruitfully increased the productivity levels, which, combined with the reduction of the employment levels, has led to a constant increase in the efficiency levels and to a decrease in costs per unit output. With the increase in efficiency levels and the reduction of costs (per unit output), the necessary conditions were fulfilled for the reduction of fares, however, not all of these have decreased, with the upper level fares (the flexible fares) continuously



increasing over time (only in those rare cases of high competition these fares have not raised).

Concerning the importance of the Liberalisation process for the increase in European cohesion and coherence, the analyses were inconclusive. Nonetheless, it is believed that the creation of a single market in Europe, along with the Integration moves and Agreements that were celebrated were important steps to achieve that goal.

It was also important to understand the extent to which the changes in the market were brought about by the European Liberalisation - on the one hand, and being the transportation market characterized by a derived demand, other outside forces have necessarily influenced it; on the other hand, the small changes in the competitive structure do not fully explain the changes in the conduct and performance. Two main driving forces were found: the macro-economic environment and the influence of non-European markets. As regards the former, the Liberalisation process was implemented during a major economic downturn, forcing companies to retrench and adopt a more defensive approach; moreover, this downturn appeared to be so relevant in the growth and profit of the market that no definitive conclusions were drawn about the actual influence of the Liberalisation process. With regard to the latter, due to the importance of those markets for the operation of the larger European companies, their behaviour and conduct was highly influenced by the changes that took place in those markets.

In summary, the Liberalisation process has solved most of the former market distortions, establishing a uniform and commercially driven environment in Europe. However, due to both the presence of several relevant market distortions, and the influence of outside forces that have negatively influenced the market, some of the initial goals have either been partially achieved or not achieved at all. Therefore, the main conclusion to be drawn is that the Liberalization process did not come up to its expectations.

During the analyses carried out in this Thesis, some fields of the Liberalisation process were not fully researched while others were not touched. This has occurred either because some of these aspects were beyond the scope of this Thesis, or because of the inherent limitations of a Master Thesis. Consequently, some relevant issues of the

Liberalisation process were not studied. With the purpose of helping other researchers in their future investigations about the Performance of the European Liberalisation, some guidelines are presented below.

- ◆ To include the charter companies. The non-scheduled market was their core market, and it was already rather liberalised; however since they moved almost 50 per cent of the total leisure passengers in Europe, they should be incorporated in the studies.

- ◆ To include the rest of the value chain stakeholders (for instance, airports, ground handlers, etc). The Liberalisation process essentially focused on the scheduled market, thus, these players kept their power and influence over the market, therefore being able introduce important market distortions.

- ◆ To include the non-European markets, because of the importance of those markets for the European companies; also, since the Liberalisation process did not change the relationship with third-party countries, they should be included in the analyses.

- ◆ To use different attributes in the Structure Conduct Performance paradigm. In this Thesis, only the attributes considered more relevant were used, however, others might also provide important perspectives on the Liberalisation process.

- ◆ To include the rest of the legislation related to the air transportation market (not included in the Liberalisation Packages). During the Liberalisation period, the European Commission released various legal texts to try to overcome some of the limitations of the process. It may be interesting to draw inferences about the impact of the new legislation in order to better understand the limitations of the Liberalisation process.

- ◆ To use other economic models. The Structure Conduct Performance paradigm is a powerful model, however some of its features are not compatible with a market like air transportation; thus, other models might be more adequate.



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