

Optimization of European Air Transport - Generous Intentions, Difficult Implementations and Controversial Results

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ABSTRACT

The paper's theme is research within the fields of socio-economic and human priority aimed primarily to stimulate partnerships in priority areas such as planning, balanced development, polycentric, based on transport systems. Important element that focuses on all research undertaken, consider policies and strategies offered by the EU in transport, and launching a new strategic concept (NCS), the European air routes optimization, allowing quick and easy movement into desired areas. In addition, it was found that many airports need a substantial upgrade. Scientific results and conclusions of this research are to draw some color pan European airline to optimize connections between Eastern and Western Europe. The industry is shifting gears in the recovery cycle. Growth is slowing towards normal historical levels in the 5-6% range. Relative weakness in developed markets is being offset by the momentum of economic expansion in developing markets. We see a strong end to 2010 that boosted the year's profit forecast to \$15.1 billion. Slowing traffic growth is in line with our projections for a reduced profit of \$9.1 billion in 2011, that's a 1.5% margin.

KEYWORDS

Air transport, Airlines alliance, Airport, Passengers, Performance

JEL Classification

L 93, M 10, R 41

Introduction

In the early 1900s an international trade theory called factor proportions theory emerged by two Swedish economists, Eli Heckscher and Bertil Ohlin. This theory is also called the Heckscher-Ohlin theory. This theory states that international and interregional differences in production costs occur because of differences in the supply of production factors.

Commodities requiring for their production much of abundant factors of production and little of scarce factors are exported in exchange for goods that call for factors in the opposite proportions. Thus indirectly, factors in abundant supply are exported and factors in scanty supply are imported (Ohlin, 1933). These simple statements lead to an important conclusion: under free trade, countries export the products that use their scarce factors intensively and import the products using their scarce factors intensively.

A country is labor-abundant if it has a higher ration of labor to other factors than does the rest of the world. A product is labor-intensity if labor costs are a greater share of its value than the are of the value of other products. Those goods that require a large amount of the abundant – and thus less costly – factor will have lower production costs, enabling them to be sold for less in international markets. The most frequently used explanation of the comparative advantage in international trade is the Heckscher-Ohlin factor proportion theory, which is based on differences in factor endowment among countries. The model ignores demand and can be used with caution to explain inter-sectorial exchange between industrial goods and services. The provision of tourism services is relatively labor-intensive. The factors are measured in terms of flows such as capital depreciation and working hours (Jafar Jafari, 2000).

1. Developments of airline transport industry

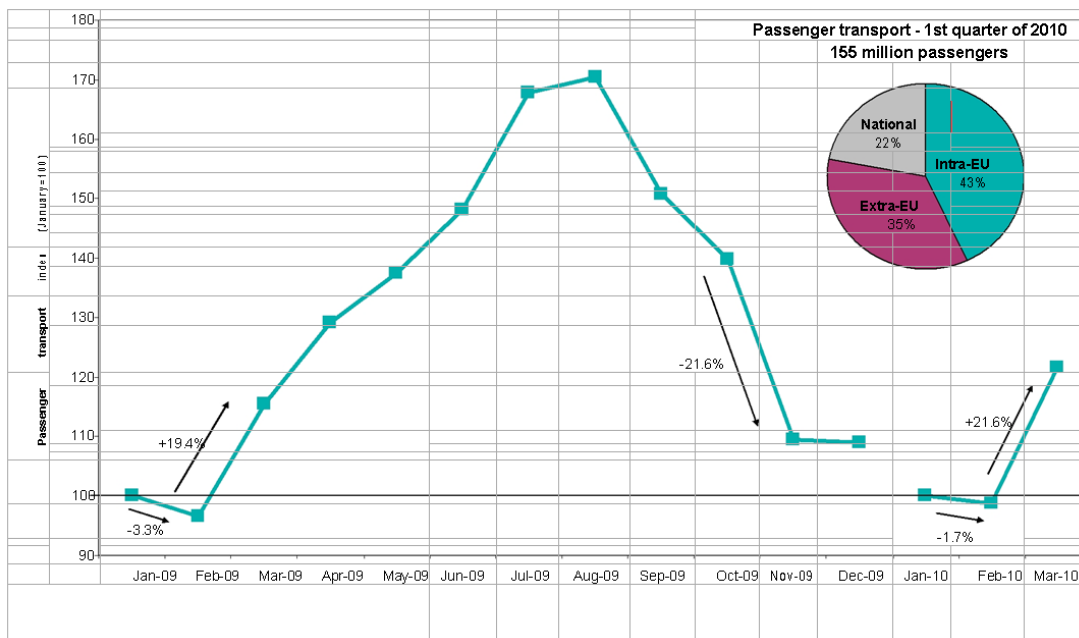
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At the Paris Convention of 1919, following the First World War, the allied countries decided that nation states would have full sovereignty over their own airspace. Since that time, national governments have been strongly involved in the development of national and international scheduled air transport networks.

From 1947 on, the International Air Transport Association (IATA) (the umbrella organization of the international airlines) set the ticket prices charged by the international airlines at the worldwide IATA traffic conferences. Frequently governments owned their national airlines, or subsidized them heavily. In short, the trinity of the national government, the national airline and the national airport dominated the international air transport markets. Little room was left for competition in the air transport regime of bilateralism (Guillaume Burghout, 2007).

Since the end of the 1970s the international air transport regime has been characterized by continuous deregulation of air transport markets. This trend started with the deregulation of the domestic US air transport market in 1978. Many bilateral air-service agreements were liberalized during the 1980s and 1990s. The United Kingdom–Netherlands agreement of 1984 and the United States–Netherlands agreement of 1992 were the first examples of these ‘open skies’ agreements between European countries and between the United States and other countries respectively.

Graph 1: EU-27 monthly passengers carried for 2009 and the first quarter of 2010 (January=100)*



In 1988 a first ‘package’ of deregulation measures marked the beginning of the full, multilateral deregulation of the EU air transport market, which was eventually completed in 1997. As a result, airlines are increasingly free to allocate resources in both space and time. The system of bilateral treaties no longer imposes a strict framework for intra-EU airline network development. Airlines can compete freely on ticket prices, frequencies, route networks and service levels. However, much of the extra-EU network is still regulated by means of bilateral air-service agreements.

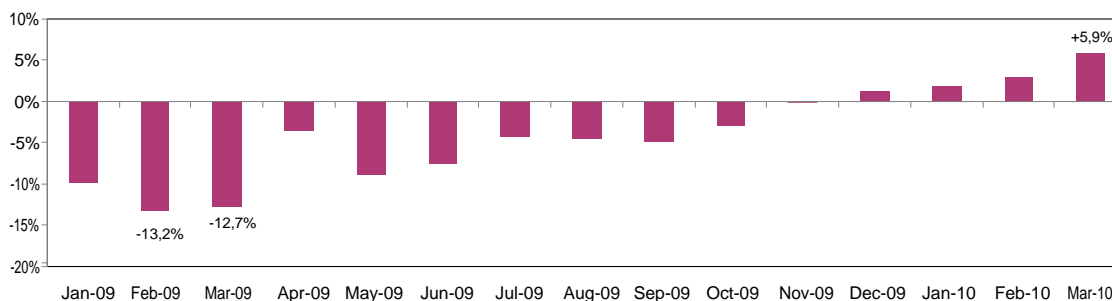
The regime changes in aviation, have resulted in significant changes for airlines and airports. Close examination of the consequences of deregulation of the US aviation market in 1978 reveals three important issues that existing studies have only addressed in a limited way with respect to the deregulated EU air transport market:

- the reconfiguration of EU airline route networks,
- dynamics in the EU airport hierarchy,
- the consequences for airport planning and development.

2. Economical view of airport

Theoretically, since any transport is a derived demand and most users would prefer not to travel in order to undertake a desired activity, transport is only used when the benefits of the activity outweigh the costs of travel. Air transport is used either when it is the only way to derive a net benefit or when it offers the greatest net benefit compared to other modes, this rationale holding for both passengers and freight. The funding constraints and the distortions due to subsidy can be eased by privatization. In some contexts, corporatization can overcome funding limits, but it is becoming more common to consider full privatization as a way of bringing genuine risk capital into airports. The general trend to supporting the ideology of privatization, together with the belief that governments should concentrate on their core strengths of legislating rather than managing airlines and airports, is causing a similar change in the role of institutions towards airports. There is an even greater possibility of airports having and abusing monopoly positions than with airlines, so the institutional role has to change from planning and facilitating to regulating profits (R. Caves, G. Gosling, 1999).

Graph 2: Evolution of EU-27 passengers carried (compared to the same month of the previous year)*



International routes were regulated economically for much the same reasons, with most countries subsidizing their flag carriers very heavily, fearing that stronger countries' airlines would capture larger market shares. The international regulations were based on the International Conference for Air Navigation in 1919 which was reinterpreted in 1944 by the Chicago Convention on Civil Aviation which brought the International Civil Aviation Organization into being in 1947. Among other things, members agreed to Freedoms of the Air, allowing the carriage of traffic between countries by the airlines of those countries (third and fourth freedoms).

Additional agreements, often of a bilateral nature, laid down more specific conditions. Those bilateral Air Service Agreements (ASA) often contained pooling arrangements between the licensed carriers which effectively stopped all competition except for the rare event when fifth freedom rights were granted to a carrier from a third country to carry traffic in the market. In general, each country took an equal share of the capacity on a route and operated some pooling of revenue. There were usually restrictions on the number of gateways which could be used. In return, as well as showing the flag abroad, the airlines were often expected to provide domestic services, often with uneconomic fare levels to meet social goals. They were also used as instruments of government policy, including their use for defense reserves, as a source of employment and as a showcase of a country's technological capability.

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3. Airline alliances

The emergence of the international alliances occurred after the market deregulation. The alliances affect the major activities of the carriers depending on the type and level of alliance. Networks could be integrated into different forms by incorporating the departures/arrivals of a partner carrier. The major objective is to add as many destinations as possible by accessing the connection system of the partners. The reasons for creating the alliances are *air-political*, i.e. the airline has no traffic rights and is precluded from controlling a foreign carrier that has this right; *economical*, e.g. its costs or fleet are unsuitable for that market; *infrastructural*, e.g. slots are not available; or *financial-related*, e.g. the airline has insufficient resources to develop new markets. For an airline, the benefits are the same as adopting a hub and spoke network: cost factors, demand factors and entry deterrence. By entering into an alliance, a carrier can increase market densities and reduce fixed costs in the markets with, for example, a code-sharing agreement.

This form of alliance confers a strategic advantage by allowing the partners to commit credibly to greater outputs, and the strategic effects arising from the elimination of the double-marginalization problem in vertical integration. The horizontal alliances reduce competition not only in the market where prior competition between the partners takes place, but also in the other markets of the alliance network. The hybrid alliance is a mix of vertical and horizontal alliances and it is likely to have both pro- and anti-competitive effects.

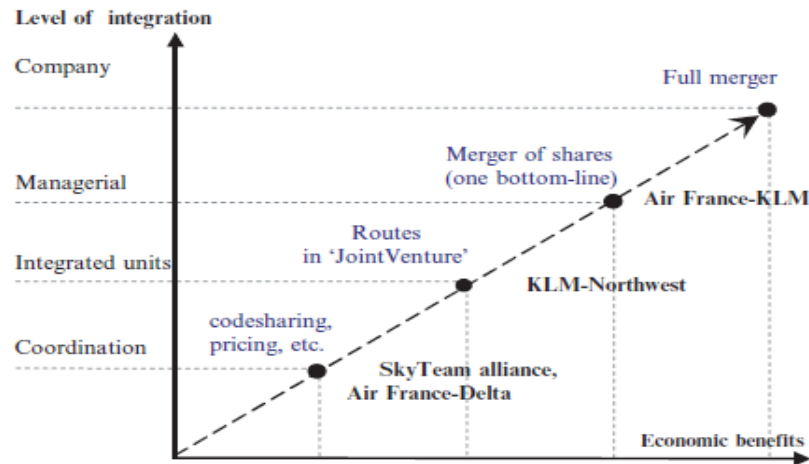


Figure 1. Different forms of alliances (A. Cento, 2009)

Attempting to define alliance success can be rather tricky as success is a very subjective concept. Indeed, success has a different meaning to different firms at different times. Success of a collaborative venture could mean survival to the ailing company or could be synonymous to market domination to the strong firm. The British Airways-US Airways alliance was a perfect example of how the meaning of alliance success could diverge between partners. At the time of the formation of alliances to British Airways, success was measured by the degree of access to the US domestic market while to US Airways, success was to avoid bankruptcy by benefiting from a cash injection. However, over time the position of the carriers changed and eventually their alliance, following British Airways announcement of possible partnership with American Airlines, was terminated in 1997 (A. Bissessur, F. Alamdari, 1998).

The existence of an alliance has a positive impact on passengers. Passenger of alliance benefits are multiple: the flight can be made with any member of the alliance; passengers benefits of standardized services of company; the air fares in alliance are in favor of passenger, more facilities offered to passengers in the alliance, etc. Besides the economic benefits of the alliance results from production, the effects of "alliance" are collected a psychological level with positive influence in marketing and sales, which is reflected in economic results. Standardization of services in the alliance has an important role in optimizing the costs. The companies will use the same communication and reservation systems reduced the technical costs of these departments.

4. Implications, limitations and performance of existing routes

Western European experiences show that air as part of a whole system of traffic, being in competition with road and air travel mode can have a significant rate only if the passenger can be delivered at speeds of at least 180km / h (Fengler W., Platzer G., 2006, p. 1). Most companies are considering inflatable railway line to decide how to use the infrastructure (Bussieck M. R., et al., 1997, p. 415). Opening to competition of international passenger services, which includes the right to pick up passengers at any station located on the route of an international service and set them down at another station, including stations located in the same Member State, has implications for the organization and financing of air passenger transport services provided under a public service contract. Member States of the European Union (EU) should be able to limit the right of market access where it would endanger the economic balance of public service contracts concluded between the state and the controller (Elijah E., 2010, p. 52).

In the case of air passenger transport analysis is carried out in three directions and involves:

- requirements analysis with implications to the basic geographic (location of targets) for current and future economic situation (industry, agriculture, tourism, education, culture and social situation).
- geographical restrictions (status of environment) within the legal and political resources.
- analysis of performance through quality indicators, quantitative indicators of safety and comfort.

The level of international air travel is now 4% above the pre-recession peak of early 2008. All regions, except Africa, reported a slowing in year-on-year growth rates from October to November. Europe's carriers recorded 7.3% growth in passenger traffic, below the 9.4% recorded in October. Overall travel performed by the region's carriers is only slightly ahead of the pre-recession levels of early 2008. In absolute terms there was a 1.7% fall in traffic volumes for the region's carriers between October and November. Industrial labor action and adverse weather conditions particularly affected Europe's carriers at the very end of the month.

The year-end 2010, holiday season has been tough for travelers and for airlines. Exceptionally adverse weather conditions in Europe and the US resulted in travel chaos. Passengers were inconvenienced. Airlines saw lost revenues and saw costs rise. As the backlogs of stranded passengers clear and the situation normalizes, there are two opportunities that must not be lost. The first is to learn and apply lessons from this difficult season so that all stakeholders in the industry's infrastructure are better prepared for future exceptional situations.

The second opportunity is to evaluate the regulatory world in which aviation operates. In 2010, the Icelandic volcano and the year-end adverse weather made the value of air transport crystal clear. Modern life and the global economy depend on aviation. Whether you are a business person operating in the global market, families keeping in touch across distances or heads-of-state on important foreign missions, aviation is critical.

Conclusion

Concerning the impact of Low Cost Carriers (LCCs) on consumer behavior, LCCs have redrawn the air travel landscape. They have opened travel to groups that could not previously afford it. By using regional airports, LCCs have also started to compete with traditional rail networks in many markets. Certainly in developed countries, international travel is no longer reserved for the rich, and it is increasingly viewed as a right rather than a luxury. LCCs have enabled businesses to significantly cut the costs of international travel and facilitate more face-to-face meetings. Many businesses have formalised cost-cutting measures which demand that employees travel within limited budgets. Although the impact of LCCs has traditionally been limited to short-haul routes, they look set to extend into longer-haul journeys, with a more extensive service, offering greater comfort than is currently offered on existing short-haul itineraries. Regarding the new developments of airline transport industry, Aircraft design is evolving in ways that will change the customer's journey. For example, larger aircraft will allow greater passenger comfort, small aircraft will give greater flexibility on routes, and more efficient technologies will enable airlines to fly cleaner, quieter and further. The 555 passenger, two-tier Airbus A380 has 49% more floor space yet only 35% more seating than the

previous largest aircraft, so seats and aisles can be wider and passengers more comfortable⁸. The A380 can fly 10% to 15% further than previous aircraft, enabling longer non-stop journeys, and produces fewer emissions and less noise. At the same time, smaller aircraft are expected to open up travel to new, smaller airports. For example new VLJ (Very Light Jet) models have increasingly long ranges and can take off from shorter runways, allowing them to operate from more airports. In the US, NASA envisages the use of VLJs as a point-to-point air taxi service⁹, which will become more accessible as operating costs and prices fall, driven by high utilization and efficient turnaround rates together with innovations in scheduling, which will allow individual seats to be booked, rather than the whole aircraft. Technological innovations are also enabling aircraft to become more fuel efficient. According to the International Air Transport Association (IATA), new aircraft are 70% more efficient than 40 years ago and 20% better than a decade ago. The industry is aiming to increase fuel efficiency by an additional 50% by 2020. Furthermore, the boundaries of travel are continually being pushed, with the first sub-orbital space tourism flights planned for 2009. Resulting innovations could have implications for the airline industry, such as the development of composite materials that could be used to construct aircraft in the future, and the development of environmentally 'cleaner' bio fuels. Rising cost of oil. Increased energy demand from rapidly developing economies such as China and India has pushed up primary energy prices. No new major oil fields have been found since 1976, with some commentators suggesting that peak oil production will be passed within the next few years. At the same time, world demand for crude oil is growing - from 78 million barrels per day in 2002 to 84 million barrels a day in 2005¹⁰. China is predicted to consume nearly as much oil as US by 2020. With demand set to reach 103 million barrels per day in 2015 and to over 119 million barrels per day in 2025, the future is likely to be one of continuing high prices. Nevertheless, consumers have proved resilient to increasing fuel surcharges in the past few years, with air travel continuing to grow despite these extra costs to travelers.

Furthermore, airport capacity, which is suitable for substantial hub operations, is scarce in Europe. Moreover, the current allocation mechanism of slots through grandfather rights is a barrier to entry at congested airports. Finally, the network economies of hubbing favor the addition of connections to existing hubs rather than the development of new hubs that serve the same market. Regional and low-cost airline networks were less stable than national airline networks. They frequently showed discontinuous changes. Some regional carriers established niche hubs, while others concentrated on traffic feed to the major carriers.

The second half of the 1990s saw the rise of the low-cost carrier, dedicated to serving point-to-point markets only. Some of the low-cost airlines served primarily the smaller, non-hub airports; others concentrated on the major airports in Europe.

The rise of the low-cost carriers and the growth of regional operations contributed to a de-concentration of intra-EU traffic. However, only part of the smaller airports reaped the benefits from this concentration trend, leaving most of the other small airports with below average growth levels or even decreases in direct air service.

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