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# The impact of US–EU "Open Skies" agreement on airline market structures and airline networks

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A B S T R A C T

The gradual liberalization of international air transport has largely benefited the traveling public. Progress since the development of concepts such as "Open Skies" in the late 1970s as an alternative to the restrictive bilateral air service agreements that had effectively controlled most international air transport since the mid-1940s has been uneven and spasmodic. The recent move to open the North Atlantic more fully to competition has proved a particularly challenging task, and the agreement between the US and the European Union is still both partial and conditional. This paper offers an overview of the economics of the situation and provides insights into the reasons why it has developed in the way it has, the outcomes that we may expect from it, and some consideration of the wider, non-commercial, impacts that it may have.



## 1. Introduction

From the late 1970s, when first the US domestic cargo market was liberalized followed by the domestic passenger sector, there has been a gradual withdraw of the state from the specific economic regulation of airlines. Internationally, the initial moves at deregulation can be traced to the initiation of the US's "Open Skies" policy from 1979. The recent opening up, at least to a substantial extent, of the US–EU[1] transatlantic market is the one of the most significant measures of international airline liberalization since the removal of international market barriers within the European Union (EU). The US–EU passenger market is substantial. In 2007 it accounted for 55 million passengers, 385 flights per day in each direction and 235 nonstop city-pairs served by 45 airlines comprising eight from the US, 26 from the EU and 11 others. Geographically, 32 airports in 23 states were served on the US side and 53 airports in 19 countries in the EU.

The development comes at a time when similar measures have been initiated in other long-haul markets (e.g. between the US and Australia), and when there are similar, some complementary, changes taking place within air transportation more generally, including initiatives to improve air navigation systems, the coming on-line of new aircraft, developments in the way that airports are used and financed, and structural changes within the industry as a new wave of merger takes hold.

Understanding a little of the history of the recent develops on the North Atlantic helps us appreciate why the current arrangements exist, and offers some insights into likely future institutional changes. It is inevitable that the current regime is only a stepping-stone. Understanding the nature and economics of the airline industry helps in appreciating how carriers, and other suppliers such as airports, are likely to react to the new situation. It is also helpful to look beyond the narrow and specific confines of air transportation issues to explore the implications of more generic policies, such as industrial and security policies, may be for the long-term development of the North Atlantic market.

## 2. Institutional background

International air transportation has, until recently, been one of the most regulated of industries. The Chicago Convention of 1944 laid down a basis upon which a system of international bilateral air service agreements (ASAs) was founded.[2] This was a compromise arrangement that attempted to reconcile the very liberal, free market ideas of the US on the one hand and the more restrictive ones of countries such as Australia (that wanted a single global carrier) on the other. There were particular fears in some countries that the US, that had the largest fleet of

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[1] US–EU is used throughout rather than EU–US simply because of where the author is currently based.

[2] The Convention also established the United Nations' International Civil Aviation Organization (ICAO) to oversee international agreements. Importantly, the ICAO also has remits that cover a range of safety and security oversight matters that has largely allowed these to be treated separately to issues of economic regulation.

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commercial aircraft at the time and the potential of adding to this by converting surplus military hardware, would dominate any largely market-based outcome and thus an institutional structure emerged that led to piecemeal, and restrictive, practical arrangements.

The Convention did not stipulate any particular form of international service structure but rather established national sovereignty over airspace and an institutional framework within which nations could essentially trade these rights ("freedoms of the skies") amongst themselves. The outcome was a mass of bilateral agreements between countries that, in general, stipulated which airlines that could fly between them, the capacity of each airline, the fares to be charged, and, often, how the revenues generated were to be shared between the carriers. Similarly, air navigation services were sovereign responsibilities and a patchwork of systems emerged that impinged upon any notion of seamless air travel.

These restrictive bilateral ASA regimes were, at the time, seem as a step forward from the *ad hoc* and often opaque institutional structures that existed before, and they came at a time when international air transportation was still relatively new with many markets small and embryonic after the devastation of the Second World War. Because of this, they probably did little to impede the development of the sector for some time. Additionally, domestic markets were normally regulated although the structure differed between countries. In some countries there were single state-owned monopoly carriers whereas in others, such as the US, there were private airlines but competition was highly regulated. In many cases, institutional barriers prevented domestic and international carriers of a country operating in each other's markets.

The macro-economic conditions of the late 1970s ("Stagflation"), combined with background pressures generated in part by a series of academic studies, led to a sea-change in policy thinking. The US initially legally removed most economic regulation from its domestic market in 1978 and other countries, either through *de jure* reforms or *de facto* actions, gradually loosened theirs. The move towards greater economic and, to a lesser degree political, integration in Europe in the 1990s brought with it the creation of a Single European Market, including that for air services. This embraces not simply the ability of airlines that meet safety and environmental criteria and do not violate European Union (EU)[3] competition policy from operating anywhere within Europe, but it also removed any ownership restrictions for airlines offering purely domestic or intra-Union services.

The experiences of deregulation (or in Europe, "liberalization") of air transport markets over the past quarter of a century are generally seen as having produced significant economic benefits.[4] Not everyone has gained, certainly some communities have lost services or have seen service quality decline, some airlines have gone bankrupt, and some classes of passengers are now paying higher fares, but for those few that have been adversely affected there are many more who can fly more cheaply, have a greater variety of services to choose from, or have found jobs in the extended air transportation value chain. No positive change occurs without disruption, and that has certainly been the experiences of airlines, but these negative features have been far outweighed by the positive effects.

International air transportation deregulation was generally slower to emerge than domestic reform because of the need for a double coincidence of interests.[5] US policy makers first muted the general idea of bilateral "Open Skies" policies to replace the highly restrictive air service agreements as early as 1979, but it took another dozen or so years before the first major one, with the Netherlands, was signed. Since that time, a further 60 or so liberal agreements, of varying importance, have been signed between the US and partners, including many European states. The emergence of the large free trade area in air transportation service within Europe from the mid-1990s was another element in freeing-up other international markets by having both knock-on and demonstration effects for regions outside of the European area.[6]

## 3. The economic condition of the airline industry

Airlines find it difficult to recover their full costs in competitive markets. As seen in Fig. 1 that reports operating margins,[7] both globally and for two of the largest markets, there are clear cycles in the financial performance of the industry that correlate with the larger business cycle. But, in addition, taken overall, the airline industry has performed badly across cycles. In the US, for example, over the past 20 years or so the operating margins of US airlines has been about 0.4% compared with an average of well over 5% for US industry as a whole. The period has also seen a number of traditional airlines cease operations permanently (e.g. Pan Am and TWA in the US and Sabena and Swissair in Europe) as well as a much larger number of new entrants, and particularly low cost carriers.

There have been a number of "events" in recent years that particularly impacted on commercial aviation, adding the to normal market uncertainties of the industry and the larger, temporal trends that are on-going.

### 3.1. September 11th, 2001 terrorist attacks

The attacks on the US in 2001 had implications for the global air transportation market. It not only led to an immediate shutting-down of large parts of the system, most notably those associated with the US market, but also to a longer-term reduction in demand as concerns about the safety of air travel emerged. The additional security measures that were put in place following 9/11 added to the cost of air travel, not simply in monetary terms but also because of the additional time and inconvenience associated air travel. This came at a time when there was already a downturn in the business cycle that began in the US in 2000.

### 3.2. Severe acute respiratory syndrome (SARS)

The SARS epidemic had a severe, albeit it relatively short-term impact on the international civil aviation market in 2003, and in particular adversely affected a number of Asian markets. While difficult to isolate out the particular implications of the disease of the finances of the sector, the *Official Airline Guide* shows that flights to China fell by 45% between June 2002 and 2003, by 36% between

[3] For ease of drafting, the title European Union (EU) is used throughout although legally it has changed over time.

[4] For example see Button (2004) for an examination of the European experience, and Morrison and Winston (1995) for an account of the effects of deregulation in the US. Following the initial moves to creation of the Single European Aviation Market in 1993 the average annual growth rate in traffic between 1995 and 2004 was almost double the rate of growth from 1990 to 1994 (InterVISTAS-ga[2], 2006).

[5] In addition, liberalization of other elements in the air transportation supply chain (airports, air traffic control, etc.) has been slow leading to continuing distortions in both domestic and international markets that inevitably will limit any gains from the further liberalization of airline markets.

[6] Organization for Economic Cooperation and Development (1997) provides an account of wider trends in international air transportation, and offers some alternatives for moving forward with market liberalization.

[7] Operating margins are reported rather than net margins that can be influenced by vagaries in tax structures and lumpy investments. Estimates by IATA *Fact Sheet*, March 2007 are that the net margins for its members were −1.5%, −0.8% and −0.1%, respectively, for 2004, 2005, and 2006. Physical measures – revenue passenger kilometers and revenue ton kilometers are the standard industrial parameters – are not used because they do not directly affect the financial performance of airlines.