

# TAKING FLIGHT: THE ECONOMIC CONSEQUENCES OF THE EU-US OPEN SKIES AGREEMENT

EMMA KEARNS

*Senior Sophister*

*We have grown accustomed to low-cost flying within Europe thanks to recent efforts to liberalize what was historically a heavily regulated industry; however, the first agreement pertaining to transatlantic air travel between the EU and the US was signed only as recently as April 2007. Emma Kearns investigates the impact of the 'open skies' agreement on the aviation industry, giving particular mention to its predicted knock-on effects for Ireland. Increased transatlantic competition is expected to benefit consumers through lower prices, as well as improved choice and quality of service. Non-passenger considerations and the implications of issues such as the environment and the looming US recession are also discussed.*

## **Introduction**

The 'open skies' agreement is the first aviation treaty signed by the United States and the European Union. It is due to take effect from the 30th March 2008. The primary objective of 'open skies' or an Open Aviation Area (hereafter OAA) is to eliminate the restrictions that are currently implemented through the traditional bilateral air service agreements. It will remove constraints on the destination, frequency of flights and on the number of carriers authorized to fly between the two regions:

‘The ultimate objective of the European Union is to create an Open Aviation Area: a single air transport market between the EU and the US in which investment can flow freely and in which European and US airlines can provide air services without any restriction, including access to the domestic markets of both parties’ (European Union: Delegation of the European Commission to the USA website, 2007).

This preliminary agreement paves the way for the aviation industry to be regarded as any other 'normal' global industry. While this is the first stage agreement between the parties it is expected to act as a blueprint for world aviation.

This paper will briefly discuss the history of the aviation industry and how it has evolved from a highly regulated market to the current industry structure. It will also investigate the implications of this agreement on market operators and consumers, giving a concise analysis of non-passenger concerns such as employment, cargo and airport slots. Special mention is also given to the implications the agreement may have on aviation in Ireland. Furthermore, consideration will be given to environmental issues, the fragile US economy and the potential impact of a recession on the aviation industry.

## **A Brief History**

Traditionally the aviation industry has been characterised by protectionist policies, resulting in high prices, low productivity and inefficiency in the market. Typically the state owned airlines or 'flag carriers' dominated the market and as a result enjoyed monopoly power. A key feature of a monopoly is barriers to entry which prevents other firms entering the market. A monopolist has the ability to set price above marginal cost. This gives rise to the existence of supernormal profits in both the short- and long run. Owing to the fact that a monopoly does not operate at a price equal to marginal cost they are inefficient and generally wasteful of resources. Notably, incumbent airlines strategically used regulatory capture to keep new entrants out of the market.

The US were first to deregulate the aviation industry with the Airline Deregulation Act of 1978. In Ireland the market was deregulated through the Anglo-Irish agreement in 1986 which opened up the skies between Ireland and the UK. On the first day that deregulation was introduced airfares on the Dublin-London route fell by 54% (Barrett, 1997). This remarkable fall in prices illustrates the positive effect deregulation can have on a market. By allowing competition into a market it forces incumbents to lower prices or risk losing their market share to new entrants. Deregulation in the rest of Europe followed in 1993 with the creation of the Single European Market, with the policy of protectionism ending on April 1st 1997. Although the aviation sector has clearly come a long way, restrictions still remain on airlines operating between the US and the EU. The objective of the new 'open skies' agreement is to remove the barriers that currently restrict competition.

## Market Structure

At present the transatlantic aviation market is not perfectly competitive. A perfectly competitive market is characterised by a large number of firms, no barriers to entry or exit and, firms operating at a price equal to marginal cost. This implies that no supernormal profits are earned. In practice a perfectly competitive market is difficult to achieve. Baumol's theory of contestable markets serves as a more accurate approximation of reality. It does not require a large number of firms in an industry as is the case in perfect competition. However, it yields the same competitive results: 'A contestable market is one into which entry is absolutely free, and exit is absolutely costless' (Baumol, 1892: 3). It is the threat of new entrants that confers contestability to a market. By eliminating some of the barriers that hinder competition in the aviation industry, the OAA is a step towards full liberalisation.

The OAA will increase competition for transatlantic carriers. This will compel the existing incumbents to operate more efficiently or face significant losses. It will also reduce their relative market power as more firms are authorized to enter the market. The liberalisation of the industry will enable firms to expand their capacity utilisation through new and increased services. This will facilitate the move towards an optimal level of production i.e. at the lowest point on the average cost curve. As all carriers in the industry converge towards optimality, it will augment the efficiency of the entire market, not just on the transatlantic routes. Airlines will be able to pass on cost savings to consumers within the EU and US regional markets.

Deregulation will generate economies of scope through increased network size, possible mergers and alliances. It will allow carriers to operate on a larger scale without hindering the competitiveness of the market. Firms will be able to coordinate their activities in order to reduce costs and subsequently pass on the saving to customers in the form of lower fares. Consolidation appears to be the way forward. Prior to the implementation of the 'open skies' agreement airline mergers were already in progress. Recent mergers include Air France and KLM, Easyjet and GB Airways and Lufthansa and Swiss Air. These mergers have the potential to exploit scale economies in allowing:

'Two carriers to spread certain fixed costs over more passengers (scale economy). The carriers might achieve added savings by reconfiguring their combined network to connect more flights to certain hub airports (scope economy). They might also achieve higher utilisation e.g., by combining traffic to raise load factors (density economy)' (The Brattle Group, 2002: 5).

These findings demonstrate the probable cost savings that can be accomplished. Through an OAA, overall efficiency of the market can be enhanced.

## Consumers

Increased competition will lead to lower fares for passengers. This in turn will stimulate demand in the transatlantic market. It is estimated that the agreement will generate twenty-six million additional passengers over the first five years (Booz Allen Hamilton Ltd., 2007). The rise in passenger numbers will provide stable growth for the transatlantic market. Lower fares will increase consumer surplus. The magnitude of the growth will be determined by the price elasticity of demand.

**Figure 1. Consumer Surplus Diagram<sup>1</sup>**

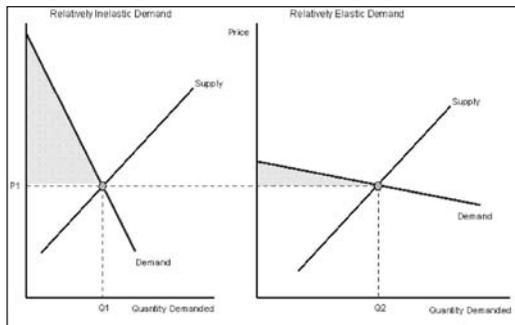


Figure 1 illustrates that the more inelastic the demand for a commodity the higher the potential consumer surplus as some people will be willing to pay a high price in order to continue consuming the product.<sup>2</sup>

The estimated consumer surplus over the first five years of the agreement is shown in Table 1. It demonstrates that consumer surplus is expected to lie between €6.4 billion and €12 billion depending on how responsive consumers are to changes in price. The greater the sensitivity to price, the more impact a

<sup>1</sup> Source: <http://tutor2u.net/economics/revision-notes/as-markets-consumer-surplus.html>

<sup>2</sup> A consumer with relatively elastic demand is more responsive to changes in price, thus a price increase will cause a more than proportionate fall in quantity demanded, as consumers will switch to close substitutes. In the case of relatively inelastic demand consumers are less responsive to changes in price. A rise in price in this case will cause a less than proportionate fall in quantity demanded.

price reduction will have.

**Table 1. Estimated Consumer Surplus<sup>3</sup>**

Year	Price Elasticity = 1	Price Elasticity = 2
1	1,000	410
2	2,000	850
3	2,800	1,300
4	3,200	1,700
5	3,400	2,100
Total	12,000	6,400

In addition to this gain, consumers will also benefit from the ‘open skies’ agreement through improved choice and quality of service. As the number of carriers grows, firms will endeavour to improve their services in an attempt to gain market share.

## **Non-passenger Considerations**

### **Employment**

The benefits of the ‘open skies’ agreement extends beyond that of the consumer. One of the consequences of an enlarged transatlantic market will be the creation of additional employment:

‘The elimination of output-restricting bilateral agreements is estimated to range from 2,800 to 9,000 employees in the EU aviation industry. The increased employment in the United States from both effects is estimated to range from 2,000 to 7,300 additional employees’ (The Brattle Group, 2002: 75).

Indirect employment will also be augmented in supporting industries.

### **Cargo**

The air cargo industry is a sizeable market. Through the liberalisation of the aviation industry it will provide this sector with an impetus for expansion. At present air trade accounts for 50% of total merchandise traded between the EU and US. Growth of between 1-2% of the existing market is expected (Booz Allen

---

<sup>3</sup> Source: Booz Allen Hamilton (2007: 7)

Hamilton, 2007). The enlargement of the cargo industry will in turn generate auxiliary employment in this sector.

### **Airport Slots**

‘Airport slots or units of capacity at capacity-constrained airports are allocated to airlines in order of seniority: that is according to an airline’s grandfather rights at the airport’ (Barrett, 2007: 64).

This method of slot allocation hinders competitiveness at hub airports. The demand for these slots will be significantly enhanced through an OAA as airlines launch new routes in response to the new emerging market. At present the price of slots in hubs are expensive. Where capacity is constrained and demand continues to escalate, the cost is expected to increase further. In 2006 slots at Heathrow cost €15million per pair (Barret, 2007). Carriers face an opportunity cost regarding the retention or sale of these slots. There has been a shift towards the use of outlying airports where there is spare capacity. Ryanair have taken advantage of such airports and consequently reduced their cost base. The airport charge for Aer Lingus was shown to be 85% larger than that of Ryanair in 2007 (Barret, 2007). Owing to the fact that Ryanair fly into smaller airports it allows them to achieve complete turnaround in twenty minutes. This efficiency could not be accomplished at a hub airport. This illustrates the potential savings that could be made if carriers substitute away from hubs. This may become a viable strategy for many carriers as the traffic at hubs is expected to be augmented through an OAA.

### **What Does ‘open skies’ Mean for Ireland?**

As discussed above, the ‘open skies’ agreement between the EU and US will liberalise the transatlantic aviation market. Consequently the market will become more competitive as the barriers that previously restricted entry will be eradicated. With the intention of gaining an understanding of how this agreement will affect the Irish economy, a reflection on the influence deregulation initially had is required. Deregulation had a profound influence on the Irish aviation industry. It resulted in a remarkable reduction in airfares with fares on the Dublin-London route more than halving on the first day of deregulation. Lower airfares were not the only consequence however; the tourism sector also boomed:

‘In 1994 the Irish Government Green Paper on Aviation Policy estimated that airline deregulation had generated a 60% increase in visitor numbers, additional tourist earnings of £560m and an additional 25,000 jobs in tourism over the years 1987-1993’ (Barrett, 2007: 71).

Deregulation enhanced access and enabled tourists to travel to Ireland more affordably.

With this in mind, the ‘open skies’ agreement ought to have a positive effect on the Irish economy in terms of employment opportunities, tourism and lower fares for consumers both in the transatlantic and regional markets. Ireland is a FDI intensive country with most of the investment coming from the US. By 2006 Ireland had attracted 470 firms from the US alone, creating 95,515 jobs (IDA Ireland website). This is a considerable market and through an OAA greater access to Ireland via the US is possible. Perhaps this will further stimulate FDI investment into Ireland in the coming years.

The regional airports in the West of Ireland will be net beneficiaries of an OAA. Table 2 illustrates the number of routes served by the nine airports of the western region. This is comparable to the 150 routes served by Dublin airport.

**Table 2. Number of Routes Served from Irish Atlantic Region Airports, Summer 2007<sup>4</sup>**

Shannon	47
Cork	40
Knock	18
Galway	16
Derry	12
Kerry	6
Waterford	5
Donegal	2
Sligo	2
<b>Total</b>	<b>148</b>

As previously noted, when airlines opt for outlying airports there is substantial time and cost savings to be made. It is evident from the figures above that these airports could serve as an alternative to Dublin. Airlines that intend to take advantage of the liberalised transatlantic market have the option of using

---

<sup>4</sup> Source: Barrett (2007: 69)

these regional airports to facilitate the addition of new routes. They also have the capacity for use as a base by US carriers. These regional airports are likely to benefit in terms of employment due to increased passenger traffic.

## **Further Considerations**

### **Environmental concerns**

As the 'open skies' agreement is expected to boost the volume of air traffic it will have auxiliary implications for the levels of pollution. The aviation industry currently constitutes 3% of greenhouse gas emissions (European Commission, 2008). This figure is set to rise due to the expected escalation in worldwide travel. Air travel also contributes to the levels noise pollution. As a result, the EU has launched a Clean Sky initiative:

'By 2020, Clean Sky hopes to cut emissions of carbon dioxide by 50%, nitrogen oxide by 80% and noise pollution by 50%, as well as setting up an eco-friendly life cycle for products – design, manufacture, maintenance and scrapping / recycling' (European Commission website, 2008).

This initiative aims to diminish the pollution caused by the aviation industry.

### **World Economy**

The state of the world economy is liable to have an influence on the aviation industry. The US economy is on the brink of a recession. The subprime crisis, combined with a growing budget deficit and weak dollar, has left the US economy in a vulnerable position. The weak dollar in relation to the euro renders European goods more expensive relative to US domestic goods. Furthermore, it makes it more expensive for Americans to holiday in Europe. If these exchange rate conditions persist it could reduce the demand for transatlantic flights in the US. Moreover, trade between the US and Europe could diminish, thus impacting on air cargo services.

Due to the network effects of globalisation the subprime crisis has not been confined to the US. Investors and institutions internationally have been affected. If there is a slowdown in the world economy this could have adverse consequences on the entire aviation industry, not just on the transatlantic market. Consumers may opt for fewer journeys abroad if they have less income, thus reducing the demand for both short haul and long haul flights. Moreover, if the price of oil continues to rise, it will inflate operating costs for airlines and

diminish their ability to lower costs. It can be deduced from this that airfares may increase, further depressing demand.

## **Conclusion**

It is probable that the 'open skies' agreement will have positive consequences on the aviation industry as a whole. While this is a preliminary agreement and further issues need to be addressed, it offers the potential to liberalise the transatlantic market. As discussed, deregulation has favourable effects on a market. It compels incumbents to operate more efficiently or be forced out of the market by new entrants. Consumers benefit via lower prices, superior choice and an overall improved service. However with the instability of the world economy at present, it is difficult to fully postulate the true impact this agreement will have. Despite these concerns it is the potential for competition that is imperative for the efficient operation of any market. The 'open skies' agreement will lay the foundations for the future of the entire aviation industry.

## **Bibliography**

Barrett, S. 1997. 'The implications of the Ireland-UK Airline Deregulation for an EU Internal Market'. *Journal of Air Transport Management* 3:2:67-73.

Barrett, S. 2007. 'Hub Airport Slots, Market Exit and Irish Regional Economic Development'. *Quarterly Economic Commentary Winter 2007*: 63-79.

Viewed at:

[http://www.esri.ie/UserFiles/publications/20071220111940/QEC2007Win\\_SA\\_Sean%20Barrett.pdf](http://www.esri.ie/UserFiles/publications/20071220111940/QEC2007Win_SA_Sean%20Barrett.pdf) accessed on 04/02/2008

Baumol, W. 1982. 'Contestable Markets: An Uprising in the Theory of Industry Structure'. *The American Economic Review* 72:1:1-15.

Booz Allen Hamilton Ltd. 2007. 'The Economic Impacts of an Open Aviation Area the EU and the US'. Viewed at:

[http://ec.europa.eu/transport/air\\_portal/international/pillars/global\\_partners/doc/us/eu\\_us\\_study\\_executive\\_summary.pdf](http://ec.europa.eu/transport/air_portal/international/pillars/global_partners/doc/us/eu_us_study_executive_summary.pdf) accessed on 04/02/2008.

European Commission. 2008. 'Lighter, quieter and smarter – designing tomorrow's planes'. Viewed at:  
[http://ec.europa.eu/news/transport/080205\\_1\\_en.htm](http://ec.europa.eu/news/transport/080205_1_en.htm) accessed on 06/02/2008.

European Union: Delegation of the European Commission to the USA. 2007. 'Open Skies: Jacques Barrot in Washington to sign historic aviation deal at the EU-US transatlantic summit'. Viewed at:  
<http://www.eurunion.org/News/press/2007/2007044.htm> accessed on 02/02/2008

IDA Ireland Website. 'Foreign Direct Investment in Ireland'. Viewed at:  
<http://www.idaireland.com/home/index.aspx?id=2359> accessed on 05/02/2008.

The Brattle Group. 2002. 'The Economic Impact of an EU-US Open Aviation Area'. Viewed at:  
[http://www.brattle.com/\\_documents/UploadLibrary/ArticleReport2198.pdf](http://www.brattle.com/_documents/UploadLibrary/ArticleReport2198.pdf)  
accessed on 06/01/2008

Tutor2u Website. 'Consumer Surplus'. Viewed at:  
<http://tutor2u.net/economics/revision-notes/as-markets-consumer-surplus.html>  
accessed on 05/02/2008.