

## **THE EVOLUTION OF THE AVIATION SECTOR TOWARDS CONTESTABILITY AMONGST AIRPORTS**

Jessica Loughnane

*Senior Sophister*

*The dramatic evolution of the aviation sector in the last two decades is examined by Jessica Loughnane in this essay. The role that low-fares airlines have played in this liberalisation is examined as is their effect on the Dublin-London air route. A look is also taken at the barriers to contestability that remain within the aviation sector.*

### **Introduction**

The aviation sector has undergone fundamental transformation in recent years. Liberalisation of the European and US skies alongside the emergence of competitive, innovative low-cost airlines<sup>1</sup> has resulted in a radically new aviation market defined by efficiency, productivity and competitive practices. The consequences of these improvements have had far reaching effects. Air travel is no longer reserved for the privileged few who could afford the inordinately expensive flights of the previous era, and the destinations available to consumers have multiplied greatly to include every corner of the world. This is a radical departure from the historically costly and inefficient aviation sector of the previous forty years, which had opted out of 'normal market economics'. A combination of reduced airfares and a more efficient, productivity-orientated outlook from airlines has greatly affected the role of airports. Airlines are now price sensitive; airports can no longer charge rates in the knowledge that airlines will simply pass on the added cost to passengers. A competitive market has emerged among airports as a result of deregulation and increased scrutiny by airlines of the cost structure within airports. The dominance of the traditional hub airports during the previous era has been eroded; low cost airlines have taken an innovative approach to air travel and have chosen to base their activities in cost conscious 'peripheral' airports within an hour or two of the most popular European cities via ground transport. Ryanair notoriously started this trend by using airports such as Beauvais, Charleroi, and

---

<sup>1</sup> Such as Ryanair, a highly successful European low-cost carrier, which copied to some extent the model of Southwest, an American low-cost airline that had achieved market dominance in the USA.

## THE EVOLUTION OF THE AVIATION SECTOR

Frankfurt-Hahn, airports a few hours from Brussels, Paris and Frankfurt respectively. Due to the rapidly changing economic environment of the airlines, numerous spillover effects have touched the airport sector.

The changing nature of the market structure for airports cannot be analysed in isolation. One must examine the evolution of the aviation sector as a whole in order to fully comprehend the radical transformation of this industry in recent years. This essay endeavours to outline the background against which aviation took place prior to deregulation, and the effects that this had on all sectors in the industry. The deregulation of domestic skies within the EU has resulted in a radically altered market structure, enabling low cost carriers to emerge, the importance of which cannot be underestimated for the industry but in particular for airports. Low cost airlines have played a pivotal role in ensuring competitive practices are adopted among airports, in particular the role of Ryanair is discussed due to its first mover advantages within Europe and the market dominance it has achieved.

### **The aviation industry before deregulation**

The Chicago conference of 1944 set the tone of the aviation sector until the mid 1980s. Aviation was conducted on a bilateral basis with predetermined capacity and price levels for national 'flag-carriers'. Thus the sector became characterized by numerous market distortions in the form of government interventions and regulations, exceedingly high fares, large quantities of government subsidies and loss-making airlines. The situation was aptly described by Dr. Barrett as a 'Noah's Ark system' with two airlines, two airports and two governments in agreement over fares, frequency of flights and routes (2005). Resistance to change came from many quarters. Airlines wished to maintain the status quo as huge economic rents and supernormal profits were created by the lack of competition in the sector; existing airlines had created an oligarchic market in which they could dominate (Barrett 2000). Bizarrely this lack of competition also created a scenario whereby airports allowed national airlines to gain de facto control of the airports via slot allocation committees who distributed slots for take off and landing on the basis of 'grandfather rights'.<sup>2</sup> It is estimated that at current slot prices, an airline, like Aer Lingus, that operates in Heathrow gains an estimated monopoly rent of 10% per slot (Kirlazidis 1994). Airports did not

---

<sup>2</sup> Airlines through the system of grandfather rights cultivated a strategic advantage over any potential entrants, for example, Aer Lingus have grandfather rights in Heathrow Airport which initially hindered Ryanair's access to Heathrow and therefore London, however Ryanair developed a strong market in Stansted Airport after deregulation and now dominate this route.

engage in a competitive market to ensure airlines used their facilities. Airports were viewed as public utilities<sup>3</sup> rather than as a business and therefore the inefficiencies and high costs caused by bilateral trade agreements were endured as no alternative market structure was entertained by national governments. National governments were slow to impose change to facilitate a competitive market in this area as aviation was intrinsically linked to foreign policy, national defense and national identity and this accounts for the willingness of governments to fund ailing national airlines and to tolerate an uncompetitive market. Thus national governments used non-economic rationale to justify their continuing support and regulation of the aviation sector (Barrett 2000).

## **Liberalisation of Air Travel**

The move towards deregulation developed first in the US with the Airline Deregulation Act of 1978. This removed government intervention in the sector by allowing airlines to determine their own prices and route free from any interference. This created an opportunity for Southwest airlines to develop into a dominant low-cost carrier within the US domestic line and thus providing the inspiration for other similar European companies such as Easyjet and Ryanair (Barrett 2004). Deregulation in Europe occurred at a slower pace, airlines had achieved regulatory capture<sup>4</sup> over member states, entrenching and strengthening their incumbent advantages. New entrants were excluded through market distorting factors such as unfair slot allocation at airports and government subsidies. This changed however when liberalization was instigated in 1986 with a case brought before the European Court of Justice, 'Nouvelles Frontières'. This case was highly instrumental in ensuring deregulation of the aviation sector as the Court came to the conclusion that air transport within the Single Market could not be treated any differently to other sectors of industry regardless of any special significance that member states may attach to it. The case ensured that any 'barriers' to trade in existence within the industry were to be eliminated, at least on paper, such as trade distorting government subsidies (Kyrou 2000). Prior to EU liberalisation, some important bilateral agreements took place ensuring open skies between countries such as Britain and the Netherlands in 1984 and Ireland and the UK in 1986. The rest of Europe deregulated at a more gradual pace in three

---

<sup>3</sup> A public utility provides basic services to a market such as electricity or water; this company usually enjoys a monopoly position due to economies of scale etc. In recent times however there has been a growing trend towards privatising these companies, such as Eircom and British Rail.

<sup>4</sup> A situation whereby the government instead of regulating the activities of an industry in the interest of all parties involved, the government is actually influenced by one particular firm giving it an unfair advantage, for example Aer Lingus, CIE and taxi drivers in the 1990s.

## THE EVOLUTION OF THE AVIATION SECTOR

stages, 1987, 1990 and 1993 (Graham 2001). An agreement was also reached with EFTA and the EU to create a free trade area between the two in aviation.

### **Contestable Markets**

Airline markets are thus very near to providing a good example of contestable markets according to Baumol (1982). The theory of contestable markets was developed in the 1980s by Baumol and the key requirements to ensure contestability include, entry into and exit from an industry are free, there is a distinct absence of sunk costs,<sup>5</sup> and any current production techniques employed by incumbents are available to new entrants. In a contestable market the price producers charge is equal to the marginal cost of the product, therefore there is an absence of supernormal profits. This ensures that an influx of new entrants attracted by supernormal profits are avoided. Regulatory restrictions on a contestable market are limited. Baumol does not believe that the number of firms in an industry is indicative of the level of contestability; a perfectly contestable market can exist with a small number of firms provided that there are no barriers to entry (Barrett 1994). The EU now has the most deregulated aviation market in the world; any airline with a valid Air Operators Certificate can operate within the EU at market-determined prices (Gillen & Lall 2004). Any bans on new airlines have been eliminated, price competition has been introduced and collusion between airlines is now strictly prohibited. Liberalisation is highly successful; one only has to look at the radical reduction in fares resulting from the deregulation of the Anglo-Irish skies, in 1987 passenger numbers had increased by 92% since 1985 and fares fell by approximately 70% (Barrett 2004). Despite these numerous advances, factors remain which hinder the aviation industry from reaping the full benefits of contestability.

### **Barriers to Contestability**

Despite Baumol's assertion that the aviation sector is a very close example of contestable market, obstacles to contestability do exist, these mainly occur as a result of the lack of competitive practices among airports. Although the emergence of low-cost airlines is radically altering the airport sector by encouraging competitive behavior, barriers remain to hinder the liberalization

---

<sup>5</sup> A sunk cost is irretrievable; it constitutes an opportunity cost associated with the decision to participate in an industry. It acts as a barrier to trade in an industry like aviation as it discourages potential entrants.

process and hamper the expansion of the new low-cost carriers. Structural barriers to contestability among airports include hub airport dominance, ground handling monopolies and CRS. Mergers, predatory pricing and state aid constitute strategic barriers.

Slot allocation at airports remains problematic. Grandfather rights ensure that incumbent airlines continue to dominate hub-airports and this restricts the ability of new entrants to enter into these markets. Alternatives to slot allocation committees include distributing slots via a lottery, or franchising the slots and lastly auctioning the slots to the highest bidder and thus ensuring the most efficient use of a scarce resource (Miller 2004). Although slot scarcity is a problem, low-cost airlines such as Ryanair have circumvented this issue by using 'secondary' airports in the vicinity of hub-airports to service their passengers. The Commission, despite taking a generally 'laissez faire' attitude towards slot allocation has formulated some regulation in regard to the issue. While still maintaining the principle of 'historic precedence', airlines must use their slot allocations or the airlines will forfeit the right to use them. The approach of the EU has little impact on the negative effects of slot allocation, as reform should be directed at the manner in which allocation is carried out. EU regulation still enables airlines to keep competitors out of certain airports by using their slots inefficiently. Airlines can maintain their slots with the use of smaller aircraft, uneconomical passenger numbers, and by using profits from other routes to maintain route domination in areas that make a loss. These strategies enable airlines to hinder competition and are therefore a barrier to contestability. Any attempts to reform the allocation of slots have been met with heavy criticism from incumbent airlines; this is because traditional, dominant carriers view their share of slots as an asset to their company. Airlines at hub-airports view slots as part of their 'inheritance'. The stance of the airlines on this issue obviously creates a paradoxical situation whereby the airports undertake the costly investment in the infrastructure of the facility but the airlines claim ownership without any real justification (Kirlazidis 1994).

Another obstacle to contestability is ground handling monopolies. Often incumbent airlines with grandfather rights hold exclusive rights to provide ground-handling services to its competitor. This allows airlines with such privileges to unfairly further consolidate its advantageous position by charging competitors high prices for such services. Tendering for such services would eradicate this inequality and ensure that the most cost-efficient company would provide the service. Reform of slot allocation and ground-handling monopolies are a fundamental aspect to ensuring the full benefits of deregulation are reaped within the EU. Ground-handling services remain a barrier to contestability, as 'self-handling' is rarely permitted in airports and therefore some airlines have created a monopoly provision of services. Despite formally declaring the need to ensure fair

## THE EVOLUTION OF THE AVIATION SECTOR

competition between airlines in this area, the Commission cites that ‘practical constraints’ hinder the ability to implement liberalisation fully in this area. Frankfurt, Milan and Athens pose particular problems in relation to ground-handling monopolies, with official complaints lodged with the Directorate General (Kyrou 2000).

Air traffic control (ATC) deficiencies also hinder the full realisation of contestability; delays are increasing in European airports, approximately one hundred planes at any given time are delayed waiting to take off or have to circle their intended destination to receive clearance to land. The root of the problem lies in the fact that ATC in Europe is controlled by forty-two different centres and this obviously causes greater delays (Kirlazidis 1994). The creation of a single controlling body to supervise and co-ordinate ATC would have a positive impact on the industry within the EU.

Mergers and cartels also prevent the full benefits of contestability to be realised. The Directorate General in the EU is responsible for ensuring that cartels, mergers, alliances, and state aid do not inhibit the free market. The abuse of a dominant position is prohibited in article 82<sup>6</sup>; activities such as predatory pricing<sup>7</sup>, setting prices too high<sup>8</sup>, and refusing to allow access to a market<sup>9</sup> are all prohibited within the EU. Article 81 prohibits collusion; firms must not undertake restrictive practices (Kyrou 2000). The Commission does recognise the ill effects of uncompetitive agreements between airports and airlines and the problems that affect airlines resulting from deficient airports. The general stance of the Commission in relation to agreements between airports and airlines is highlighted by the case concerning Charleroi airport and Ryanair. The European Commission in 2004 came to the conclusion that the agreement between the airport and airline concerning airport charges and taxes amounted to illegal state aid, which the airline would have to repay. Ryanair had in return for generating increased traffic through the airport<sup>10</sup> agreed with BSCA (Brussels South Charleroi Airport) that the airline would receive a reduction in airport taxes, a rebate in ground handling

---

<sup>6</sup> Article 82 defines what an abuse of a dominant position involves, it was formerly known as article 86.

<sup>7</sup> Predatory pricing occurs when, for example an airport, wishes to decrease another airport’s profitability to ensure they exit the market or when an incumbent airport endeavours to inhibit the entry of a new airport.

<sup>8</sup> In an uncompetitive market, for example airports prior to deregulation, the airport due to lack of competition has the ability to set prices above a market determined price.

<sup>9</sup> Airports within the aviation sector hold a vital market position; slot allocation provides a good example of preventing a new airline to enter the market by ensuring that access to the airport is unobtainable.

<sup>10</sup> Ryanair has a proven track record in generating passenger numbers at secondary airports, Frankfurt Hahn prior to Ryanair’s arrival had passenger numbers of 450,000 in 2001 but once the airline established itself at the airport in 2002 passenger numbers rose to 1.5m.

services<sup>11</sup>, and a commitment from the airport that taxes and regulations such as opening hours would remain static for 15 years. The Commission viewed this agreement to be in direct conflict with the principles of the Common Market as it distorted competition among airlines in particular. The Commission's argument is disputed by Groteke and Kerber who point out that any airline offering the same chance to maximise capacity at Charleroi and generate similar revenues for the airport from charges and non-aeronautical revenue sources would have reached a similar agreement with the airport authority (2005). Ryanair as a low cost airline with a clear business model seeks out similar business concepts from the airports it chooses to use. The airports it seeks to use must be cost effective, simple in design, ensure quick turn around times, and limit delays. The Commission used the case of Charleroi to highlight that airports are not permitted to charge airlines different prices, financial support is permitted only in relation to the creation of a new route and any other financial support is viewed as an illegal aid in violation with the Common Market (Groteke & Kerber 2005). Despite the Commission's misgivings regarding the relationship between Ryanair and BSCA one only has to look at the bilateral agreement between Aer Lingus and Sabena<sup>12</sup> prior to deregulation to believe that competition has led to a significant reduction in prices and hence a increase in consumer welfare.

Airports must be allowed discretion and freedom to behave as commercial enterprises; the Commission must not create a 'regulatory straightjacket' despite the noble desire to create "fair competition for everyone in the single market of air transport" (Groteke & Kerber 2005). Airports must act in a proactive manner in order to establish a contestable manner. The business model of airports like Frankfurt Hahn, which spent 27m euro on renovations to ensure Ryanair based itself there, should be replicated. As airfares have reduced, the proportion of airport costs in tickets has risen. In order to stop costs from spiraling, airports must engage in price competition as Charleroi has, and increasingly airports should tender contracts for services to ensure efficient and competitive practices. By relying on low cost carriers to attract more passengers and generate revenues; the bargaining power of these individual airports are greatly reduced. Ryanair stopped its service to Rimini airport and moved to Acona airport (one hour south of Rimini) after a dispute regarding costs. Airlines such as Ryanair tender contracts for services thus enabling them to move quickly into

---

<sup>11</sup> Ryanair at Charleroi paid 1 euro per passenger whereas other airlines using the airport paid an amount between 8 euro and 13 euro.

<sup>12</sup> Aer Lingus and Sabena airlines agreed not to engage in price competition, thus keeping fares high at 650 pounds.

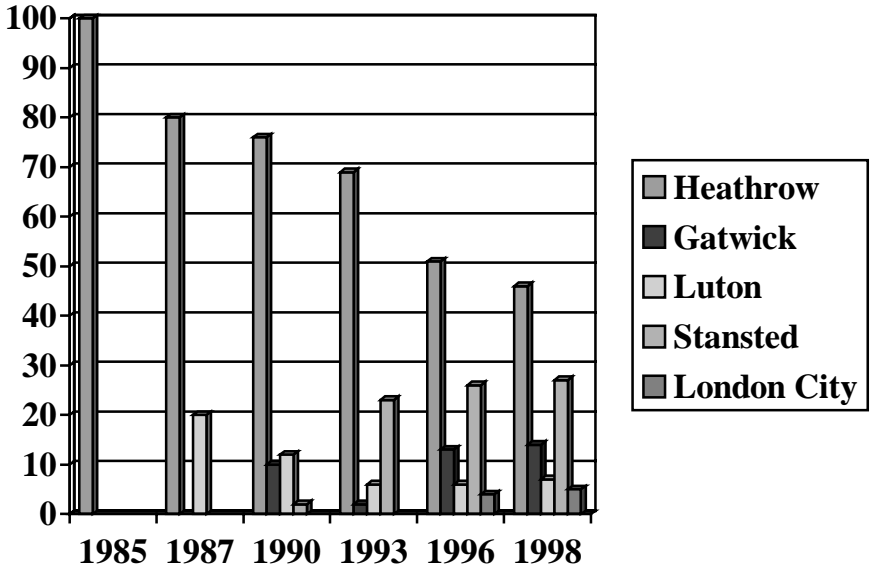
market openings; this renders them ‘footloose’ and therefore able to move airports. A ‘regulatory straightjacket’ greatly reduces the ability of airports to act in a competitive manner.

### **Benefits of Competition illustrated by a Case Study of London’s Airports**

In order to illustrate the many positive effects associated with airport competition it is necessary to look at a case study of the London-Dublin route. Prior to liberalisation in 1986, Heathrow airport dominated the market with a limited contribution from Gatwick airport. Since deregulation this route has become the busiest international route for scheduled services in the world, the development of airports in competition with Heathrow has greatly enhanced this route. Stansted, Luton, Gatwick and London City airport all compete against Heathrow for market shares. Slot allocations in Heathrow prevent the entry of new airlines into this airport and hence since deregulation there has been a marked increase in the use of smaller airports in the London region. Figure 1 highlights the growing diversification of passengers to the five different London airports. The dominance of Heathrow over this route has been eroded over the period 1985-1998. Ryanair has played an integral role in diverting passengers from the traditional hub airport, Heathrow, towards ‘secondary’ airports like Stansted (Barrett 2000). Table 1 highlights the contribution that Ryanair has made to passenger growth rates at Stansted and thus demonstrates that low cost airlines provide a pivotal lifeline to secondary airports.



**Figure 1: The impact of airline competition of the Dublin-London Route between 1985 -1998**



Source: based on figures from the UK Civil Aviation Authority.Barrett, 2000, p20.

**Table 1: Stansted Airport and Ryanair’s contribution to passenger growth from 1990-1999**

	Total Passengers	Ryanair Passengers	Ryanair Share %
1990	1.2	-	-
1991	1.7	0.2	17
1992	2.3	0.6	26
1993	2.7	0.7	26
1994	3.3	0.8	24
1995	3.9	1.0	26
1996	4.5	1.3	29
1997	5.4	1.5	28
1998	6.8	2.1	31
1999 (est)	7.7	3.2	42

Source:Barrett, 2000 pp.21

## **The role of low cost Airlines in creating a competitive airport market**

The London market highlights the integral role that low cost airlines have played in securing increased competitive practices in the airport service market. Hub airports are not compatible with the demands of these low fares airlines, the large airport structure with numerous terminals and business lounges do not suit the no frills attitude of the likes of Ryanair. Gold plating is considered an unnecessary expenditure that is not supported by consumer demand; the airports traditionally justified these expenses and increasing costs to airlines as a necessary response to consumer demand. However the increasing transfer of passengers away from expensive hub airports like Heathrow to the 'secondary' airports of Stansted and Gatwick is an example of the willingness of passengers to switch to airports with fewer facilities in order to avail of lower prices. Though uncompetitive and inefficient practices are still adopted by Heathrow and Gatwick, annual increases in airport charges between 1997 and 2002 were kept below inflation rates.

European hub airports such as Charles de Gaulle in Paris are close to capacity and therefore the combination of high charges and the unfair system of grandfather rights provides little allurements for low cost airlines. These airlines prefer to use 'secondary' airports in order to decrease costs, create a separate identity in the market, and service new catchments areas. The economies of scale involved in establishing an airline at an airport may inhibit airlines entering into hub airports due to the costs involved etc, therefore adding to the attraction of less important airports. Low cost airlines require a different level of service from airports than their competitors, for example fewer check-in desks are required. Ryanair in Dublin airport despite generating 25% of the passengers only use 11% of the check-in desks. The availability of slots, the lack of congestion, the good transport facilities on the surface and the lower frequency of delays attract low cost airlines to non-hub airports (Barrett 1994). Underused and overlooked airports are in abundance in Europe. These airports are often more compatible with low cost airlines business models, with a lack of gold-plating and single storey terminals. Fewings highlights that a large pool of suitable alternatives to hub airports exists in Europe alone (Barrett 2004). Ex-military airports are ideally suited for low cost airlines, in France 32 such facilities exist, 34 in the UK and 28 airports in Germany. Fewings also examined the availability of peripheral airports near existing dominant airports, of the 10 EU countries he examined, 131 airports within one hour of surface travelling time of existing hub airports were found (Barrett 2004). The extent of underused airports within Europe is illustrated in table two, compiled by Fewings.

**Table 2: Level of airport and runway provision in Europe in 1998**

Runway Length	Number of airports per million inhabitants	
	Over 1600m	Under 1600m
Austria	0.8	0.0
Denmark	1.9	0.4
Finland	4.1	0.0
France	1.0	0.1
Germany	0.3	0.1
Greece	2.5	1.2
Iceland	22.5	26.2
Ireland	1.1	2.5
Italy	0.6	0.1
Norway	5.3	6.5
Scotland	1.6	2.1
Sweden	4.3	0.7
UK	0.7	0.3

Source: Barrett, 2000, pp.19

Opportunities do exist for the construction of new airports, despite the well-worn arguments to the contrary that maintain construction is too costly and time consuming. The London City Airport construction project only cost 7m and was completed in 40 weeks. However any new airport construction must take into account the negative environmental effects on the surrounding area such as noise pollution, the lack of land, congestion, and waste and noise disturbance. To combat the ill effects of airports the surrounding land should be acquired, aircraft and slots should be used efficiently, public transport to and from the airport should be increased and the price of car parks should be increased to encourage use of public transport.

## Conclusion

While low-fares airlines have altered the structure of the aviation sector by vastly reducing fares and this in turn has made aviation less vulnerable to economic climate changes, the aviation market remains an uncertain entity. The economic implications of political unrest, terrorism and health epidemics have far reaching consequences.

Recent global events such as 9/11, the SARS outbreak in China and the war in Iraq have caused the demand for air travel to fluctuate. While air transport is no longer considered a 'luxury good' due to the new business dynamic introduced largely by low cost airlines, the industry must continue to strive to increase efficiency and productivity. The progress of airports in relation to

## THE EVOLUTION OF THE AVIATION SECTOR

creating a contestable market has proceeded slowly. The barriers that remain are largely administrative and with the support of the European Commission, airports and the aviation sector will continue to work towards contestability (Barrett 2004).

### **Bibliography**

- Abeyaratne, R (2000) "Management of airport congestion through slot allocation." *Journal of Air Transport Management*, Vol.6, pp. 29-41.
- Banister, D & Joseph, Berechman (2000) *Transport Investment and Economic Development*. London: UCL Press.
- Barrett, S (1987) *Flying High: Airline Prices and European Regulation*. , Aldershot: Avebury.
- Barrett, S (1991) *Transport Policy in Ireland in the 1990s*. Dublin: Gill and Macmillan.
- Barrett, S (1993) "Air Transport Markets," Banister, D & J Berechman (eds), *Transport in a Unified Europe- Policies and Challenges*. North Holland: BV Publishers.
- Barrett, S (1994) "Aviation and the pursuit of Contestability." *Journal of Economic Affairs*, Vol.42, No.2
- Barrett, S (2000) "Airport Competition in the Deregulated European Aviation Market." *Journal of Air Transport Management*, Vol.6, pp.13-27.
- Barrett, S (2003) "Airports as Multimodal Interchange Nodes, European Conference of Ministers of Transport," Economic Research Centre.
- Barrett, S (2004) "How Do the Demands for Airport Services Differ between Full-Service Carriers and Low-Cost Carriers?" *Journal of Air Transport Management*, Vol.10, pp. 33-39.
- Barrett, S (2005) *Lectures in Transport Economics*, Trinity College Dublin
- Baumol, W.J. (1982) "Contestable Markets: An Uprising in the Theory of Industry Structure", the American Economic Review

- Forsyth, B (2004) "Locational and monopoly rents at airports: creating them and shifting them." *Journal of Air Transport Management*, Vol.10, pp .51-60.
- Freathy, P (2004) "The commercialization of European airports: successful strategies in a decade of turbulence?" *Journal of Air Transport Management*, Vol.10, pp. 191-197.
- Gillen, D & Lall, Ashish (2004) "Competitive advantage of low-cost carriers: some implications for airports." *Journal of Air Transport Management*, Vol.10, pp. 41-50.
- Graham,A (2001) *Managing Airports: An International Perspective*. Oxford: Butterworth-Heinemann.
- Groteke, F & Wolfgang Kerber (2005) "The Case of Ryanair-EU State Aid Policy on the Wrong Runway." *ORDO*, Vol.55, pp. 313-331.
- Kirlazidis, T (1994) *European Transport: Problems ad Policies*. Aldershot: Avebury.
- Kyrou, D (2000) *Lobbying the European Commission: The Case of Air Transport*. Aldershot: Ashgate.
- Miller, J (2004) "The Contestability of Markets." *Student Economic Review*. Vol. 18. pp. 211-222.