EUROPEAN AIRPORTS AND AIRLINES: EVOLVING RELATIONSHIPS AND THE REGULATORY IMPLICATIONS

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Abstract

The purpose of this paper is to question the need for a special regulatory framework for European airports in the light of recent developments in the relationship between airlines and airports; to argue that the airport business should now be treated like most other industries and be subject only to normal competition law. Three factors underlie the changed relationship. These are: the creation of a single European aviation market; the development of airline business models operating on a pan-European basis; and the increasing use of the internet which has reduced the costs of entry for airlines into local (geographic) markets. In combination these factors have had a profound effect on the dynamics of the airline industry. These dynamics have increased the business risk faced by airports and highlighting the increased buyer power of airlines. The result has been a shift to bespoke long term contacts between airports and airlines. The paper argues that the bespoke contracts are also incentive compatible from the passenger's point of view and, in combination with the incentive that airports have to secure high-margin commercial sales to passengers, produce an outcome that is favourable to the passenger; direct airport competition merely guilds the lily. Any residual concerns regarding market dominance and possible abuse have then to be set against the significant disadvantages and costs of sector-specific economic regulation; increasingly the remaining competition issues are of a type better handled through the application of normal competition law.

Introduction

The paper highlights recent developments in the airline-airport relationship in Europe and concludes that ex-ante regulation of airports is generally unwarranted. This conclusion is reached after discussing the impacts of airline liberalization and of the internet (which has altered the way passenger search for and book flights). In combination these factors have changed the European airline business profoundly with equally profound repercussions for the airport business; airports now face airlines with increased buyer power. Airports and airlines have thus turned to negotiated long-term contracts as a means of doing business, contracts that are favourable for passengers as well as for the firms involved. This unfolding of market forces has added to other, existing arguments, for forgoing an airport-specific regulatory regime, not least of which is the increasing complexity of regulation.

The paper is structured as follows. The next two sections outline the factors that led to fundamental changes in the character of the European airline industry after 1997. The third substantial section outlines the consequences of these changed fundamentals: the increased buyer power of the airlines and the increased business risks faced by airports. The fourth section introduces the concept of the negotiated (bespoke) contract, together with the characteristics of these contracts and a case study. This is followed by a section arguing that these contracts, from the passenger standpoint, are incentive compatible, that the two-sided market characteristics of airports lead to favourable outcomes for the passenger, and that geographic competition between proximate airports is an added, but possibly unnecessary, factor enabling market forces to unfold in the passenger's interest. This leads to the concluding section which questions the need for sector-specific (ex-ante) regulation in the light of both the changed circumstances and the costs and disbenefits of regulation. The paper concludes that any residual problems are more likely to be associated with vertical restraints but these can be addressed using the standard instruments of competition law; in this respect the airports industry should considered a normal industry.

Catalysts of Change

In various stages over the best part of two decades the EU liberalised its aviation market. The first Directive, adopted in 1983, was a limited measure liberalising some inter-regional services. But by 1994 most of the European market had been opened up and it only remained for full cabotage to be introduced in 1997, for the task to be completed. From that date, airlines registered in the EU and controlled by EU nationals had the right of establishment throughout the EU and were free to fly within and between all Member States. A German airline, for example, could henceforth base itself in the UK and fly domestic services or from the UK to any other EU country. The European Union had become a single aviation market.

During the early 1990's, European aviation was still dominated by the major national airlines[1] largely state owned, although there was also a large mostly privately owned charter airline sector based in the countries of northern Europe that had emerged as a form of regulatory bypass in order to facilitate the transport of sun-seekers to the Mediterranean. When the staged legislation for the single aviation market was being drafted, all its consequences were not fully foreseen; the prevailing consensus was that increased competition would emerge as a result of rivalry within and between the two existing airline groupings, charters and scheduled aviation. In 1994, for example, I had discussed and challenged the predictions made by an author who, three years earlier, had tried to anticipate the impact of the forthcoming European liberalisation by reference to US experience with its own earlier liberalisation. Re-reading this material it is clear that neither of us really foresaw what was to come (Pryke 1991, Starkie 1994).

Competitive markets drive dynamic efficiency; they are a process of discovery, full of surprises and unexpected consequences. In this particular case, the establishment of the single aviation market acted as a catalyst for the launch of new innovative airline business models, predominant amongst which was the Low Cost Carrier (LCC) model, to an extent inspired by Southwest Airlines in the United States although the long-standing European charter airlines had already adopted many of its features. The model is continually evolving and, in turn, is influencing the practises of the old (legacy) airlines[2]. It defies easy definition but, as the name-tag suggests the emphasis is on minimising costs by simplifying and unbundling the product (not catering for flight transfers, not handling freight, allocating seats, or selling food and beverage and providing only a single class of

[1] The share of national carriers on international schedule services in Europe was 90 per cent as recently as 1992. www.parliament.uk/briefingpapers/commons/lib/research/briefings/snbt-00182pdf.

[2] For example, some legacy carriers, sometimes referred to as 'full-service carriers', are adopting similar practices on their short-haul operations. On the other hand, with the removal of legal distinctions following deregulation, charter carriers have begun to offer seat-only bookings on charter flights, thereby crossing over into the scheduled airline sector.

travel); by adopting operating practices that lead to high utilisation of equipment and crew (such as high seat density, quick turnarounds, point-to-point service schedule); by simplifying crew training and maintenance costs by focussing on one type of aircraft, and by encouraging, at first, telephone sales and then in more recent years, sales through the internet to reduce marketing costs[3]. As will become apparent, the internet has had an especially important role to play in this story and in that respect it can be regarded as a further catalyst of change; it has allowed airlines to penetrate new markets at little cost.

The subsequent growth of the new carriers has been remarkable: airlines either established or re-inventing themselves as an LCC now account, on some estimates (Paul 2009), for approximately 40 per cent of European available seat kilometres (ASK's) and for as much as 50 per cent of total passengers carried within Europe. The eponymous Irish-registered Ryanair, is now the world's largest airline in terms of international passengers carried and the largest domestic airline in Spain.

New Market-Dynamics

Because the new airlines owe their origin to the establishment of a single European market in aviation[4], a further defining characteristic of some and certainly of the two airlines that now dominate the LCC sector, Ryanair and easyJet, is that they are European in outlook; operations are conducted on a pan-European basis with operating bases spread across the whole of the EU. Ryanair by early 2010 had three dozen operating bases across 9 nations[5] (Figure 1[6]); easyJet in early 2010 had a score of bases across half-dozen countries; Norwegian operated out of four countries; and even the relatively small Wizz Air operated out of six countries.

The LCC's, have changed the European aviation market in another important respect, the market has become much more dynamic with frequent, rapid change taking place within it. The big LCC's especially have continued to add large numbers of aircraft to what were by the mid-2000, already large fleets. This has meant every year not only introducing a large number of new routes (Ryanair planned to establish nearly 150 in 2010 and easyJet 73 in summer 2010) but also a continual process of establishing new bases from which to operate the newly acquired aircraft, seeking the best

[3] For further details of the LCC product and its characteristics, see Barrett (2010). Another important feature is the strict use of one-way fares which Tretheway (2004) considered the most important pricing development in the industry in the last 25 years because it removed the ability of the legacy airlines to price discriminate by erecting fences. This has more relevance for airline competition rather than airport-airline relationships.

[4] Ryanair is one of the earliest having been established in 1985 to take advantage of a liberal bi-lateral aviation treaty between the UK and Ireland.

[5] In contrast in 1998, the year after the completion of the single aviation market it had just 3 bases, 2 in the UK and one in Ireland.

[6] Figures posted at the end of text.

financial return in the process. Some of these bases are located at well-established airports, sometimes capital city airports, but many are at regional airports. Others, and particularly those used by Ryanair, are at little used airports and, in a number of cases, at airports receiving their first scheduled jet passenger service[7]. Moreover, as one would expect in a competitive market, one has seen not only entry but exit too, of airlines from the operating register[8] (a number of LCC's have ceased trading including the large Sterling Airways), of airlines from routes and operating bases and of airports from the scheduled airline business[9]. Thus, within the general picture of growth there has been substantial shifts of capacity across the European trading block as some airlines have disappeared and as old and new airlines have tried out new markets, cutting back on others that have failed to come up to expectations.

These dynamics are illustrated well in Figure 2, taken from an easyJet presentation to financial analysts in late 2008. It shows, in outline, the capacity changes in various European markets planned for the winter 2009 season, at a time when overall capacity placed into the market by easyJet changed little due to the severe economic recession. Some easyJet bases show rapid growth (Gatwick), others reduced activity (Stansted) or complete closure (Basle, East Midlands, Dortmund). The same pattern of expansion and contraction in different parts of the European market in search of a better financial return[10] is to be seen in the activities of other LCC's and, to a degree, in the operating practices of the legacy airlines as they have responded to the LCC threat.

It is in the context of these market dynamics that the internet has played a crucial role. It has facilitated considerably the process of expansion by the airlines into new geographical markets, a process driven initially by the LCC's and then, more recently, albeit more cautiously, by the legacy airlines[11]. Before the advent of the internet, informing a local market of your service offerings was always a protected process involving significant sunk costs. The internet has had the effect of greatly reduced the search costs of both passenger and airline; it has enabled the matching of airline and customer relatively easily at little expense and, in turn, made it easier and less costly for airlines to switch flights from one base to another and from one country to another across the regions of Europe.

[7] Reynolds-Freighan (2010) calculated using OAG data that there were 81 more airports in Europe receiving jet air services in 2008 than in 1996.

[8] Sterling Airways ceased trading in 2008. It had its main base at Copenhagen with other bases in Norway and Sweden.

[9] See Muller-Rostin (2010)

[10] For example: "easyJet closed its base at East Midlands airport and reallocated the aircraft to bases where it will be able to drive an improved return." (easyJet Full Year Results, November 2010).

[11] I am grateful to Mike Goodliffe of the CAA for drawing my attention to this point.

Buyer Power

The new, dynamic nature of the European aviation market has lead to yet another fundamental change and one that is central to the theme of this paper; it has transformed the traditional business relationship between airport and airline. A widely held view, and one associated particularly with the airlines and their trade associations, is that an airport provides a monopoly service enjoying significant market power. Furthermore, the capital intensive nature of airport infrastructure means that it is inefficient to have more than one firm providing the basic services of an airport at any one location so that airports are not just monopolies but natural monopolies (IATA 2007). In the past the implications of this arguable proposition, the singular airport exercising market power, has not been a major issue largely because of the common ownership by the state, in one guise or another, of both the dominant airlines and the dominant airports. In the immediate post-war years airlines such as Air France were taken into state ownership and most major airports were developed as state entities and sometimes, as in the UK, subject to national planning regimes. The presumption was, not always borne out in practice, that the public sector owners acted in the public interest and naturally did not exploit market power[12]. But, the last 25 years has seen the privatisation of a limited number of airports and a more commercial attitude by many more. In this new economic environment, the view of the airlines and their trade associations that airports are monopolies with significant market power, has struck more of a chord. For example, such a view was contained in a 2002 study for the European Commission: "[a]s airports change from public services provided by central government to privately owned or commercialised entities there is a growing need to protect against possible monopolistic behaviour" (quoted in Morrell 2010:11). Thus, in parallel with changes of ownership and business practices in the airport sector, there have been moves to subject the larger, newly privatised airports and sometimes, for good measure, some public sector airports too, to price controls (economic regulation)[13].

But here we have the irony of one development in policy cutting across the need for another; the single aviation market has, through the change it has generated, transformed the market-power relationship between airport and airline and made questionable a need for airport price controls. European airlines today, unlike the flag-carrying airlines of the past, are no longer locked-in by restrictive bi-laterals to a particular 'home' operating base. To each and every part of the EU, all airlines, legacy airlines as well as the new breed of LCC's, are free to come and go as they please in

[12] It was often exploited but in a subtle way; state employees extracted the rents in the form of wage premiums. Market power increased the power of labour to threaten disruption.

[13] Formal economic regulation has been introduced for some of the airports in, for example, Ireland, Netherlands, Germany, Austria and the UK.

search of the best financial return. And, as illustrated above, many have done so and have threatened to do so[14]. Recently the chief executive of BA threatened to transfer future expansion of the airline from Heathrow to Madrid[15].

The result has been a big increase in the buying power of airlines[16]. European airports now compete with each other to attract the services of airlines, especially to attract base aircraft and appear to do so vigorously; Ryanair's Chief Executive has claimed that he is "besieged" by European airports offering cut-price deals and bmibaby, a LCC spawned by BMI, claimed in a recent legal hearing to hold all the cards in airport negotiations[17].

Hyperbole apart, the balance of power between airport and airline, both LCC's and legacy airlines, has undoubtedly shifted as a result of the creation of the single European aviation market and that shift poses a serious problem for the airports. It has created a potential problem of stranded assets. Both airlines and airports are capital intensive businesses but airports more so. The really significant difference is that aircraft are 'capital on wings'; the chief asset of the airline is relatively mobile unlike the generally sunk assets of the airport[18]. Airport assets have a high degree of specificity; although there are opportunities for switching between different aviation related product lines (scheduled aviation, cargo, general aviation, aircraft maintenance etc) opportunities for using assets outside of the aviation domain are limited. And, even within aviation context, some airport assets are specific to a particular product; for example, scheduled passenger services require fairly specific assets for handling passengers (although recent entrants have tried to minimise the risk by investing in fairly rudimentary facilities capable of easy conversion to other uses). Thus, airport capital, for so long reasonably secure as a result of both the stabilising effect of bilateral air service agreements and a system of charging for airport use based on published tariffs, has become increasingly at risk

[14] For example, the merger of KLM and Air France led to the switching of some long-haul routes between Amsterdam and Paris.

[15] "BA will be able to access...growth because our assets are mobile and we can focus on developing Madrid rather than...London" (BA threatens to favour Madrid, *Financial Times*, June 11, 2010)

[16] Sometimes reference is made to countervailing power, the first time in the aviation context was probably in a report to the New Zealand government in 1989 (Travers Morgan Pty et al 1989). But countervailing power invokes the idea of bilateral monopoly. In the current context when it is possible for the airline to have dominance as a buyer, the term 'buyer power' is more appropriate.

[17] The presiding judge commented that: "I think it incorrect to state...that...bmibaby in negotiating terms held all the cards: although [it] had a strong negotiating position" Davis (2009).

[18] On entry at an airport, an airline will face certain fixed station operating cost, more so if establishing an operating base, and will have to sink costs in relation to marketing. However, the former can be kept to a minimum by contracting out (short-term) functions to service companies. As noted previously, the internet has played a major role in attenuating the costs of marketing new services, costs that are frequently offset by the inducements offered to airlines by airports. There are many examples of the latter (see Graham, 2008, 251-252) but to illustrate the point, early in 2010, Dublin airport was offering up to 100 percent discount on charges for up to 5 years on new routes as well as additional marketing support.

from the new dynamics of the market brought about by the freedom of European airlines to entry and exit local markets throughout the EU.

Long-term Contracts

There has been a market response to the instability. Airports increasingly have offered airlines discounted charges in return for long-term commercial contracts in order to try and establish a more stable environment for their activities. Such an approach is not uncommon in the wider market economy, in economic sectors faced by similar circumstances of capital intensity, sunk costs and sometimes footloose customers[19]. The energy sector is one such example and the seminal paper examining such business models (Joskow 1985) used coal mines and power generating utilities as the exemplar; the mines not wishing to sink (literally) investment expenditure without the comfort of long term profitable sales secured by contracts. A more prosaic example involves the dairy farming industry. Dairy herds can take years to establish and therefore milk supply shortages can arise if unstable prices lead to large and sudden contraction of herds. In the UK, major retail chains like Tesco and Waitrose have entered into long term price contracts with suppliers to alleviate this problem. In other parts of the transport sector one can point to the arrangements between shipping lines and port operators where the latter will sometimes build terminal facilities backed by long term contracts with the former. And finally, in the aircraft manufacturing industry there have been examples of the development of new aircraft types relying on commitments to purchase by airlines or leasing companies.

A feature of long-term commercial contracts between airports and airlines is their confidentiality so that which parties agreed the first contract and when, is not generally known, but airports and airlines were certainly arranging such contracts before the beginning of the new millennium[20]. Some of the pioneers were various regional airports contracting with integrated tour operators operating their own aircraft fleets and express parcel carriers investing in sheds and other ground handling facilities[21]. There is also the early example of a legacy airline, Lufthansa, agreeing terms (of relatively limited scope and duration) with a major hub airport, Fraport (Klenk 2004). But contracts have burgeoned with the growth of the LCC's. The terms of these contracts are generally confidential but

[19] There are other forms of vertical relationship used to mitigate the risks associated with asymmetric power in supply chains. Some of these are discussed in relation to the airline industry in Hanlon (2007, 308-9).
[20] easyJet and Liverpool airport agreed a long-term contract in 1998.
[21] Other examples come from general aviation. The lease contract agreed between British Aerospace Flight Training (UK) Ltd and Prestwick Airport, Scotland in 1992 is a specific example: the author was asked to make a legally binding determination for a term in this contract in 1997.

legal challenges have revealed some details and the author has knowledge of others. It is possible therefore to indicate their basic features with some degree of confidence.

Contract template

As one might expect in the circumstances, the airport has to discount its charges, sometimes very substantially to get a commitment from an airline to establish an operating base where aircraft, after a day's operation, are parked overnight. The attractions to an airport of such a base, is that not only does it provide presentational advantages, which Justice Davis (2009) aptly described as connoting the equivalent of the retail sector's 'anchor tenant', but it also has operational and financial advantages as aircraft rotate through the base during daily operations and then require preparation for the following day. In addition to discounting its charges, the airport usually has a number of obligations it must fulfil as part of the contract, in particular obligations relating to the quality of services to be supplied such as minimum turnaround times. If the contract covers an extended duration, there might very well be obligations to undertake staged investment in various infrastructure improvements in order to accommodate the expected growth in passenger traffic. And importantly, it is usual for the airport to commit to undertaking quite extensive marketing on behalf of the airline such as agreeing to the number of sites at which adverts are placed.

The contract in turn places certain obligations on the airline, in particular an operational commitment from the airline concerning base aircraft which will probably have two components. First the initial number of aircraft to be based at the airport and the date at which operations are to commence; second, a roll-out programme adding additional aircraft again with indicative dates (see Figure 3). Sometimes the contract will go further and provide the airport with the comfort of guarantees regarding minimum passenger volumes thus making it effectively a take-or-pay contract.

There are features regarding charges that are worth mentioning. In the contract, the charging structure is very much simplified. Traditionally, aeronautical charges distinguish between those for the use of the runway and the parking of aircraft together with an arriving, or more commonly, a departing passenger charge. In addition, there can be separate baggage facility charges including for hold-baggage screening, security charges, ground handling levies, charges for handling disabled passengers and so on. In marked contrast, the charge in the contract is a simple charge per departing passenger subject to a price inflation index. In this way the charge better reflects the sharing of volume risk; the airline is not paying a landing charge for example that remains constant regardless of the aircraft's loading. Second, to encourage volume, charges are sometimes subject to growth discounts so that a new route or even an added rotation on an existing route, will be subject

to a reduction in the rate of charge, perhaps as much as a half , for the first year then tapering-off in subsequent years. Third, there are provisions for adjustments to the all-inclusive rate of charge in certain circumstances such as new mandatory security requirements.

Finally the contracts are non-exclusive; it is open to both prospective and existing users of the airport to strike similar (but not necessary identical) contracts. Indeed, one differing aspect is the term or length of the contract. Some are written to cover a very long period, as much as 20 years, whilst others are for much shorter periods.

Bearing in mind the length of the contracts and the difficulty of writing contracts to cover all eventualities, perhaps it is not surprising that from time to time terms of contracts have been subject to dispute between the parties concerned. Perhaps more surprising, given the significant downturn in traffics as a result of the great recession, is that more problems have not arisen, particularly in the UK where long term contacts are common and outbound tourist traffic has been suppressed by the fall in pound Sterling against the Euro. The risk sharing nature of the all-inclusive charge has helped but, where contracts have allowed, carriers have also adjusted their equipment, substituting smaller aircraft in those markets where traffic has declined most (or have, concentrated adjustments in those markets not constrained by the existence of contracts, easyJet's contraction at Stansted being a case in point (see Figure 2)).

Case study

One example of a long term contract, the terms of which have come to light as a result of a dispute, concerns Durham Tees Valley airport, in the north east of England and bmibaby, a low cost subsidiary of BMI, now a subsidiary of Lufthansa. The case is complicated by the fact that negotiations started between bmibaby and the then local authority owners of the airport prior to the airport being sold to Peel Airports Ltd, a subsidiary of the Peel Group (owners of Liverpool and Doncaster Robin-Hood airports). The eventual base-airport contract was between British Midland Regional Ltd (trading as bmibaby) and Teeside International Airport Ltd (TIAL) a subsidiary of Peel Airports Ltd.

The duration of the contract was 10 years from the start of operations. The initial operations were to commence no later than 31 October 2003 and were to support a minimum of two B737's operating exclusively from TIAL by the summer of 2004 The charging structure involved low passenger charges in the early years, rising at a steady rate to year 7 with increases thereafter linked to the UK Retail Prices Index. Importantly, there were also several sources of financial support to be given to

bmibaby. Under a contract heading 'marketing' £0.85mn was to be paid to bmibaby in the form of a contribution towards an approved marketing plan, designed to support the region in which the airport was located. The sums payable came primarily from local government sources but were paid by the airport. Similarly monies were paid by way of the local Tourist Board, in the sum of £0.1mn, for the winter 2003 launch of services subject to a minimum of five frequencies a week to any destination after consultation with the airport on the route planning process. Under the heading 'training' TIAL was to pay bmibaby £0.2mn for training and then £5,000 for each job created. Other provisions covered contributions by the airport for advertising sites, a fuel rebate and free staff car parking. In the round, the financial incentives to be provided by airport were substantial particularly bearing in mind the limited commitment by the airline which was to base initially only two aircraft at the airport.

In spite of this apparently favourable contract, in essence bmibaby sought to walk away from it, hence the dispute which went to court. The airport company launched a claim against the airline, claiming damages for the loss of income it would have received for the remainder of the 10 year contract. The UK High Court dismissed the airports claim in March 2009 basically because the contract did not include clauses detailing how many times each aircraft had to fly each day or to which destinations. The airport appealed the judgement arguing that the flying programme was an operational matter to be determined by the airline and not an aspect to be tied down in a contract. The Court of Appeal ruled in favour of the airport. Its view was that the airline's commitment to base and operate aircraft was binding and dismissed the airlines contention that the contract was sufficiently uncertain to be legally binding. The deputy CEO of Peel Airport Group in retrospective comments in the summer of 2010 remarked that most airline-airport partnerships over fixed terms that they were party to, worked well. "The airport needs an operational commitment from the airline as to the number of aircraft and time period it will commit to operate from that airport as a base, so that the airport can then derive some comfort from the costs it may then incur in paying for improvements to infrastructure and other facilities at the airport". (Pakey quoted in Communique Airport Business, 2010). Thus, the airport attempts to lay-off some of the investment risks in return for undertakings in terms of price and quality of service (see also Figure 3).

The Passenger Perspective

I have argued that European aviation has seen a major change take place in the last few years in the relationship between the airlines and the airports. The ability of EU airlines to enter and exit local aviation markets at will since full liberalisation has increased the market power of the airlines vis airports and has led to the extensive use of bilateral service agreements between airline and airport.

These agreements have sought to protect the position of both parties: giving airlines security with respect to the price and quality of service it can expect from the airport and giving the airport the security needed to sink costs in undertake structural improvements to an airport's facilities. But what protects the passengers' interest? Open entry into the various European airline-route markets should ensure that generally the passenger gets a competitive product from the airlines for intra-European flights, but is there still a requirement for regulatory intervention to ensure that the passenger-consumer is not exploited directly or indirectly in his or her transition through the airport?

In the new environment there are a number of factors which reduce and arguably eliminate the need for a separate framework of regulation to protect the airport-using passenger. One factor is the nature of the long-term airport-airline contracts and the fact that in general they stress, explicitly or implicitly, the importance of traffic volume; either explicitly via traffic volume guarantees given to the airport by the airline or implicitly through the roll-out programme for base aircraft. The incentive is to maximise passenger volumes (through pricing and quality of service) so that the interests of the passenger are aligned with that of the airline and airport[22]. In addition, the quality of service guarantees in the long term contracts on matters such as turnaround times are also aligned with the passenger's interest. The second, important factor is that airports are operating in several different markets or as the UK Office of Fair Trading expressed the point, airports are multi-product entities supplying to the market a bundled group of services (Office of Fair Trading, 2006) and one important service is providing, directly or indirectly through concessions, retail services to both departing and arriving passengers (and land-side to 'meters-and-greeters' other visitors and employees), together with the facilities for the hire or parking of cars at the airport[23]. The consequent income stream, from these often high margin activities, is now an important source of revenue for the airport, providing around half of total revenues at European airports (Graham, 2008), and this also provides an important incentive for the airport business to encourage passenger volumes, which it can do by restraining prices charged to the airlines (Starkie, 2001)[24]; charges which in a competitive airline

[22] Note also in this context the extensive use by airports of new route discounts and similar volume related incentives; these cover airlines using the airport which do not have a negotiated supply contract.

[23] It is usual for there to be significant non-passenger related revenue generating activities (freight, general aviation, aircraft maintenance etc) particularly at smaller airports which, as they grow, often diversify *into* the scheduled passenger business. Statements one sometimes reads implying that airports with only one or two flights a day cannot possibly be profitable fail to understand the broad nature of the airport business.

[24] There have been claims that there are instances where an airport has charged a zero or negative price to airlines in order to maximise high-margin retail sales. Although these claims have not been verified, if one adds into the equation the cash support evident in the TIAL case (above), it seems quite likely that the effective price to the airline for the use of the TIAL airport facilities might very well have been zero. See also anecdotal evidence in Calder (2006, 99-100).

market are reflected in the fares that passengers pay[25]. Moreover, airport management, by encouraging more airlines to make use of an airport, in turn, make that airport more attractive for passengers. This passenger friendly incentive structure has led recently to its interpretation in the context of multi-sided market theory with the airport viewed as a platform for the different 'sides' of the market, including retailing, to operate across (see in particular Gillen 2010, also Graham 2008, 230-269)[26].

The forgoing factors alone, I would argue, are adequate in most circumstances to secure the passenger's interest but, to guild the lily, airports can also compete directly with each other for passengers. This especially the case in western and eastern Europe where a combination of high population densities and redundant assets from the Second World War and Cold War ensures that most countries have a high density of aerodromes with overlapping catchment areas (see Gillen and Niemeier 2008, 39). A much quoted study reported in Fewings (1999), for example, found that in France and Germany there were 32 and 28 airports within 1 hour surface access time of the next nearest airport. Figure 4 illustrates a similar point with respect to the major part of the UK. It shows for 21 airports in England and Wales that had an annual passenger through-put of at least 400,000 in 2005/6, driving times to near-by airports[27]. The mean travel time to the nearest airport across all airports shown is about 1 hour. This suggests a potentially competitive airport market especially if one takes into account the conservative estimates of driving times, the inability of airports to price discriminate across their local passenger catchment areas (see Starkie, 2002) and the fact that there are other smaller airports either in the market for short-haul scheduled flights or with the potential to enter, not included in Figure 4. On the other hand, the competitive picture presented is focused on short-haul passenger movements, not all the 21 airports currently have the infrastructure capable of handling long haul flights. But this is to ignore the potential for competition to take place for the long haul passenger as a result of traffic connecting through the major hubs in different

[25] Zhang and Zhang (2003) and Oum et al. (2004) confirmed analytically that concession revenues would ameliorate charges but by less than if the airport with concession income adopted a welfare maximising strategy. In reality there are demanding information requirements and control mechanisms required to achieve such a welfare maximising policy: perfect information begets the optimal solution.

[26] Gillen in his insightful Martin Kunz memorial lecture, 2010, challenged the conventional idea that the airline 'owns' the passenger, suggesting instead that the airport owns the passenger and that the airline simply serves as the airport distribution system. Consistent with this are the efforts made by airports to market themselves directly to the retail (passenger) market through websites and e-mail data bases.

[27] Entries in Figure 4 show driving times between airports that are within 2 hours of each other (except for Norwich which is more than two hours from its nearest neighbouring airport). Airports are ranked left to right by their proximity to the nearest of the other 20 airports. Further details can be found in Starkie (2008,159-161 and 2009)

Member States. For example, in mid-2010, 14 regional UK airports were connected to *both* Paris Charles de Gaulle and Amsterdam Schiphol.

Wither Sector-specific Regulation?

To summarise the preceding discussion, I have argued that a new feature in the liberalised aviation market in Europe is the introduction of bespoke long term contracts between the airport and its downstream airline customer. Where these contracts exist, they have replaced the need for the long established published tariffs and general conditions of use governing airport access and, in so doing, they have had the effect of internalising what might have otherwise have been dealt with by a regulatory process. These contracts have not only aligned the interests of the airline and airport but the passenger too. In addition, attention has been drawn to the high-margin retailing business at airports which provide an incentive for airports to drive passenger volumes which they can do by ameliorating charges to airlines. Finally, an added incentive-compatible feature is the potential for direct and indirect competition for passengers between airports across much of Europe on account of overlaps in catchment areas or because of feed into alternative hubs for connecting to long-haul flights. In the circumstances it seems unlikely that European airports on the whole are either in the position to exercise significant market power or will be inclined to do so.

This raises the issue of whether there is a need for sector-specific regulation in the airports sector; whether it is now of questionable overall benefit given that it is impossible to design the perfect regulatory process. Although many politicians act as if economic regulation is both a costless and a perfectly informed process, this is far from being the case. No matter how well designed, regulation, faced with information asymmetries[28] and a certain rigidity of practice when new information becomes available, introduces its own distortions; distortions which together with wider disbenefits have to be allowed for when judging its utility.

The Problems of Regulation

A review of the problems associated with a regulatory regime requires a separate paper to do the subject matter justice, but a few of the problems are worth touching upon. Taking incentive regulation, operating through some form of price control or cap, as the benchmark approach and drawing upon UK experience, it is evident that setting of the cost of capital is a crucial input to the overall exercise. However, experts can disagree on what is an appropriate figure for the cost of

[28] For example, airlines have begun to stress the scale of switching costs to counter the argument that they can transfer flight operations easily to another airport, but regulators have limited information on this issue; they can however observe the degree of airline initiated switching taking place in the market.

capital at the time that the price control is set and sometimes disagree to an extent that impacts profoundly on the level of the price cap (see Starkie 2008, 111-115). There are also fundamental disagreements over whether the general approach leads to incentives to under or over-invest (Andrew 2004, 169-171) ; under-investing might occur because of the so-called hold-up problem or because no upside gains are possible to offset unexpected downsides (a sudden fall in traffic for example) thus reducing average returns over the long run and producing an asymmetric return profile (see Starkie and Yarrow 2008); over-investment might occur because the regulatory asset based (RAB) approach ensures that the firm will, ceteris paribus, get a return on any capital it invests[29]. And then there are the less strategic but no less important problems resulting from requiring the airport to commit to a detailed forward looking investment programme for the purposes of the regulatory settlement in spite of it facing a dynamic market with unpredictable outcomes, or whether expressing allowable charges in the form of an average passenger yield, as opposed to a tariff basket approach, unintentionally incentivises the airport to focus on passengers at the expense of other airside activities such as cargo handling. There are many other problems of a similar nature and significance.

Some problems can be addressed as they become evident, but the resulting technical ` fixes` add still further to what is already a complex process of regulation thus re-enforcing the tendency for regulation to expand in both its scope and time taken, a process of regulatory creep. Regulatory creep is certainly evident in the economic regulation of UK airports as the following quotation illustrates: "The first review, in 1990-91, took 14 months, from the terms of reference to the final decision. The second review, in 1995-6, took 21 months, the...2002 review [took] 32 months. The first formula was a simple value of 'x`. The current proposed formula is a value of x, with six trigger points, and a service quality scheme covering a dozen parameters. In addition, the BAA operates under a web of agreements and undertakings, which have grown at each review" (Toms 2004). Since Toms wrote that piece, the process has become even more detailed[30]. Regulatory creep is also evident in the growth in the volume of material brought forth during the course of a review. Take for example the report of the Competition Commission produced in response to the (statutory) 'reference' that the industry regulator has to make to the Commission towards the start of each UK airport price review. In 1991 the Commission's report covering the three London airports owned by BAA plc (Heathrow, Gatwick and Stansted) was 315 pages in length; in 2008, the report on Stansted

[29] It is not the practice for the UK regulator to scrutinise and thus second guess the firm's capital expenditure programme.

[30] By visiting the CAA website at http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=68 one can see the large volume of material posted on quality of service matters and capital expenditure triggers including monitoring reports, protocols and correspondence generated.

alone was 768 pages and this was in spite of the CAA's intention that its new approach of encouraging 'constructive engagement' between the airport and airlines would simplify and focus the deliberations (see also Starkie 2008, 71-72).

Apart from the 'technical' problems of regulation, the burgeoning regulatory process and the voluminous output of material that ensures, there are also the insidious side effects; the crowding out of negotiated solutions[31] and the tendency to produce a uniformity of provision when different carriers have different preferences when trading-off price against service quality in their offerings to passengers (Schuster, 2009). And, of course, there is the general tendency for regulation to stifle market discovery and innovation, just as it did in the European airline market in pre-liberalisation days. In part this stifling effect is due to what Kay (2010) has referred to as intellectual capture: " [i]t requires a considerable effort of imagination to visualise that any industry might be organised very differently from the way that industry is organised now. So even the regulator with the best intentions comes to see issues in much the same way as the corporate officers he deals with every day." So has the ex-ante form of economic regulation now outlived its usefulness when applied to the airports industry, at least in Europe?

A Shift of regulatory focus

In answer to the question: is ex-ante economic regulation redundant, the answer is generally yes. However one might conceive of its usefulness when a group of proximate airports are in co-ownership.[32] In such circumstances, dominance will be more evident and, from the passenger perspective, airport competition less effective. Although I have argued that even the singular dominant airport will have an incentive to attract both airlines and passengers by ameliorating charges, one might envisage that the circumstances that led to regional co-ownership and dominance, conspire to produce different incentives and outcomes. For example, co-ownership might originally have been part of a planned approach by the state (coupled with the direction of different types of aviation to different airports) and this, in turn, might have lead to an anti-competitive, controlling mindset on the part of managers/owners of the airport grouping, especially when the airports remain state controlled. Alternatively, co-ownership might have been pursued with the intent of exercising dominance (where the state wanted to extract monopoly rent for fiscal purposes for example). But if there is a remedy in these circumstances it is not to regulate prices but

[31] This is illustrated by easyJet's attempt to get Luton airport price regulated but having failed to do so it then negotiated a long term contract (on terms probably more favourable than it would have achieved through a price cap).

[32] Examples would be the Paris, Barcelona, Milan and Amsterdam regions.

to implement structural change (divestment and ownership change), the recent outcome of the market reference inquiry into BAA plc being an example of such a change.

Both the UK Department of Transport and Competition Commission[33] have also argued that economic regulation is still required in circumstances where airport capacity is squeezed and constrained as it is in the London area. Their reasoning is that existing capacity constraints limit competition at least in the short run so that the impact of competition would be only marginal at best; it is a view widely shared[34]. But this reasoning leads to a false presumption that the absence of capacity is equivalent to the deliberate withholding of capacity from the market; only in the latter circumstances is there a basis for arguing that there is an exercise of market power and, at least in the London area, there is little firm evidence that market power has been exercised in this way[35]. Prices might be judged high or to be on an upward trajectory when capacity is constrained but this is to be expected; the cost of adding marginal capacity at congested airports, particularly when the airports are large, is probably above average costs[36], apart from which prices need to clear the market and, in a capacity constrained market, rationing prices will generate not monopoly rents but scarcity rents, (temporary) returns in excess of the firm's marginal costs of supply. And, of course, if airport charges fail to clear the market (balance demand with restricted supply) then the task falls to the airlines to raise their fare yields, failing which the market clears (inefficiently) by either airlines queuing to access the runway or by passengers queuing to book seats. But here is the rub; in circumstances of constrained supply, economic regulation becomes an exercise in managing rent-seeking behaviour from which the passenger (or other retail users) benefits little if at all[37].

Never the less this is not to deny that there are or could be competition issues relating to airport use but these are perhaps more subtle than a case of an airport abusing a dominant position. We can observe, for example, that many airports are often dominated by a single airline. Sometimes this happens to be a major hub airport, Paris Charles de Gaulle, Frankfurt, Amsterdam, or London

[33] See, for example, the Competition Commission (2008)

[34] This argument was strongly rebutted by Yarrow (2009) who made the point, amongst others, that: "...there are important dimensions of competition that are not significantly hindered by the existence of capacity constraints, and indeed that in some cases the existence of such constraints even encourages and strengthens a relevant mode of competing (e.g. competition to discover how best to improve capacity utilisation efficiency)..."

[35] The Competition Commission has pointed to a dragging of feet by the BAA on the issue of investing in additional capacity at Heathrow but arguably the constraints on expanding capacity have been political rather than economic. Only the second Labour government under the short tenure of Prime Minister Gordon Brown expressed unequivocal support for runway expansion at Heathrow.

[36] "... at a site constrained airport, such as Heathrow, long run incremental cost based on the cost of new developments could be considerably above existing costs including a reasonable return on assets after depreciation." Competition Commission (2008, fn.38)

[37] The management of the rents at Heathrow was the basis of Beesley's (1999) proposed 'deal' between airport, airline and government.

Heathrow for example, or a much smaller airport chosen as an operating base by an LCC. This raises the question: in these circumstances does the resident dominant airline have market power and is it more likely to exercise market power than the airport at which it is based? It has been observed that fare yields tend to be higher at major hub airports but this might be explained by the higher costs of operating at such airports or by the difference in passenger mix (Lee and Luengo-Prada, 2005). On the other hand, airlines have much greater ability to price discriminate between passengers and can segment the market in a way that airports cannot and, as we have argued, the existence of high-margin retailing at airports gives a powerful incentive for the airport to seek passenger volume, an incentive that the airline does not necessarily have. This is an area that requires further thought especially in circumstances when it is suggested that a particular airport should be subject to a price cap because of its potential to exercise significant market power, but the same airport also happens to host a dominant airline, circumstances that might suggest the possibility of double marginalisation.[38]

A further aspect that might raise competition concerns is the possibility for vertical restraints or foreclosure of one form or another. There was a hint of this type of restraint in the TIAL contract for example; one of the terms required the airport management to confer with bmibaby in the event that the airport was approached by another airline intending to operate to any destination within an extensive network of routes specified by bmibaby. Alternatively, one might imagine pressure of a potentially anti-competitive nature applied in reverse; the airport tries to encourage its base airline from setting up at near-by competing airports. The opportunity for vertical foreclosure is even more evident when there is vertical integration of the supply chain, when the airline and airport are co-owned. Co-ownership was, of course, a common occurrence in the past when both national airline and national hub airport were controlled by the state, a situation which prevails still today in some Member States. Although it is common for the airport and airline to be in the hands of separate state operating companies this does not preclude collusion either tacit or otherwise, an accusation recently made for example in relation to Air France and Aeroport de Paris (Villard 2009). A further dimension is added when the airline and airport co-invest in airport or airline assets. The best examples of this practice are Lufthansa's equity share in Frankfurt and its investment in Terminal 2 at Munich. In these circumstances, anti-competitive practices might manifest themselves through differential pricing strategies or in the form of preferential access to facilities. In this latter context,

[38] Starkie (2010) raises this point in relation to Schiphol which is deemed to have significant market power but hosts a dominant airline group, KLM-Air France, accounting for around 60 percent of the passenger through-put and with KLM having a monopoly on approximately half the routes served; the same airline group also dominates the relatively proximate hub of Paris Charles de Gaulle.

complaints have been made by non-dominant airlines at Munich, Paris Charles de Gaulle and London Heathrow in relation to access to terminals used by dominant airlines.

But now we have moved into the realm of competitive conduct rather than that of ex-ante economic regulation which, in turn, suggests that these issues should be handled through the application of competition law. Consequently, the case for having a specific airport regulator is now questionable. The OECD reminded us recently that: "[T]he purpose of [sector specific] economic regulation is to protect consumers from abuse of power, where dominance cannot be dealt with through general competition law. This should be its only objective" (OECD 2009). My argument has been that the shift in the dominant relationship between airports and airlines in recent years, leading to the increasing regulation of governance through bilateral contracts between the two parties, makes abuse of dominance on the part of airports much less likely and, although there might be areas of residual concern, the emphasis has shifted to issues of vertical foreclosure in the aviation supply chain, issues, which together with any remaining dominance concerns, are better dealt with through general competition law[39].

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[39] Academics have begun to turn their attention to vertical relationships and vertical foreclosure in the aviation supply chain particularly between airports and airlines. See for example Xiaowen and Zhang (2010), Basso and Zhang (2008) and Fuhr (2009). As one of the paper's referees pointed out, a possible eventual outcome of this research is that special rules do prove necessary for this industry.

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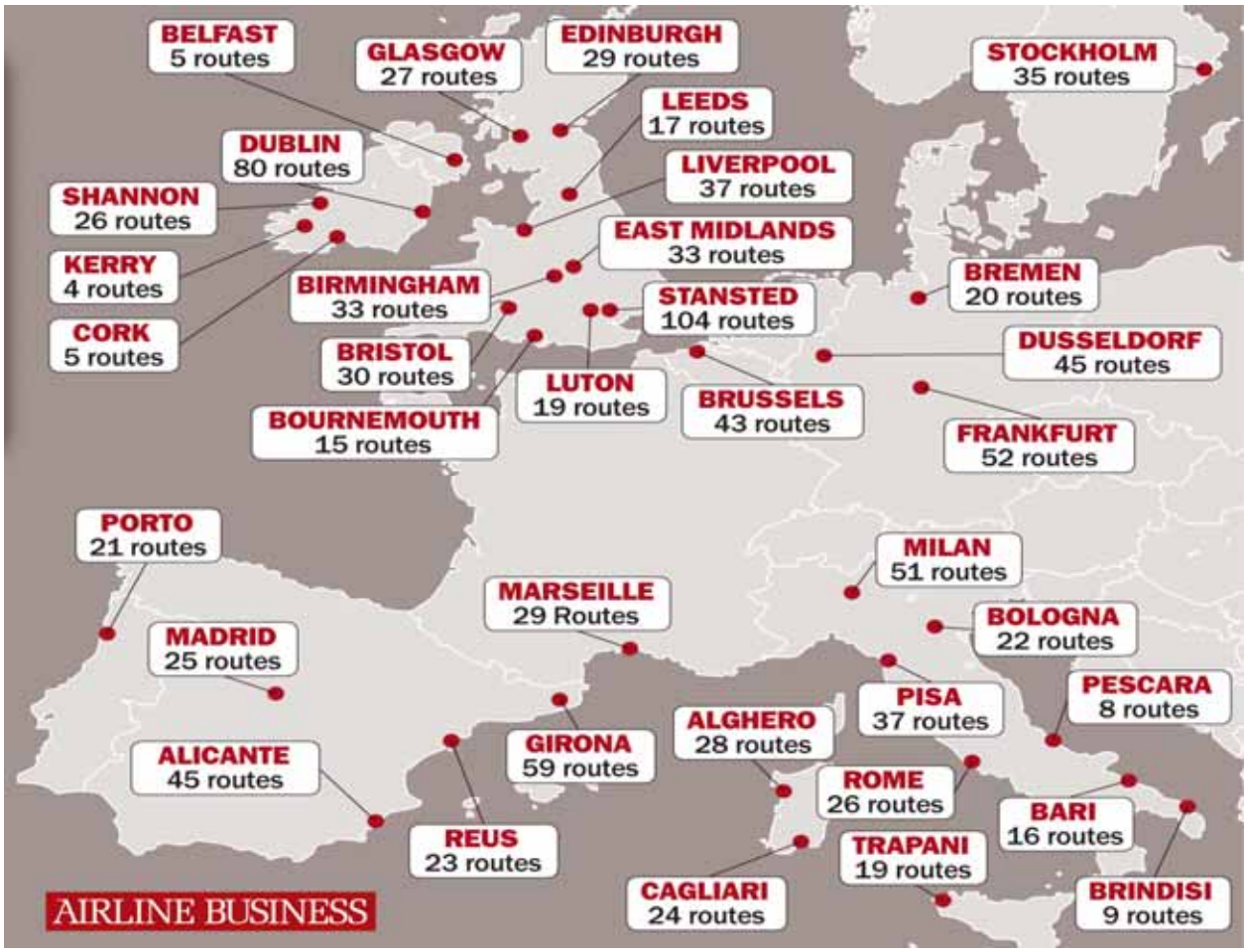

Figure 1: Ryanair Bases January 2010. Source *Airline Business*, January 2010.

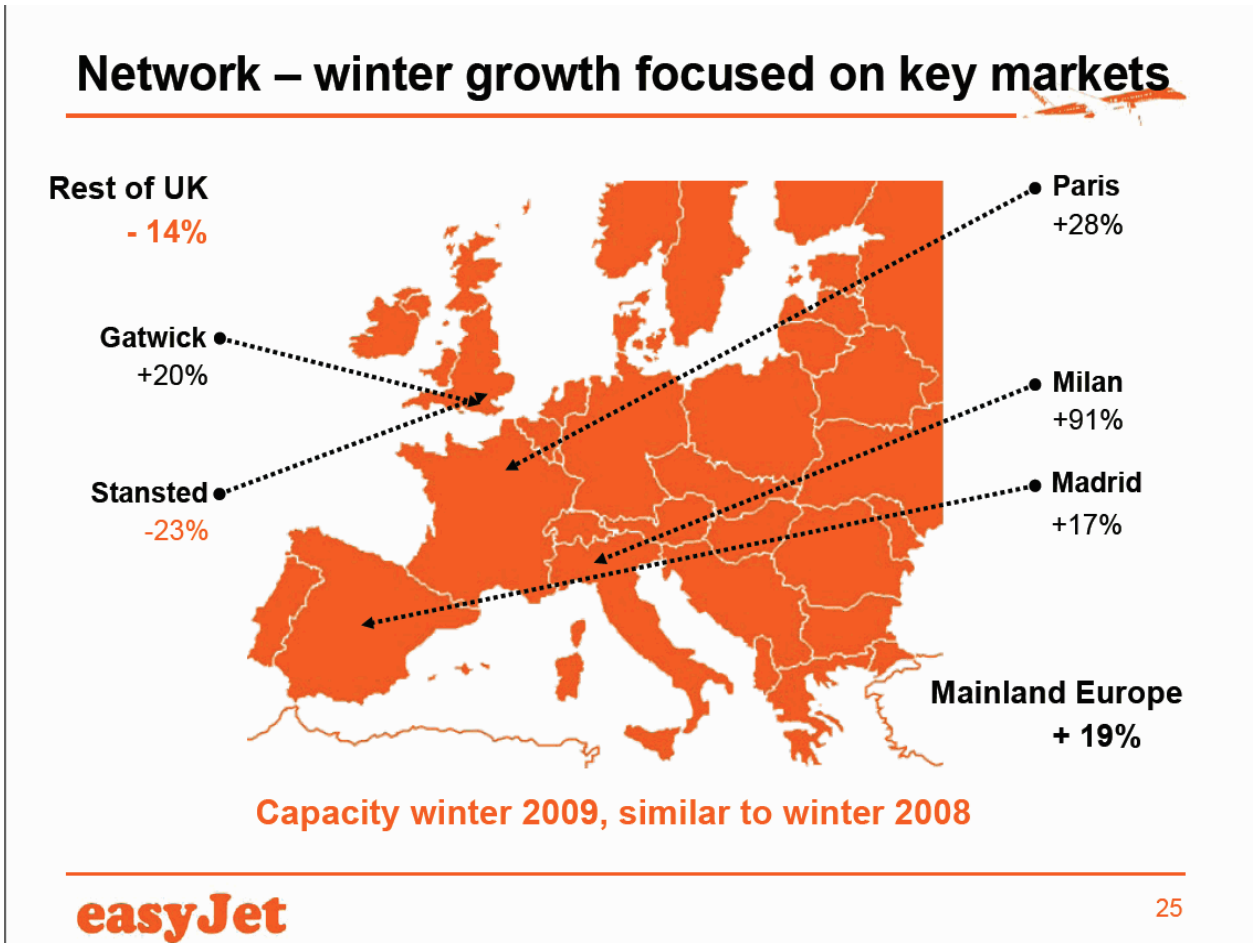

Figure 2 easyJet's re- distribution of network capacity, winter 2009 v 2008. Source: investor presentation.

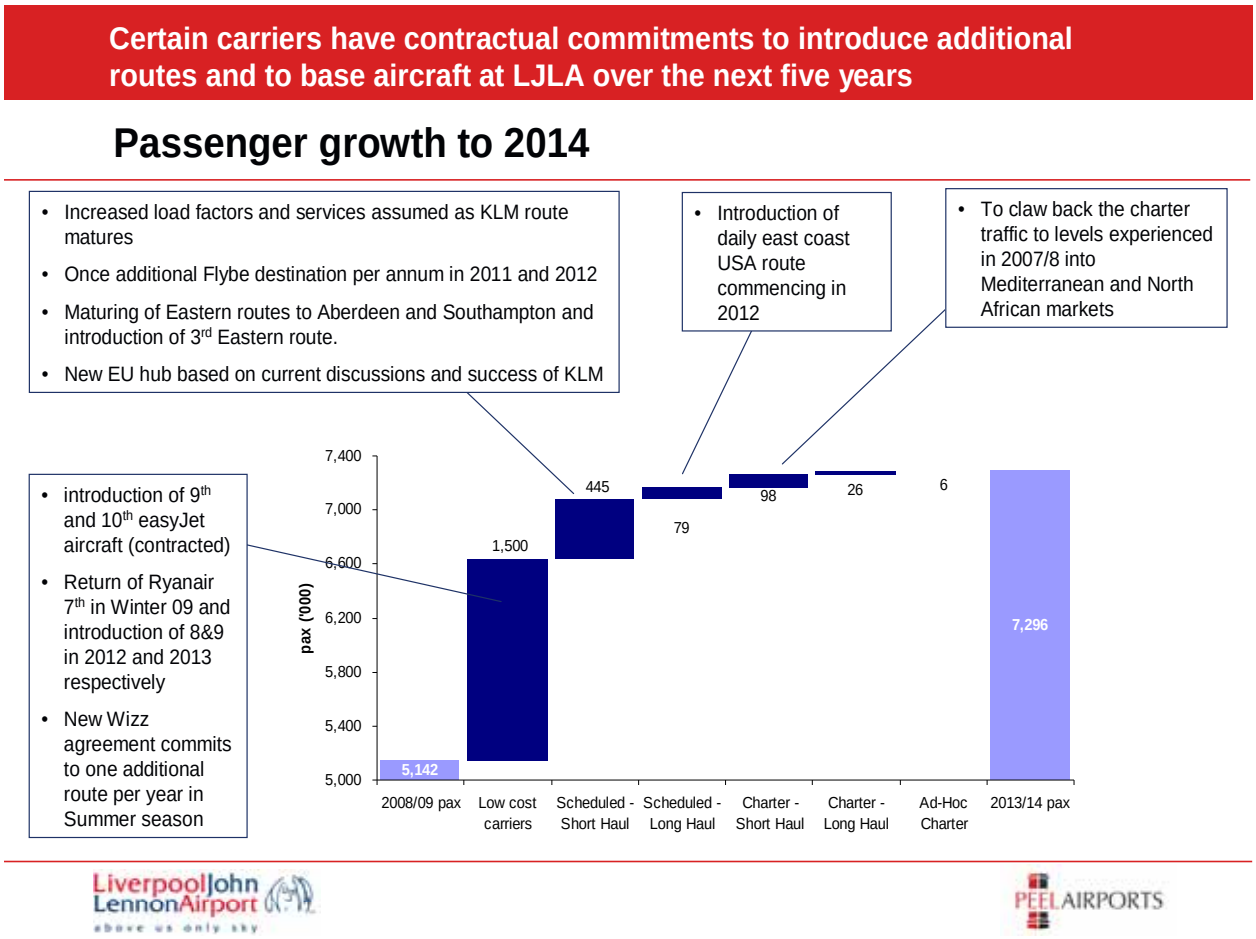

Figure 3: Liverpool airport's planning assumptions based on contract commitments by airlines. Source: Liverpool Airport

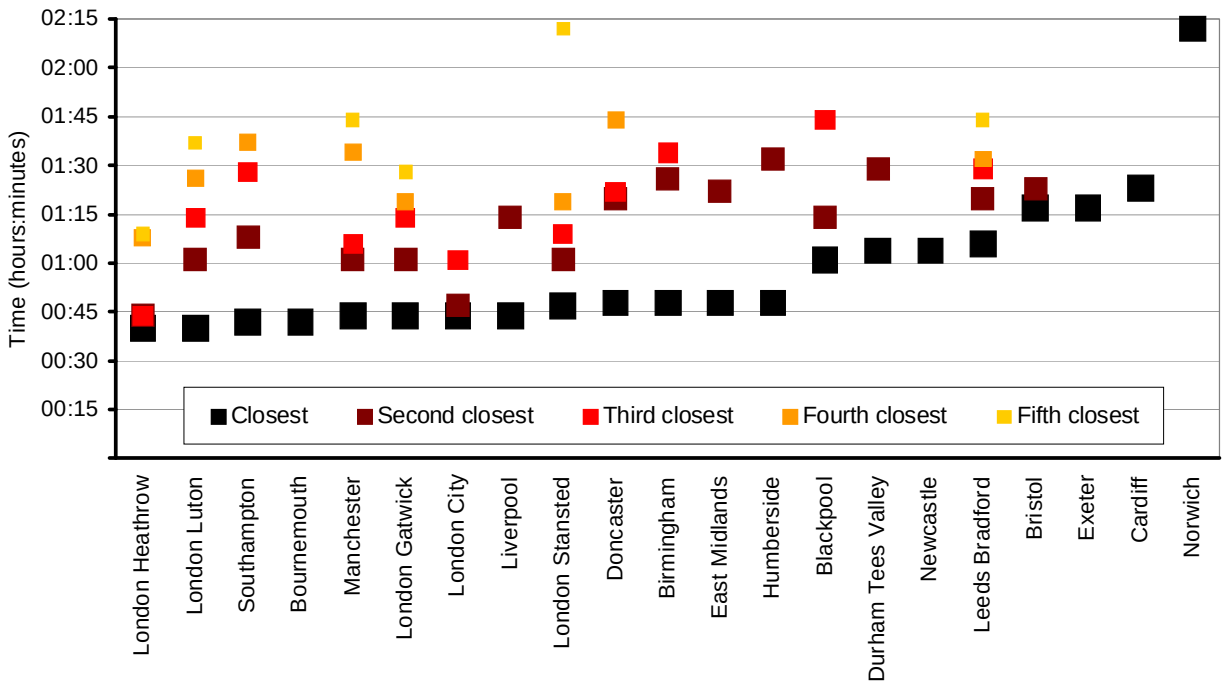

Figure 4: Drive times between English/Welsh airports. Source: author calculation using RAC routefinder.