CAN THE EUROPEAN LOW-COST AIRLINE BOOM CONTINUE? IMPLICATIONS FOR REGIONAL AIRPORTS

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1. Introduction

Most traditional major airlines in Europe have been posting heavy losses and reducing capacity to reflect the recent down-turn in demand for air travel. Meanwhile, a new wave of low-cost airlines has been expanding rapidly in the European short-haul market. Carriers such as Ryanair and easyJet have not only achieved growth rates of 25-30% per annum but remained profitable through the post September 11th slump (Baker, 2002). The business model for low-cost air services is well documented (Lawton, 2002; Gudmundsson, 1998). This paper intends to assess the commercial performance of these airlines in different types of markets. Recent profit warnings from Ryanair and easyJet have created speculation as to whether the low-cost bubble may be about to burst. Some of the current challenges and future opportunities will be considered including the extent to which the low-cost advantages are sustainable. Regional and secondary airports have been among the major beneficiaries of low-cost carrier expansion and the implications for these will be highlighted.

2. Growth of low-cost services in Europe

It is only since 1995 that low-cost scheduled services in Europe have really taken-off (Table 1). It is the UK and Ireland that have been the main focus of this activity to date; new entrants in other parts of Europe such as Air One (Italy) and Air Europa (Spain) are more akin to the bmi British Midland model of a more efficient traditional airline rather than a radically new product (Buyck, 2003). Color Air in Norway was one failed example and within the last year several other European attempts have started such as Hapag Lloyd Lite and German Wings in Germany; Jet 2 and MyTravel Lite in the UK.

However it is Ryanair based in Ireland and easyJet in the UK that have come to dominate the market.

Table 1: Traffic growth of low-cost airlines

scheduled passengers (millions)

	1995	2001	2002
Ryanair	2.2	9.5	14.5
EasyJet		6.0	8.8
Go		3.7	6.0
Virgin Express		2.4	2.4
Buzz		1.4*	1.8*

* estimate

Source: IATA, CAA, Virgin Express

bmi British Midland has unit costs of 7.4p per seat kilometre, on a similar aircraft type and network from Heathrow to that operated by the low-cost airlines from Stansted or Luton. In comparison, easyJet's unit costs are 4.5p per seat kilometre and Ryanair's a rock-bottom 2.8p per seat kilometre (Calculated from CAA and IATA data for 2001). This enables low fares to be offered viably by the new entrants. The major difference between Ryanair and easyJet arises from Ryanair's greater use of secondary airports.

3. Route development

Table 2 shows that the most successful low-cost services have been to leisure destinations that previously lacked reasonably priced air service (e.g. Venice, Pisa, Nice). These have seen dramatic growth in total traffic, with the low-cost carriers capturing a substantial market share. In the case of traditional charter points, such as Malaga, the low-cost airlines have diverted demand from the charters, especially independent travellers who favour the more flexible schedule and booking arrangements. On the big city routes, the picture is more variable.

The market share of low-cost airlines on routes from London to major hub airports is generally in the 10-25% range. These are still dominated by British Airways and the foreign hub carrier. The low-cost share of local traffic (excluding hub connections) will be rather higher however. Where traffic is mainly UK originating the low-cost airlines tend to do better (e.g. Rome and Zurich) than when it is foreign biased (e.g. Copenhagen). Paris is depressed by the presence of the Eurostar rail service which provides another competing option. On routes to other major airports from London where traffic exceeds 1 million passengers per year, the low-cost airlines perform rather more strongly, taking 25-50% of the market. In many cases the leading low-cost operator has pushed one of the traditional flag carriers out of the top two places on the route (Doganis, 2001). To Nice and Geneva, for example, easyJet and BA dominate, while to Dublin it is Ryanair and Aer Lingus. A low-cost airline may well become the largest operator in each of these markets in due course, with one of the traditional airlines withdrawing completely, or utilising a low-cost offshoot such as bmibaby or SAS's Snowflake subsidiary (Baker, 2003).

The secondary routes (under 1 million passengers per annum) fall into two main categories. Firstly, leisure destinations where the low-cost airline dominates with a market share of 50%+ and the traditional carriers may well pull out - as has already happened with Salzburg and Turin. Secondly, the more business oriented routes where low-cost market share is much lower (0-30%). These are likely to remain important as feeder routes for British Airways to its Heathrow hub but the prospects for other carriers are less certain. Where traffic is mainly foreign originating (e.g. Oslo), the bias in Frequent Flier Programme membership may enable the foreign airline to hang on. Some routes can be identified which seem to be at a less advanced stage of development than others. This may be because low-cost airlines have curtailed or avoided service due to high airport charges/lack of alternate airports or that the traditional carriers are aggressively defending their patch.

Mixed business/leisure destinations such as Amsterdam, Barcelona and Rome appear able to support a substantial growth in demand but ones without much tourist appeal are more dependent on inbound traffic to London (e.g. Oslo, Dusseldorf). Places such as Esbjerg, Eindhoven, Hamburg/Lubeck are unlikely to see many British leisure travellers even if the price falls to zero! Recent 'giveaways' by low-cost airlines, where seats have been on sale for only the price of the taxes and charges, have reputedly still been left with 10% of tickets unsold. Demand cannot be stimulated ad infinitum (Binggeli and Pompeo, 2002).

Table 2: Traffic growth and low-cost market share on primary and secondary routes from London

Route	Growth in scheduled passengers 1997-2002	Low-cost market share of scheduled passengers 2002	Carriers 2002
ROUTES TO MAJOR HUBS			
Rome	+28%	27%	Ryanair, go
Zurich	+16%	26%	easyJet
Amsterdam	+21%	25%*	easyJet, buzz
Frankfurt	+27%	23%	Ryanair, buzz
Milan	+30%	19%	Ryanair, go
Munich	+16%	16%	go
Paris	+3%	14%	easyJet, buzz
Copenhagen	+32%	13%	go
Madrid	+43%	11%	easyJet
OTHER PRIMARY ROUTES (> 1m pax in 2002)			
Nice	+82%	51%*	easyJet, go
Malaga	+247%	49%*	easyJet, go
Barcelona/Geron	+98%	44%*	easyJet, go, buzz
Dublin	+18%	40%*	Ryanair
Brussels	+1%	37%*	Ryanair, Virgin Exp
Geneva	+48%	38%*	easyJet, buzz
Stockholm	+41%	28%	Ryanair
SELECTED SECONDARY ROUTES (<1m pax in 2002)			
Salzburg	+454%	100%	Ryanair

Venice	+152%	67%	Ryanair, go
Bologna/Forli	+111%	59%	Ryanair, go
Pisa/Florence	+161%	55%	Ryanair
Gothenburg	+6%	53%	Ryanair
Naples	+129%	46%	go
Berlin	+33%	29%	buzz, Air Berlin
Hamburg	+18%	29%	Ryanair, Air Berlin
Athens	+7%	25%*	easyJet
Oslo	+9%	21%	Ryanair
Dusseldorf	-2%	17%	buzz
Helsinki	+13%	4%	buzz
Lisbon	+20%	0	
Vienna	-14%	0	

* estimated

Source: Compiled from CAA Statistics with airport pairs shared between low-cost and traditional airlines estimated on basis of capacity and average load factors

4. The importance of regional and secondary airports to the low-cost business model

Whereas the traditional airlines have concentrated on large cities and major airports, the low-cost airlines have opened up under-utilised airports at some distance from the main population centres. Although all the low-cost airlines include some secondary airports in their route network, it is Ryanair in particular that has made a virtue out of flying to places previously unheard of. Some examples of substitute airports for major cities are given in Table 3. In addition, Ryanair flies to a number of small regional airports that are not realistically substitutes for the major airports but perhaps have an underserved local catchment area or inbound tourism potential. Examples would include Klagenfurt and Graz in Austria, Groningen in the Netherlands, Aarhus in Denmark, Tours and Bergerac in France and Kerry County in Ireland. In many cases these only had service with small regional aircraft before the arrival of Ryanair with its Boeing 737s. In the UK, easyJet has developed bases at Bristol and East Midlands, bmibaby at East Midlands, Cardiff and Teesside and Jet2 at Leeds/Bradford.

Table 3: Use of secondary airports by low-cost airlines – some examples

Major Airport	Secondary Airport
London Heathrow	London Stansted (Ryanair, easyJet)
Rome Fiumicino	Rome Ciampino (Ryanair, easyJet)
Glasgow	Prestwick (Ryanair)
Berlin Tegel	Berlin Schonefeld (Ryanair, easyJet)
Toulouse	Carcassone (Ryanair)
Frankfurt	Hahn (Ryanair)
Milan Malpensa	Bergamo (Ryanair, Jet 2, bmibaby)
Brussels	Charleroi (Ryanair)
Manchester	Liverpool (easyJet)

One of the advantages of secondary airports is the greater productivity of aircraft and crew that can be achieved from quick turn-arounds. Table 4 takes the example of the London-Frankfurt route to show that Ryanair flying Stansted-Hahn would get 60% better productivity than BA flying Gatwick-Frankfurt. It is interesting to question whether easyJet has 'lost the plot' by expanding at Gatwick!

Table 4: Higher productivity at secondary airports

Route	Block Time	Turn-around	Output per 14 hour day
Stansted-Hahn	1:15	30 min	8 sectors
London City-Frankfurt	1:30	30 min	7 sectors
Heathrow-Frankfurt	1:35	45 min	6 sectors
Gatwick-Frankfurt	1:50	45 min	5 sectors

All timings with 737 jet aircraft (Avro RJ from London City)

Low-cost carriers can make secondary airports work in a way that traditional airlines cannot by bringing in passengers from a much wider catchment area (Barrett, 2000). When Stansted had operations only by Air UK and some of the European major scheduled airlines it effectively operated as a regional airport for people in East Anglia and to some extent East London. It was a bizarre choice for anyone from the much larger markets in Central London or further west because it had lower frequencies than Heathrow, similar fares and a longer access journey. Now with average fare levels half those of Heathrow, people are willing to drive past their nearest airport to fly from Stansted. This is particularly true of leisure passengers who appear to place a very low value on their own time.

Another example is provided by Charleroi airport in Belgium. This is situated in a depressed region of Belgium, with an industrial heritage which has historically generated little air travel. It is however well placed geographically to attract traffic from other more populous and affluent areas nearby. A survey of Ryanair passengers - Table 5 (Ryanair Passenger Survey, 2002) suggested that only 18% of passengers resident at that end of the route came from the natural catchment area of Charleroi (Southern Belgium). The rest were attracted from the rest of Belgium, the Netherlands, even Germany and France. If only a conventional scheduled service was on offer from Charleroi these would have used other airports such as Brussels, Luxembourg or Amsterdam.

Table 5: Geographical distribution of passengers on Ryanair services from Charleroi

Region	Proportion of traffic
Brussels Area	25%
Northern Belgium (Flanders)	19%
Southern Belgium (Wallonia)	18%
The Netherlands	17%
Luxembourg	8%
France	7%
Germany	6%

Based on residential location of originating traffic at Charleroi Airport in a survey of Ryanair passengers analysed by the University of Westminster

Without a low-cost service many of these people would not have travelled at all meaning that the market for a conventional 'high-cost' regional jet service from Charleroi may be as little as 10% of the demand that Ryanair have captured, making such a service unviable.

The rapid growth of secondary airports presents a number of problems in terms of ground access. Not only are people coming from further afield but the vast majority of these will add to environmental concerns by using a private car. Small airports do not have the throughput required to support fixed rail links, although a few have a station in close proximity, usually more by accident than design! (e.g. Prestwick). By changing the fundamental economic balance between rail and air travel, low-cost air services have also undermined government efforts to move more long-distance traffic by rail.

Despite these handicaps, in certain markets, low-cost carriers and secondary airports are now handling a major share of traffic (Table 6).

Table 6: Importance of secondary airports in selected markets from London

	Passengers 2003 (000)		Passengers 2003 (000)
London-Nice		London-Glasgow	
Heathrow-Nice	510	Heathrow-Glasgow	1465
Luton-Nice	326	Stansted-Prestwick	721
Gatwick-Nice	265	Luton-Glasgow	474
Stansted-Nice	110	Gatwick-Glasgow	387
		Stansted-Glasgow	378
London-Venice		Lon City-Glasgow	28
Stansted-Treviso	366		
Gatwick-Venice	261	London-Genoa	
Stansted-Venice	166	Stansted-Genoa	145
Heathrow-Venice	54	Gatwick-Genoa	67
Luton-Venice	4		

Source: CAA Statistics

For example on London-Nice, easyJet has the largest market share (flying from Luton, Stansted and Gatwick) with Luton traffic alone approaching that of Heathrow. On London-Venice and London-Genoa, Stansted carries more than Gatwick, with a large amount of Venice traffic pasing through the secondary airport of Treviso. On London-Glasgow, although Heathrow still dominates, Stansted-Prestwick a 'nowhere to nowhere' combination has 628,000 annual passengers and the low-cost airlines in total have a majority of the local traffic (much of BA's demand is for transfers at Heathrow and Gatwick).

Dramatic growth rates, albeit from a low base, have been achieved at the airports dominated by low-cost carriers (Table 7). In comparison, the remaining UK airports grew by 37% over this seven year period.

Liverpool provides a good example of how a route network can be expanded by low-cost airlines. Until 1996 it had just three Irish sea routes meeting a specific geographical and ethnic niche. Since easyJet started expansion it now has a basic European network with 14 destinations including Amsterdam, Paris, Geneva and Madrid.

Table 7: Growth in traffic at secondary airports served by low-cost carriers

Airport	1995 scheduled pax (million)	2002 scheduled pax (million)	Growth (%)
Stansted	2.9	14.8	405
Luton	0.6	5.4	873
Liverpool	0.4	2.4	551
Prestwick	0.2	1.3	508
Other UK airports	92.6	126.6	37

Source: CAA Airport Statistics

Although the low-cost airlines can bring previously undreamed of traffic to the secondary airports, this may not be profitable growth for the airport operators, however. Because these airports hitherto had little or no traffic, the airline is in a very strong position to negotiate cheap deals. Aviation Strategy (July/August 2000, P3) shows how Ryanair is allegedly on course to obtain a net receipt (rather than the airport charges an airline normally has to pay!) of 3.5 million euros from Charleroi airport and the Walloon region for developing its network from here. The European Commission recently conducted an investigation into whether it represented illegal state subsidies and Ryanair was ordered to repay part of these incentives. A conventional airport would expect an income of 10 million euros from this volume of traffic however, so Ryanair is still getting a good deal! Although it is logical to attract such 'marginal' extra traffic when existing infrastructure is under-used, the problem eventually can become that 'the cart starts pulling the horse' and the airport has to build new facilities. At Luton a new terminal was built and a new rail station to cope with easyJet's expansion but the airline launched a much publicised criticism of the increase in airport charges that followed (at a claimed £5.50 per passenger, still much below the published rate). Ryanair has undergone a similar dispute with Aer Rianta in Ireland and TBI blamed a fall in profits on the increased market share of low-cost airlines at their airports.

The productivity benefits of using secondary airports have also been surrendered by easyJet in its expansion at congested Gatwick. These services will require higher yields in comparison to routes operated from Stansted or Luton. However, the lower frequencies offered from Gatwick, coupled with direct competition from other airlines such as BA may not make this achievable.

5. Can the growth be maintained?

As the provision of low-cost services increases, catchment areas can contract again. Examples of this are already being seen in the UK where, for example, East Midlands had the whole of the Central England and Yorkshire market for low-cost travel to Barcelona to itself when bmibaby started flying the route in 2002. Two years on, alternative low-cost Barcelona services have started from Leeds/Bradford, Birmingham and Manchester while go (easyJet from March 2003) has also launched a rival service from East Midlands to Barcelona. Is this market becoming too crowded? The news that Ryanair is to move its Birmingham-Gerona flight to East Midlands was rapidly followed by easyJet’s notice of withdrawal from June 2004 (Noakes, 2004).

There is some evidence of low-cost airlines starting to cannibalise their own traffic as network coverage grows. This may be because there is a finite pool of people willing to travel more and more as fares fall, hence these have to be progressively shared amongst a greater number of possible airports or destinations. One example is North East Italy where a proliferation of airports now have low-cost service from London (Table 8). After the initial boom in 1999-2000 total traffic has stagnated and there has been some redistribution between airports, with Turin falling significantly from its 2001 maximum. The three daily flights that were previously offered with small jets were down to just one daily Ryanair service using a large 737-800 in 2003. This is unlikely to assist business communications between London and Turin! In 2004, perhaps spotting an opportunity, BA has now re-entered the market from Gatwick. Table 9 examines the South West of France, where Ryanair started off with services to Carcassone and subsequently added Nimes, Montpellier, Perpignan and Biarritz. Total traffic has continued to grow but there has been some churn in the routes operated with certain destinations such as Carcassone and Bordeaux seeming to have peaked.

Table 8: Low-cost carrier traffic between London and North East Italy

thousand passengers

	1999	2000	2001	2002
Bergamo	-	-	-	186
Brescia	-	85	189	189
Genoa	70	130	154	150
Milan Linate	-	148	230	124
Milan Malpensa	-	202	23	-
Turin	122	179	190	144
TOTAL	192	744	786	793

Source: Compiled from CAA Statistics

Table 9: Low-cost carrier traffic between London and South West France

thousand passengers

	1998	1999	2000	2001	2002	2003
Bergerac	-	-	-	-	49	
Biarritz	-	43	87	110	116	
Bordeaux	-	-	56	105	94	*
Carcassone	38	90	109	122	119	
Marseille	-	-	57	91	81	*
Montpellier	-	-	6	2	84	
Nimes	-	-	44	156	154	
Pau	-	-	-	-	-	+
Perpignan	-	-	56	98	109	
Rodez	-	-	-	-	-	+
Toulon	-	-	-	-	54	*
Toulouse	-	-	9	5	39	*
TOTAL	38	133	424	689	899	

* former buzz routes discontinued by Ryanair + new Ryanair routes

Source: Compiled from CAA Statistics

An interesting issue arising from entry by a low-cost carrier into the marketplace is where its traffic is obtained from. Is it diverted from other airlines and if so which are the most vulnerable? Can it generate new traffic and if so what are the implications for the wider tourist market? It is difficult to draw conclusive findings on the generation of traffic because these markets may have been targeted by the new entrants because they were seen as having the right conditions to grow rapidly - regardless of any low-cost service. It is possible to make a crude estimate based on low-cost airline growth in the UK between 1998 and 2001. Comparing with AEA average growth rates, conventional scheduled airlines operating to/from the UK have still grown but appear to be 7 million passengers short of the expected figure compared to countries without low-cost service. Charters are similarly 1 million short, leaving a residual 5 million that can be assumed generated by the low-cost airlines out of their growth of 13 million passengers (about 40% of their traffic).

A danger for some medium sized airports that enjoyed a reasonable level of conventional airline service but perhaps have a weak business/high yield demand is that the major airlines start to desert them altogether in the wake of a low-cost onslaught. At the Belfast airports, hub links have been dramatically eroded. Now the bmi service to Heathrow is the only link with the wider world. A passenger wishing to go to Chicago or Singapore previously had the choice also of BA via Heathrow, Sabena via Brussels or KLM via Amsterdam. BA and KLM have withdrawn due to low-cost competition while Sabena failed. For a passenger going to Amsterdam itself, easyJet may provide some advantages but it has killed the use of Amsterdam as a hub out of Belfast. For a passenger in e.g. Seattle wanting to reach Belfast, it is only the bmi connection that will appear in the CRS and can be booked as a through ticket. Connections at Amsterdam onto easyJet are likely to be more expensive without through fares and impracticable due to no schedule co-ordination, no through check-in and the passenger takes the risk if something goes wrong. Belfast's local accessibility may have improved in terms of price but its global accessibility has very much deteriorated. As shown here, low cost airlines do not always supplement but can eventually substitute traditional airline service, which may not be financially beneficial to the airport operator. Traditional airlines have rewarded airports that have kept low-cost carriers out (through high airport charges) with expansion and redeployment of resources (e.g. London City, Manchester and Southampton in 2003).

6. New market opportunities

The financial performance of carriers such as Ryanair in Europe and Southwest and Jetblue in the US has led to a proliferation of airlines aiming to jump onto the 'low-cost' bandwagon. These are likely to find the going rather more difficult however than the more established low-cost players. This is particularly true where an existing operation has simply been re-branded to offer low fares. It is very difficult to create a low-cost airline from a high cost one as KLM found with buzz and easyJet, after careful analysis, decided to walk away from Deutsche BA. British Midland's rapidly escalating losses in 2002 (Clark, 2003b) may be largely attributable to the launch of bmibaby. In the German market, Air Berlin has moved from charters into low frequency scheduled services such as Hanover to London Stansted once per day (Hill, 2003). It is easier to start a low-cost airline with a 'blank sheet of paper' but even then the best opportunities have already been seized. Some of the new entrants such as Air Scotland struggled with unreliable wet-leases and financial concerns (Travel Trade Gazette, 2003a). The challenge facing all these airlines is that they do not have the critical mass of Ryanair or easyJet which particularly handicaps their marketing efforts as well as reducing the scope for deals on airport charges or aircraft. They are also generally more exposed to competition from the majors where they do not have sufficient frequencies.

With a large number of new aircraft on order by Ryanair and easyJet in addition to the continual stream of new entrants, many more markets in Europe will need to be developed by low-cost airlines to absorb this capacity.

It may be difficult for low-cost airlines to continue such dynamic market stimulation in the longer term. The extent to which other European countries provide the conditions for successful low-cost operations on the UK/Irish model is variable. London is an almost unique case, with large traffic volumes to almost anywhere and being a tourist destination as well as a generator of outbound traffic (Aviation Strategy, 2003). There is also limited surface competition due to the need for cross-water journeys on all international travel and a suitable secondary airport in Stansted that was ripe for expansion. Paris is the other city to meet the first two criteria but there is no equivalent airport to Stansted and the private car and TGV provide more significant competition than other airlines in many cases.

There are relatively few dense international routes in mainland Europe - of the 20 busiest European air routes in 2000, 11 involve London and a further 8 are domestic. Paris-Madrid is the only other international route in the top 20. A number of European cities only owe their current traffic volumes to the existence of a hub (e.g. Amsterdam or Frankfurt). The contestable market for point-to-point services is likely to be much smaller, even allowing for traffic generation through price cuts. Whereas 'London to nowhere' markets can work 'nowhere to nowhere' is much more challenging (Lobbenberg, 2004).

The availability of suitable secondary airports is another factor. Cities such as Vienna or Lisbon have no realistic secondary airport and Vienna has some of the highest charges which has kept if off all low-cost carriers' shopping lists. In Spain, all commercial airports are under the control of AENA which reduces the scope for negotiation on airport charges and may explain Ryanair's minimal presence in this country until the takeover of buzz. The new, privately owned Don Quijote airport at Ciudad Real between Madrid and Seville may provide a future opportunity. In France the situation is more promising as most regional airports are controlled by the Chamber of Commerce and hence anxious to seek the economic benefits that can accrue from low-cost service (Thompson, 2002). However, the problem of public subsidies now looms large, there are few big international markets outside Paris and the London to French provincial routes have already been extensively tapped for inbound tourism.

It appears difficult to succeed with low-cost services from UK regional airports to business destinations in northern Europe. Leisure routes are therefore likely to dominate away from the big cities and bmi’s decision to hand its East Midlands-Brussels service back from bmibaby to bmi regional suggests that some markets cannot be stimulated significantly by lower fares. Further evidence that some of the recently launched low-cost routes cannot fill a 737 comes from Ryanair’s axing of Ostend and Maastricht and bmibaby’s decision to hand certain Cardiff routes to Air Wales. The UK market would appear to be nearing saturation. The part of Britain that still appears to have a shortage of low-cost capacity compared to its share of air travel demand is Southern England (south of London). Although easyJet is slowly adding routes from Gatwick (to cities already in their network such as Nice, Zurich, Belfast and Inverness), slot constraints mean these are always likely to be secondary to their main service from Stansted or Luton. Flybe has launched a quasi low-cost network from Southampton but using BAe 146 aircraft and incurring relatively high airport charges. Bournemouth or Manston in Kent would appear to be the two airports with some possible future potential although if Gatwick was to receive a second runway - or BA was to pull out altogether - it is likely that future demand would concentrate here.

Better prospects for low-cost carrier growth perhaps lie in spreading across Europe to develop previously untapped markets. Ryanair has been the major exponent of this strategy, developing new bases at Brussels South Charleroi, Frankfurt Hahn, Stockholm Skavsta and Milan Bergamo. On the upside, several of the traditional European flag carriers are unlikely to survive in the longer term, leaving openings for a more efficient provider.

7. Pressure on revenues and costs

The traditional airlines largely ignored the new low-cost carriers for the first eight years of their existence. However, the damage being inflicted - particularly in the UK and Ireland market – did not make this a viable long-term strategy (Mason, 2000).

In April 2002, British Airways led the way by abolishing traditional restrictions on short-haul tickets starting from the UK and moving to a simple fare structure of market prices for each flight which can be combined as required and change over time, typically increasing sharply in the last two weeks before departure. This was followed by bmi who went further, allowing cheap one way travel. Table 10 shows that the impact has been dramatic, especially for business travellers willing to plan ahead.

Table 10: London-Edinburgh day return fares following BA and bmi price changes May 2002

Fares are for travel out and back on the same day, with fixed reservations, in £ sterling

Airline-Airport	Time of booking in relation to time of travel		
	1 day ahead	1 week ahead	1 month ahead
British Airways – Heathrow	104-234	64-234	64-119
bmi – Heathrow	63-74	63-139	63-104
Scot – London City	238-344	238-344	238-344
British Airways – Gatwick	68-163	88-173	63-83
easyJet – Gatwick	105	75-80	35-55
easyJet – Luton	105-205	75	40-65
go – Stansted	98-118	98	98
Ryanair – Stansted/Prestwick	39-69	23-41	23-28

Fares for travel on Wednesdays 1st May, 8th May and 29th May 2002

Fares include all taxes and charges but assume debit card payment and e-ticket

Range indicates minimum and maximum fare depending on flight times chosen

Scot Airways flying from London City was the only airline at this time that retained the old BA pricing structure, where a day return never went below £238 no matter how far in advance the booking was made. It can be seen that the low-cost airlines are no longer universally cheapest. BA and especially bmi are now competitive. Ryanair’s Scottish airport is Prestwick, which is not a direct substitute for Edinburgh but it does appear that no-one beats Ryanair’s fares! As a result of these changes, many travellers who had grown used to ignoring the traditional airlines now found they were worth considering, especially with the benefits of more convenient airports, allocated seats, free food and drink etc. This led to the irony of British Airways being voted ‘best low-cost carrier’ in the Guardian/Observer travel awards of Summer 2003.

The reaction by the European major airlines varies from matching BA to persevering with the old emphasis on length of stay rather than time of travel. The dilemma for the major airlines is whether they will lose more in dilution (passengers who would have been prepared to pay a full business class fare trading down to a low-priced, fixed reservations ticket) than they will gain in extra volume and bookings attracted back from the low-cost airlines. They are particularly vulnerable because the peak hour business flights, especially early in the morning, are not popular with leisure travellers and so often have to be sold at a discount to passengers booking well in advance. Foreign airlines are less exposed than BA because the low-cost airlines have few early morning flights into London as they base their aircraft overnight in the UK.

Although this has not necessarily improved the financial position of the majors, there is some evidence that it is fulfilling one of its strategic objectives in terms of making life more difficult for the low-cost carriers. easyJet with its emphasis on big cities, is more exposed to this retaliation by the majors than Ryanair, which has often created its own market to places without previous air service. easyJet's yields were down 11% in the six months to March 2003 compared to a year earlier. This resulted in a loss of £48 million for the half-year compared to a profit of £1 million in the six months to March 2002 (Clark, 2003a). At the time of writing, another winter season loss has just been reported by easyJet for 2003/04 (Milner, 2004).

Although easyJet blames weak demand, more competitive offerings from the major carriers and excess low-cost capacity must also be factors at work.

8. Can the cost advantages be maintained?

Although the low-cost airlines have exploited a wide range of areas to achieve cost levels well below the traditional airlines, some of these cost advantages are unlikely to be sustainable in the longer term, as the major airlines bring their practices more into line and cross-subsidies within the business of outside suppliers are eliminated.

The surplus of pilots resulting from major airline cutbacks since 2001 has benefited the low-cost operators but this situation could rapidly reverse if the major airlines resume recruiting. Virgin Express found itself with a chronic pilot shortage in 1998 as most of the staff left to obtain better paid jobs elsewhere. The only realistic alternative to high pilot turnover has been to make remuneration more competitive and hence increase costs. If productivity is higher, a net saving can still be obtained. Crew lodging expenses are also likely to increase for low-cost airlines as services and frequencies expand, necessitating aircraft to be stabled away from their home-base. Ryanair has avoided this to date by launching new bases and putting up with an unattractive schedule from spoke points. easyJet does have some overnight stops which are essential to compete for the business market. At the same time, the majors are busy renegotiating labour contracts to bring them closer to the low-cost model so either way, convergence of costs and conditions appears inevitable. Contracted out services and supplies (e.g. in ground handling, fuel or catering) may have been cross-subsidised to some extent by organisations desperate to win marginal extra business from the new entrants. Again, this may no longer be possible when the low-cost airlines start becoming a major part of the market (Stewart and Michaels, 2003).

Ryanair is replacing its cheap second-hand 737-200 aircraft with brand new 737-800 aircraft but these carry higher fixed costs and require more seats to be filled, which could provoke a crisis of excess capacity. Some Ryanair routes such as Groningen, Ostend and Londonderry have struggled to fill a 737-200 or an ex-buzz 146. These may be dropped once the fleet becomes entirely 737-800 based. However, the deals Ryanair and easyJet have achieved by placing their latest aircraft orders in the middle of the economic downturn should provide a long-term cost saving over other operators - if it comes to the worst the aircraft could always be leased out, undercutting other sources of flight equipment! Ryanair with the 737-800 (189 seats) has also ensured it will have the lowest seat-mile costs in the short-haul business - a strategy Delta has now attempted to emulate in the US by using 757s rather than small 737s for its Song operation.

The low airport charges which have been used to lure new low-cost carriers to unattractive airports will be difficult to continue in the long-term. Ryanair has run into problems in Winter 2003/04 over whether its deals at secondary airports that are owned by national or local government constitute illegal state aid. It has been difficult to obtain details of the incentives offered by airports and their regions to lure Ryanair as these are not in general published. It suffices to say that Ryanair are the hardest negotiators in the business however and details of their arrangements at Charleroi have been entered the public domain (Aviation Strategy, 2001). This indicates that for 1 million passengers carried, Ryanair would pay Charleroi airport 2 million Euros in airport charges and handling fees but receive 5.4 million Euros in incentives, marketing support and rebates. Therefore the net result is that Ryanair would be paid 3.4 Euros per passenger for using Charleroi. This compares with a cost to the airline of around 10 Euros per passenger at a conventional European airport such as Brussels. Following an adverse ruling in the French Courts over such incentives at Strasbourg, Ryanair moved its flights to Baden Baden and appealed to the European Court.

The decision from the EC that part of Ryanair's arrangements at Charleroi constituted illegal state aid may prompt a swathe of other deals obtained by low-cost airlines to be re-examined (Travel Trade Gazette, 2003b). Ryanair have axed their Stansted service from Charleroi (although this may have more to do with competition from the accelerated Eurostar rail service!) and launched an appeal. At other airports, friction has arisen when the airport operator attempts to raise charges after initial launch incentives unwind. easyJet has been undergoing a dispute with privately owned Luton airport over increases in charges and Ryanair similarly at Dublin (Aviation Strategy, 2002). Although Ryanair threatened to withdraw services if charges are increased (and did briefly do so at Manchester), airports cannot lose money ad-infinitum on propping up such services. This pressure has been sharpened by the loss of proceeds the airports made from duty-free sales within the EU. At the major airports used by easyJet at its outer destinations (e.g. Nice, Geneva, Amsterdam, Glasgow), there is less room for negotiation as it would be discriminatory to maintain a long-term discount to one customer (rather than a launch discount available to all). For these airports the low-cost carrier is only a small fraction of total traffic and hence carries less clout in negotiations. The productivity benefits of using secondary airports have also been surrendered by easyJet in its latest round of expansion at congested Gatwick. These services will require higher yields in comparison to routes operated from Stansted or Luton. However, the lower frequencies offered from Gatwick, coupled with direct competition from other airlines such as British Airways may not make this achievable.

Ryanair and easyJet have both adopted a strategy of rapid expansion as they need to move quickly from being a marginal extra source of business for airports and third party suppliers of services to being major players that these organisations can't then do without. This will strengthen the airline's position in contract re-negotiations and hence perpetuate some of the cross-subsidies that have been used to date, where long-standing customers (traditional airlines) pay the full cost of services while new entrants pay only the marginal cost. There is a particular issue with the funding of new airport infrastructure – Ryanair's business model demands the use of spare capacity at underutilised airports but what happens when Ryanair has grown to the extent that a new terminal is necessary? This cannot be funded on the back of the airport charges Ryanair is paying!

A further hazard to low-cost airlines comes from the temptation to put some 'frills' back in order to try and improve yields. go always had allocated seats and in latter days introduced express check-in for hand baggage only customers and joined the Global Distribution Systems. easyJet has reversed these strategies but in so doing may lose some of go's passengers - the risk of merging two differentiated brands. easyJet has been forced to make its tickets flexible in the wake of cheaper restricted fares from the likes of BA. This is a 'frill' as it is difficult to optimise load factors when passengers can change their bookings. In the US Frequent Flier Programmes carry relatively more importance than in Europe. Southwest has hence been unable to avoid this additional feature and easyJet is likely to be under pressure to follow in Europe, given its high density network of business oriented routes.

Cost differentials will be further eroded as the major carriers strike back by taking an axe to distribution costs. Major carriers have already cut commission from 9% to 4% in many cases and the growth of the internet make greater changes inevitable. BA cut commission in the UK to 1% from the beginning of 2004 and others have followed suit. Due to their marketing spread the large airlines (which would include Ryanair and easyJet) should be in a stronger position than the small players if eventually everything moves to direct-sell.

To alleviate this gloomy picture however, the low-cost airlines will continue to have important advantages in terms of higher seating density and aircraft utilisation. The majors cannot realistically address these issues as they are dependent on business passengers and need to offer a reliable service using major (but often congested) airports and exploit the advantage of their networks by maximising the number of hub connections.

9. Feasibility of low-cost airlines in the long-haul market

The cost differentials which the current wave of new entrants have created in the short-haul market are much more difficult to translate to the long-haul business. Firstly, aircraft and crew utilisation offers minimal scope for improvement. Most long-haul airlines are already able to fly the aircraft through the night, obtaining 14-16 hours utilisation per day (Table 11); little time is wasted sitting on the ground at airports and it is impossible to avoid accommodating crew away from home. The existence of high yield passengers paying many thousands of pounds for their sleeper seats at the front of the aircraft means the marginal cost of the seats in the economy cabin of a Boeing 747 is very competitive. If one replaced this with an all-economy aircraft the revenue required per economy seat could actually rise. On long-hauls it is not possible to reduce seat pitch below about 31 inches so there is no saving from greater seat density. Load factors are already high on long-haul flights with 80%+ being the norm (Table 11). For these reasons, very few long-haul charter operations have succeeded except to points with negligible business traffic (e.g. Orlando) or in peak season when major airline fares are priced well above average costs. Whereas on European routes, low-cost airlines typically are able to charge about half the conventional fare, on long-haul it would be more like just 10-20% cheaper.

Table 11: Comparison of aircraft utilisation and passenger load factors, 2001

Airline	Boeing 737-300 daily utilisation hours	Europe pax load factor %	Boeing 747-400 daily utilisation hours	Long-haul pax load factor %
Air France	7.6 (A320)	65	14.1	79
British Airways	7.6	62	12.0	72
British Midland	6.5	60		
KLM	7.1	71	15.0	80
Lufthansa	7.1	62	15.3	77
Virgin Atlantic			14.6	76
easyJet	11.0	81		
go	9.4	75		
Ryanair	8.8 (737-800)	74		

Source: AEA, IATA, CAA

It is also impossible to eliminate the frills altogether on flights of 7-12 hours duration. Freddie Laker's Skytrain in the 1970s offered hot meals on payment which still requires all the catering and galley procedures to be maintained. There are few long-haul routes dense enough to support an adequate frequency of service without feeder traffic which makes hubs much more crucial than for short-haul. It is hence also more difficult to make the strategy of using secondary airports work. In the London area, long-haul services have become overwhelmingly concentrated on Heathrow at the expense of Gatwick and Stansted. Bilateral agreements still rule in the intercontinental markets, posing a severe obstacle to new entrants: airlines like Ryanair only have the freedom to serve any intra-EU market. The circumstances where low-cost long-haul airlines might work would seem to be on dense leisure or mixed business/leisure markets without too much seasonal variation in demand.

10. Scope for regional low-cost airlines

Another area where low-cost practices may be of interest is in the regional sector. Although many low-cost airlines serve secondary airports it is with large capacity 737s. Regional jets have high seat mile costs making them unsuitable for low-cost operations. Attempts to use BAe 146s have failed (e.g. buzz, Debonair). The aircraft which might fill a gap in this market are the larger turbo-props, namely the Dash 8-300/400 series and ATR72. These are very efficient on short sectors (their lower speed undermines the economics on longer sectors). Examples include the Channel Islands services in the UK operated by flybe, along with expansion by Wideroe in Norway to thin international routes. Air Wales are taking over thinner bmibaby routes from Cardiff and Air SouthWest based at Plymouth claims to be a low-cost regional carrier. Turbo-props can also operate from airports with shorter runways than the 1800 metres required for a Boeing 737. This opens up a number of possible niches.

Table 12 shows how flybe has supplemented its ten routes operated by the BAe 146 jet at Southampton with a further 6 routes using Dash 8s. Seven of the eight longest routes use the 146 while five of the eight shorter routes use the Dash 8. The longest Dash 8 operation is to Toulouse but scheduled flying time is still only 5 min longer than with a 146.

Turbo-props however have two main disadvantages. One is that they cannot realistically be used between northern Europe and the Mediterranean - and these are in many cases the most attractive low-cost markets. The other is that passengers (particularly the higher yielding business traffic) have a preference for jet aircraft. In the US this has led to the almost complete demise of mid-sized turbo-prop aircraft. An era of high fuel prices and possible environmental charges will improve the competitive position of the turbo-props however. Low-cost US airlines such as Jet Blue have ordered Embraer Regional Jets to attack the markets that are too thin for the A320 but seat mile costs will rise (Nuutinen, 2003). Ryanair may have to look again at smaller aircraft for their thinner markets.

Table 12: flybe aircraft types on routes from Southampton

Route	Distance (miles)	Aircraft type	Frequency per day
Alicante	875	146-200	1
Belfast City	315	Dash8-400	3
Bergerac	431	Dash8-400	1
Dublin	269	146-200	2
Edinburgh	355	146-200	3
Geneva	471	146-200	1
Guernsey	118	Dash8-300	5
Jersey	125	Dash8-400	4
La Rochelle	329	146-200	1
Limoges	369	Dash8-400	<1
Malaga	998	146-200	1
Murcia	909	146-200	1
Perpignan	601	146-200	1
Prague	686	146-200	1
Salzburg	679	146-200	1
Toulouse	522	Dash8-400	1

Source: OAG Summer 2004

In mainland Europe, turbo-props could be useful for low-cost services from smaller airports such as Dortmund or Bremen in Germany and Nantes or Strasbourg in France. A densely populated part of Europe bounded by Barcelona, Milan, London and Copenhagen would be within range from smaller airports in France or Germany. Distances to major international centres become too great from much of Scandinavia, Italy, Greece and the Iberian Peninsular however.

11. Conclusions

The low-cost airline sector in Europe is still undergoing a phase of rapid development and positioning. Already the short-haul market share of low-cost airlines in the UK and Ireland (40% of short-haul scheduled traffic; 30% if charters are included) has exceeded that in the US (25%) despite a much later start. Tremendous opportunities undoubtedly exist in other countries almost untouched to date by the low-cost revolution. However, there are also incipient signs that the low-cost bubble may be about to burst and that not all the current players can be winners in the longer term.

The current over-capacity situation is likely to be rectified in two ways. The successful low-cost airlines will come to dominate the markets they are most efficient at providing for (essentially point-to-point routes not involving major airports). Ryanair is likely to find it has a number of these markets to itself and the majors will be forced to withdraw. Some of the very high growth rates achieved to date cannot be maintained across the board in the longer run and there is likely to be more substitution between destinations. Already it is apparent that routes with little or no leisure travel potential cannot be greatly stimulated by low fares. British Midland has been the first to blink, handing the East Midlands-Brussels route back to bmi regional from bmibaby. The failure of one or more new entrants will also help bring demand and capacity back into line. The major airlines will have to concentrate on their strengths which are feeder services to long-haul flights, although increasingly these may also be contracted out to lower-cost suppliers under franchise arrangements (e.g. British Airways with GB Airways). Charters will have to retrench to meeting the specific requirements of the Inclusive Tour market.

The cost bases of the low-cost and traditional airlines will inevitably move closer together. Ryanair’s ability to produce costs per seat kilometre one-third those of the majors will be eroded. The long-term differential is more likely to be in the order of 5:3 (closer to easyJet’s current position). The key question is whether Ryanair can still attract the volume of passengers they need to remote airports, in competition with the major airports and airlines, with this diminished price advantage. An alternative strategy might be to use their current strength to drive rival airlines out of many markets altogether and then defend this territory in the future.

Secondary airports without a natural local market are vulnerable in the same way as hubs if airlines go out of business or change their commercial strategy. Passengers and air services are footloose and can easily switch to substitute airports. As the price differentials in flying from obscure airports become less exaggerated, the major airports near the large population centres are likely to find their relative competitive position improving once again - assuming they have the capacity to handle the growth in traffic.

The glamour of air travel is gradually disappearing and the low-cost airlines have been the first to recognise that it is essentially a commodity like any other, that people will purchase primarily on price. It is however just as easy to lose money as a 'no-frills' airline as it is for a full-service carrier. It is the balance of costs and yields that is important and these are likely to converge between different types of operation in the longer term.

References

Aviation Strategy (2001) Ryanair, just too good a negotiator. *Aviation Strategy*, July/August, 3.

Aviation Strategy (2002) Low cost carriers and airports: a productive relationship? *Aviation Strategy*, September, 18-19.

Aviation Strategy (2003) Continental barriers to LCC expansion. *Aviation Strategy*, January, 2.

Baker, Colin (2002) Bargain benefits. *Airline Business*, January, 35.

Baker, Colin (2003) Budget options. *Airline Business*, February, 56-58.

Barrett, Sean (2000) Airport competition in the deregulated European aviation market. *Journal of Air Transport Management* 6 (2000) 13-27.

Binggeli, Urs and Pompeo, Lucio (2002) McKinsey on LCCs: a European gold rush? *Aviation Strategy*, June, 16--19.

Buyck, Catherine (2003) Veni vidi vici. *Air Transport World*, March, 27-28.

Clark, Andrew (2003a) EasyJet slumps £48m into the red. *The Guardian*, 8 May, 19.

Clark, Andrew (2003b) BMI record worst-ever loss. *The Guardian*, 18 April, 22.

Doganis, Rigas (2001) *The airline business in the 21st century*. London: Routledge.

Gudmundsson, Sveinn Vidar (1998) *Flying too Close to the Sun: The Success and Failure of the New-entrant airlines*. Aldershot: Ashgate.

Hill, Leonard (2003) An old hand at low fares. *Air Transport World*, January, 45-46.

Lawton, Thomas (2002) Cleared for Take-Off: *Structure and Strategy in the low-fare airline business*. Aldershot: Ashgate.

Lobbenberg, Andrew (2004) quoted in Ryanair post Charleroi. *Aviation Strategy*, February, 1-2.

Mason, Keith (2000) The propensity of business travellers to use low cost airlines. *Journal of Transport Geography* 8 (2000) 107-119.

Milner, Mark (2004) Crowded Skies: EasyJet shares nosedive. *The Guardian*, 6 May, 18.

Noakes, Gary (2004) Easy Jet axes two East Mids routes. *Travel Trade Gazette*, 19 April, 72.

Nuutinen, Heini (2003) JetBlue: Rationale behind the Embraer order. *Aviation Strategy*. July/August, 16-19.

Ryanair Passenger Survey (2002) *Survey of Ryanair passengers at Charleroi Airport*. Ryanair, May 2002 (unpublished).

Stewart, David and Michaels, Kevin (2003) LCC growth: implications for the suppliers. *Aviation Strategy*, March, 17-19.

Thompson, Ian (2002) Air transport liberalisation and the development of third level airports in France. *Journal of Transport Geography* 10 (2002) 273-285.

Travel Trade Gazette (2003a) CAA reviews Air Scotland set-up. *Travel Trade Gazette*, 5 May, 68.

Travel Trade Gazette (2003b) EC ruling could clip Ryanair's wings. *Travel Trade Gazette*, 17 November, 68.