New Europe, new low-cost air services

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ABSTRACT

Only a few years ago European low-cost service was almost exclusively focused on Western Europe. However, the enlargement of the European Union to East Central Europe has brought with it an expansion of the liberalised air space, thereby offering new opportunities for service to Community airlines. Low-cost air service has since diversified in favour of new west–east air links that represent almost 60% new routes that have opened up between Western and East Central Europe. The western low-cost airlines dominate the market rather than Eastern European ones. The new west–east routes reflect new forms of mobility: post-migration flows from the east by those who have gone to work in Western Europe, new tourist practices and undoubtedly new types of business as well.

1. Introduction

In autumn 2008, the main low-cost European airline, Ryanair, inaugurated a new base at Birmingham airport and launched several new services from there. These include flights to Katowice and Krakow (Poland), and Kaunas (Lithuania). Between 2006 and 2008, its rival EasyJet opened up eight routes between Krakow and Western Europe, mainly to Great Britain. These events point at once to the dynamic growth in European low-cost air service and to a certain degree of geographical diversification in favour of west–east links between Western and East Central Europe.

In Europe, as elsewhere, low-cost carriers (LCCs) are the fruit of the liberalisation of air transport (Francis et al., 2006). Taking advantage of the new freedom of access to the market, various airlines structured themselves according to the low-cost model,[1] which consists of making maximum use of their aircraft and of the work force, reducing the costs related to comfort and making use where possible of various incentives offered by governments (Barbot, 2006; Dennis, 2004; Graham and Vowles, 2006; Hunter, 2006). Reducing costs allows them to offer low fares, making it possible either to compete directly with the so-called legacy airlines on their customary markets, or to attract passengers to niche markets (the 'trailblazing strategy') (Dobruszkes, 2006). It is highly symptomatic that Ryanair is the most important new entrant since the liberalisation of the European skies (Barrett, 2004). By contrast, outside the liberalised airspaces, carriers remain dependent on bilateral air service agreements between States. These are often restrictive and thus

are an important brake on the penetration of the market by new operators; this explains the near-absence of LCCs in these markets.

In Europe, it is well-known that the liberalisation of the skies was implemented between 1987 and 1997, and offers Community airlines free access to the EU market (O'Reilly and Stone Sweet, 1998; Williams, 2002). At the end of this process, the 15 European Member States (EU-15) as well as Iceland, Norway and Switzerland were part of the new liberalised airspace. Clearly, it was strictly within this western space that the European low-cost airlines first developed, reaching 18.4% of all European seats[2] in the summer of 2006 (European Parliament, 2007). However, the EU recently underwent two successive enlargements, bringing the total number of Member States to 27. Part of what was formerly Communist Europe is now without question integrated into the Western European bloc. These enlargements have meant an expansion of the single market as well as of the liberalised European space. From the point of view of the low-cost networks, they bear within them the seeds of several new dynamics: the opening up of new west–east routes, the penetration of the western market by eastern low-cost airlines and, conversely, the penetration of the eastern market by western low-cost airlines.

The object of this paper is to analyse these processes and to investigate how European low-cost carriers have adapted their strategies and have developed their networks in light of the new freedoms. The research questions are therefore as follows. To what extent has the low-cost offer diversified geographically, and in response to what needs? Which airlines are responsible for the new dynamics? What is the contribution of low-cost carriers to the new west–east routes? What network strategies are the LCCs following? The rest of the text is organised as follows. Section 2 reviews

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[1] Or transformed themselves into them.

[2] The denominator includes charter seats.

the existing literature on the geography of European low-cost air services. Section 3 specifies the data used and the methodology followed. Section 4 presents an overview of the new low-cost dynamic, emphasising the areas served and the geographical origins of the LCCs. An analysis of a number of networks enables us to gain a better understanding of these processes. We close with a number of conclusions.

2. The geography of European low-cost air services: a critical review

The development of European low-cost air services has been the subject of a significant amount of scholarly literature. However, if we focus on the geography of these services, the literature is far more limited. It is even more scant if we set aside the case studies that relate only to a given airport or a very small number of routes, often for lack of more comprehensive data.

Francis et al. (2006) recall that the European low-cost industry began under the auspices of the Irish airline Ryanair, which in 1995 restructured itself on the model of Southwest. The first flights were centred on the UK and Ireland, but gradually bases were opened all over continental Western Europe. Numerous other airlines followed suit.

Dobruzskes (2006) delineates a global geography of the European low-cost carrier's service, using exhaustive data from 2004. The study shows that the low-cost supply represented 18% of regular intra-European seats at the time, and that these seats were limited almost exclusively to Western Europe (98%). More surprisingly, apart from Ryanair and to some extent EasyJet, all of the LCCs at the time operated flights centred only on their country of origin (third and fourth freedoms of the air), despite the new air freedoms. Almost all LCCs were from Western Europe, and Ryanair then ranked as the sixth European airline on the basis of the number of intra-European seats, just ahead of EasyJet. These results are unfortunately already partially outdated, so rapid have been the changes in recent years. First, various low-cost carriers have gone bankrupt or merged with others (European Parliament, 2007). Secondly, Ryanair and EasyJet continued to grow significantly by extending their fleets and their networks, whereas new LCCs of significant weight appeared on the scene, such as Wizz Air, whose network radiates outwards from East Central Europe. Third, the impact of the enlargement of the EU to include 10 new Member States in May 2004 (the so-called EU-10 group, consisting of the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Cyprus and Malta; the first eight are generally known as the EU-8) had not yet made its mark on the low-cost networks. Finally, in 2007 Bulgaria and Romania also joined the EU.

As regards the future development of the low-cost supply, Dennis (2004) raises questions about the future in light of the opportunities as well as the restrictive factors, including the saturation of the market (demand is not infinite, especially on niche markets), the availability of secondary airports, and pressures on costs. He does not, however, mention the enlargement of Europe to the east as one of the opportunities provided by the new markets. As far as distances are concerned, Francis et al. (2007) recall that the low-cost supply is essentially limited to short-haul routes[3]. They therefore indicate that the low-cost model is difficult to transfer to the long-haul segment. For over longer distances, the comparative advantages between LCCs and the legacy carriers are greatly reduced. The LCCs could be cheaper than the others by no more than 20%, without taking into consideration the inevitable re-

sponse of the legacy airlines, where these are present. These conclusions mean that if the low-cost offer of air service continues to develop, it must target short- or medium-haul travel. This confirms, therefore, the potential interest the new East Central European markets hold for the LCCs. Certainly these markets are yet to be developed and are compatible with short- or medium-haul European flights. Francis et al. (2006) already noted the proliferation of new services, focused primarily on the tourist destinations in East Central Europe, such as Prague. These were initially facilitated by the freedoms offered in 2002 by the Czech Republic and Slovakia. Then came the more recent developments in the context of the expansion of the liberalised airspace into the new EU Member States.

Even if the development of the low-cost supply and its extension to the 'new Europe' is not yet complete, the time seems right to take stock of the situation and of the processes under way.

3. Toward an updated geography of European low-cost networks: data and methods

Our research is based on analyses of the service offered, carried out with the aid of the databases produced by the OAG firm. These describe in a geographically disaggregated manner the regularly scheduled air service throughout the world. For each flight they indicate, among other things, the operating airline, frequency and number of seats. The supply is described exhaustively and is available for the period from January 1991 to January 2008. Where there are several airports in one city, these have been merged into a single entity in order to prevent multiple counting of the number of routes which may be linked to the use of different airports.[4] However, we have not included in these groupings secondary airports located at considerable distance from the cities they say they serve, such as Hahn for Frankfurt (130 km) or Gerona for Barcelona (105 km).

The question then arises as to how to identify low-cost airlines. There is no 'official', up-to-date list. Not all LCCs are members of the low-cost airlines' lobbying group[5]. Conversely, certain carriers that claim to be 'low cost' in fact offer traditional fares, in some cases because of various extra charges. Moreover, the situation is changing quite rapidly as a result of bankruptcies, the creation of new airlines or changes in the strategy of existing ones. For example, Air Polonia began its flights in December 2003 and ceased operations in December 2004. We cannot be satisfied, therefore, merely with reproducing previously published lists of LCCs. Rather, a list needs to be drawn up more or less from scratch before every new study.

In order to put together a reliable list for this research, we compiled an inventory of potentially low-cost airlines drawing on Graham and Shaw (2008) and on Internet searches. Then, for each airline identified, the prices offered on several routes were compared with those of the legacy carriers[6]. Empirically, it thus became evident that the 'pure LCCs' almost always offer fares of at most EUR 0.10 per km and/or half the price offered by the legacy carriers. By this process, a list of 21 low-cost airlines could be drawn up and used to determine the low-cost supply at January 2008, comparing it with the total supply (see Annex 1). We have also used the list of LCCs provided in Dobruzskes (2006) for the year 2004.

By East Central Europe, we mean the former Communist countries that have now become members of the EU (Poland, Slovakia, Hungary, etc.). By Western Europe, we mean all the other EU countries plus Norway, Iceland and Switzerland.

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[3] Even if recently we have seen the emergence of new medium-haul routes. Th share of low-cost flights of over 1000 km has therefore risen from 30% in 2004 to 43% in 2008 (personal calculations based on the OAG dataset).

[4] To give but one example, Rome includes Rome Ciampino and Rome Fiumicino.

[5] ELFAA — European Low Fares Airlines Association.

[6] Comparisons made on 10 November 2008 for return journeys one month and three months later, based on all-inclusive fares, including reservation fees for credit card bookings and a supplement, where applicable, for checked baggage.

Table 1
Geographical distribution of the European low-cost supply (millions of seats).

	January 2004		January 2008	
West–West	7.89	98%	13.40	83%
West–East	0.14	2%	2.13	13%
East–East	0.01	0%	0.07	0%
West–Other	0.03	0%	0.57	4%
Total	**8.08**	**100%**	**16.17**	**100%**

Table 2
Geographical distribution of the European low-cost supply (city-pairs).

	January 2004		January 2008	
West–West	512	94%	964	72%
West–East	21	4%	285	21%
East–East	2	0%	7	1%
West–Other	11	2%	81	6%
Total	**546**	**100%**	**1336**	**100%**

4. The dynamic of new west–east low-cost air services

4.1. The rise of the west–east low-cost air links

An analysis of the development of the low-cost supply by geo-graphical region between 2004 and 2008 first of all indicates a sus-tained growth, given that the low-cost supply has doubled over those four years[7] (Table 1). This growth mainly affects the internal links within Western Europe. However, we can see at the same time the emergence of a range of services connecting Western to East Central Europe, which today represent 13% of the European low-cost supply. Conversely, links that are limited to East Central Europe re-main fairly marginal. The 'West-Other' links cover flights to Morocco under the terms of the new open-skies agreement signed between that country and the EU. When measured in terms of numbers of city-pairs rather than numbers of seats (Table 2), the proportion of west–east links is more significant, which means that the new low-cost routes are low in air traffic density. Flights are thus infre-quent and, in certain cases, operated by aircraft of lower capacity. For instance, MyAir.com uses CRJ900 regional jets with 86 seats, whereas the norm for Ryanair is a B737 with 189 seats.

These results reflect the trend of the general reconfiguration of the European continent since the fall of the Communist regimes. First, from an economic point of view, Western Europe remains without a doubt the centre of wealth, economic power, key indus-tries, etc. East Central Europe, which once operated essentially within the Communist system of COMECON, has become a semi-periphery, that is, a satellite of Western Europe (Vandermotten and Marissal, 2003). The restructuring is the work mainly of wes-tern firms which acquired certain production units or services in the region (for instance, banking and insurance services) or which outsourced certain labour-intensive industries (assembly lines) to the former Eastern bloc. In 1982, exports from the countries of East Central Europe were much more likely to be towards the Soviet Union and each other (59%) than towards Western Europe (23%). In 1999, these represented 17% and 69% respectively[8]. Moreover, the fall of the Iron Curtain made it easier for western companies to sell their products on the East Central European market, even if this represented a secondary market for them. The share of western

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[7] Part of this growth comes from the transformation of Aer Lingus into a low-cost company.
[8] *Source:* Vandermotten and Marissal (2003) based on UNCTAD.

Fig. 1. Publicity encouraging festive tourism.

Table 3
Main west–east low-cost markets (according to seats, 2008).

Poland <> UK	20.8%
Czech Republic <> UK	6.4%
Poland <> Germany	5.3%
Poland <> Ireland	5.2%
Romania <> Italy	5.0%

Table 4
Airlines operating new European West–East routes (2008 vs. 1991, according to city-pairs).

Type of airline	City-pairs	Total	Share (%)
Flag carriers	110	110	28
Low-cost	185		
Flag carriers and low-cost	29	227	59
Low-cost and others	13		
Others	51	51	13

Table 5
Geographical origin of the low-cost airlines according to the volume of seats offered (2008).

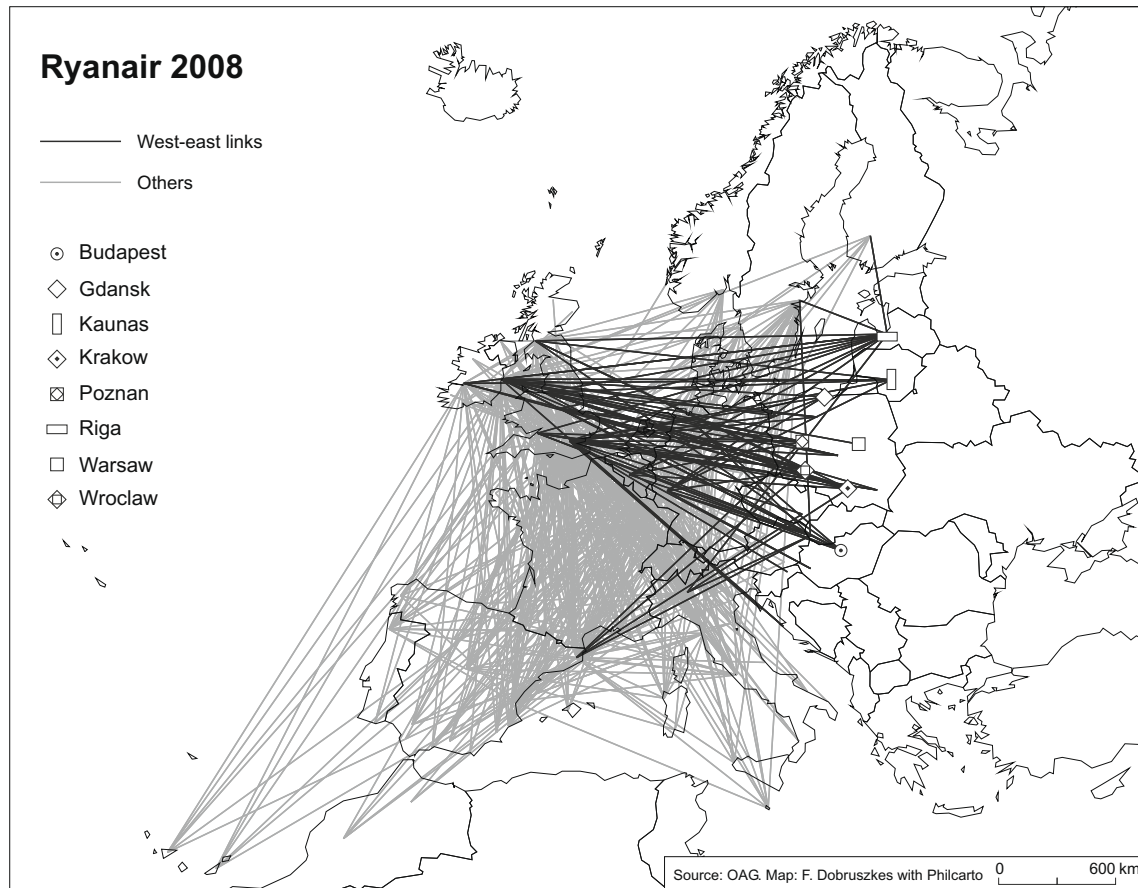| Routes	Origin of the airline	
	West (%)	East (%)
West–West	99	1
West–East	63	37
East–East	0	100
Other	67	1
Total	**93**	**6**

Fig. 2. The route network of Ryanair (2008).

exports towards East Central Europe thus rose from 1.8% in 1982 to 2.9% in 1999.[9] This configuration fosters new business travel from west to east,[10] some of which is provided by the LCCs. Nor should we overlook the use of low-cost flights by a certain type of business clientele, as we have seen this to be the case in Western Europe (Mason, 2000, 2001; O'Connell and Williams, 2005). The same may well also be true on the west–east routes, even though these low frequencies and not very suitable timetables are in theory a handicap for attracting that type of clientele.

Second, from a tourism perspective, certain cities or regions in East Central Europe have succeeded in promoting their heritage to draw western tourists (Hall et al., 2006). For European citizens, the new rules of free circulation simply with an identity card have facilitated tourist travel to the east. Combined with low fares offered by the LCCs, this increased mobility has given rise to new practices on the part of western tourists, who are discovering East Central Europe either for its rich heritage (e.g. Prague, Budapest, Krakow or Riga) or more particularly in the context of medical (Connell, 2006), festive (Fig. 1) or even alcoholic and/or sexual tourism. On the other hand, internal tourism within East Central Europe, while increasingly popular, probably continues to take place by road (car and coach). Finally, according to the World Tourism Organization (UNWTO), the number of international tourists attracted to East Central Europe has grown from 39 million in 1990 to 99 million in 2008.[11]

Third, from a demographic perspective, we have seen significant migratory flows resulting from inequalities in development between the two Europes. Many citizens of East Central Europe have migrated to Western Europe, whether legally or not, to look for work or to set up businesses. Already before the enlargement of the EU eastwards, international migration was observed, particularly towards Germany and Austria, which until then had been the primary host countries for migrants from the EU-8 (Boeri and Brücker, 2005). In the context of the enlargement of 2004, transitional measures allowed the old countries to delay applying the rules of free circulation to new Member States, at the latest until 1 May 2011. Nevertheless, as regards members of the EU-10 group, the United Kingdom, Ireland and Sweden adopted a more open position starting on 1 May 2004, while many other countries subsequently relaxed their rules in 2006 or 2007. The United Kingdom and Ireland are thus the two main countries to have experienced an increase in migratory flows from the EU-10 after the enlargement of 2004. By contrast, Germany continued to receive significant flows in spite of its restrictive measures (Zaiceva and Zimmermann, 2008). In the UK, since the turn of the millennium, migration from the EU-8 and from the New Commonwealth was offset by a fairly weak natural outflow. About 812 000 people received the right to migrate from the EU-8 to the UK between May 2004 and the end of March 2008 under the 'Worker Registration Scheme' (WRS)[12]. Around two-thirds of all the approved applications to WRS were Polish. These figures may, however, be an under- or an over-estimate of the real figures (Dobson, 2009).

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[9] Ibid.

[10] Evidence of this may be found, notably, in a dynamic of opening high-ranking international hotels, especially in Budapest, Prague and Warsaw (Johnson and Iunius, 1999).

[11] *Source:* UNWTO World Tourism Barometer.

[12] Home Office, UK Border Agency, *Accession Monitoring Report May 2004 – Mars 2008, A8 Countries*, available at http://www.bia.homeoffice.gov.uk.
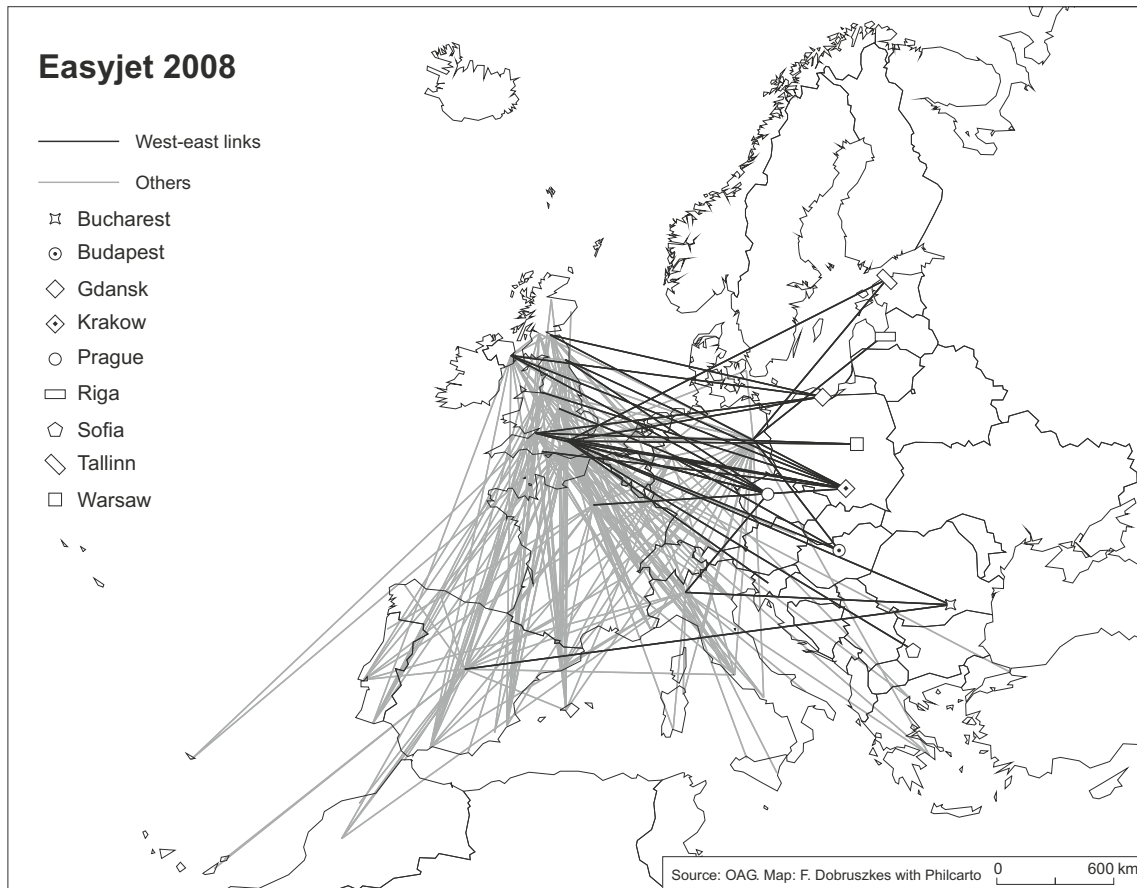
Fig. 3. The route network of EasyJet (2008).

Underestimate because it does not include those who did not have the right to migrate freely or illegal migrants; overestimate because it includes multiple registrations and does not take into account returns to the countries of origin or migrations to third countries. It does, however, give an idea of migration from East Central Europe (and from Poland in particular) to the UK. These migrations were certainly facilitated by British legislation, but also by the presence of a significant Polish diaspora there from the years after World War II, which served as a sort of conveyor belt for new migrants. Dobson (2009) stresses the fact that Polish churches and social clubs in Great Britain served as labour exchanges and advice centres. In Ireland, the number of residents from the EU-10 increased from under 25 000 in 2002 to more than 120 000 in 2006, out of a total population of 4 million (Barrett et al., 2008). In the 'Celtic Tiger', which turned into a net importer of workers in the mid 1990s (Allen, 1999), the arrival of workers from East Central Europe further diversified the list of nationalities participating in the transformation of the country into a centre for internationally traded services developed by foreign cross-border companies (Grimes, 2006). Economic growth was so great that the Irish labour force was no longer sufficient. As in the UK, migrants from the EU-10 earned less than their own nationals (Barrett et al., 2008). These waves of migration by European workers gave rise to new post-migration mobility of the 'visit to friends and relatives' [VFR] type. These involved either the migrants making visits to their home country, or friends and family visiting the migrant in his or her new host country. In the past, immigrants or their friends and family back home travelled by train or coach, or did not travel at all. Today, once a certain distance is involved, the use of low-cost airlines has become the classic mode of travel and enables people to increase the frequency of their visits. As is the case

with tourism, so migration has prompted new west–east flows, but not east–east ones, given that there has been little migration within East Central Europe itself.

These three components of the new west–east low-cost market contribute to the distribution of air service by country pairs, as shown on Table 3. However, the factors of distance and travel time should be added in order to understand the results. For if the supply of air travel between Poland and the UK is considerable, this is of course due to the significant migration mentioned above, but also the result of the distance involved (e.g. 1600 km between Warsaw and London) and the obstacle of the Channel, the crossing of which increases the cost and time of travel. Proportionately, the importance of the Poland <> Ireland flows is due as well to an even greater distance and two sea crossings. The Italy <> Romania pair is due in part to the transit of non-EU states (former Yugoslavia) and to the Adriatic Sea. By contrast, the lower proportion of low-cost flights involving Germany can be explained by the latter's relative proximity to East Central Europe (e.g. 1100 km between Warsaw and Frankfurt, 650 km from Budapest to Munich), which makes travel by car or coach easier.

4.2. The new low-cost air links as a main part of the west–east dynamic

If the new low-cost routes from west to east represent only a limited part of the European low-cost supply (13%, see Table 1), they do represent a very important part of the overall dynamic between Western and East Central Europe. According to the OAG databases, in 1991 there were 118 air links between these two entities. These routes represented in a sense a 'diplomatic minimum' consisting,
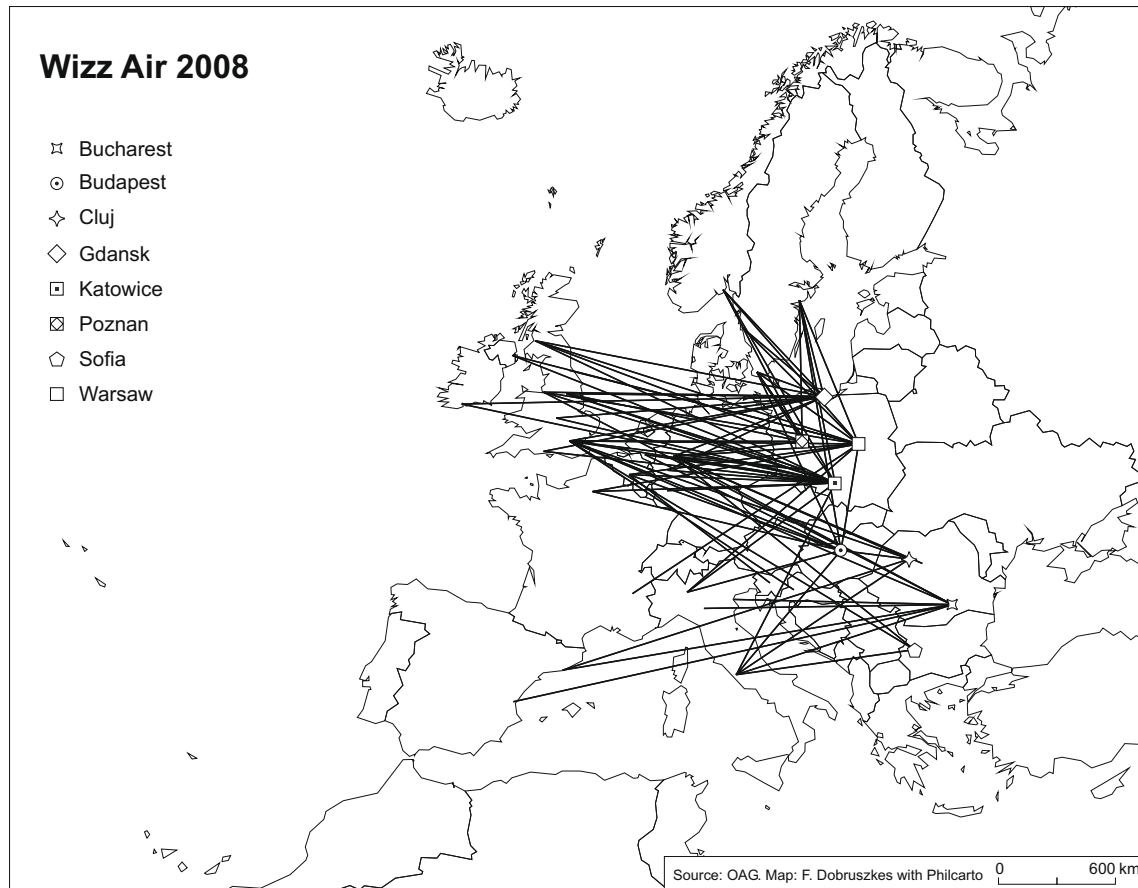
Fig. 4. The route network of Wizz Air (2008).

essentially, in joining eastern capitals to western ones. In 2008, west–east routes reached a total of 500. The geographical diversification of the destinations is thus very significant, and Table 4 shows that the LCCs are present on 59% of the new routes created, possibly in competition with legacy airlines, but most often without them. The results based on volume of supply are equivalent, inasmuch as the LCCs operate 57% of the seats on these new west–east routes, as compared to only 35% offered by the flag carriers. Thus there is no doubt that the LCCs are the prime movers of the geographical diversification of supply on west–east routes. This reflects a feature particular to flights serving East Central Europe, for if we consider the totality of the liberalised European airspace, LCCs are involved in 'only' 3/10 of the new routes created between 1991 and 2005 (44% based on number of seats) (Dobruszkes, 2008: 242). This difference can be explained by the hypothesis that low-cost flights are an essential condition for attracting passengers from East Central Europe living in Western Europe, whose purchasing power is generally low. The question thus arises whether certain tourist markets in East Central Europe may be of interest to the western traveller only because of the demand directly awakened by low fares.

4.3. The compartmentalization of the markets

Table 5 shows the countries of origin of the LCCs operating European routes. It provides two important details. First, there is a certain tendency of 'to each his own', according to which the low-cost routes within the West are operated almost exclusively by western LCCs, whereas the few existing intra-eastern low-cost routes are operated exclusively by eastern LCCs. In other words, despite the liberalisation of air transport of which the LCCs are a direct result, there has not been a penetration of 'the other bloc'.

The LCCs remain in effect, like their legacy competitors, centred for the most part within their country of origin. Ryanair constitutes the most significant exception in this regard. Undoubtedly, this should be seen as a consequence of the diversity of languages and national laws, which increase the costs of opening a base in another country. In fact, if there is a degree of market penetration, this is only through west–east routes, where western LCCs still dominate, operating as they do two-thirds of the seats. In all, the western LCCs dominate 93% of the European low-cost market, while the eastern LCCs make up only 6%.[13]

We may conclude at this point that the extension to the east of the liberalisation of air transport has benefited the western LCCs more than the eastern ones. The western LCCs have been able to grow from their base in a significant western market. They have been established there for several years now, and have proven the solidity of their economic and geographical model. This explains their size, which ranks them among the major European airlines. In 2008, Ryanair was the carrier that operated the most intra-European seats, ahead of Air France[14] and Lufthansa; EasyJet, for its part, ranked fourth, ahead of SAS and Iberia.[15] By contrast, the principal eastern LCC, Wizz Air, was only 30th among intra-European airlines, followed by Sky Europe in 35th place. In these circumstances, Ryanair and EasyJet have reached a volume of traffic such that they are able to take certain risks in developing west–east markets that represent only a small proportion of their activities.

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[13] The remaining 1% are the Moroccan LCCs.
[14] Ryanair was the second airline if we consider Air France – KLM instead of Air France only.
[15] Own calculations based on OAG.

MyAir 2008

— West-east links
— Others

⌘ Bucharest
⬠ Sofia

Source: OAG. Map: F. Dobruszkes with Philcarto   0   600 km
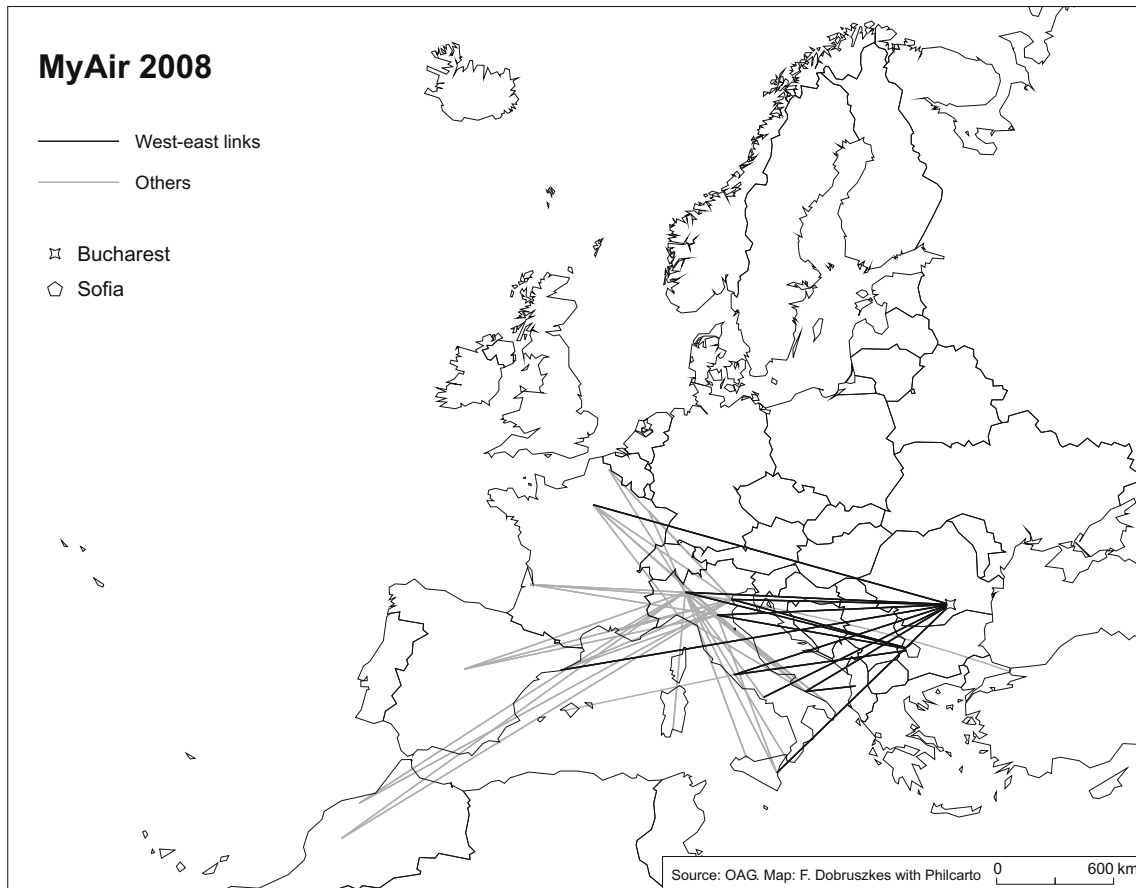
Fig. 5. The route network of MyAir (2008).

4.4. Network strategies

Analysing the networks of a number of low-cost airlines allows us to gain a better grasp of the geographical logic underlying the new west–east routes. Five networks that are varied in origin and sufficiently representative of the dynamic under way have been selected: Ryanair, EasyJet, Wizz Air, Myair and Blue Air.

4.4.1. Ryanair

Ryanair's network (Fig. 2) reflects the strategy of a western LCC that has extended its network into East Central Europe in order to penetrate new markets. The various types of logic being followed are explained under Section 4.1. Thus, the response to the post-migration need for mobility is to be found mainly in the routes between Poland and Great Britain or Ireland. In the UK, Polish and other EU-8 nationals are not concentrated in a single region, but are fairly widely distributed over the countries (Blanchflower et al., 2007: 39). This explains the geographical diversity of the routes operated by Ryanair, which are not centred on London alone. In Ireland, Poles represent the second largest group of foreign residents after the British: there are 63 276 residents of Polish nationality according to the 2006 census.[16]

The element related to migration does not exclude the fact that the two other reasons for travel which we have identified may also play a role. For destinations such as Budapest or Riga, western tourist and business travel also need to be considered, given that these two cities combine both tourist sites and various regional

headquarters of western cross-border companies. In Krakow, the low-cost carriers owe their success both to post-migration flows and to a tourist demand fostered by low fares, a bit like in Carcassonne, France.

4.4.2. EasyJet

The case of EasyJet, the second largest low-cost carrier in Europe, shares some similarities with Ryanair (Fig. 3). It, too, is a Western European airline, historically focused exclusively on Western Europe but having diversified its network towards the east in recent years. However, the EasyJet network is geographically less dense, albeit with higher frequencies per route (Mason and Morrisson, 2008). Moreover, EasyJet, unlike Ryanair, is best known for operating flights from its country of origin, Great Britain (Dobruszkes, 2006). The network thus more closely resembles that of a classic flag carrier: its strategy consists essentially of linking London and the other major British cities with the capitals of East Central European countries. A few large cities outside Britain are also covered by the new west–east routes (Madrid, Milan, Paris). The urban tourism component would seem to play an important role in the latter, since Prague and Krakow, well known for their architectural heritage, are the two principal cities of East Central Europe linked by EasyJet to a wide range of western cities.

4.4.3. Wizz Air

The Wizz Air network displays the characteristics of a Hungarian LCC, whose logic is clearly that of penetrating the west–east market (Fig. 4). As in the case of Ryanair, we find a post-migration trend (towards Great Britain in particular) and a tourist component on routes to certain cities of East Central Europe. However, the supply is geographically more diversified

[16] Central Statistics Office, 2008: *Census 2006. Non-Irish Nationals Living in Ireland*, www.cso.ie.
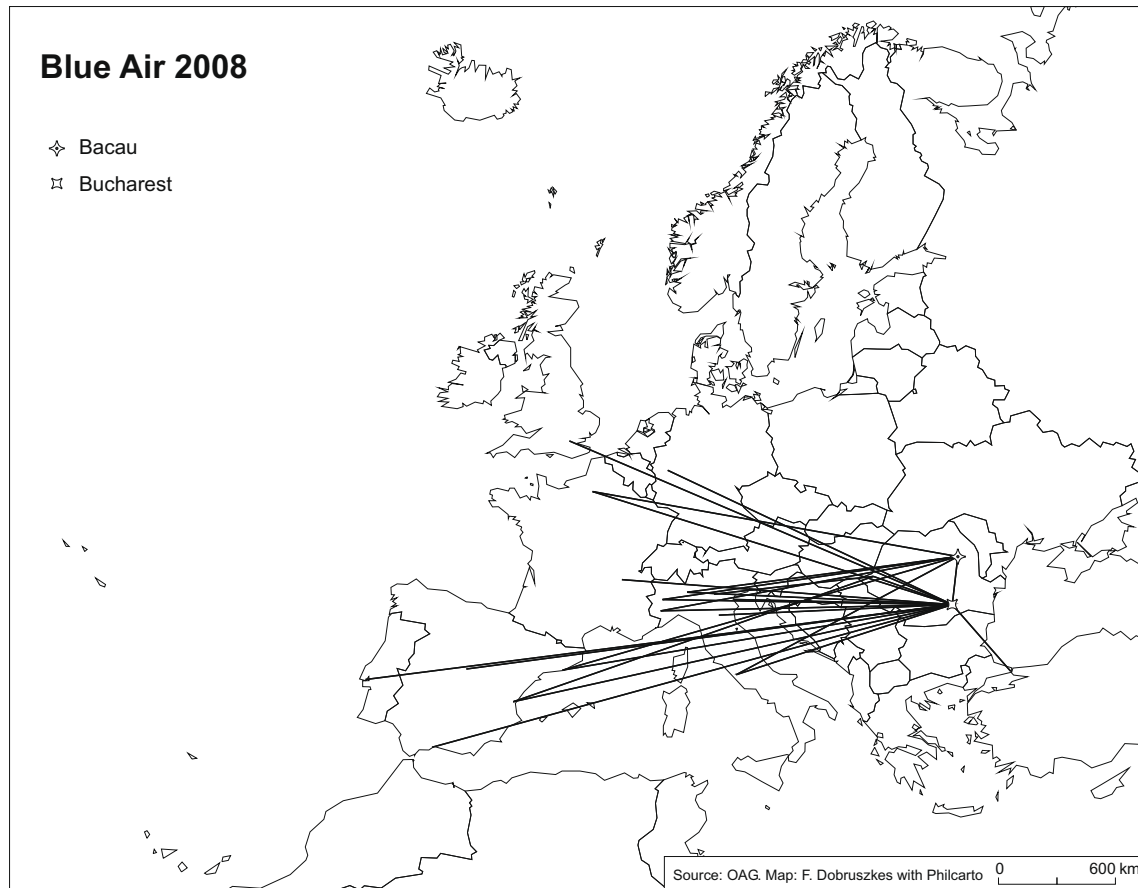
Fig. 6. The route network of Blue Air (2008).

and the airline operates numerous routes between major cities. In this regard, it positions itself clearly as a direct rival to the legacy airlines, as does EasyJet. This diversity of routes attests, notably, to the interest in air travel by the new business flows linked to the penetration of western capital in the east. Thus, Wizz Air serves the Katowice Special Economic Zone, which hosts the majority of foreign investments in Poland (Rey and Molinari, 2006). Moreover, it should be noted that Wizz Air, like Ryanair, also operates numerous flights under the seventh air freedom, that is, flights between two countries outside the country (Hungary, in the case of Wizz Air) where it is registered.

4.4.4. MyAir

The network of the Italian LCC MyAir (Fig. 5) likewise shows a response to the need for post-migration mobility, in this case within the context of Romanian immigration to Italy. Romanians constitute the largest group of foreigners in Italy today (625 278 immigrants officially counted in 2007[17]), so that flows between Italy and Romania now rank 5th in low-cost travel from west to east (Table 3). This network also reflects the fact that many small and medium-sized Italian investors invested in Romania in sectors such as agribusiness, restaurants, specialised farms, retail and distribution businesses and sub-contracting workshops (Rey and Molinari, 2006). The network centred on Romania (and more marginally on Bulgaria) allows the airline to diversify its service with regard to the routes centred on its country of origin, Italy. Compared to the flag carriers (Alitalia and Tarom), the airline offers a geographically more diverse

service, flying to cities other than Rome and Milan. It also simplifies international travel considerably by flying over non-EU States and the Adriatic.

4.4.5. Blue Air

Finally, the Blue Air network, a Romanian LCC (Fig. 6), also exhibits a west–east pattern that meets the post-migration needs of Romanian immigrants living in Italy and business travel by Italian investors. This is supplemented, however, by various routes to major agglomerations in Western Europe and to tourist destinations on the Spanish Riviera. The question may therefore be asked whether we are seeing the emergence of new destinations in the Mediterranean for East Central European tourists, unless we are dealing with Romanian immigrants living in those areas. Blue Air's network is centred on Bucharest as well as on Bacau, from where it operates niche routes. The airline used to be based in Cluj, but it does not seem to have been able to withstand the competition from Wizz Air, and preferred to move its base to the smaller city of Bacau (population 207 000 in its functional agglomeration[18]).

In conclusion, the five cases presented here are good illustrations of the three reasons for air travel highlighted in Section 4.1 (new business flows; new tourist flows; new VFR post-migration mobility). Unfortunately, it is very difficult to determine the relative share of each of these three reasons, which certainly vary depending on the city-pairs in question. It is likewise difficult to measure the balance between "market-pushed" (the airline responding to needs) and "airline-pulled" (the airline creates the

need) dynamics, not to mention the efforts of local public actors to change the image of their city in a more cultural direction (see Young and Kaczmarek, 1999; Hughes and Allen, 2005) and/or to support the development of air transport.

At this point, new west–east links involve mainly the big cities both in the west and in the east. This is in contrast with the situation prevailing in Western Europe, where certain airlines have been able to flourish in niche markets, such as Ryanair, which created new tourist markets by serving regional airports that were formerly nearly unknown to the public, such as Pau or Carcassonne in France. The question remains as to whether East Central Europe is "ripe" for such developments. At this stage, the answer appears to be no.

In the context of low-cost west–east routes, moreover, the almost complete absence of service to tourist destinations on the coast, whether in the west (Spanish and French beaches, the South of France, Greek islands, etc.) or in the east (Black Sea). There are two likely explanations for this phenomenon. First, people in East Central Europe tend mainly to visit destinations in the same region of Europe, which are cheaper and with reasonable accessible by car or coach. Travel to western cities is only beginning to emerge (Boniface and Cooper, 2005). However, Ryanair's service to Gerona (105 km from Barcelona) raises a question: is it a sign of post-migration travel by immigrants from East Central Europe, or of new trends in tourist travel from the east? Secondly, the Black Sea is for now a destination dominated by all-inclusive package tours offered by tour operators that use charter flights.

5. Conclusions

Centred initially on Western Europe, European low-cost air services have undergone a recent evolution towards greater geographical diversification. Indeed, if the Western European low-cost supply has further increased, it has also been supplemented by new west–east routes between Western Europe and East Central Europe. These have been made possible by the extension of the liberalisation of the European skies to the new EU Member States. The latter contribute significantly to the dynamic of spatial diversification of East Central Europe's air service, since the low-cost supply represents approximately 60% of the traffic on the new west–east routes. We can see the development of these new routes as a logical consequence of the linkage of East Central Europe to Western Europe according to three factors: migration to the west, tourism, and the flow of capital to the East. The relative importance of these three factors for understanding new west-east routes remains unknown, but the weight of the first two seems in any case to be very significant.

The most striking aspect of the question is no doubt the observation of the extent to which the dynamic of development in East Central Europe's air service is dependent on the strategies of the LCCs. By all evidence, a less developed East Central Europe, dependent on Western Europe, seems to follow a dynamic in air service that is shaped largely by a 'lower end' supply. No doubt low fares are needed if the populations of East Central Europe are to be able to travel by plane. And perhaps low fares are needed as well to attract tourists from Western Europe to places in East Central Europe beyond a few longstanding tourist destinations such as Prague. Conducting qualitative surveys among passengers would certainly be useful in order to gain a better understanding of the underlying logic of these new air markets, and the attendant new forms of mobility. Such surveys would also make it possible to quantify the relative shares of the three categories of reasons that have been identified (business, tourism and post-migration flows).

Several other questions remain open and should be the subject of further research. First, we know little about the contribution of local public authorities in East Central Europe to the dynamics observed. Did the latter, like their Western European counterparts, have to grant State aids and other advantages in order to attract certain airlines? Second, the future of low-cost service to East Central Europe is an open question. On the one hand, it remains to be seen whether the latter has reached its maturity or whether new routes will continue to be added. If the latter, will the dynamic still be in favour of west–east links between major cities? Or, on the contrary, will we see the opening up of secondary routes, as in Western Europe, and/or the creation of a denser network within East Central Europe? On the other hand, will the current economic crisis call into question the viability of certain low-cost west–east routes, due to the loss of jobs filled by migrant labour?

Finally, the new low-cost routes between west and east appear to be organised in accordance with what is happening and decisions made in the west (origin of the transnational capital; main source of tourists; attraction of the labour force). The same will undoubtedly continue to be true in the future. As things stand, the "new" Europe seems much more like a periphery than an engine of Europe in its own right.

Acknowledgements

Annex. 1

List of the low-cost carriers (2008).

Airline	Code	Country
Aer Lingus	EI	Ireland
Atlas Blue	8A	Morocco
Blue Air	0B	Romania
bmibaby	WW	UK
Clickair	XG	Spain
EasyJet	U2	UK
EasyJet Switzerland	DS	Switzerland
Flyglobespan	Y2	UK
Germanwings	4U	Germany
Jet2.com	LS	UK
Jet4you	8J	Morocco
Monarch Airlines	ZB	UK
MyAir.com	8I	Italy
Norwegian Air Shuttle	DY	Norway
Ryanair	FR	Ireland
SkyEurope	NE	Slovakia
Transavia.com	TO	France
Vueling Airlines	VY	Spain
Wind Jet	IV	Italy
Wizz Air	W6	Hungary
Wizz Air Bulgaria Airlines	8Z	Bulgaria

References

Allen, K., 1999. Immigration and the Celtic Tiger: a land of a Thousand Welcomes? In: Dale, G., Cole, M. (Eds.), The European Union and Migrant Labour, Oxford, New York, Berg, pp. 91–111.

Barbot, C., 2006. Low-cost airlines, secondary airports, and state aid: an economic assessment of the Ryanair–Charleroi Airport agreement. Journal of Air Transport Management 12, 197–203.

Barrett, S., 2004. The sustainability of the Ryanair model. International Journal of Transport Management 2, 89–98.

Barrett, A., McGuiness, S., O'Brien, M., 2008. The Immigrant Earnings Disadvantage across the Earnings and Skills Distributions: The Case of Immigrants from the EU's New Member States in Ireland, IZA Discussion Paper No. 3479 (www.iza.org).

Blanchflower, D., Saleheen, J., Shadforth, C., 2007. The Impact of the Recent Migration from Eastern Europe on the UK Economy, IZA Discussion Paper No. 2615 (www.iza.org).

Boeri, T., Brücker, H., 2005. Migration, Co-ordination Failures and EU Enlargement, IZA Discussion Paper No. 1600 (www.iza.org).

Boniface, B., Cooper, C., 2005. Worldwide destinations. The geography of travel and tourism, fourth ed. Oxford, Elsevier.

Connell, J., 2006. Medical tourism: sea, sun, sand and… surgery. Tourism Management 27, 1093–1100.

Dennis, N., 2004. Can the European low-cost airline boom continue? Implications for regional airports. The 44th European Congress of the Regional Science Association.

Dobruszkes, F., 2006. An analysis of European low-cost airlines and their networks. Journal of Transport Geography 14 (4), 249–264.

Dobruszkes, F., 2008. Libéralisation et desserte des territoires: le cas du transport aérien européen, Brussels, Peter Lang.

Dobson, J., 2009. Labour mobility and migration within the EU following the 2004 Central and East European enlargement. Employee Relations 31 (2), 121–138.

European Parliament, 2007. The consequences of the growing European low-cost airline sector. Brussels, European Parliament's Committee on Transport and Tourism.

Francis, G., Humphreys, I., Ison, S., Aicken, M., 2006. Where next for low cost airlines? A spatial and temporal comparative study. Journal of Transport Geography 14 (2), 83–94.

Francis, G., Dennis, N., Ison, S., Humphreys, I., 2007. The transferability of the low-cost model to long-haul airline operations. Tourism Management 28 (2), 391–398.

Graham, B., Shaw, J., 2008. Low-cost airlines in Europe: reconciling liberalization and sustainability. Geoforum 39 (3), 1439–1451.

Graham, B., Vowles, T., 2006. Carriers within carriers: a strategic response to low-cost airline competition. Transport Reviews 26 (1), 105–126.

Grimes, S., 2006. Ireland's emergence as a centre for internationally traded services. Regional Studies 40 (9), 1041–1054.

Hall, D., Smith, M., Marcisewska, B. (Eds.), 2006. Tourism in the New Europe: The Challenges and Opportunities of EU Enlargement. CABI Publishing.

Hughes, H., Allen, D., 2005. Cultural tourism in Central and Eastern Europe: the views of 'induced image formation agents'. Tourism Management 26 (2), 173–183.

Hunter, L., 2006. Low cost airlines: business model and employment relations. European Management Journal 24 (5), 315–321.

Johnson, C., Iunius, R., 1999. Competing in Central Eastern Europe: perspectives and developments. International Journal of Hospitality Management 18 (3), 245–260.

Mason, K., 2000. The propensity of business travellers to use low cost airlines. Journal of Transport Geography 8 (2), 107–119.

Mason, K., 2001. Marketing low-cost airline services to business travellers. Journal of Air Transport Management 7 (2), 103–109.

Mason, K., Morrisson, W., 2008. Towards a means of consistently comparing airline business models with an application to the 'low cost' airline sector. Research in Transport Economics 24, 75–87.

O'Connell, J., Williams, G., 2005. Passengers' perceptions of low cost airlines and full service carriers: a case study involving Ryanair, Aer Lingus, Air Asia and Malaysia Airlines. Journal of Air Transport Management 11 (4), 259–272.

O'Reilly, D., Stone Sweet, A., 1998. The liberalization and reregulation of air transport. Journal of European Public Policy 5 (3), 447–466.

Rey, V., Molinari, P., 2006. L'Europe de l'Est entre européanisation et mondialisation. In: Jouve, B., Roche, Y. (Eds.), Des flux et des territoire – Vers un monde sans États? pp. 171–198.

Vandermotten, C., Marissal, P., 2003. La production des espaces économiques, part II, Brussels, Éditions de l'Université de Bruxelles.

Williams, G., 2002. Airline competition: deregulation's mixed legacy, Aldershot, Ashgate.

Young, C., Kaczmarek, S., 1999. Changing the perception of the post-socialist city: place promotion and imagery in Lodz, Poland. The Geographical Journal 165 (2), 183–191.

Zaiceva, A., Zimmermann, K., 2008. Scale, Diversity, and Determinants of Labour Migration in Europe, IZA Discussion Paper No. 3595 (www.iza.org).