

The impact of low-cost carriers on tourism development in less famous destinations*

ŁUKASZ OLIPRA**

Abstract

Purpose of the paper. *The purpose of the article is to present and analyze the impact of low-cost airlines sector on the tourist market and especially its contribution to the development of tourism in less famous destinations.*

Methodology. *To achieve the aim, author uses descriptive method and literature studies, and also presents and analyzes existing studies, research, reports and data.*

Findings. *The analysis show, that low cost carriers influence the development of tourism in smaller cities and less famous destinations in several different ways. Most of the result directly from the basis of LCCs business model. To cut costs low fare airlines fly to secondary and regional airports with lower landing fees and taxes and less congestion, what assure them low turnaround time. Effective and sometimes aggressive marketing of LCCs help them to generate new demand for air travel and generate new tourists.*

Research limitations. *The article presents mainly research results of other authors and general analysis of data concerning Polish aviation market. Main limitation of the research is the scope of the problem. It was not possible to present complete view of the problem because of the number of regional airports served by LCCs in Europe and the diversity of policies of local and regional authorities in the area of tourism.*

Research and managerial implications. *Low cost airlines try to increase their revenues also thanks to marketing fees paid by regions where they fly. From the point of view of regional authorities it is a chance for them to advertise and promote a region and thanks to such a campaign to attract more (and new) tourists. The article can be also an incentive for more detailed research in Poland, the country of origin of the author, where LCCs have developed very rapidly since 2004. It would be valuable to analyze the impact of LCCs in Poland on tourism market and maybe on this base draw strategies which will help to achieve more profits by regional economies.*

Originality/value of paper. *the paper summarizes and analyzes results of the research of other authors in this area and tries to analyze the influence of low-cost airlines on the Polish tourist market in general.*

Key words: air transport, low-cost carriers, development of tourism, development of regional airports, sustainable tourism.

1. Introduction

Air transport in the world in recent years is the fastest growing sector of transport. It is one of the major sectors of the global economy, which generates annually about 413 billion dollars in revenue (IATA, 2006). Undoubtedly one of the major factors contributing to the development of the aviation industry is the progressive liberalization of the aviation sector in the world. In Europe, air transport is one of the important sectors of the economy, which is important both for economic development and the integration process itself. The European aviation market is highly integrated and liberalized. Its liberalization has been implemented gradually from 1987-1992. Air transport market was fully liberalized on 1st April 1997, when the restrictions on the right to engage in cabotage were finally lifted (Szymajda, 2002, p. 28).

At the same time one could observe significant and major changes in the air transport market in the world. One of the major changes in the market was the emergence and rapid development of low-cost airlines. This article is devoted, on one hand, to the operation and presence in the market of low-cost carriers, and on the other hand, to their effects on the tourism market, particularly the development of tourism in less popular destinations.

The author tries to answer the following questions: what consequences for the functioning of the air transport market resulted from the emergence of low cost airlines? What were the effects of low-cost airlines in the tourist market? Do they contribute to the development of tourism in Europe, particularly in small, less known sites? Whether and how can local and regional communities use

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** PhD in Economics, Wrocław University of Economics, Department of Economic Policy and European Regional Studies

** Ph.D. in Economics, Wrocław University of Economics, Department of Economic Policy and European Regional Studies
e-mail: lukasz.olipra@ue.wroc.pl

low-cost airlines to advertise themselves?

In an attempt to answer these questions, the author presents the basic principles of the “low-cost business model”, then presents and analyzes the factual data concerning the low-cost air transport market in Europe. Furthermore the author analyzes how and to what extent low-cost carriers influenced the functioning of the tourism market in Europe. The article uses a descriptive method and analysis of statistical data. Literature studies include books about air transport market, articles published in international journals and also the available reports published by international organizations. The analysis presented applies to Europe, primarily the European Union. The sample period is from 1999 - 2011 with single references to earlier data.

2. The beginning of low-cost airlines in USA and Europe

The era of cheap air transport began in 1971 in the United States, when Rolling King and Herb Kelleher decided to start *South-West* airlines - which were different from other airlines already functioning in the market (South-West Airlines). The first low-cost European airline was the Irish Ryanair. The airline was established in 1985 by the Ryan family. After three years of dynamic growth in the years from 1985-1988 (increase in the number of aircraft and connections), and intense price competition from national carriers, Aer Lingus and British Airways, in 1989, began to record losses. Consequently in 1990, the company underwent a thorough restructuring, and the Ryan family decided to “copy” the low-cost model, based on how the U.S. airline, *South-West* operated. Ryanair, under the new management, from that moment onwards was promoted as Europe's first low cost airline offering the lowest fares in the market and high flight frequencies (Ryanair). The second largest low-cost carrier in Europe, EasyJet (originally designed as a low-cost airline) was founded in Britain in 1995. It started out by launching the flight connection between London (Luton Airport) and Glasgow in Scotland. The ticket price was equal to the price of a pair of jeans (Jones 2007, p. 1); EasyJet.

3. Basic principles of operation of low-cost carriers

The basic characteristics and the philosophy of how low-cost carriers operate can be encapsulated into the following points (Callaghan, 2006):

- focus on minimizing costs and maximizing efficiency,
- low costs are transferred to low tariffs for consumers,
- primarily a *point-to-point* service as opposed to the *hub and spoke* model,
- direct flights between regions,
- using mostly secondary and regional airports,
- operation of newer, cleaner and more efficient aircraft.

Table 1 shows the differences in functioning of low-cost airlines and traditional carriers. It is worth mentioning that in some positions, low fares carriers managed to, not only reduce costs but to convert them into an additional source of income. A primary example is catering. During the flight it is possible to obtain a meal, even a warm meal, but the customer has to pay extra for it. The same applies to the use of the fleet. On one hand, a short stop at the airport reduces costs for the carrier, on the other - more frequent use of the fleet generates more profit. Moreover, LCCs generate additional revenue by placing advertisements on the seat backs, seat rears, trays, headrests, in magazines distributed onboard and outdoor advertising on the hulls of some of its aircraft. Other sources of income are derived from the provision of ancillary services such as car hire and travel insurance. In 2000, revenue from ancillary services was estimated at 10% of the total revenues of carriers (Gillen and Lall, 2004, p. 47).

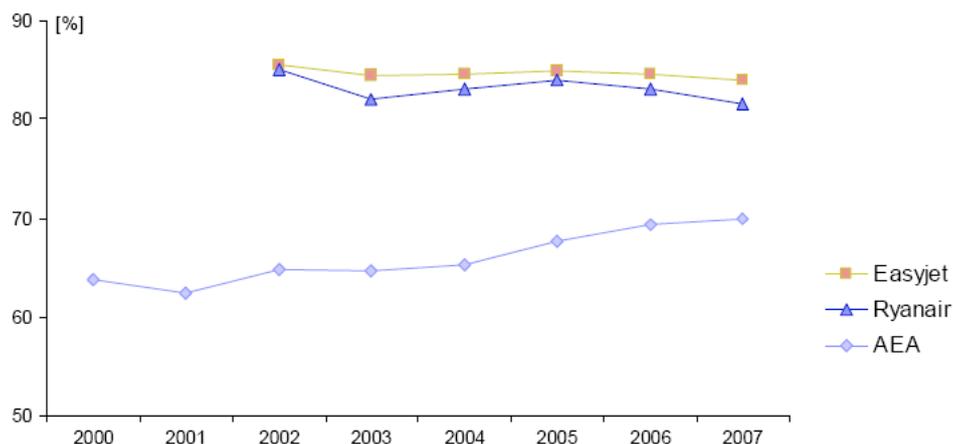
Tab. 1: Differences in the functioning of low-cost carriers and traditional airlines

	Low-cost carriers	Traditional airlines	Advantage of low-cost carriers
The use of the fleet	Short stops at the airport (approx 25 min)	Prolonged stops at airports because of the use of main, more congested airports (about 45 min)	Increased use of the fleet, reduced demurrage charges
Additional services	“no free goodies”, “no frills”, additional charges for catering, extra baggage, etc.	“Entertainment programs”, quick check-in, paper tickets, business class, catering	Lower ancillary costs, low complexity of services, additional revenue
Airports	Secondary and regional airports	Main, international airports	Lower landing and airport fees
Fleet	Standardized fleet (only one type of aircraft), higher density seating (eg. Boeing 737-300: 148)	Different types of aircraft, lower density seating (Boeing 737-300: 128)	Lower maintenance costs, spare parts and training, easier exchange of the onboard crew, increasing the use of the capacity of the aircraft
Ticket sales	Direct sales channels, sales through agencies and travel agents only if the costs are minimal	The majority of tickets sold through agencies and travel agencies, and by the airlines themselves	Lower distribution costs, less complexity (no classes)
Connections network	Direct connections, non-stop, short routes	Long destinations and short indirect routes	Reduced complexity of networks, greater use of the fleet and the ability of carriers
Personnel	A large variation in salary (up to 26%), better use of airline capacity	High base salary (variation up to 11%), strong workers unions	Lower fixed costs of employing staff

Source: Skeels, 2004

Low cost airlines, by using an aggressive marketing policy consisting of different prices, increase the *load factor* of its operations. The size of this index varies between carriers and is dependent on many factors, including the duration or the air connection. However, in most cases, the *load factor* of low cost airlines is much higher than the *load factor* of conventional airlines. Figure 1 shows the load factor index of the two largest low-cost carriers from 2000-2007 with regards to the average for traditional carriers (affiliated to the Association of European Airlines - AEA).

Fig. 1: Load factor on intra-European routes in the period from 2000-2007

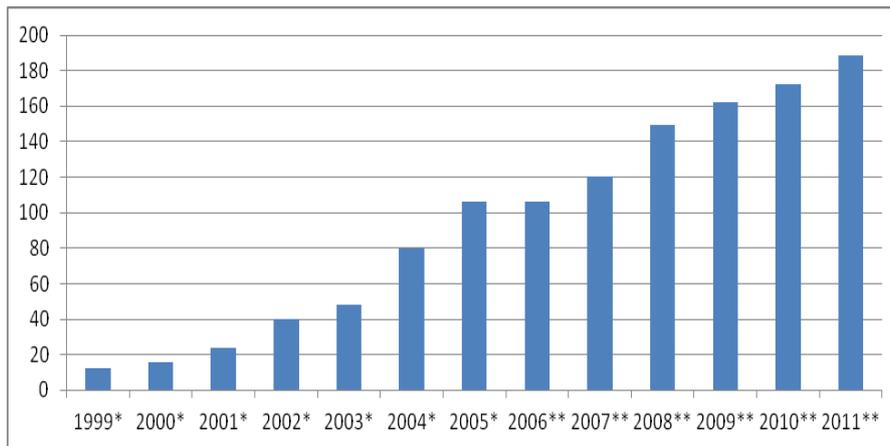


Source: Association of European Airlines, 2007, p. 15

4. Development of low-cost air services market in Europe

Low-cost airlines grew fastest in Great Britain and on routes between the United Kingdom and Ireland due to lower labour costs, a huge London market and a relatively liberal regulatory environment (Maciuk 2004, p. 48-49). In the mid-80s a liberalized bilateral agreement was signed between Britain and Ireland, which enabled the launch of the Ryanair connection between Ireland and Great Britain (Doganis 2006, p. 88). Since 1999, the expansion of the British and Irish markets, cheap airlines began the conquest of the whole of the European continent, increasing its market share each year. Figure 2 shows the growth dynamics in the number of passengers transported by cheap airlines in the years from 1999 - 2011.

Fig. 2: Number of passengers carried by LCCs in Europe from 1999-2011 (in millions)



* Data for all low-cost carriers including non-ELFAA members

** Data only for ELFAA members: Ryanair, EasyJet, Norwegian, Vueling, Flybe, transavia.com, Wizz Air, Jet2.com, Sverigeflyg.

Source: Own preparation on the basis of data from European Low Fares Airline Association, www.elfaa.com (as on 25/05/2012).

Low-fare airlines increased their market share also in Europe. Table 2 shows rapidly growing market share of LCCs in Europe from 4,9% in 2001 to 35,3% in 2010. We can also see that European low-fare airlines achieved the highest market share in comparison to other regions of the world. Even in the USA it is lower than in Europe. We have to also notice the lower starting point of European LCCs in 2001 in comparison to the American ones.

Tab. 2: Market share of low-cost airlines in Europe with reference to other regions of the world

%	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Europe	4,9	8,2	13,6	17,7	20,5	23,7	28,5	31,4	32,1	35,3
North America	17,6	19,8	21,9	24,0	24,9	26,0	27,1	28,5	28,0	28,6
Latin America	3,2	5,7	7,1	7,8	9,6	14,2	17,7	21,7	28,3	29,9
Asia Pacific	1,1	1,8	2,4	4,5	6,2	9,0	12,3	14,1	15,7	17,6
Middle East	0,0	0,0	0,1	0,9	1,9	3,4	5,6	7,4	8,3	11,9
Global	8,0	9,5	11,4	13,5	14,9	16,7	19,3	21,1	21,9	23,4

Source: European Commission, *Annual Analyses of the EU Air Transport Market 2010*, final report prepared by Mott MacDonald, September 2011, p. 97.

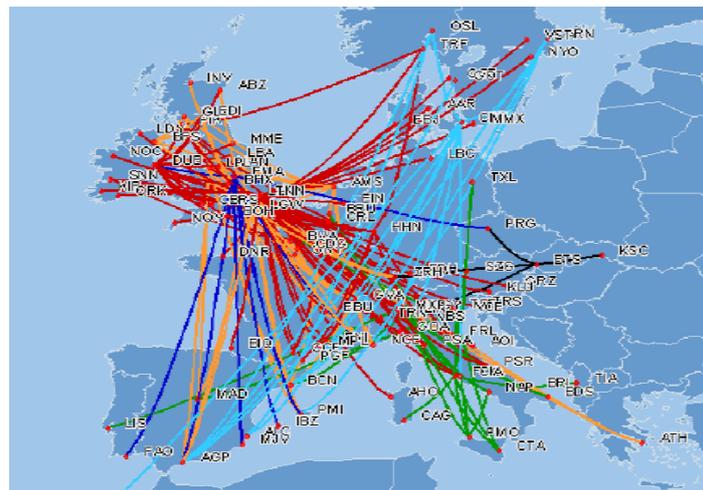
Figures 3 to 7 present the development of connection networks of cheap airlines in Europe in the years from 2001 - 2005. The figures take into account the airlines which are members of the *European Low Fares Airline Association – ELFAA*. The key for all maps is located next to Figure 7.

Fig. 3: LCCs' routes in Europe in 2001



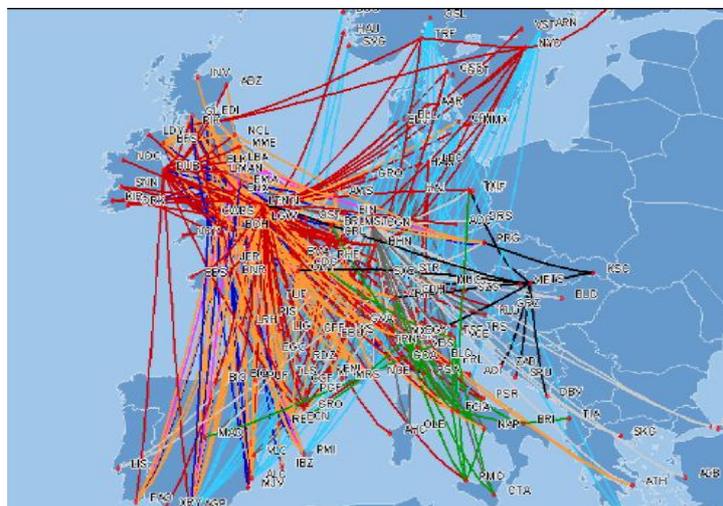
Source: European Low Fares Airline Association, www.elfaa.com

Fig. 4: LCCs' routes in Europe in 2002



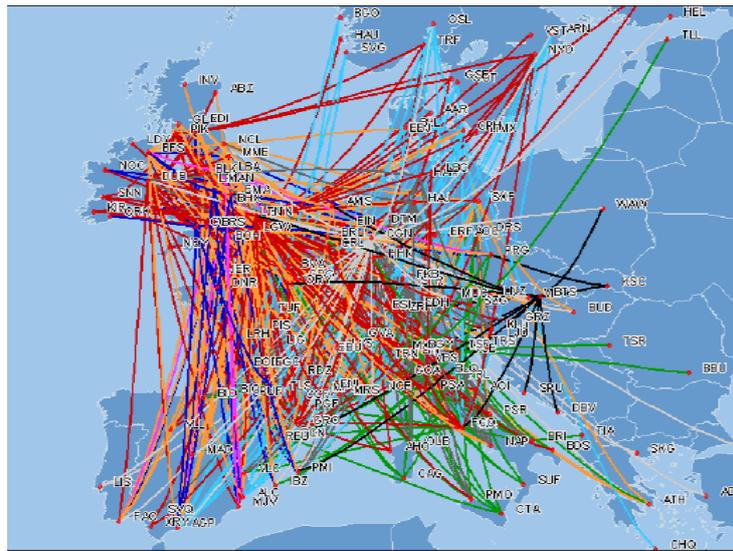
Source: European Low Fares Airline Association, www.elfaa.com

Fig. 5: LCCs' routes in Europe in 2003



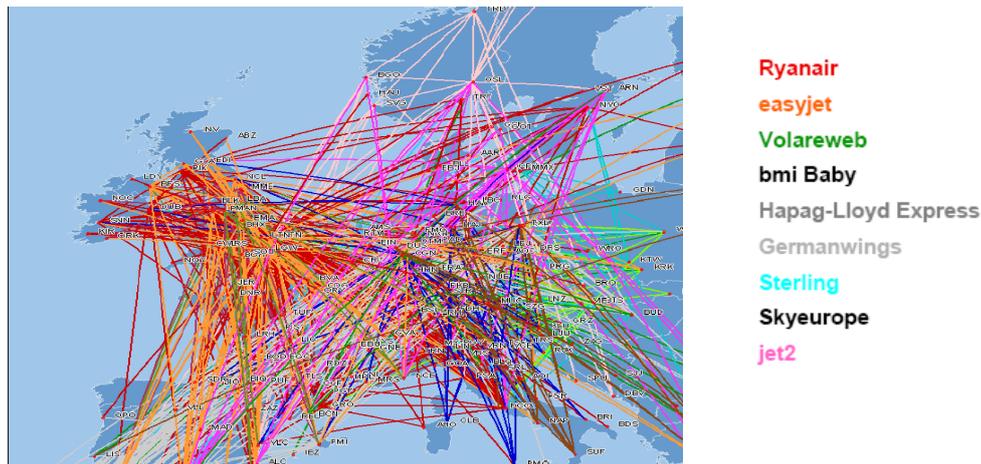
Source: European Low Fares Airline Association, www.elfaa.com

Fig. 6. LCCs' routes in Europe in 2004



Source: European Low Fares Airline Association, www.elfaa.com

Fig. 7. LCCs' routes in Europe in 2005



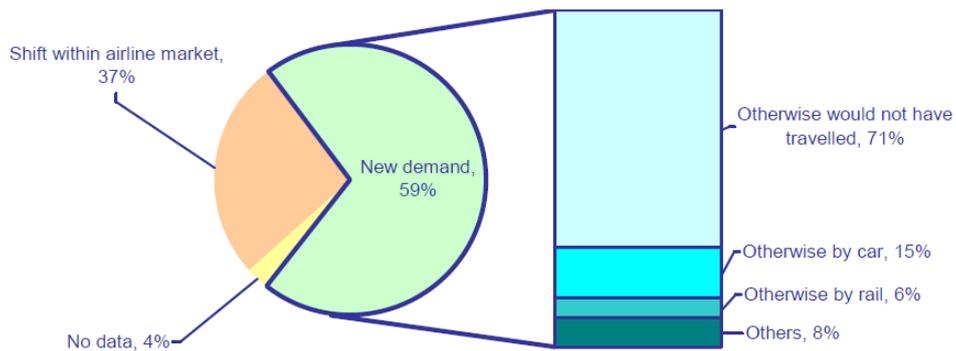
Source: European Low Fares Airline Association, www.elfaa.com

5. Effect of low-cost airlines in the aviation market

The experiences from America, Europe and other regions of the world, where air transport has been liberalized, show that cheap airlines have a major impact on the development of competition. The experience from Europe has shown that competition among traditional carriers did not increase immediately after the liberalization of the market, which meant that the benefits from liberalization in the beginning were small. The emergence of budget airlines and their dynamic development significantly affected the degree of competition in the market. Furthermore, the competition also stimulates the introduction of new products and reaching out to segments that were not properly supported before. The emergence of the cheap airlines in the European market has created new demand in market segments that have not been served well by network carriers (Forsyth *et al.*, 2006, p. 146-147; Franke, 2004, p. 17). Figure 8 shows the structure of demand for cheap air transport. Only 37% of passengers “changed” their mode of transport from the traditional airlines to low-cost airlines. 59% of passengers of cheap airlines, are people who are creating new demand, 71% of them declare that in other circumstances (if there were no cheap airlines) they would not

have travelled at all.

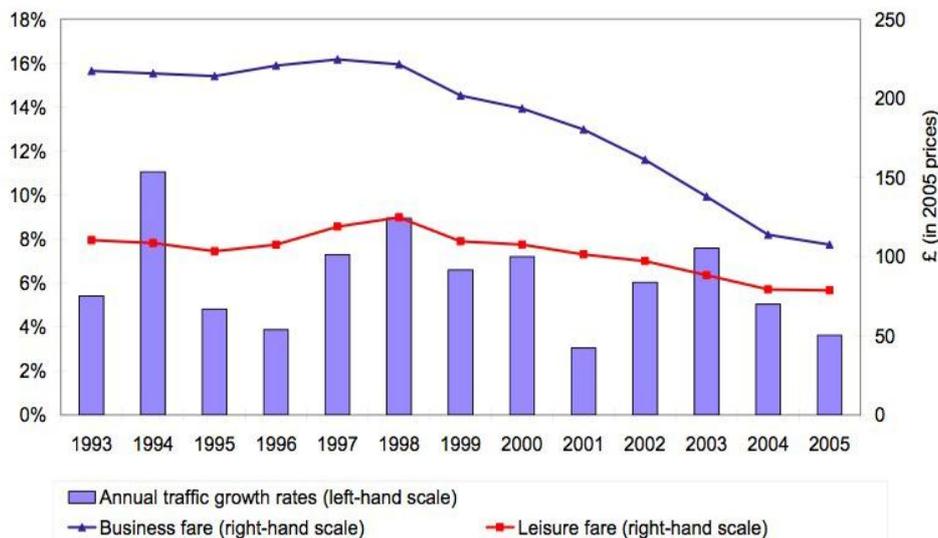
Fig. 8: The structure of the demand for low-fares air travel



Source: European Low Fares Airline Association, *Liberalization of European Air Transport: the Benefits of Low Fares Airlines to Consumers, Airports, Regions and the Environment*, Brussels 2004, www.elfaa.com

The most visible effect of the liberalization of air transport and the main benefit to consumers is the drop in ticket prices. On one hand, tariffs are no longer subject to regulatory mechanisms and may be determined based on market mechanism, on the other hand the emergence of low-cost carriers that offer very cheap airline tickets also reduced the prices of traditional carriers. As shown in Figure 9, which presents the change in the fare on routes between Great Britain and other EU countries with regards to the dynamic growth in passenger traffic, ticket prices started to decline from 1999, that is, from the moment the expansion of low-cost carriers began in the European market.

Fig. 9: EU-UK Passenger growth and average one-way fares paid by UK passengers (by purpose of travel) in the period 1993 - 2005



Source: Analysis of the EU Air Transport Industry, Final Report 2006, by Cranfield University, Department of Air Transport, European Commission - DG Energy and Transport, p. 90.

6. Low cost airlines and tourism in Europe

The development of LCC market presented above is significant. We can however ask the question whether this development of cheap airlines influence the tourism market and if yes - how? The basic segmentation of the demand for air travel distinguishes two main categories: business and

leisure. It is estimated that the split between these two groups in the LCC sector is similar to flag carriers and counts ca. 30/70% accordingly (Graham and Shaw 2008, p. 1442). B. Graham and Shaw discuss the opinion that LCCs allow more people to fly, promoting social inclusion (Graham and Shaw, 2008). They claim that there is little evidence of any major change, especially in the leisure market, in the type of people flying compared to the mid-1990s and “despite the significant increase in the total number of people flying, it is still the middle and higher-income socio-economic groups, who are flying more often, than in the past, and on shorter trips” (Graham and Shaw, 2008, p. 1442; Civil Aviation Authority 2006).

We can assume that it is debatable whether Low-Cost airlines assure social inclusion and encourage more (new) people to fly, but one thing is certain: thanks to LCCs people fly more than before. European Travel Commission in its reports for 2005, 2006 and 2007 recognized low-cost carriers as the main drivers of growth in travel and tourism demand (ETC, 2005, p. 4; ETC, 2006, p. 4; ETC, 2007, p.4). However all these reports indicate that the development of LCC resulted in more frequent but shorter trips. The increase of the share of short trips in the period 2004-2010 is presented in table 3.

Tab. 3: Evolution of the number and share of short and long holiday trips in the European Union in the period 2004 – 2010

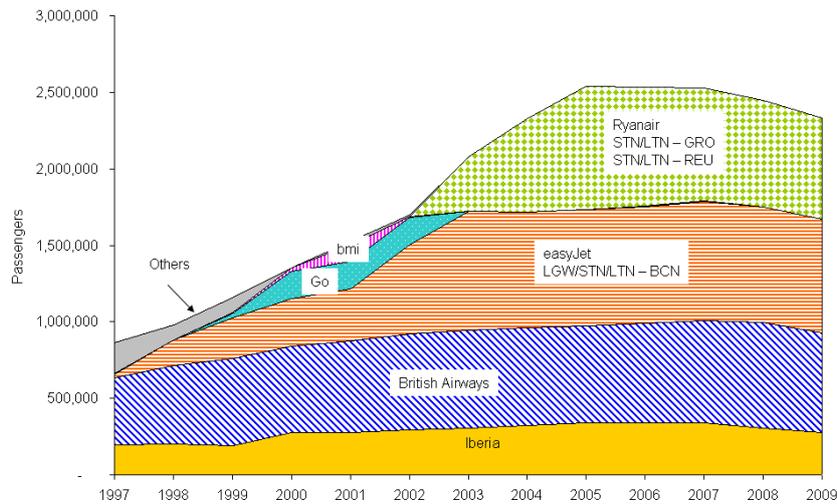
Type of holidays	Increase in the number of trips over the period 2004 - 2010	Share in the total number of trips	
		2004	2010
All holidays	19%	100%	100%
Short holidays (1-3 nights)	27%	52%	56%
Long holidays (4+ nights)	11%	48%	44%

Source: Eurostat, 2011, p. 3.

Low-cost airlines are significant for the development of weekend, city or short-break tourism and in effecting a radical expansion of potential destinations. They are extending the range of motivations and frequency of travel for private leisure reasons also by the use of their highly efficient Internet sites, where one can buy not only a flight ticket, but also book a hotel, hire a car, buy travel insurance and even sometimes check entertainments in the travel destination. Cheap airlines target an eclectic range of overlapping niche markets, ranging from cultural tourism through the second-home market, pensioners wintering abroad to “stag” and “hen” parties. LCCs also serve the “visiting friends and relatives” (VFR) market thanks to the increasing number of destinations served. After EU enlargement in 2004 we could observe a huge migration of workforce from new member states using more and more low-cost airlines for travelling. Studies of Civil Aviation Authority in the UK found that migration is followed by VFR traffic (Graham and Shaw, 2008, p. 1442; compare: Davidson and Ryley, 2010, p. 458).

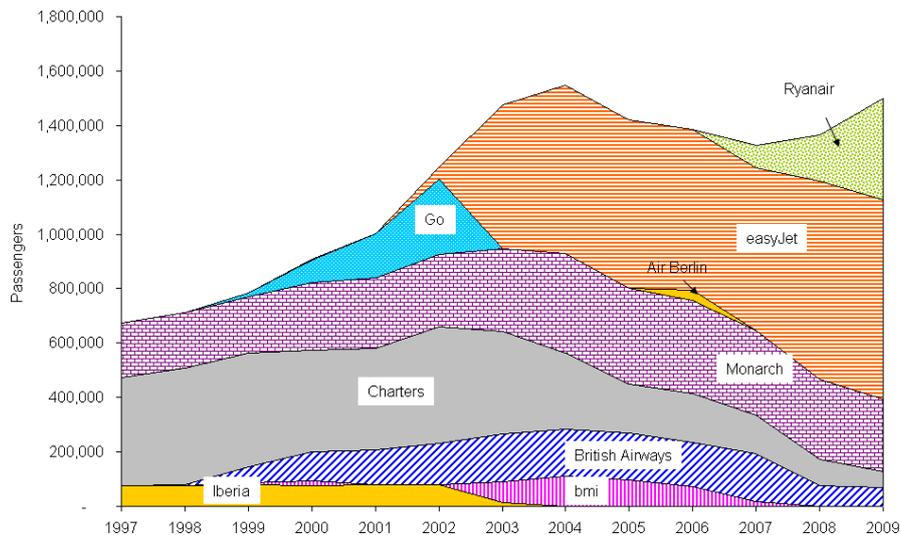
Many routes of low-cost airlines were clearly designed to carry travelers to the tourist destinations of Mediterranean Europe. This caused networks to be roughly North-South, mainly from the United Kingdom, Germany, Belgium, Scandinavian countries etc., to Spain, Italy, south of France and so on (Dobruszkes, 2006, p. 254). After EU enlargement we could observe dynamic development of routes between new member states and Western European Countries, but still the main direction is North-South. The biggest LCCs were developing their networks from countries where charter airlines were already successful and well established, such as Great Britain, Germany, Sweden, Norway and Belgium (Dobruszkes, 2006, p. 254). Doganis noticed two results of the entrance of LCCs to the tourist destinations. The first result is the development of the markets (Figure 10) and the second concerns the fact that low-cost squeeze out charter airlines (Figure 11).

Fig. 10: Stimulation of the market by LCCs entrance. The case of London - Barcelona route



Source: Doganis, 2010

Fig. 11: The squeeze out of charters by LCCs. The case of London - Alicante route



Source: Doganis, Crisis and Recession - Airline Responses and their Impact on Airports, presentation given during Airport Economics and Finance Symposium, London 30/04/2010.

Sometimes, taking into consideration particular tourist destinations, low-fare airlines are mentioned as a factor boosting tourism in the city or a region, and similarly the lack of LCCs is perceived as a main barrier in the development. For example in the European Travel Commission Report (ETC, 2005) it is said that Norway noticed more arrivals in 2005 thanks to higher demand for winter tourism and new low-cost airlines routes serving new destinations. On the other hand, the main weakness of Cyprus and Malta, according to the Report, was that it was too far from the main source markets to attract low-cost airlines, what made the destination less competitive. The biggest success among tourist destinations in 2005 was announced Valencia, Barcelona (Spain) and Dubrovnik (Croatia). The main reason for a very dynamic increase in the number of tourists was mentioned a massive increase in low-cost airline services which doubled arrivals from the UK (ETC, 2005, pp. 16-20).

According to the author, arguments given above prove that the development of low-cost carriers influence tourism in Europe, and not only quantitatively but also qualitatively.

7. Flying from “nowhere to nowhere”. How LCCs help to develop less famous tourist destinations?

One of the most important activities of low-cost carriers is simply cutting costs and trying to increase revenues, what was described above. One of the most important area of such activity is cooperation with airports. Whereas in the traditional airline model, airports are associated with “cost” for an airline carrier, LCCs succeeded in turning them into a source of revenue (Air Scoop, 2011, p. 27). Probably the best known example of such an airline is Ryanair, which is extremely successful in cutting cost and sometimes turning them into a source of revenue. It is clearly established that especially at the beginning Ryanair systematically required public, direct or indirect, financing during planning of the servicing of new airports. If negotiations with the relevant authorities failed, the carrier served another airport (Dobruszkes, 2006 p. 251).

The most famous case of subsidies for Ryanair resulted in the investigation of the European Commission and its Decision (European Commission, 2004) that financial aid granted to Ryanair by the Wallon Region distorted competition in the market and could not be considered as an aid to regional development. As legal European Commission recognized financial aid supporting opening of the new routes, like for example costs of marketing and promotion. The EC Decision concerning Ryanair’s Charleroi base has been followed by the *Community guidelines on financing of airports and start-up aid to airlines departing from regional airports* (European Commission, 2005). European Commission recognized the need for underused regional airports to develop and allowed them to support opening new routes under several conditions.

One of the most important is that they should not be discriminatory. Public financing for new routes is often granted to LCCs as so-called “marketing fees”. A region where particular airport is situated can promote the opening of a new route in the city of destination and also can promote itself for example on the body of the aircraft, inside the airplane or in the airline magazine available onboard. The development and growth of LCCs routes is perceived by local authorities as advantageous a strategy for promoting national and regional economic growth and as a consequence LCCs services are being promoted by many of national and local government agencies throughout the European Union (Graham and Shaw, 2008, p. 1439).

Marketing fees paid by public authorities can be analyzed from two different points of view. On one hand they provide considerable share of revenues for LCCs, which in the case of Ryanair reaches 22% (Scribid, 2012), on the other hand, low-cost airlines give opportunity to regions to promote themselves using airline marketing. One famous example is the policy of attracting LCCs by Malta and the strategy of increasing “cultural/heritage tourism” thanks to cheap flights.

This project resulted in the increase in the number of tourists, however did not manage to cause structural change in the Malta tourist market (the number of cultural/heritage tourists did not grow significantly) (Smith, 2009 p. 289-306; Graham and Dennis, 2010, pp. 127-136). A very recent example of the advertising campaign is that carried out by Lithuania, which in April/May published relatively long articles in Ryanair and Wizzair magazines about the country and its capital Vilnius, promoting on one hand rural Lithuania (“Locals in southern Lithuania show to the author how to make the most of their unspoiled countryside, from harvesting honey and wild mushrooms to cycling, kayaking and leaping into lakes” (Lee, 2012, p. 80)), and on the other hand Vilnius - “a vibrant mix of medieval and modern” (Judd, 2012, p. 22).

There are however much more examples of such information campaigns which can be found in the airlines magazines. Low-cost airlines operate smaller regional secondary airports. They are localized, however, not only out of capital cities.

LCCs look for niches and very often choose as their destination provincial towns forsaken by flag carriers and High Speed Trains. Moreover they organize domestic flights in countries where there is a shortage of train transport (for example Sweden and Norway) or where it is slow (UK) or expensive (Germany) (Dobruszkes, 2006, p. 254). Dobruszkes in his analysis distinguishes five types of airports served by low-cost carriers:

- 1) medium or large traditional airports (eg. Athens, Dublin, London Gatwick);
- 2) secondary urban airports of large cities (eg. Rome Ciampino, London Stansted, London Luton);
- 3) regional airports serving a large city fairly close by and more generally their surrounding area (e.g. Liverpool close to the urban area of North England, Luebeck - 70 km of Hamburg, Hahn - 130 km of Frankfurt, Gerona - ca. 100 km north from Barcelona);
- 4) remotely located regional airports that airlines use either as an access to tourist area or point of departure for road tourism (e.g. Ryanair in France uses Tours for Tours Loire Valley, Dinard for Dinard Brittany or Pau for Pau Pyrenees);
- 5) traditional airports of tourist coastal zones (e.g. Malaga, Alicante, Faro)".

Dobruszkes also noticed that we can observe "the emergence of smaller, secondary (urban or regional) airports, whose creation or survival are obviously linked to LCCs, or even not totally dependent on them. The growing supply in secondary British and German airports is determined to a similar extent by the establishment of low-cost airlines" (Dobruszkes 2006, p. 262-263).

An interesting analysis of the development of new flight connections between European cities was done by T. Fan (Fan, 2006, p. 273-286). He divided cities served by air transport into three groups: "primary cities" ("world cities") - cities with scheduled flights seating more than 5000 per week to destinations 5,000 km or further (including their secondary airports); "secondary cities" and "tertiary cities", which are differentiated according to additional criterion of city population. Cities which did not fulfill the first criterion, but with population above 300,000 were called "secondary cities" and with population below 300,000 people as "tertiary cities" (Fan 2006, p. 277).

The analysis includes flights between the UK or Ireland and continental Europe in the period 1996 - 2004. The research made by T. Fan indicated that "out of the secondary cities considered in the study, the number of city pairs served increased threefold from 31 to 94 in the 8-year period. The corresponding number for city pairs served out of tertiary cities in the UK and Ireland almost doubled from 46 to 88.

The same trend is mirrored for flights destined to secondary and tertiary cities in continental Europe, which doubled (from 76 to 159) and tripled (from 53 to 152) respectively during the 8 years. A similar trend is also reported from the number of weekly frequencies operated" (Fan, 2006, p. 278). It should be also mentioned that the number of tertiary cities served by airlines increased from 52 in 1996 to 95 in 2004. Accordingly, only 7 of these cities were served in 1996 by low-cost carriers (5 by LCCs only) and in 2004 this number increased to 71, out of which 40 tertiary cities were served only by low-fare airlines (Fan 2006, p. 280). It has to be mentioned that the study presented above did not include Central and Eastern European Countries, which joined the EU and experienced dynamic development of low-fare flights since 1 May 2004.

To show the significance of low-cost airlines in Central Eastern European countries after EU enlargement, Poland was taken into consideration, as it was the biggest of the new member states. In tables 4 and 5 data concerning the number of passengers and the dynamics of change at Polish airports are presented. The most significant changes were noticed at regional airports, which experienced a very high dynamics of passenger number increase.

These figures show the scale of the development of air transport which we deal with in Poland after its liberalization associated with entrance into the EU. The dynamics of growth from 2003-2010 has no precedence in the history of Polish aviation. The largest increases for the period of 2003 - 2010 were recorded in the following airports: Lodz - Lublinek 5.814.3% Bydgoszcz: 1.230.0%, Katowice - Pyrzowice: 817.1% and Gdańsk - Rębiechowo: 507.1%. It is worth noting that all of these airports are regional airports.

The increase in passengers handled at the level of 67.7% in the airport of Warsaw - Okęcie is not, in comparison with other airports, an impressive result. It should be noted, however, that such a large increase in the number of passengers at regional airports is mainly due to low numbers of passengers to begin with at the airports. For example, in 2003 Łódź airport - Lublinek handled only 794 passengers, while Bydgoszcz airport/one handled 14 089 (Table 4).

Tab. 4: Number of passengers in scheduled and non scheduled traffic in polish airports in 2003 - 2010

Airport	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
1. Warsaw – Okęcie	5,167	6,085	7,071	8,101	9,268	9,437	8,282	8,667
2. Cracow - Balice	593	803	1,564	2,347	3,042	2,895	2,661	2,839
3. Katowice - Pyrzowice	258	580	1,083	1,438	1,980	2,406	2,301	2,366
4. Gdańsk - Rębiechowo	364	464	678	1,250	1,709	1,942	1,891	2,210
5. Wrocław - Strachowice	284	355	454	858	1,271	1,480	1,324	1,599
6. Poznań - Ławica	264	351	399	637	863	1,256	1,249	1,384
7. Rzeszów - Jasionka	67	70	91	207	274	321	381	452
8. Łódź - Lublinek	7	6	18	207	312	342	312	414
9. Szczecin - Goleniów	87	91	102	177	229	299	277	269
10. Bydgoszcz	20	25	39	133	182	267	265	266
11. Zielona Góra	8	4	0	8	7	5	3	4
Total:	7,121	8,962	11,501	15,364	19,138	20,658	18,946	20,469

Source: own preparation on the basis of data from Polish Civil Aviation Authority, www.ulc.gov.pl

Tab. 5: Percentage changes in the number of passengers in Polish airports in 2003 - 2010

Airport	Years							
	2004: 2003	2005: 2004	2006: 2005	2007: 2006	2008: 2007	2009: 2008	2010: 2009	2010: 2003
1. Warsaw - Okęcie	17,8	16,2	14,6	14,4	1,8	-12,2	4,6	67,7
2. Cracow - Balice	35,4	94,8	50,1	29,6	-4,8	-8,1	6,7	378,8
3. Katowice - Pyrzowice	124,8	86,7	32,8	37,7	21,5	-4,4	2,8	817,1
4. Gdańsk - Rębiechowo	27,5	46,1	84,4	36,7	13,6	-2,6	16,9	507,1
5. Wrocław - Strachowice	25,0	27,9	89,0	48,1	16,4	-10,5	20,8	463,0
6. Poznań - Ławica	33,0	13,7	59,6	35,5	45,5	-0,6	10,8	424,2
7. Rzeszów	4,5	30,0	127,5	32,4	17,2	18,7	18,6	574,6
8. Łódź - Lublinek	-14,3	200,0	1 050,0	50,7	9,6	-8,8	32,7	5 814,3
9. Szczecin - Goleniów	4,6	12,1	73,5	29,4	30,6	-7,4	-2,9	209,2
10. Bydgoszcz	25,0	56,0	241,0	36,8	46,7	-0,7	0,4	1 230,0
11. Zielona Góra	-50,0	-89,7	1 975,0	-19,3	-22,4	-44,2	24,1	-53,8
Total:	25,9	28,3	33,6	24,6	7,9	-8,3	8,0	187,4

Source: own preparation on the basis of data from Polish Civil Aviation Authority, www.ulc.gov.pl

In table 6 the share of low-cost airlines in the number of passengers handled at Polish airports has been presented. Definitely airport Warsaw - Okęcie (23.81% in 2009) has the smallest share of the LCCs in the total number of passengers. In most of regional airports in 2009 this share was more than 60% of passengers, and in the case of Katowice, Lodz and Bydgoszcz, even more than 90%. The dynamics of changes in the share of low cost airlines in Poland since 2004 is also worth noting. From the analysis we can draw a conclusion that low cost carriers are the main ‘engine’ of the regional airports development¹.

¹ In general low-cost carriers are responsible for about 84% of the increase in passengers volume in Poland. Detailed analysis was published in Polish: Ł. Olipra, *Low cost airlines - New „quality” in the air transport in the European Union*, in: M. Klamut (ed.), *Wrocław University of Economics’ Research Papers*, PN 211, Economics 4 (16), Wrocław 2011, p. 368-389.

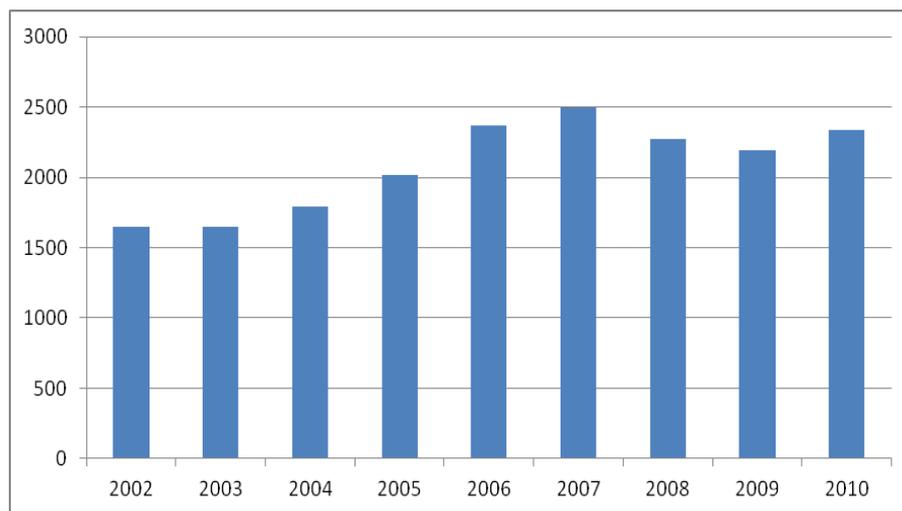
Tab. 6: Share of low cost carriers in the number of passengers in Polish airports in 2004 - 2009 (in %)

Airport	Year	2004	2005	2006	2007	2008	2009
Warsaw – Okęcie		9,60	21,31	28,64	29,42	29,67	23,81
Cracow – Balice		15,40	52,75	67,13	66,42	68,41	66,94
Katowice – Pyrzowice		63,50	84,85	80,63	82,37	86,60	90,30
Gdańsk im. Lecha Wałęsy		11,90	31,74	59,81	63,91	66,40	67,60
Wrocław – Strachowice		5,70	25,12	58,66	66,23	66,11	64,33
Poznań – Ławica		12,80	17,02	52,82	59,46	68,20	71,71
Łódź im. Władysława Reymonta		-	97,54	97,41	98,31	99,08	97,96
Rzeszów – Jasionka		-	23,85	57,53	60,61	66,97	70,18
Szczecin – Goleniów		1,22	14,81	48,54	54,61	66,02	65,87
Bydgoszcz – Szwederowo		-	49,01	86,66	86,94	93,01	95,06
Zielona Góra – Babimost		-	-	-	-	-	-

Source: own preparation on the basis of data from Civil Aviation Authority, www.ulc.gov.pl

Figure 12 presents the number of foreign tourist coming to Poland from old members of the European Union (EU15) except Germany. Germany was excluded as a neighboring country already in the original report of Institute of Tourism. However, the fact that this Figure presents a general number of tourists- not only these coming by air (exclusion of Germany - the country from which tourists come mainly by car) makes it even more valuable for our study. In Figure 12 we can also see an increase in the number of tourists after 2004. Although there is a slowdown in 2008 and 2009 caused by the crisis, in 2010 trend was again positive. Another, more detailed studies show also an increase of tourist volumes, especially those coming by air. In Cracow the number of foreign tourists increased from 680 thousands in 2003 to 2.460 thousands in 2007. In the same time the percentage of foreign tourist coming by air increased from 19% in 2003 to 63% 2007. It can be concluded that in Cracow the main increase in the number of tourists was caused by the development of air transport, mainly low-cost airlines (Olipra, 2010).

Fig. 12: Number of tourists coming to Poland from old member of the EU (EU15) except Germany in the period from 2002 to 2010 in thousands



Source: own preparation on the basis of data from: Bartoszewicz and Skalska, 2010, p. 37

Other new members of the European Union also experienced dynamic increase in the number of LCCs passengers. New routes to cities in the region make them more accessible for tourists from Western Europe who regard them sometimes as “new Paris”. These are mainly Prague (well served already before May 2004, as Czech government had allowed LCCs access before 2004), Budapest, Tallinn, Riga and already mentioned Cracow (Graham, 2008, p. 1443).

Table 7 presents the number of destinations served by particular members of European Low Fare Airline Association in the period 2006-2011. Only carriers which operated in 2011 were taken into consideration. We can notice a significant increase in the number of destinations served especially by biggest LCCs. Ryanair has increased the number of destinations between 2006 and 2011 by 27% (127 destinations in 2006 and 162 in 2011), and EasyJet almost 80% (73 in 2006 and 130 in 2011).

Tab. 7: Number of destination served by ELFAA members in the period 2006-2011

Low-cost airline	Year					
	2006	2007	2008	2009	2010	2011
Ryanair	127	139	148	150	160	162
EasyJet	73	89	109	117	125	130
Norwegian	55	74	86	95	95	110
Vueling				46	40	110
Flybe	47	53	65	54	63	97
transavia.com	95	98	90	67	96	96
Wizz Air	31	36	48	49	69	59
Jet2.com			49	49	52	51
Sverigeflyg	6	17	12	16	21	17

Source of data: European Low Fare Airline Association, www.elfaa.com (25/05/2012).

8. Low-cost airlines and the sustainable tourism

Air transport is regarded as the sector of transport having highest negative impact on the environment, polluting atmosphere and emitting noise. While talking about rapid development of low-cost carriers we have to take into consideration also environmental issues and impingement of LCCs.

In the report published by the European Low Fares Airline Association (ELFAA, 2004, p. 30) authors claim that “low fares airlines contribute to the development of sustainable tourism and environmentally efficient travel through Europe”. Among factors contributing to the lower impact of LCCs on the environment the report mentions: more efficient seat configuration and higher load factor, what results in lower fuel consumption per seat; the use of newer and thus more technologically advanced and energy efficient aircraft, which additionally minimizes fuel burn and noise emissions; operations to less congested airports, which are generally located in less densely populated areas with lower levels of aviation activity compared to the main hubs, what minimizes the noise nuisance generated by LCCs; direct services, leading to less connecting flights and thus less pollution; flying to less congested airports, what helps to avoid congestion on the access roads around main hubs with frequent traffic queues, which tends to result in and allows for more equal traffic distribution; reducing waste resulting from lack of “frills” offered on board by traditional airlines (low-cost airlines do not usually hand out newspapers and do not offer “free” meals and drinks, all of which generate waste) (ELFAA, 2004, p. 31).

All of the arguments mentioned above seem to be logic and true, when we compare LCCs and traditional airlines. However, although LCCs try to claim that they are “environmental friendly”, we have to remember that they generate new demand for air travel and encourage people to fly, what is very often emphasized by themselves. They promote growth in air travel, mainly over shorter distances in narrow-body aircrafts of fewer than 200 seats on city pairs, which could often be served by more sustainable forms of transport (Graham and Shaw, 2008, p. 1447). In other words, if there was no low-cost flights connections, 51% of LCCs passengers would either use more sustainable means of transportation or would not travel at all (71% of the new demand; see Figure 8) not polluting the environment. Regional and local authorities in less famous destinations, planning the development of LCCs networks from/to their airports should thus take also into consideration the consequences and impact of air traffic on the environment.

9. Conclusion

To sum up the analysis presented in this paper, we can conclude that low-cost carriers influence the development of tourism in smaller cities and less famous destinations in several different ways. Most of them result directly from the basis of LCCs business model. To cut costs low fare airlines fly to secondary and regional airports with lower landing fees and taxes and less congestion, what assure them low turnaround time. Some of these airports are secondary airports serving big cities and famous destinations. However, there was also a significant increase in the number of smaller cities (“tertiary cities”) served by LCCs and in the number of direct routes between “secondary” and “tertiary” cities. Effective and sometimes aggressive marketing of low-cost airlines assures the airlines a high level of load factor regardless of the kind and location of airports. So, we can confirm that they generate new demand for air travel and generate new tourists. Low cost airlines try to increase their revenues also thanks to marketing fees paid by regions where they fly. From the point of view of regional authorities it is sometimes a need to attract LCCs routes, but on the other hand it is a chance for them to advertise and promote a region and thanks to such a campaign to attract more (and new) tourists.

Taking into consideration the analysis presented above we can conclude that LCCs can positively influence less famous destinations and can help them to promote and increase the number of tourists. Environmental issue however should also be taken into consideration while planning development of LCCs routes from/to regional airports.

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