

# IMPACT OF LOW-COST AIRLINES ON THE EUROPEAN AIR TRANSPORT MARKET

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## ABSTRACT

The European air transport market has been recently swamped by the low-cost airlines. Currently there are 50 such airlines operating in Europe and their number is increasing daily. The share of low-cost airlines is expected to rise by the end of 2006 to more than 30 per cent among air carriers.

The cheapest fares on the flights advertised by low-cost airlines (LCA) are sold out months in advance, and this gives rise to a justified question whether the cheap air tickets so alluringly offered to passengers on the internet pages are merely a marketing ploy and what are the real benefits of travelling by low-cost airlines.

This paper will analyze the positive and negative impacts of low cost carrier operations on Croatian air traffic.

## 1 INTRODUCTION

Low-cost air airlines offer in fact nothing more but the seats in the aircraft. Cheap air tickets can be found only if they are reserved months in advance; otherwise, travelling by such airlines costs almost as much or just a little bit less than travelling by "traditional" air carriers. During flight no beverages or food are served, and the comfort has been reduced because of greater number of seats and maximum utilization of the passenger cabin. Another disadvantage is that the aircraft of low-cost airlines mainly land at less frequented airports, which allows great savings to these companies, but the passengers have the additional costs because these airports are often even more than 50 kilometres away from the city centre.

There is no doubt that such air carriers are needed in the Republic of Croatia, but they are primarily ideal for persons who have excess time and do not care when they will reach their destination and whether the journey there will take two or twenty hours, but the crucial thing is to have it cheap. However, it would be wrong to claim that the low-cost airlines can replace the scheduled airlines since today safety plays an important factor in selecting the air carrier. Besides, the appearance of low-cost airlines has positively influenced the pricing policy of regular carriers who, whether they like it or not, have to introduce new tariff systems with significantly lower fares.

## 2 BACKGROUND OF THE LOW-COST AIRLINES

Low-cost airline is an airline that offers transportation services at lower prices in exchange for the elimination of many services provided by traditional airlines. The concept was created in the United States of America, and was then, at the beginning of the 90s implemented in Europe and the rest of the world [1].

The first successful low-cost airline was founded in the USA in 1949 under the name Pacific Southwest Airlines. In literature the origin of this concept is usually unjustly assigned to the Southwest Airlines that started operating in 1971 and marked increasing revenue every year. With the deregulation of air traffic market, the model started to be implemented in Europe. Their appearance was facilitated also by the collapse of the Eastern Block followed by the reduced needs for the military resources, including the former military airports. After the retreat of the army from these airports the infrastructure remained which many attempted to use by offering almost free services of landing, take-off and substantial discounts in passenger handling. The representatives of LCA saw their chance here, and signed agreements with the local authorities that allow them to use the airport capacities. The benefit would be two-sided: LCA would bring passengers to the advantage of both the airlines and the regions and airports that would be revived and that would increase the employment rate. On the other hand, the aircraft manufacturers, first of all Boeing, facing the great crisis following 11 September 2001, stimulated the low-cost carries. The logic is simple: better to help the LCA than to close down the production lines. As an example of such business policy is the case of Germanwings. It is an airline in 100% ownership of the Eurowings Luftverkehrs AG group within which 49% of share belongs to German airline Lufthansa. Lufthansa, namely, since the crisis of September 11, has some 70 aircraft grounded, so that, in the opinion of experts, it is more cost-efficient to found the LCA than to keep the aircraft in hangars.

The most significant representatives of LCA in Europe include Irish Ryanair, that started to operate in 1991 and easyJet, founded in 1995. The low-cost airlines in Asia and the Oceania marked their beginning in 2000 by founding the airlines Malaysia's Air Asia and Australia's Virgin Blue. Today the model is used in the whole world and the deregulation of the market has been favourable to their fast expansion and development. In 2006 new low-cost airlines in Saudi Arabia and Mexico have been announced.

Low-cost airlines represent a serious threat to commercial airlines since the pricing structure with full service offered by commercial operators prevents efficient fight with the prices offered by LCA, and the fare represents the crucial factor for the majority of service users in selecting the carrier. In the period from 2001 to 2003, when the aircraft industry was threatened by frequent terrorist attacks, wars, occurrence of SARS, a large part of traditional operators marked substantial losses whereas low-cost airlines remained profitable on the average.

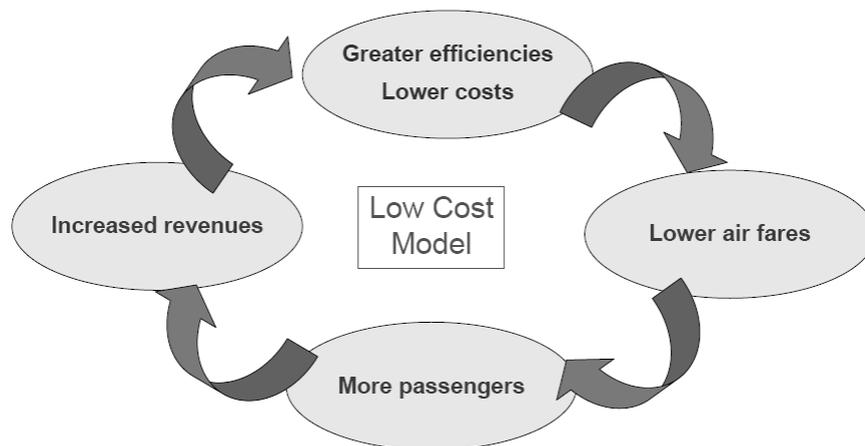
Stimulated by success of the low-cost airlines on the market, many traditional airlines decided to found their LCA, such as the KLM's Buzz, British Airways' Go and United's Ted; however, along with the good operation of low-cost airlines there was a fall in the profit in their primary sector, the traditional commercial aviation. Some of the companies that operate successfully in both areas are bmi's bmibaby, Scandinavian Airlines System's Snowflake, Germanwings owned 49% by Lufthansa and Qantas's Jetstar.

The acceptance of new members from the Eastern Europe into the European Union and adopting of the legislation in the countries that have not joined yet, has led to the introduction of new routes of low-cost airlines. The period from 2004 to 2006 saw the introduction of the routes towards Bulgaria, Slovenia, Poland, Hungary, the Czech Republic, and more recently Turkey.

### 3 IMPACT OF LOW-COST AIRLINES ON THE AIR TRAFFIC MARKET

#### 3.1 Characteristics of the operation of low-cost airlines

Great expansion of LCA is favoured by their extreme adaptability regarding the market. The low-cost airlines base their operation on constant elimination of non-profitable lines and introduction of new ones.



**Figure 1:** Operation concept of low-cost airlines

Characteristics of the concept of low-cost airlines [2]:

- focus on the minimal costs and prices and maximal efficiency,
- using secondary and regional airports,
- point to point service,
- single fare class,
- direct service between regions,
- short-haul flights,
- no service onboard aircraft,
- one type of aircraft in the fleet,
- younger and environmentally-friendly fleet,
- low operative costs.

Advantages of low-cost airlines:

- single (one-way) tickets without restrictions,
- no free in-flight service,
- cheaper airport taxes,
- single transport class,
- no in-advance seat reservations,
- travelling without ticket,
- frequency of flying,
- short handling time (up to 25 minutes),
- using secondary airports,
- direct flights,
- lower labour costs,

- flexibility in personnel planning,
- fleet standardization,
- lower costs of maintenance, spare parts and personnel training,
- minimal space at airports,
- strong promotion,
- internet and telephone booking,
- lower distribution costs,
- few administrative staff members.

Table 1 gives an overview of the biggest low-cost airlines in the world in 2004. One may notice that the US low-cost airlines still lead with five representatives among the top ten airlines, which is only logical regarding the longer operating tradition and the territory area they serve.

**Table 1:** Ten biggest low-cost airlines in the world in 2004

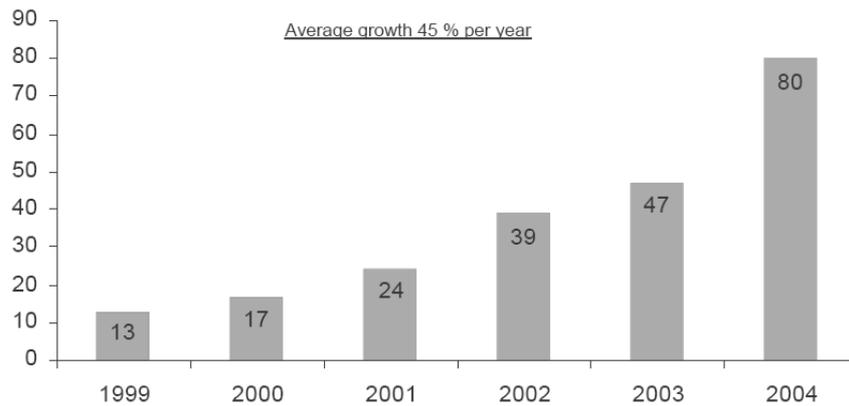
AIRLINE	COUNTRY	FOUNDATION YEAR	PAX NUMBER IN MILLIONS	OCCUPANCY RATE IN %	NUMBER OF AIRCRAFT
<b>Southwest Airlines</b>	USA	1971	77.7	70.7	447
<b>Ryanair</b>	Ireland	1991	33.4	85.0	99
<b>easyJet</b>	G. Britain	1995	26.1	81.4	98
<b>AirTran Airways</b>	USA	1993	16.6	73.5	108
<b>JetBlue Airways</b>	USA	2000	14.7	85.2	98
<b>Air Berlin</b>	Germany	2002	13.5	-	54
<b>Virgine Blue</b>	Australia	2000	13.4	76.8	47
<b>Gol Transportes Aereos</b>	Brazil	2001	9.7	73.4	47
<b>Song</b>	USA	2003	11.5	-	47
<b>Ted</b>	USA	2004	10.0	-	57

### 3.2. Significance of additional liberalization of the air traffic market on low-cost airlines in Europe

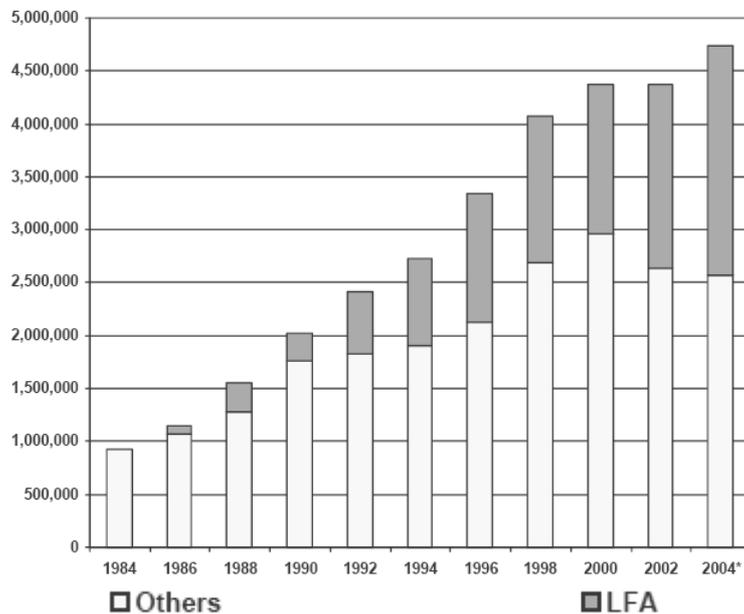
The appearance of LCA has led to additional liberalization and integration of the aircraft market in Europe. There has also been significant inflow of passengers in the otherwise neglected secondary and regional airports which forced other airports as well to improve their efficiency and competitiveness. The low-cost airlines enable people to travel by air at more affordable prices, providing new workplaces and economic growth, simplifying the travel within Europe, forcing classical air carriers and airports to reduce their prices and to be more efficient, reducing the saturation at the biggest European airports and increasing the competitiveness. The region to which the low-cost airlines direct their flights have recognized

the role of these companies as important social and economic movers of the region. The arrival of LCA has led to the opening of new workplaces, the previously neglected regions have now found their place on the map of aircraft destinations and have the possibility of free advertising on the web pages of the air carriers and greater possibility of tourist inflow during the entire year [3].

The result of additional liberalization of the European market of air traffic and business success of the low-cost airlines can be seen in Figure 2. The passengers in Europe have recognized all the benefits of LCA and every year these companies mark an increasing number of the carried passengers. The average growth in the last 6 years amounts to as much as 45%, whereas LCA in 2005 transported for the first time more than 100 million passengers, and in the following years even better results are expected [4].



**Figure 2:** The flow of the number of carried passengers by European low-cost airlines



**Figure 3:** Traffic increase on the line London – Dublin after the arrival of low-cost airlines

The significance of the appearance of low-cost airlines for a region can be seen in Figure 3 using the example of monitoring the traffic on the London – Dublin relation. The Figure shows as much as five times increased traffic in the last 20 years, which refers to a great extent to the arrival of LCA onto the market. The graph shows that the traditional companies

still hold the lead in transportation, but over the recent years LCA impose a dangerous threat by taking over a greater share in the mentioned route. A similar scenario is occurring on almost all the more popular destinations [4].

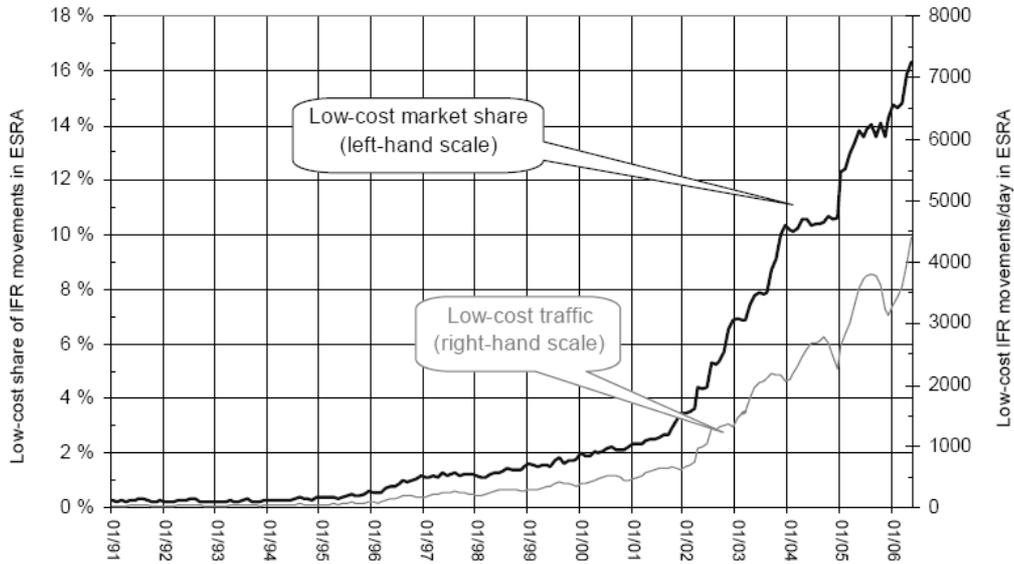
The most significant low-cost airlines in Europe are the members of ELFAA – European Low Fares Airline Association. Currently the association includes 11 member companies, among which the biggest ones, Ryanair and easyJet, carry together more than 70 million passengers, whereas the association members transported in 2005 more than 100 million passengers and realized 30% of total traffic in Europe (Table 2) [5].

**Table 2:** Statistical data on the ELFAA members

AIRLINE	COUNTRY	COUNTRIES SERVED	DESTINATIONS	ROUTES	PERMANENT EMPLOYEES	PASSENGERS (JUL'05 – JUN'06)
easyJet	U.K.	21	72	258	3,498	32.1 m
Flybe	U.K.	7	42	113	1,500	5.4 m
Hapag-Lloyd Express	Germany	10	32	64	51	3.6 m
Norwegian	Norway	23	53	82	620	3.3 m
Ryanair	Ireland	23	120	362	3,700	37.6 m
Sky Europe	Slovakia	19	37	73	820	2.5 m
Sterling	Denmark	16	36	89	1314	3.8 m
Sverigeflyg	Sweden	1	5	4	90	0.4 m
Transavia.com	The Netherlands	22	100	105	1773	4.8 m
Wizzair	Hungary	18	40	70	413	2.4 m
<b>Total:</b>						<b>96 m</b>

AIRLINE	FLEET SIZE	AVERAGE FLEET AGE	FLEET TYPE
easyJet	120	2.8	9 x Boeing 737-300, 32 x Boeing 737-700, 79 x Airbus A319
Flybe	38	7.6	24 x Bombardier Q400, 8 x BAe146-300, 6 x BAe146-200
Hapag-Lloyd Express	18	7	5 x Boeing 737-500, 8 x Boeing 737-700, 3 x Boeing 737-800, 2 x Fokker 100
Norwegian	20	13.5	20 x Boeing 737-300
Ryanair	107	2	107 x Boeing 737-800
Sky Europe	16	6.3	5 x Boeing 737-300, 6 x Boeing 737-500, 5 x 737-700
Sterling	27	6	6 x Boeing 737-500, 13 x Boeing 737-700, 10 x Boeing 737-800
Sverigeflyg	7	12	4 x Saab 340, 2 x Saab 2000, 1 x Fokker 50
Transavia.com	31	5	10 x Boeing 737-700, 21 x Boeing 737-800
Wizzair	9	3	6 x Airbus A320
<b>Total:</b>	<b>393</b>	<b>4.5</b>	

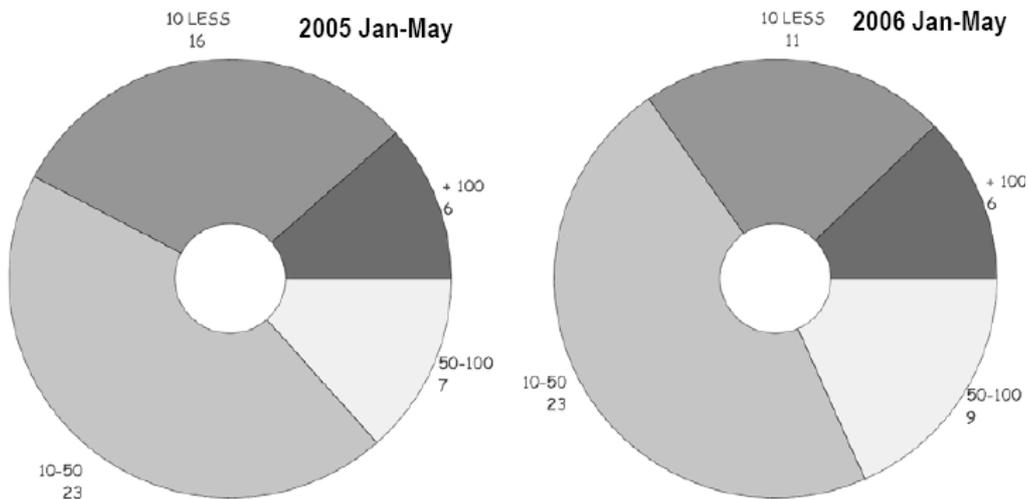
The share of low-cost airlines on the market marks a constant growth and currently amounts to 16.3% of the total number of IFR flights (Figure 4). In the last 12 months they mark an increase of 2.4%. This growth corresponds to the growth of 83% of all the additional scheduled flights. In spite of the rapid growth in the market share, the sector growth in 2006 is somewhat slower than in the second half of 2005. In 2006 there has been an increase in the number of flights by 23% compared to the previous 12 months, whereas in the second half of 2005 there was an increase in the number of flights of 31%. Comparing the same period last year, the low-cost airlines have marked in 2006 an increase in the share on the market by 2.4%. The Figure also shows major increases in traffic during the summer season and lower demand during winter [6] [7].



**Figure 4:** Market share of low-cost airlines in ESRA<sup>1</sup> region

Comparing the region from January to May 2005, with the same period in the year 2006, one may notice that the number of low-cost airlines has fallen from 52 companies to 50 (one company in the group of 1-10 daily flights has been established by combining two minor low-cost airlines). The companies fly from 22 European countries. However, the growth in the number of operators that fly more than 50 flights daily and of which there are 15 at the moment (Figure 5) is very significant [6].

Great Britain has the largest number of LCA; as many as 9 low-cost operators, followed by Germany with 6 and Sweden with 5.



**Figure 5:** The daily flights of the low-cost airlines

<sup>1</sup>ESRA - EUROCONTROL Statistical Reference Area - designed to include as much as possible of the ECAC area for which data are available from a range of sources within the Agency (CRCO, CFMU and STATFOR). It currently includes the following countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, FYROM, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, Moldova, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

#### **4 LOW-COST AIRLINES IN THE REPUBLIC OF CROATIA**

Europe tends towards integration of air traffic, and the Republic of Croatia is a member of the majority of world and European organizations that regulate civil aviation. As a signatory of the Convention on International Civil Aviation, the Republic of Croatia has signed some 50 bilateral agreements with other countries on the operation of scheduled air traffic between the countries.

By signing the so-called horizontal agreement between the European Union and the Republic of Croatia at the beginning of 2006, the Croatian air transport market has been additionally liberalized. With this agreement the Republic of Croatia has accepted the obligation to open up her aircraft market to all the air airlines from the EU, regardless of the nationality of the company and the line that the airlines intend to open.

Significant growth of international air traffic on the Croatian air transport market, which will primarily be reflected in the arrival of an increasing number of low-cost airlines, will not be really in favour of the domestic airline nor has the new agreement brought any rights. Croatia Airlines felt already last year a strong impact of international competition. Compared to the year before, 2005, there were as much as 80% more competitors on the Croatian market, so that in the following years, owing to additional liberalization of air transport market, Croatia Airlines may face double-strong competition. The operation is also unfavourably affected by the record growth in the prices of jet fuel, but also the falling prices of air transport service.

In order to adapt to the condition of competition and attract an increasing number of passengers, Croatia Airlines has already improved its network model of operation with the airlines from the Star Alliance. Numerous commercial agreements have been realized, and in the following months their cooperation will be expanded with the Italian Air One, Scandinavian SAS and Polish LOT. The competitive prices and special offers in April and May have resulted in the increased number of transported passengers. Thus in April the average occupancy of the passenger cabin was 8.3% higher than in the same period last year.

Since facing the difficulties, Croatia Airlines has introduced a number of measures to rationalize the costs in all the fields. The strategy of monitoring the prices and fuelling at airports at most favourable prices, reduction of travelling costs, representation are being implemented and there has been a 10% cut in salaries of the company management.

The signing and the application of the so-called Multi-lateral agreement on the European Air Space will contribute to better position of the company on the European air transport market. Although the full implementation of the "open skies" conditions will expose them to even greater competition, it will at the same time open up the possibility of free operation on the European market in scheduled and charter traffic.

Croatia Airlines can compete with low-cost airlines regarding prices only in domestic traffic where for the time being there will be favourable tariffs on all the flights, i.e. tickets that from Zagreb to Dubrovnik cost 183, and to Zadar and Pula about 150 kuna. However, since the number of such cheap seats in aircraft is limited, the passengers should purchase their tickets as early as possible because this is the only way to get them cheaper.

In order to attract new passengers, Croatia Airlines has, among other things, introduced also the mentioned cheap domestic flights, but the fact is that it will have to adapt to passengers by offering affordable services in the future as well. This is caused by high competition, since 19 foreign airlines are present on a relatively small Croatian market.

In order to be profitable, the airlines have to have maximally occupied aircraft. The occupancy rate of the aircraft cabin of 65% was once considered a success, whereas today, in order to be profitable an airline has to have 80% seat occupancy in the aircraft. Here the problem for Croatia Airlines is the small number of aircraft in the fleet, so that they are

considering purchasing of an aircraft with some 90 seats in order to reach the optimal occupancy of the cabin. For some lines, namely, the ATR aircraft with 48 seats is too small, and the next one in size Airbus 319 which accommodates 132 passengers is too big, so that sometimes it flies half empty which is naturally not profitable.

The list of low-cost airlines that have been licensed for flying to the Republic of Croatia in 2006:

- Germanwings (Germany)
- Hapag Lloyd Express (Germany)
- SkyEurope (Slovakia)
- SkyEurope (Hungary)
- Norwegian Air Shuttle (Norway)
- Wizz Air Kft. (Hungary)
- EasyJet (Great Britain)
- Ryanair (Ireland)

The low-cost airlines have connected the airports (except Osijek) in the Republic of Croatia with the biggest German, Czech, Slovakian, English, Norwegian, Hungarian, and Irish cities at significantly more favourable prices than offered by traditional airlines.

In the operation of low-cost airlines one should have in mind that the prices advertised represent exclusively the transport cost. If a passenger knows the exact date of travel sufficiently in advance, there is no problem in purchasing tickets for some ten euro. Usually 30 – 60 euro (in one direction) is paid. The passengers who reserve a ticket months in advance can travel for one to five euro and the tickets for some flights are given for free. However, airport taxes have to be added to this price, which sometimes multiply exceed the air transport price. Low-cost airlines fly to airports with lowest taxes, and the users of big airports pay a significantly higher ground handling charge. Commercial price of air tickets is some thirty euro in one direction for a flight of up to two hours. With this price in the rank of bus tickets, the air carrier covers the depreciation and maintenance of aircraft, costs of fuel, flight crew and administration.

The first aircraft of the low-cost carrier Ryanair from London landed at Pula Airport on 31 October 2006 and this connection with Pula will continue during the entire year at a price of 17.56 euro, on Tuesdays, Thursdays and Saturdays. Also from February next year a connection will be established with Dublin. The interest is best confirmed by the fact that already 6 thousand people reserved the tickets to London, and three to Dublin. The arrival of Ryanair represents for the Republic of Croatia a new beginning of the traffic connections and development of the Istrian region since 40 thousand arriving and the same number of departing passengers for London and Dublin mean significant increase in traffic, not only for the airport but also for the entire Istrian economy. Satisfied with the results of the flights from the Pula Airport, Ryanair has announced 16 new destinations across Europe, and from the next year the flights will operate from Zagreb as well.

Croatia Airlines has answered to such low prices by offering international flights at a price of 139 euro including airport taxes, and excluding the costs of ticket service. In September 2006 Croatia Airlines has transported 189,291 passengers which is an increase of 3% compared to the same period last year (load factor amounted to 73.7%) and represents the month record of the company, whereas in domestic traffic the record load factor of 68.4% was reached in July 2006. The company can be satisfied with these indicators since the data about increased competition on the Croatian market of 38% compared to 2005 have not been favourable. Since this number is expected to continue to grow, Croatia Airlines is facing a period of merciless fight for every passenger.

## 5 CONCLUSION

The liberalization of the European air traffic market has opened up the possibilities for the new companies to enter the market and compete with the traditional manner of airline operation by offering new business models. The low-cost model in Europe brought many benefits for the passengers regarding lower prices, greater choice, a lot faster development of secondary and regional airports, and also of the whole region, by insuring new workplaces transporting a substantially greater number of passengers to the previously non-profitable airports. The low-cost airlines reduce the negative impact of air traffic on the environment by using modern aircraft (average age of the aircraft in the low-cost operator fleet in Europe amounts to 4.5 years) and they consume much less fuel and have significantly lower emissions of harmful substances into the environment.

Low-cost air airlines base the low fares on the high occupancy rate of the aircraft (load factor on the average amounts to more than 80%), fleet standardization, accommodation of a much larger number of passengers into the aircraft at the expense of comfort (e.g. Boeing 737 – 300 of low-cost airlines: 148 seats; classical airlines: 128 seats), substantially shorter handling times (LCA – less than 25 minutes, classical airlines – on the average 45 minutes), additional charges for catering and additional baggage, paying cheaper taxes since they use secondary cheaper airports, using services of travel agencies only if the additional cost is minimal, which makes the ticket purchasing procedure much simpler and cheaper (most tickets are distributed via Internet), the majority of flights operate on short hauls without connections, lower fixed costs related to staff. All the previously mentioned benefits can finally result in as much as 40% lower operative costs compared to the classical airlines.

The advantage of traditional airlines is that the passengers have greater comfort regarding seats, catering service onboard aircraft, possibilities of purchasing return tickets, landing at major airports that are as a rule as much as 30km nearer the city centre. The fare and the paying ability of the passenger will represent in the future the crucial factor in selecting an operator, and in this sense the low-cost companies will certainly be a more acceptable version.

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