# Czech University of Life Sciences Prague Faculty of Economics and Management 

 Department of Economics

Bachelor Thesis

Comparison of traditional and low cost airlines

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## CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Thesis title
Comparison of traditional and low cost airlines

## Objectives of thesis

The bachelor thesis is focused on introduction of two models traditional and low cost on the european market. The main aim is to provide information about differences and similarities of the models and also about their representatives. Readers can expect detailed comparison of services, prices, advantages and disadvantages of low cost and traditional airlines.

## Methodology

The theoretical part consists of history of aviation, airlines classification, definitions, basic information about traditional and low cost airlines. The main part deals with the comparison of low cost and traditional airlines, practical examples of airline services, airline ticket prices at specific routes, changes in ticket prices, reservation systems and other differences.

The proposed extent of the thesis
40 pages

## Keywords

traditional airlines, low cost airlines, aviation, comparison of services, low-cost model, airline ticket prices

## Recommended information sources

BÍNA, L., ŠOUREK, D., ŽIHLA, Z.: Letecká doprava II. VŠO v Praze, o. p. s., Praha, 2007. ISBN 978-80-86841-07-6.
DOGANIS, Rigas. The airline business. 2nd ed. New York: Routledge, 2006. ISBN 9780415346153.
HANLON, J.P. Global airlines : competition in a transnational industry. 3rd ed., Oxford: Butterworth-Heinemann,2007. ISBN 0750664398.
Holloway, Stephen, 1952- Straight and level : practical airline economics. 3rd ed. Burlington, VT: Ashgate Pub, 2008. SBN 978-0-7546-7256-2.
PRUŠA, J. a kol.: Svět letecké dopravy. Praha: Galileo CEE Service ČR, 2007. 315 s . ISBN 978-80-239-9206-9.

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## Declaration

I declare that I have worked on my bachelor thesis titled "Comparison of traditional and low cost airlines" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

## Acknowledgement

I would like to thank Ing. Petr Procházka, MSc, Ph.D. and my entire family, for their advice and support during my work on this thesis.

# Srovnání tradičních a nízkonákladových leteckých společností 

## Souhrn

Tato bakalářská práce se zaměřuje na seznámení se s tradičním a nízkonákladovým modelem na evropském trhu. Teoretická část se zabývá historií letectví, dělením leteckých společností, rozdíly mezi tradičními a nízkonákladovými aerolinkami a některými základnímy pojmy, které jsou nezbytné k porozumění daného tématu.

Analytická část obsahuje základní informaci o vybraných aeroliniích, destinacích, flotile a produktech. Hlavní část je věnována srovnání produktů a služeb, následované změnami v cenách letenek, srovnání cen na určených trasách. Závěrečná část srovnává všechny produkty v ekonomické třídě.

Klíčová slova: Tradiční aerolinie, nízkonákladové aerolinie, letectví, srovnání produktů a služeb, ceny letenek

# Comparison of traditional and low cost airlines 

## Summary

The bachelor thesis is focused on introduction of traditional and low cost model on the European market. The theoretical part deals with the history of aviation, classification of airlines, differences between traditional and low cost airlines and some basic terms that are needed for understanding the topic.

The analytical part includes brief information about chosen airlines, their destinations, fleet and products. The main part is dedicated to comparison of products and services, followed by changes in ticket prices, comparison of prices at specific routes. The final part compares all products in economy class.

Keywords: traditional airlines, low cost airlines, aviation, comparison of products and services, airline ticket prices

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## 1 Introduction

Aviation is the youngest and the fastest growing industry in the world. Such development doest not only concern techniques and aircrafts but also airlines. The ocean ship sailed to America for several days before, and today the plane can fly for 8 hours. First flights were considered to be a luxury way of travel. It was a privilege only for upper layers of the population. The example of that is the very first flight that was made in the US between Tampa and St Petersburg on January 1, 1914. For 23 minutes there and back the passenger had to pay $\$ 175$. Under the current conditions this would cost about $\$$ 3,600. ${ }^{1}$

Airlines we know today were founded after 1919. They are famous for quality, comfort, service and food on board of the aircraft. These carriers are so called traditional airlines. On the other hand the phenomenon of low-cost air travel has developed quite recently. It came with the deregulation of the US and, subsequently, the European air transport market. The successful entry of low-cost airlines has sparked the waters of this sector. Other types of air carriers have responded to the situation, by implementing some elements of the operating model under which low-cost carriers operate. In 2006 Giovanni Bisignani, past Director General of the International Air Transport Association (IATA) said: "every airline is now a lower-cost airline". He used this term after financial crisis when airlines were under pressure to reduce costs.

Although there are 2 types of airline, the composition of passengers and services has changed a lot on board the aircraft. Students and backpackers flying to all corners of the world, vacationers together with businessmen, managers, soccer and other fans. Therefore the thesis will focus on European low cost and traditional airlines. The aim of this work is to provide information about traditional and low cost model and show differences and similarities of their representatives.

The theoretical part will divide the airlines according to various aspects, explain some basic terms and will describe and show the main differences between two models of airlines. The practical part will provide basic information about airlines - history, destinations, fleet, products together with services and also changes in ticket prices on two specific routes. The results will be compared in the last part.

[^0]
## 2 Thesis methodology and objectives

### 2.1 Objectives

The thesis is thematically focused on traditional and low cost airlines. The goal is to provide information about traditional and low cost model and also about their representatives on the European market. The main aim is then to compare airline products together with services. The last objective is to compare ticket prices on selected routes.

Readers can expect detailed comparison of products, prices, advantages and disadvantages of low cost and traditional airlines.

### 2.2 Methodology

The thesis is divided into theoretical and practical part.
The first part is theoretical part. In this part will be used methods such as induction, deduction and also the comparison method that accompanies the whole bachelor thesis.

In the practical part will be employed methods of analysis and basic statistical methods such as average, maximum, minimum. For simplification and visualization of the results there will be also used graphs, tables and pictures.

## 3 Theoretical Part

### 3.1 Aviation

Aviation represents the fastest growing transportation industry in the world. It's the safest and the most reliable way to transport people and cargo. Without aviation we cannot imagine our life today. The word aviation is derived from the word avis, the Latin word for a bird. ${ }^{2}$ In the following chapters we will focus on civil aviation. It means air transportation service provided to the public by airlines. ${ }^{3}$

### 3.2 History of aviation

Long time people desired to see the world from above. Therefore they were constantly looking for ways how to get in the air. The very first mention of flights came from China. But the first who was really interested in aviation was world-famous painter Leonardo da Vinci. He summarized all his notes into the Codex on the Flight of Birds. Afterwards came attempts with imitation of bird's flight. The failures led to the fact that people started using hot air balloons. The first one designed by the Montgolfier brothers got in the air in 1783. After 100 years later the idea of balloon was redesigned into the rigid airship - Zeppelin. It came across with outstanding success. But first commercial flight came in 1910 by Deutsche Luftschiffahrts-AG.

Another important milestone was achieved on 17th december 1903 when Wright brothers realized their first controlled flight with an engined aircraft. It was pretty short because it took approximately 12 seconds. On 25th July 1909 french aviator and constructor Louis Blériot was the first person in the history who successfully flew over the canal La Manche. He became hero just after 37 min. of flying. At that time in Daily Mail appeared head line: "England is no longer an island" ("L'Angleterre n'est plus une île"). ${ }^{4}$

On january 14, 1914 began the first scheduled passenger air service. It connected cities Tampa and Saint Petersburg. ${ }^{5}$ With following years came an explosive growth in

[^1]aviation - especially with an introduction of the revolutionary aircraft Douglas DC -3. It had such a huge success for its comfort and accessible travel. In 1919 was formed International Air Transport Association (IATA) which is a trade association of the world's airlines. At its founding, IATA had 57 members from 31 nations, nowadays it has 280 members from 120 nations. It means that this association represents 83 \% of total air traffic. ${ }^{6}$ This year also brought new Convention Relating to the Regulation of Aerial Navigation - the main principles: Article 1: every Power has complete and exclusive sovereignty over the air space above its territory, Arcticle 10: aircraft shall bear their nationality and registration marks, Article 19: every aircraft should have on board - list of passengers, certificates and licenses of the entire crew. ${ }^{7}$ The Convention was replaced in 1947 by Chicago Convention that formed The International Civil Aviation Organization (ICAO). Basically the organization ensures safe and orderly growth. ${ }^{8}$ The liabilities of carriers for any damages to passengers was established in the Montreal and Warsaw conventions.

The year 1919 wasn't connected only with foundation of IATA but also with achievements in aviation. John Alcock and Arthur Whitten Brown are subscribed under the first non-stop flight across the Atlantic. Their flight from Canadian Newfoundland to Ireland took 16hrs and 12min. after flying 3190 km . This year was also founded KLM, it is the oldest airline in the world, flag carrier airline of Netherlands. The first KLM flight was realised on 17 may 1920. For this route from London to Amsterdam the airline used an aircraft De Havilland DH-16. ${ }^{9}$ Czechoslovak airlines became the first in the world to fly exclusively with jet airliners, they used variant Tu-104A between Prague and Moscow.

In 1967 was introduced first flight with boeing 737, actually it's one of the most successful aircraft in the history of aviation and still we can find it on several routes all around the world. Supersonic transport came into service 2 years later with concorde's introduction. This aircraft is a holder of several records, from the most famous ones I can mention: the round-trip ticket price from London Heathrow to New York JFK was 7,995 \$ and the fastest flight time on this route was 2hrs 52min. Concorde also did a charter flight

[^2]around the world with 6 refuelling stops in 32hrs and 49min. Unfortunatelly after a crash all concordes were grounded. The last flight of Concorde was in 2003. One preserved aircraft is stored at Paris - Le Bourget airport in its aviation museum. The only supersonic competitor was the soviet Tupolev Tu-144. The strange is that it crashed also in Paris. It caused the movement of the regular passenger operation until 1st november 1977. In the end it stayed in service due to another crash only for several months.

After supersonic aircrafts came on the market the first wide-body aircraft civil aircraft with two passenger aisles) ${ }^{10}$ - boeing 747. Its nickname is Jumbo Jet. There exist several versions so it can accomodate around 500 passengers. The aircraft is mainly used by British airways, Lufthansa and Korean Air. Nowadays is the 2nd biggest aircraft for passengers in the world. Boeing 747 is also famous for one of the biggest disaster in aviation at Los Rodeos Airport. ${ }^{11}$

The rival of boeing, Airbus came up with the new aircraft Airbus A320. The revolutionary by airbus was the usage of side-stick controls (joystick) and also fly by wire system that replaces manual flight controls with electronic interface. The difference between airbus and boeing is the level of control. For simplification pilots in airbus can't control everything manually in comparison to boeing.

Finally in 2005 started operation the world's largest passenger airliner the airbus A380. This aircraft is double-deck, wide-body with 4 engine jet airliner. In four class configuration it can carry 544 passengers and in one class can find seat incredible 853 passengers. With speed of $0,89 \mathrm{M}$ it can fly maximally $15200 \mathrm{~km} .{ }^{12}$ The first airlines which used A380 on their commercial flights became Singapore airlines. Until today was delivered already 222 aircrafts of this type. The airbus A380 can be found in the fleet of Air France, we can find A380 also in the fleet of Lufthansa, British airways and many others. The main current user is the airline Emirates. Without Emirates the program of A380 would definitely stop. ${ }^{13}$

[^3]
### 3.3 Airlines

Air transport is realised by airline companies that provide air transport services. Their customers are individuals, companies, travel agencies, businessmen and mail administration. For supplying these services they utilize different kind of aircrafts and usually form partnerships or alliances with other airlines. For flight operation they need to be recognized with an air operating certificate granted by civil aviation authorities. Principally airlines cannot exist without support of airports, authorities, aviation professions and air traffic control.

Air transport is highly competitive space. It creates pressure on increasing productivity, reducing costs and ticket fares. Carriers must look for savings in their own activities as well as suppliers. Otherwise there is a risk the demand will shift to another mode of transport or airline.

### 3.4 Classification of airlines

The whole aviation industry is dependent on airline companies. They vary in provided services, size, operation, fleet, size of network and other aspects.

We divide airlines according to:
a) Length of transport and network character

- Regional airlines

They offer services from one airport hub to several smaller airports. The regional carriers often operate as independent airlines under their own brand or in cooperation with a major airline company or alliance. If they choose a contraction their role is to carry passengers or goods to/from the major airline's hub. In this case we talk about regional feeders. (KLM Cityhopper, HOP!) Their fleet consists of turboprops or regional jets (ATR, Embraer)

- Continental airlines

These carriers operate mainly medium range flights on a single continent. Their hub is at the main or at one of the main airports of the mother market. They closely cooperate with long-haul airlines. Example of continental airline is

Czech airlines (even if they operate one route to Seoul Incheon airport) or Belavia. In their fleets we can find jet aircrafts (Boeing 737, Airbus A320)

- Long-haul airlines

Long haul is just another word for flying for long distance. We consider that the flight is long haul in case the route is longer than 4000 km . ${ }^{14}$ In terms of airlines it means specializing on intercontinental flights. New only long haul carriers are French Bee, Level. Typical example is Emirates. They use usually Boeing 747, B777 or Airbus A330, A380.
b) Differences in offer and sale of transport capacities

- Scheduled airlines

Scheduled carriers provide regular passenger flights. Operation is usually on daily basis, prices are known from internet and schedule is planned long time before flying. Into this group fall both traditional and low cost airlines: Czech airlines, Lufthansa, Iberia, Easyjet.

- Charter airlines

These carriers focus on flights for order. Usually these services are used by travel agencies (tour operators), sport clubs or groups of people. Examples on European market can be Travel service, Enter air, Bulgarian Air Charter, Smartlynx airlines.
c) Character of utilization

- Passenger airlines

Airlines in this section concentrate mostly on carrying passengers. Some carriers also take care of small goods or mail but it's only a side product.

- Cargo airlines

This type of carriers offers to carry goods or post but not passengers. Big airline companies establish usually subsidiaries such as Lufthansa Cargo, Finnair Cargo.

- Courier airlines

[^4]They focus on home to home shipments. Typical example of this category with the highest number of wide-body aircrafts is Federal Express (mostly known as FedEx).
d) Geographical location

- International airlines

International carriers are those which pass through the air space over the territory of more than one country. (Czech airlines, Tap Air Portugal, British Airways, Ryanair)

- Domestic airlines

The carriers offer services only within one coutry. Examples: Sata Air Acores, Finist'air, Chalair Aviation.
e) Character of product

- Traditional airlines

They operate scheduled service, known for service quality, connections, different travel classes.

- Low cost airlines

Carriers without traditional services. It results in lower fares and comfort, charging for extras such as seat allocation, baggage, priority boarding, meals. ${ }^{15}$

[^5]
### 3.5 Model of traditional airlines

Traditional (legacy, full service) carrier is a company with a long history, usually owned by state or by private sector. Often we talk about national airlines or flag carriers. In some countries they enjoy benefits coming from international agreements. Full service carrier is an airline which provides services such as refreshments (drinks, snacks) or meals depending on the time of travel and distance flown, check-in to the final destination, proposing connecting flights, free hand luggage, checked baggage usually for free but nowadays it's changing on short/medium range in Europe due to the competition with low cost carriers.

The most of service is usually included in the ticket price. It means that the airline takes care of the passenger completely, so there is no need to purchase anything else. Differences we can find even among traditional European airlines. Some of them offer hot meals, alcoholic and non alcoholic beverages (Aegean Airlines, Turkish Airlines) and on the other hand we can find couple of European carriers that cut their services (Czech Airlines, Iberia, Brussels Airlines). These carriers offer traditional care only on long haul flights. Other services include choosing a seat in the plane, oversize baggage, offer of daily press, on board entertainment, blankets. In comparison to low cost airlines the ticket price is generally set as a round trip ticket. The price is much higher but compensated for better service. It can be found in systems like Galileo or Amadeus.

Another difference is travel classes. Carriers offer upgrades to higher classes (business or first class) through websites, call centres or at check in desks. Passengers can expect better comfort - welcome drinks, good quality meals served in porcelain, more space for legs, higher seat pitch, business airport lounges and also more miles into their frequent flyer programme. The airlines quality is also seen on the willingness to help with whatever problem in case of any irregularity in their schedule due to technical, weather or even personal reasons. This point is really crucial because when a person has ticket with a low cost carrier they let passenger to solve problems alone and afterwards it's really difficult to recover money back from them. Next feature is a great system of connecting flights. In case a passenger misses a flight due to the late arrival of his first flight he will be rebooked for another flight. Basically it means the airline guarantees all connections until the final destination in case a passenger has all flights in one reservation.

Airlines in this category depart from the main international airports. They are pretty close to the city centre. It results in higher landing fees that need to be included in the ticket price. Traditional airlines have several advantages at these airports - using air bridges, support at airport - service desks, self check-in counters (kiosks) that sometimes include tagging service and also lounge of alliances or airlines.

The target group of traditional airlines are business travellers and individuals who prefer comfort, services and more flights opportunities during a day between 2 destinations and are less sensitive to price.

### 3.5.1 Alliances

The most of traditional carriers are members of airline alliances. This term we can define as an arrangement between 2 or more airlines willing to cooperate on a substantial level. The membership in alliance helps carriers to increase the competitiveness and improve connectivity among their flights. The cooperation includes several areas: coordination of flights within an alliance, codeshare (2 or more airlines share the same flight), compatibility of reservation and ticketing systems, compatibility of frequent flyer programs, integration and sharing other activities: airport handling services, joint marketing, sales. It has also positive effect on travellers who can benefit from more departure times on given routes, shorter travel times as a result of transfer optimalizations, service and check-in desks of alliance partners, using services of alliance partners with a certain frequent flyer status, faster mileage rewards by earning miles on several carriers, more destinations to reach, higher number or airport lounges,

There are 3 major airline alliances in current period - Star Alliance, Oneworld and Sky Team. Star Alliance is the largest global airline alliance in the world. Founded in 1997 and currently includes 27 members (European members are: Adria Airways, Aegean Airlines, Austrian Airlines, Brussels Airlines, Croatia Airlines, LOT Polish Airlines, Lufthansa, Scandinavian Airlines, Swiss International Air Lines, TAP Portugal). As a second in 1999 was established Oneworld alliance. (European members: British Airways, Finnair, Iberia Airlines) and lastly came Skyteam in 2000. This alliance has currently 20 members (European members: Aeroflot, Air Europa, Air France, Alitalia, Czech Airlines, KLM)

### 3.5.2 Frequent flyer programmes

Frequent flyer programme (FFP) is a loyalty programme offered by an airline. Passengers have opportunity to register in frequent flyer programmes. Airline's customers collect points (miles, kilometres) by flying, payments via credit or debit cards, hotel stays, car hires, surveys and other partners. The motivation for such a behaviour is that these points may be redeemed for award flights or other benefits such as upgrades to upper classes in case there is a free place, hotel stays, meals, extra baggage, greater weight of baggage, presents, and access to airport lounges. The main problem of frequent flyer programme is the limited allocation of points for the lowest fares. It means after flying with that ticket the person will receive small amount of points. The result of this policy is a harder possibility to enjoy these benefits and also harder to reach the higher status. Every time passengers should think about if using collected points for an award flight is a good idea or not. It can happen that for taxes he will pay practically the same as what is the price of a normal ticket.

European frequent flyer programmes are represented for instance by OK Plus (Czech Airlines), Flying Blue (Air France, Air Corsica HOP!, Twin Jet, Chalair Aviation, KLM, KLM CityHopper, TAROM), Miles \& more (Lufthansa, Austrian Airlines, Croatia Airlines, Condor Airlines, Air Dolomiti, Brussels Airlines, Luxair, Adria Airways, Swiss Global Airlines, Edelweiss Air, Swiss International Airlines), Executive Club (British Airways), Miles+Bonus (Aegean, Olympic Air). From the listing above we can see that airlines in the same alliance try to link all their activities in order to reduce costs as much as possible and provide more connections to their passengers.

### 3.6 Model of low cost airlines

Low cost carriers (LCC), low cost airlines, budget carrier all these terms describe airlines that offer cheap tickets for a lower quality of service. ${ }^{16}$ Last couple of years they became very popular. But before that had to come the liberalization of aviation market. Deregulation of the market and foundation of European Union helped expansion of low cost carriers. With establishment of Schengen area budget carriers were on the way to have a strong presence in Europe.

[^6]The development of LCC also caused high development of secondary and regional airports. Some of them experienced a double-digit percentage growth in number of passengers. It resulted in need to build new terminals for being able to handle new passenger numbers. (examples: Beauvais Tillé Airport ${ }^{17}-85 \mathrm{~km}$ from Paris, Brussels South Charleroi Airport ${ }^{18}$ - 50 km from Brussels) It shows that people are willing to travel far for saving money. In 1984 was established the first European low cost company Ryanair. The airline is famous for many controversies, aggressive marketing strategies and also for possibility to fly for 1 Euro. In conditions of low cost airlines we distinguish between ultra-low cost and low cost. To ultra low cost companies belong Ryanair or Wizzair on the other hand low cost companies are for example Easyjet and Eurowings.

The main difference between the traditional and low cost airlines is price. The lower price of ticket is at the expense of comfort and other services for customers. Passengers get only what they pay for - it means in the fare is included only the flight from point A to point B. There exist stricter conditions for luggages. Free of charge is a small cabin luggage, bigger cabin luggage usually too, only in case of Wizzair there is a need to pay extra fee. Of course any additional cabin luggage or any checked luggage is charged. Problems have usually passengers who fly for the first time or they are not familiar with the airline rules. Also passengers have to pay for snacks, meals, beverages, favourite seats or priority boarding. Being first who enters the gate at the airport isn't every time the best idea. Most of flights are boarded by bus so the passenger will have to wait in the bus until all people get on the bus. At winter time people have to count with the fact that the bus driver lets the door opened until the last passenger board the bus.

Ticket prices are always for one-way trip. The closer is the time of departure the higher is the price. The flight ticket can be bought online or at airport for a fee. It is highly recommended to print the ticket at home otherwise the person will be charged at check in desk at the airport. The advantage of printed ticket is that the passenger can go directly to the gate so it will save a lot of time. In case the passenger would have any trouble with the reservation at the airport, all problems must be solved via call centres, personally or email. The airlines simply don't have any people at airports because it would cost them money.

[^7]Sometimes people would like to buy 2 one-way tickets with a low cost carrier. It's possible but the carrier doesn't guarantee any connections. People should keep in mind that LCC often have delays and they don't offer anything back. Another factor is a fleet of one type aircraft - Airbus A320 or different types of Boeing 737. The reason is gain in reducing airline's costs.

LCC have only 1 travel class but a short time ago some of these airlines came up with 2 travel classes - economy and business. (Ryanair, Easyjet) Their aim is to bring business passengers from traditional airlines. According to my point of view they won't success entirely because at traditional airlines people are motivated by frequent flyer programmes, quality of service provided and for some people the feeling from the flight is by traditional airlines at different level. If we take it into account then the target group are individuals, travellers, students and workers.

### 3.6.1 Club memberships

Low cost airlines don't run frequent flyer programmes but some of them offer a club membership. It's a tool of budget carriers how to attract new potential customers and also keep the current ones. The most famous is Wizzair Discount Club, Megavolotea. The person becomes a member for a "small fee" of 30-60Eur/year. The price differs from airline and membership - standard or group. ${ }^{19}$ In return he will get 10 Eur discount for flights, discounted luggage, seats, first access to sales ${ }^{20}$

[^8]
### 3.7 The main differences between low cost and traditional carriers

| Characteristics | Low cost airlines | Traditional airlines |
| :---: | :---: | :---: |
| Trademark | One | Several |
| Airports | Regional or secondary airports | Main airports, airports with higher taxes |
| Transport | Passenger | Passenger, cargo, mail |
| Fleet | 1 type aircraft (B737, A320) | Several types of aircrafts |
| Aircraft utilisation | High | Average |
| Aircraft turnaround | 30-40min | 1 hour |
| Operations | Point to Point | Hub and Spoke |
| Routes distances | Short, medium | Short, medium, long-haul |
| Target group | Students, budget travellers | Business travellers |
| Travel classes | Single class configuration (or 2 economy and business) | Economy, economy premium, business, first class |
| Seat pitch | Small | Medium |
| Services on board | Snacks, meals and beverages for purchase | Newspapers, snacks, meals, beverages, board entertainment |
| Customer services | call centres, email | service desks, self checkin kiosks, call centres |
| Seat reservation | For a fee | Usually free of charge |
| Passenger loading | Mostly via stairs | Jet bridges and stairs |
| Access to airport lounges | No | $\begin{aligned} & \text { Yes (business or } 1^{\text {st }} \text { class } \\ & \text { ticket) } \end{aligned}$ |
| Ticket type | One-way | Round trip (One-way costs more) |
| Ticket | Issued from Internet, check-in (for a fee) | issued from internet, self checked-in kiosk, checkin |
| Frequent Flyer programmes | No | For example: Flying Blue, Miles \& More, OK Plus |
| Club memberships | Sometimes (Wizz Discount Club, Megavolotea) | No |
| Operating costs | Low | Medium to high |
| Ownership | Private | State-owned + private |

Table 1: Differences between traditional and low cost carriers (own work)

### 3.8 Advantages and disadvantages of airlines

### 3.8.1 Advantages of traditional airlines

- The possibility of buying connecting flights.
- A wide network of destinations.
- Cooperation of airlines within the alliance - proposing more destinations.
- More convenient departure and arrival times.
- Several frequencies during the day.
- Business class and first class.
- Daily press, services on board included in the ticket price.
- Frequent flyer programmes.
- Utilisation of main international airports.


### 3.8.2 Disadvantages of traditional airlines

- High prices of tickets.
- Limited service in economy class by some traditional carriers.
- Mostly round trip tickets - higher prices of tickets in case of flying one-way.


### 3.8.3 Advantages of low cost airlines

- Ticket sales - regular actions like 5 Eur for all flights or $20 \%$ reduction of ticket price.
- Low fares - that's the main reason why lot of people buy a ticket with a budget airline.
- Similar route prices - it doesn't matter if a person flies short or medium distance flight.
- New fleet - new aircrafts ensure the safety, even some passengers are still afraid to fly with a low cost carrier. The new aircrafts have less consumption of fuel and also offers new design of planes.
- One-way tickets - it offers more flexibility for planning a trip.
- The selling and payment through internet.


### 3.8.4 Disadvantages of low cost airlines

- Secondary/regional airports - they're usually far from city centre.
- No refreshments, snacks or meals on board - they are offered for a purchase for a limited quantity.
- No entertainment on board - no LCD screens and service on board.
- Travelling only in economic class.
- No frequent flyer programmes.
- Limited quantity and weight for luggages - baggage for payment, small cabin luggage for free/big cabin luggage for payment.
- High fee for changing the ticket - usually it's cheaper to buy completely new ticket than changing the ticket for another date.
- Cancellations, Irregularities - in case of delay, person should count more with couple of hours than minutes.
- Any replacement transport in case of cancellation or a long delay of flight.


### 3.9 Strategy of airlines

The main goal of a company is making a profit but it's not possible without customers. In terms of airlines only satisfied passengers can bring a success. The airlines have to determine their goals and according to that choose the right strategy.

### 3.9.1 Strategy of low cost airlines

### 3.9.1.1 Type of market and pricing strategy

A low ticket price is the main strategy of low cost carriers. It has success by individuals, students, workers or travellers who need to reach the destination without any other service. Usually these customers are sensitive to price and they choose to travel on a budget because they don't have enough money for travelling with a traditional carrier. They often travel in less demanded days and times for reducing the ticket price. ${ }^{21}$

All low cost airlines offer only one-way tickets. The price depends on the day and time of travel, seasonality, taxes payed to the airport. These carriers choose mainly secondary airports like Oslo Torp, Stockholm Skavsta or previously mentioned Paris Beauvais Tillé instead of flying to main international airports such as Stockholm Arlanda airport. The reason for that behaviour is in case of a choosing an airport located further from the city centre they will pay less taxes and therefore they will be able to offer cheaper fares than their concurrency represented by traditional carriers. The pricing strategy is connected with a reduction of all costs - services or number of crew. Low cost carriers are famous for behaviour to their employees - by Ryanair they have to pay themselves $£ 300$ for uniforms, £2000 for 6 week training course, punishments in case of not selling enough during the flight. ${ }^{22}$

### 3.9.1.2 Product strategy

Low cost airlines focus on passengers who need to reach the final destination and they don't care about the service on board or travel classes. Their main strategy is so called Point to Point. (direct connections). The most of services are charged - luggage, airport check-in, seat allocation, meals. Budget carriers also provide additional services - booking

[^9]hotels, car hires, transport from airports in cooperation with airline partners or on an affiliate basis.


Figure 1: Point-to-point ${ }^{23}$

### 3.9.2 Strategy of traditional airlines

### 3.9.2.1 Type of market and pricing strategy

Higher ticket price is not a big deal for potential customers of traditional airlines. Passengers expect high quality of service without any additional costs. They want to be sure that will land on time for catching their business meeting. Business travellers require higher frequencies because their time is much more valuable. In this case we talk about time sensitive passengers. Into this group may be added also leisure passengers who need to travel and return according to fixed schedule.

Traditional airlines offer a return ticket while in case of buying a one-way trip the price ticket would be highly overpriced. The price of each ticket is much higher than by LCC and depends on class the passenger will decide for. We can say there are big differences in fares and booking classes - they have different conditions and restrictions.

The carriers predict carefully the peak seasons and offer discounts for flights out of this period. This system helps to equalize the load factor on high demanded flight routes and will provide affordable flight tickets for leisure passengers.

It's common that these carriers serve main international airports which are close to the city centres.

[^10]
### 3.9.2.2 Product strategy

The airline is focused on one segment of customers with similar needs and interest business travellers or people who prefer high quality of service, comfort, welcome drinks, enough legroom and space for personal belongings, time punctuality and secured connecting flights. They offer up to 4 travel classes: economy, economy premium, business and first class. Each cabin class is divided into invisible booking classes that differ in conditions and benefits (such as frequent-flyer points, refund policy, change and baggage). Basically it depends on how much the passenger will spend on his ticket. Their main strategy is so called Hub and Spoke. Basically the term means that routes are organized as a series of 'spokes' that connect outlying points to a central hub.


Hub-and-spoke


Figure 2: Hub-and-Spoke ${ }^{24}$
Last years several traditional carriers (Iberia, Czech Airlines, Brussels Airlines) downgraded their products (for example no meals served in economy class, baggage for a fee, less miles offered into the frequent flyer programme, more miles needed for award tickets, favourite seats for payments) for reducing their costs and increasing competitiveness with low cost airlines. In my opinion traditional airlines should keep higher services and not following the low cost product. Finally it's every time a passenger's choice with whom he will decide to travel and only the time will show if the way some airlines decided to go was the right one.

[^11]
## 4 Analytical Part

### 4.1 Comparison of products and services of traditional and low cost carriers

Traditional and low cost airlines do not apply a unified model to their business. They differ in formation of companies, strategies, destinations, fleets, size, services and other characteristics. It's important to say that nowadays lots of differences are slowly disappearing among these companies. It's a result of hard competition on the market.

In the following part I would like to present and describe airlines with their services. The text will deal with brief history, destinations, fleets, travel classes, frequent flyer programs or memberships.

### 4.1.1 Vueling Airlines

Vueling is a low cost Spanish airline established in 2004. Its main base is at Barcelona El Prat airport and another one is at Rome Fiumicino airport, the airline also operates 13 additional bases. Vueling flies to 163 destinations, in 2015 carried more than 24 million passengers and after Iberia is the second largest carrier in Spain. The major part of the company is owned by International Airlines group that also includes Iberia or British Airways. Vueling airlines are in closer cooperation with Iberia, we can say it's their low cost company. Nowadays this carrier is much closer to those traditional airlines that don't offer practically any service. With the company slogan - Love The Way You Fly and with the company results we can expect further development of this company.

### 4.1.1.1 Destinations



Figure 3: Destinations of Vueling ${ }^{25}$
The airline flies to the most of the European countries, proposes short and medium range flights. The furthest destinations are Reykjavik, Dakar and Banjul. Most flights are served from Barcelona and for many passengers this is not the last destination on their journey. Thanks to the sophisticated reservation system, passengers can profit from many connecting flights. So it's possible to fly for example from Prague to Tenerife via Barcelona airport. This is not a common practice by low cost airlines.

### 4.1.1.2 Fleet

The Fleet of Vueling consists of different versions of airbus - A319, A320 and A321. Currently the company operates in total 107 aircrafts of these types. The average age of aircraft is 7.2 years. ${ }^{26}$ This number could decrease after adding new A320 neo into their fleet. Currently the mother company ordered 47 new aircrafts, question is if all these aircrafts will be accommodated in Vueling.

### 4.1.1.3 Product

By Vueling airlines you can choose from 3 economical classes. Basic Fare contains only the flight itself without any other services like checked bags, priority boarding, refund, changing flight, snacks and beverages. Check-in is every time available at airport for free. Online Check in is free of charge when a person request a random seat between 7 days and 4 hours before the departure of the flight (except if a passenger is flying from Cardiff, Lyon, Prague or London Heathrow, where he can check in online only up to 24

[^12]hours before departure). It's possible to add 23 kg checked baggage with a fee starting from 13eur (at airport it costs 40 Eur). The price depends on destination. The ticket price includes 10 kg hand luggage with size $55 \times 40 \times 20 \mathrm{~cm}$. Another possibility how to make your flight more comfortable is to choose a seat - the reservation system proposes back rows, XL, front rows or priority seats. Prices vary from 1,99 Eur to 16,99 Eur.

The second type of the flight ticket is Optima Fare. This fare costs approximately 20 Eur more depending on the flight. It has several advantages; one of them is receiving flight ticket into the mail box directly after buying a flight ticket, 23 kg checked baggage and choosing a seat except XL seat that remains for additional payment.

The highest level is Excellence Fare. It contains all the services of previous fare. The main plus is the possibility to change the ticket for free but you need to pay in case there is a difference in fare. Passenger can check 2 baggages with max 23kgs allowance, free refund, free snacks, meals and beverages on board, priority boarding, access to airport lounge.

| Vueling | Basic Fare | Optima Fare | Excellence Fare |
| :--- | :---: | :---: | :---: |
| Instant boarding Pass | X | YES | YES |
| Checked baggage | X | YES | YES |
| Hand luggage | YES | YES | YES |
| Priority boarding | X | X | YES |
| Seating choice | X | YES | YES |
| Priority seats | X | X | YES |
| Random allocation of <br> seats | YES | X | X |
| Snack/refreshment | X | X | YES |
| Newspapers | X | X | X |
| Refund | X | X | YES |
| Total flexibility on <br> changes | X | X | YES |
| Earlier departure | X | YES | YES |
| Airport check-in | YES | YES | YES |
| Online check-in | YES | YES | YES |
| Miles/points | YES | YES | YES |
| Lounge entrance | X | X | YES |

Table 2: Vueling fares ${ }^{27}$

[^13]
### 4.1.2 Transavia France

Transavia France is a low cost French airline founded in 2006. They started operation one year later. This carrier is owned by Transavia airlines (established in 1965) and French national carrier Air France. The airline operates from 3 bases Paris Orly Airport, Lyon - Saint - Exupéry Airport and Nantes Atlantique Airport. Transavia serves 56 destinations.

Transavia is in closer cooperation with Air France. It means that for flights with Transavia France you can earn flying blue miles into the frequent flyer programme of Air France in case you will fly in 2 higher fares. Also these miles can be redeemed for awards later on for flights with Air France or Transavia France. In conclusion this is just another low cost carrier whose services are closer to the lowest fares of traditional airlines.

### 4.1.2.1 Destinations

Transavia France serves 56 destinations. Most of them we could find in Europe Burgas, Athens, Heraklion, Rhodes, Malta, Ibiza, Canaries islands, Madeira. They're called "leisure" destinations. The carrier also operates several destinations in Africa for example - island Boa Vista in Cape Verde archipelago, Fes and Marrakesh in Morocco, Djerba in Tunesia, Algiers and favourite destinations in Turkey such as Antalya and Bodrum. The carrier doesn't propose any connecting flights it means if the passenger would like to fly from Prague to Madeira or Cape Verde he would have to buy 2 one-way tickets.

### 4.1.2.2 Fleet

The fleet of Transavia France consists of one type aircraft - Boeing 737-800. Currently the carrier operates 30 aircrafts with average age of 5.4 years. In their fleet are 2 aircrafts with age of 19.2 years ${ }^{28}$ The airline decided to order only 1 new Boeing 737-800. It's possible that it will replace one of these two older aircrafts in the fleet. Transavia airline that is a sister of Transavia France also ordered only 1 Boeing 737-800.

### 4.1.2.3 Product

Transavia offers 3 fares like Vueling. We can choose from Basic, Plus or Max. Basic provides only the flight itself without any checked bag and other services mentioned

[^14]by the previous airline. Their basic fares are practically same. The passenger can check-in at airport or at home through online check-in which is available from 30 hours to 4 hours before departure. This option is available for all 3 fares. It's possible to carry max 1 item of hand luggage ( 10 kg ) with max. dimensions of $55 \times 40 \times 25 \mathrm{~cm}$. The passenger has also possibility to add a hold luggage ( 15 kg for 15 Eur, 20 kg for 20 Eur) or choose a seat for a fee from 4 to 12 Eur depending on location of the seat during the reservation process. All additional services can be bought up to 2hrs before departure. Any person is able to change the time, the date and the route of the flight and the passenger details. This entails $€ 50$ in change fees per person per flight plus the difference in ticket price. For this fare there are no flying blue miles.

Plus fare costs approximately 22 Eur more. In return of that the passenger can expect all benefits included in the base fare and services like 20kg of hold luggage, a standard seat of choice, changing the time and date up to 14 days before departure date. The person will have to pay only the difference in ticket price. This fare entitles the passenger to receive 250 award Miles per one-way journey.

The person can enjoy Max fare for additional 25 Eur. The Max fare includes 1 hand luggage + accessory (total 10kg), 30kg of hold luggage, choice of all seats, fast track security, priority boarding, possibility to change your reservation - time and departure date up to 14 days before departure date. The person will have to pay only the difference in ticket price. This fare entitles the passenger to receive 500 award Miles per one-way journey.

| Transavia | Basic | Plus | Max |
| :--- | :---: | :---: | :---: |
| Instant boarding Pass | X | X | X |
| Checked baggage | X | YES | YES |
| Hand luggage | YES | YES | YES |
| Priority boarding | X | X | YES |
| Seating choice | X | YES | YES |
| Priority seats | X | X | YES |
| Random allocation of <br> seats | YES | X | X |
| Snack/refreshment | X | X | X |
| Newspapers | X | X | X |
| Refund* (only taxes) | X | X | X |
| Total flexibility on <br> changes | X | YES | YES |
| Earlier departure | X | X | X |
| Airport check-in | YES | YES | YES |
| Online check-in | YES | YES | YES |
| Miles/points | X | YES | YES |
| Lounge entrance | X | X | X |

Table 3: Transavia fares ${ }^{29}$

### 4.1.3 Ryanair

Ryanair is an Irish low cost airline established in 1984. The carrier can be also called ultra low cost. By this term we mean an airline offering only the flight itself. All additional services are for payment. In 2016, Ryanair carried more international passengers than any airline in the world. The carrier operates more than 2000 daily flights from 87 bases (Dublin, Prague, Frankfurt Main). A year later Ryanair became the first European airline to have carried over 1 billion customers. ${ }^{30}$ Nowadays it serves 205 destinations with 427 aircrafts.

The airline is famous for ticket sales starting from 1 Euro. But only limited number of seats is sold for this price. If a passenger wants to purchase seat so cheaply he can't hesitate for a long time. This airfare war is a marketing strategy how to attract as many passengers as possible. Slogan of the company is Low Fares Made Simple.

Ryanair is connected with many controversial ideas. For example the carrier was considering charging passengers $£ 1$ to use the toilet on the flights, charging extra for

[^15]overweight passengers, redesigning planes for vertical seats or eliminating toilet on one side of the plane.

### 4.1.3.1 Destinations

As mentioned above Ryanair serves 205 destinations. Most of them are airports further from city centres - secondary airports (Brussels Charleroi, Paris Beauvais) or regional airports. Lots of regional airports served by Ryanair can be found in France (Brive, Carcassonne, Bergerac, Dinard or Tours) Among major airports operated by Ryanair we can mention - Barcelona El Prat, Prague, Madrid, Hamburg or Budapest. Ryanair flies model point to point but recently the carrier started to offer several indirect flights.

### 4.1.3.2 Fleet

The fleet consists of 427 aircrafts Boeing 737 with average age 6.8 years. ${ }^{31}$ Here we can see that the fleet is younger than by traditional airlines. But younger doesn't mean safer, it depends on technical inspections and people who control it. The last year the arline ordered new Boeing 737 MAX 200. This plane is special for the capacity; it gives 8 extra seats (in total 197) and uses $15 \%$ less fuel on a per-seat basis in comparison to previous model. ${ }^{32}$

### 4.1.3.3 Product

Ryanair is a low cost or so called ultra low cost carrier offering one-way fares with 3 price packages Standard, Plus and Flexi Plus. The first fare doesn't include any service. During the reservation process the person has a choice to add all what is included in higher fares. Seat reservation is available from 3 Eur to 15 Eur depending on where he would like to be seated. (seat on sale , standard, front seat or extra leg room). In case of travelling with a checked-in bag get ready for a fee of 25 Eur. Free of charge is one small bag (35x20x20cm) plus a larger cabin bag (55x40x20) with a maximum weigh allowance of 10 kg. Passengers can purchase a priority boarding for 5 Eur. It entitles the person to take 2 bags (small or large) on board. Without this option the larger cabin bag will be placed into the hold for free. ${ }^{33}$

[^16]By Plus fare we can find online check-in 60 days before departure, 20 kg check-in bag, Priority and 2 Cabin bags and reserved standard seat. If the person would like front seat or extra legroom seat he would have to pay 13 or 15 Eur. After seat selection the system offers Security fast track for 3,59 Eur. Basically it means going fast through security control.

The highest package is Flexi Plus. In comparison to the previous one, here the ticket includes any reserved seats, flexible tickets, optional airport check-in and fast track.

With this airline passengers have to pay attention to what is included in their ticket. Ryanair applies lots of fees in case there is a problem with the reservation at the airport. For example: fee for re-issuing the boarding card 20 Eur, airport check-in 55 Eur, checked bag at airport 40 Eur, flight change 50-95 Eur (while online it costs 35-65 Eur), name change fee 160 Eur ( online 115 Eur) ${ }^{34}$.

| Ryanair | Standard | Plus | Flexi Plus |
| :--- | :---: | :---: | :---: |
| Instant boarding Pass | X | X | X |
| Checked baggage | X | YES | YES |
| Hand luggage | YES | YES | YES |
| Priority boarding | X | YES | YES |
| Seating choice | X | YES | YES |
| Priority seats | X | X | YES |
| Random allocation of <br> seats | YES | X | X |
| Snack/refreshment | X | X | X |
| Newspapers | X | X | X |
| Refund | X | X | X |
| Total flexibility on <br> changes | X | X | YES |
| Earlier departure | X | X | X |
| Airport check-in | X | X | YES |
| Online check-in | YES | YES | YES |
| Miles/points | X | X | X |
| Lounge entrance | X | X | X |

Table 4: Ryanair fares ${ }^{35}$

[^17]
### 4.1.4 Air France

Air France is the French national carrier (flag carrier). The airline was founded in 1933, it belongs to one of the oldest airlines in the world. Its main base is at Charles de Gaulle Airport and Orly Airport. Air France also operates from other French cities Bordeaux, Lyon, Marseille, Nice and Toulousse. The French national carrier flies to 201 destinations all around the world. In Air France group we can find several airlines - KLM, HOP!, Joon airlines. It's a founding member of Sky Team alliance. Until now this carrier is one of those who still offer snacks and beverages in economy class, but the question is for how long they will keep that strategy. Reducing the service quality came months before with the introduction of Joon airlines. Air France has also its loyalty programme called Flying Blue. The company slogan is: France is in the air.

### 4.1.4.1 Destinations

Air France flies to 93 countries across America, Africa, Asia, Europe and Oceania. In the destination list we can find French Polynesia, Reunion Island or Dakar in Senegal. In Europe the airline operates capitals and other touristic places. The most destinations are served by Air France. Several destinations in Europe are served by subsidiaries and franchisees - Air Corsica, HOP!, Cityjet or Chalair aviation.

### 4.1.4.2 Fleet

The fleet of Air France consists of several types of aircrafts - offering short, medium and long range flights:

| Aircraft type | Number | Avg. Age |
| :--- | :---: | :---: |
| A318 | 18 | 12,8 |
| A319 | 38 | 17,4 |
| A320 | 37 | 9,5 |
| A321 | 20 | 15,3 |
| A330 | 15 | 15,3 |
| A340 | 7 | 19,1 |
| A380 | 10 | 7,2 |
| B777 | 70 | 12,4 |
| B787 | 5 | 0,7 |
| Total | 220 | 13,0 |

Table 5: Air France fleet ${ }^{36}$

[^18]With fleet of KLM and other cooperating airlines we can say that Air France is one of the leading traditional airlines in Europe

Air France has also one historical point in their fleet - it's one of two carriers who were flying supersonic services with famous Concorde on the route from Paris to Washington or to New York.

### 4.1.4.3 Product

Air France as a traditional airline offers 3 fares in economy class and 1 in business class. The lowest economy fare is the Light fare. The price package entitles the passenger to take max 12kg cabin bag with max dimensions $55 \times 35 \times 25 \mathrm{~cm}$. This fare is closer to low cost carriers with some differences. The main point is that Air France passengers can enjoy snacks, beverages and meals on board for free. They profit from airport check-in as online check-in (opens 30 hrs before departure), service desks or self check-in kiosks. When person needs to travel with a 23 kg checked baggage he can add one in options for 25 Eur or in case he's an holder of higher frequent flyer status of Flying Blue (min holder of silver card) he has the baggage for free. Seats are also available for purchase - standard for 10 Eur and Seat plus for 20 Eur per passenger. This ticket also entitles people to receive flying blue miles on their account.

The second economy fare is Standard. For approximately extra 27 Eur passengers benefit from all advantages of Light fare. The only difference in comparison to previous fare is a checked baggage included in price and possibility to change a ticket with a fee + possible fare readjustment.

The Flex fare adds passenger's choice to take an earlier flight but it's subject to availability, ticket refund, priority boarding, seats in front of the cabin and other benefits included in fares before. If it's not enough there exists also a Business class that offers: sky priority, 2 x checked baggage (32kg), lounge, business meal, changing and refunding ticket without any fee.

| Air France | Light | Standard | Flex |
| :--- | :---: | :---: | :---: |
| Instant boarding Pass | X | X | X |
| Checked baggage | X | YES | YES |
| Hand luggage | YES | YES | YES |
| Priority boarding | X | X | YES |
| Seating choice | YES | YES | YES |
| Priority seats | X | X | YES |
| Random allocation of <br> seats | X | X | X |
| Snack/refreshment | YES | YES | YES |
| Newspapers | YES | YES | YES |
| Refund | X | X | YES |
| Total flexibility on <br> changes | X | YES | YES |
| Earlier departure | X | X | YES |
| Airport check-in | YES | YES | YES |
| Online check-in | YES | YES | YES |
| Miles/points | YES | YES | YES |
| Lounge entrance | X | X | X |

Table 6: Air France fares ${ }^{3}$

### 4.1.5 Czech Airlines

Czech airlines (ČSA) is the national carrier of the Czech Republic. The flag carrier was founded in 1923. It's the fifth oldest operating airline in the world after KLM, Avianca, Quantas and Aeroflot. ${ }^{38}$ They are operating from main base at Prague Ruzyně international airport (Vaclav Havel Airport Prague). The Czech carrier flies to 50 destinations during the summer period. CSA is a member of Sky Team alliance. The membership brings benefits such as offering more flights, destinations, better connections, collecting miles and using them with alliance partners. All miles flown with this carrier and Sky Team partners can be collected in frequent flyer programme OK PLUS. Recently the carrier reduced most services for cutting costs and being able to compete with low cost carriers. The truth is that on some routes they achieved even better price than low cost concurrency.

It was close and the airline would no longer exist. Due to unpreparedness for market liberalisation, foundation of low cost carriers, poor managerial decisions to buy several

[^19]new airbuses and not phasing out the older B737 aircrafts or operating non-profit lines. This resulted in the situation that the airline was close to bankruptcy. Then came privatisation process. Korean Air acquired a $44 \%$ stake in Czech Airlines. This brought codeshare agreement between Czech airlines and Korean Air and lending one airbus A330 for long haul route to Seoul. The whole privatisation process ended before several months ago when Travel Service airlines acquired 20\% stake from a Czech state company Prisko. Nowadays the carrier holds 97,74 \% stake in Czech Airlines. The chairman of Travel Service said that the aim is to create a strong airline with around 70-80 aircrafts. ${ }^{39}$ Changes also occurred in the company's management. It led to significant changes in CSA, reducing fleet, employees, services in economy class and establishing a new product. The aim was to cut costs for being able to compete with low cost carriers.

Slogan of the Czech Airlines is: At home in the skies

### 4.1.5.1 Destinations



Figure 4: Czech Airlines destinations ${ }^{40}$

The map shows the carrier operates mostly the capital cities and destinations in Europe such as Paris, Stockholm, Rome, Madrid, Barcelona, Frankfurt, Copenhagen and Moscow. The leisure destinations are served mainly by the airline owner Travel Service. In summer

[^20]period CSA serves these leisure destinations: Porto, Nice, Bilbao or Malta. Czech airlines offers also 1 long haul route to Seoul.

### 4.1.5.2 Fleet

| Aircraft type | Number | Avg. Age |
| :--- | ---: | ---: |
| ATR 42-500 | 3 | 12,6 |
| ATR 72 | 5 | 14,0 |
| A319 | 9 | 9,5 |
| A330 | 1 | 16,5 |
| Total | 18 | 11,6 |

Table 7: Czech Airlines fleet ${ }^{4}$

The company operates small, middle and long haul fleet. Small ATR aircraft is used for short distance flights (Ostrava, Bratislava, Košice, Warsaw, Budapest or Bologna). Airbus A319 serves medium distance flights (Paris, Amsterdam, Barcelona or Madrid). This aircraft will be later replaced by new 7 Airbuses A320neo. ${ }^{42}$ The future of the fleet is unknown. There is a possibility that the owner Travel Service will require only 1 type aircraft (Boeing) for medium range flights in the entire group.

### 4.1.5.3 Product

Czech airlines like Air France offers 3 variants of economy class (Lite, Plus and Flex). Lite economy class includes only 8 kg cabin bag with max dimensions 55 x 45 x 25 cm . If there is a need to travel with a checked bag (23kg) there is a fee 25 Eur. The baggage with 32 kg allowance would cost 50 Eur. This fare doesn't have possibility to choose a seat for free but passengers can have a seat for a small fee 5, 10 or 20 Eur (preferred seat, economy comfort class seat, exit row seats). Czech airlines don't serve any meal or snacks on board. The option is to purchase snacks or beverages from service on board or choosing a gourmet menu during the reservation process. The gourmet menu consists of cold breakfast menus for morning flights: Turkey, Beef, Duck, Chicken or Vegetarian menu for 10 Eur. Flights in the afternoon offer hot menus - Chicken, Duck, Fish, Beef and Vegetarian for 14eur. Rebooking is possible for 60 Eur before departure and for a fee of 100 Eur within 72 hours from the scheduled departure. Together with the

[^21]rebooking fee, passengers will be charged the fare difference if the same fare is unavailable on the rebooked flight.

The Plus fare economy contains in plus checked baggage (23kg), small personal item (3kg) and more miles in the frequent flyer programme.

The last fare is Flex economy. The ticket price includes a light snack, sky priority service (special care for passengers) - special check-in desk, fast track, special security place. Rebooking is possible for free. The person will have to pay only the difference in the ticket price. It's also possible to refund the ticket for 60 Eur. The passenger name can't be changed with any price package.

| Czech Airlines | Lite | Plus | Flex |
| :--- | :---: | :---: | :---: |
| Instant boarding Pass | X | X | X |
| Checked baggage | X | YES | YES |
| Hand luggage | YES | YES | YES |
| Priority boarding | X | X | YES |
| Seating choice | X | YES | YES |
| Priority seats | X | X | YES |
| Random allocation of <br> seats | YES | X | X |
| Snack/refreshment | X | X | YES |
| Newspapers | YES | YES | YES |
| Refund | X | X | YES* |
| Total flexibility on <br> changes | YES* | YES* | YES |
| Earlier departure | X | X | X |
| Airport check-in | YES | YES | YES |
| Online check-in | YES | YES | YES |
| Miles/points | YES | YES | YES |
| Lounge entrance | X | X | X |

Table 8: Czech Airlines fares ${ }^{43}$
*rebooking fee is 60 Eur + difference in price, changing name isn't possible in any class.

[^22]
### 4.1.6 Brussels airlines

Brussels airlines is the national carrier of Belgium. The airline was created by a merger of SN Brussels Airlines (SNBA) and Virgin Express in 2006. Even though it is a flag carrier, the ownership is in the hands of Lufthansa. Its main base is at Brussels airport. From there the airline connects 96 destinations in Europe, Africa, Asia and North America. Passengers travelling with this carrier can collect miles to Lufthansa's frequent flyer programme Miles\&More or to Brussels airlines programme LOOP.

Brussels Airlines is an official member of Star Alliance, the world's leading global airline partnership. In 2017 the airline carried 9,077,178 passengers. ${ }^{44}$ The slogan of the airline is: We go the extra smile.

### 4.1.6.1 Destinations



Figure 5: Brussels Airlines Destinations ${ }^{45}$

This map includes only European flights. ${ }^{46}$ From intercontinental flights I could mention New York, Toronto, Mumbai and lots of destinations in Africa. This carrier also

[^23]serves leisure destinations like Canary islands, Madeira, Mallorca, Cape Verdes or Hurghada. Brussels airlines as other traditional airlines fly Hub and Spoke model.
4.1.6.2 Fleet

| Aircraft type | Number | Avg. Age |
| :--- | ---: | ---: |
| A319 | 22 | 13.8 |
| A320 | 13 | 14.2 |
| A330 | 11 | 19.4 |
| Sukhoi Superjet 100 | 3 | 1.4 |
| Total | 49 | 14.4 |

Table 9: Brussels Airlines fleet ${ }^{47}$
The carrier operates aircrafts from small to long range distances. As the last one joined the fleet Russian Sukhoi Superjet 100. On the table we can see that the average age of airbus A330 is relatively high. The carrier plans to replace them with newer second hand A330.

### 4.1.6.3 Product

Brussels airlines as a traditional airline offer a choice between economy class and business class. The economy class has 3 fares - Check\&Go, Light\&Relax and Flex\&Fast.

The fare Check\&Go entitles a passenger to take 1 carry-on bag with max dimensions $55 \times 40 \times 23 \mathrm{~cm}$ and 1 personal item with max dimensions $40 \times 30 \times 10 \mathrm{~cm}$ (a handbag, a laptop bag or a camera bag), all together weighting no more than $12 \mathrm{~kg} .{ }^{48}$ Adding 23 kg checked bag would cost 25 Eur and 32 kg baggage 55 Eur. Interesting is that for $2^{\text {nd }} 23 \mathrm{~kg}$ checked bag a passenger would pay 40 Eur (for $32 \mathrm{~kg}-55$ Eur). It is possible to add a maximum of 4 luggages (100kg per passenger). During the reservation process a person can choose also his seat. The Standard seat is for a fee of 10 Eur. Brussels Airlines doesn't serve any meals or snacks it means food and beverages are for purchase on board. In case a passenger decides not to fly the airline refunds only airport taxes. As with other traditional airlines, you get miles to your frequent flyer program in case of flying in the lowest price package.

The second cheapest fare is Light\&Relax. The differences are that a person can change to earlier flight on day of departure in case the ticket is in the same class and there

[^24]is a seat availability , 23 kg checked baggage is included in ticket price, refund for a fee of 65 Eur and other changes are charged 50 Eur.

The last fare is so called Flex\&fast. As the name implies this price package should allow us to change the flight as we want. We can refund the ticket for free and for other changes we pay only the fare difference if there is any. Also all passengers can profit from fast line, priority check-in, boarding, newspapers, snacks, drinks and all other benefits included in previous price packages.

| Brussels Airlines | Check\&Go | Light\&Relax | Flex\&Fast |
| :--- | :---: | :---: | :---: |
| Instant boarding Pass | X | X | X |
| Checked baggage | X | YES | YES |
| Hand luggage | YES | YES | YES |
| Priority boarding | X | X | YES |
| Seating choice | X | YES | YES |
| Priority seats | X | X | YES |
| Random allocation of <br> seats | YES | X | X |
| Snack/refreshment | X | X | YES |
| Newspapers | X | X | YES |
| Refund | X | X | YES |
| Total flexibility on <br> changes | X | X | YES |
| Earlier departure | X | YES | YES |
| Airport check-in | YES | YES | YES |
| Online check-in | YES | YES | YES |
| Miles/points | YES | YES | YES |
| Lounge entrance | X | X | X |

Table 10: Brussels Airlines fares ${ }^{49}$

[^25]
### 4.2 Comparison of ticket prices of traditional and low cost carriers

In this chapter we will look at the ticket prices of different airlines. For this study I chose routes and airlines which connect Prague Ruzyně international airport (Vaclav Havel Airport Prague) with one of the busiest airports in Europe. Among selected companies belonged traditional airlines - Air France, Czech Airlines, Brussels Airlines and low cost carriers Transavia, Vueling and Ryanair. The first described route is from Prague to Paris and as a second was chosen the route to Brussels. All prices were taken on the carrier's websites on $28^{\text {th }}$ february 2018 and $2^{\text {nd }}$ march 2018. Traditional carriers usually offer several times during the day. In this case were used the cheapest times of the day. Another problem are codeshare flights (two or more airlines share the same flight) - for example: Czech airlines offer flights of Air France or Smartwings but CSA isn't the operating carrier. So for the purpose of the research were taken only operating carriers and one-way direct flights.

The following chapters contain tables and graphs with data collected from web portals of the companies. All prices used in comparison are in Euro currency.

### 4.2.1 Prague - Paris

This route is one of the most favourite among Czechs and foreigners. Last year on the route have been transported 846,977 passengers. ${ }^{50} 4$ carriers operate on this segment. 3 airlines (Air France, Czech airlines and Vueling) serve Paris Charles de Gaulle airport and Transavia serves Paris Orly airport. The both airports offer good connection with the city centre by trains, tram or buses.

[^26]| Website / date | $\mathbf{1 1 . 3 . 2 0 1 8}$ | $\mathbf{1 1 . 4 . 2 0 1 8}$ | $\mathbf{1 1 . 5 . 2 0 1 8}$ | $\mathbf{1 0 . 6 . 2 0 1 8}$ | $\mathbf{1 0 . 9 . 2 0 1 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Air France | 227 | 80 | 108 | 108 | 60 |
| ČSA | 111,05 | 54,50 | 104,50 | 73,50 <br> (CSA+AF) | 64,50 |
| Transavia | 169 | 34 | 84 | 124 | 39 |
| Vueling | 124,99 | 34,99 | 84,99 | 74,99 | 74,99 |

Table 11: Comparison of prices on route Prague - Paris ${ }^{51}$
The first research was for 11.3.2018. The date when the information was taken took place relatively close to departure. As we can see on the table above prices for flight to Paris are quite high for a one-way flight. People book in advance usually for 70eur for a return ticket.

Here is no place for long consideration if to buy a ticket or not. If the person really needs to fly at this time he should definitely buy it as soon as possible. The question is with which company he should fly. The answer depends on whether the potential passenger needs a luggage, expect refreshments or he can fly just with a cabin luggage. Unfortunally all prices of traditional airlines mentioned above are in light economy (lite economy). In case we really want to fly with a luggage we have to pay an extra fee or higher economy class. Czech airlines offer upgrade to economy plus class for 20 Eur that includes 23kg checked bag or you can add your bag in additional services during your reservation for 25 Eur. It means the airline steals 5 Eur from you. The second cheapest variant is to fly with low cost Vueling airline. The tariff 124,99 Eur is also without any checked luggage. In case we need one, we have again two choices - upgrade from Basic to optima for 20 Eur or adding the bag in additional services for 15 Eur - in this case the final price would be 139,99 Eur. In my opinion the rest choices (flying with Air France or Transavia) are overpriced but if the passenger is a businessman, has a higher frequent flyer status (silver, gold or platinum card) and needs to be for example at some meeting , he chooses according to his preferences and schedule.

[^27]The second research was for 11.4.2018. In the table above we can see that prices decreased by more than a half in comparison to previous date. Passengers who plan to fly on this date definitely should buy this fare because surely it won't decrease. Low cost travellers who don't need a luggage should decide between Vueling or Transavia airlines. Their price and services are almost the same so the main reason for decision will be the location of the airport. If their hotel is closer to Charles de Gaulle airport or to Orly. Czech airlines doesn't propose anything plus, only miles, possibility to purchase business meal or better care at airport.

What I found really interesting are ticket prices in june. If we look at 2 tables below we'll see that prices for the same routes, airlines (Czech Airlines and Air France) and times differ from 2 airline websites. At website of Czech airlines we can see price 73,50 Eur for both airlines. But if we check the site of Air France we'll be shocked because they sell the same flights for 92 Eur (flight operated by Czech Airlines ) and 108 Eur (operated by Air France).


Figure 6: Czech Airlines reservation system ${ }^{52}$

[^28]

Figure 7: Air France reservation system ${ }^{53}$
If the person checks what he'll get for the price he'll be shocked again. So for 73,50 Eur the passenger can fly with Air France bought on the Czech Airlines website with a 23kg checked bag or for 108 Eur same flight bought on the Air France site without any luggage. It's important to say that adding a bag would cost you there additional 25 Eur in case you are not owner of higher frequent flyer status. So before buying a ticket with Air France or Czech Airlines I would highly recommend checking prices on both websites, compare classes and then decide where to buy it. If I were in the passenger's position and would have to choose from these 4 airlines, definitely I would have chosen a flight with Air France for better service on board and luggage included but would buy that ticket on the Czech Airlines website.

[^29]Air France offers different kind of tariffs according to age of passengers, unfortunately the only benefit we can see by young people:

| Fares | Light/Flex | Light/Flex |
| :--- | :--- | :--- |
| dates | 10.6 .2018 | 10.9 .2018 |
| Adults (25-64) | $108 / 184$ | $60 / 136$ |
| Seniors (65+) | $108 / 184$ | $60 / 136$ |
| Young (18-24)* | $108 / 126$ | $60 / 84$ |

Table 12: Air France - prices for age categories) ${ }^{54}$
Changes in prices according to the fares Light and Flex
*Flights bought on the website of Air France and those which are operated by Czech airlines can benefit 10Eur deduction of the base fare in case of young travellers.

Actually the price is the same for all categories only younger people have an opportunity to buy cheaper higher fare which allows them to change the ticket for a small fee of 20 Eur.

[^30]
## Ticket prices through time



Figure 8: Prague - Paris, Ticket prices through time ${ }^{55}$

The graph (Figure 8) represents differences of ticket prices of traditional and low cost carriers. The graph uses data collected in the $1^{\text {st }}$ table. It shows that the most expensive airline with the departure in several days is Air France. On the other hand relatively surprise is the position of Czech Airlines. There are many dates when the Czech national carrier is actually cheaper or proposes similar price in comparison to low cost airlines. For instance if the passenger plans to fly with Czech Airlines in several days, surely he should look at their website. Probably they will offer the cheapest price. The graph again proved that flights with low cost carriers should be bought in advance and not at last moment. For example Transavia flight on 10.9.2018 was proposed only for 39 Eur that is really affordable price which is even cheaper than taking a bus or train to Paris, on the other hand Transavia can be pretty expensive in case the person waits with the purchase until the last moment. For 11.3.2018 the ticket price was 169 Eur without luggage. And lastly prices of Vueling flights were about the same except 1 day when the price was 34,99 Eur. It's important to add that these airlines don't earn anything on low fares, they get money from people who buy at last moments or during peak seasons - New Year, Christmas, national fests or festivals. The last interesting note on the graph is days of

[^31]the week. As we can see the cheapest days were Wednesday and Monday. These days people don't travel a lot so airlines offer low prices for not transporting just an air.

The next part will deal with a change in prices depending on days and weeks in a month. The first graph below shows the average prices within 12 weeks. From the line chart we can observe that Air France has the highest average ticket price until the beginning of the 9th week. This week is especially interesting because all four carriers reach very high ticket prices. The reason for that is a public holiday ( $1^{\text {st }}$ and $8^{\text {th }}$ of May). The Czech national carrier CSA was in total the second most expensive on this route. From the $10^{\text {th }}$ week the airline took the first place. When we compare 2 low cost airlines Vueling and Transavia we can see that Vueling is more expensive than Transavia in the first 4 weeks before departure. The carrier sometimes even offer higher price than the traditional carrier Czech Airlines. We can deduce from the chart that Transavia was the cheapest airline in the early days and Vueling during the 12th week. Finally we can say that on this route are large differences between traditional and low cost carrier only several weeks until departure. Later the average ticket prices are getting closer, but there still retain a little price difference.


Figure 9: Prague - Paris, Average weekly prices March - May ${ }^{56}$

Now we'll discuss prices of the days of the week. On two charts below we will show how the average price changes depending on the day of the week. The graph with prices from March shows 4 airlines. The chart confirms that the most expensive airline is Air France followed by Czech Airlines. The low cost carriers hold a difference of 20 Eur with CSA during the entire week with the small exception - weekend. Air France distinguishes from low cost carriers mostly on Monday, Tuesday and Thursday where the difference is about 40 and 60 Eur. The position of the cheapest carrier took Transavia for the entire week. There was only slightly difference with Vueling. These two low cost carriers were closest to the price of Czech Airlines on Tuesday and Sunday where Transavia's average price met with the price of CSA.

[^32]

Figure 10: Prague - Paris, Average daily prices in March ${ }^{57}$

And finally the last graph for the route to Paris shows the price situation in May. The most expensive day is Sunday surprisingly with Transavia. The rest 3 airlines have similar price that day. The low cost carriers are copying their average ticket price for the rest of the week. The same we could say for Czech Airlines and Air France. Even if they're in same alliance they're big competitors on this route.

[^33]

Figure 11: Prague - Paris, Average daily prices in May ${ }^{58}$

### 4.2.2 Prague - Brussels

This route is in TOP 10 destinations from Prague. In 2017 was transported to Brussels international airport 327557 passengers. ${ }^{59}$ If we include passengers from the secondary airport Brussels Charleroi the number would be even higher. The segment is operated by 3 carriers. Brussels Airlines and Czech Airlines serve Brussels international airport and Ryanair flies to Brussels South Charleroi airport. Both airports are reachable by public transport. Charleroi airport is served by Brussels city shuttle bus. Prices differ from 5 - 14 Eur depending on time of purchase. Brussels international airport is connected with centre by trains for 9 Eur. The airport is located only 15 km from Gare Centraal but Charleroi airport is a little bit further - 55 km from city centre.

The first research was conducted on 12.3.2018. Data in table show us similar situation of traditional airlines like in the first research. Flights with date close to departure are usually overpriced. By low cost airline we can see a really cheap fare. It has 2 factors "Monday factor" and probably the load factor (the capacity utilization of an aircraft) that isn't so high yet.

[^34]| Website / date | $\mathbf{1 2 . 3 . 2 0 1 8}$ | $\mathbf{1 1 . 4 . 2 0 1 8}$ | $\mathbf{1 1 . 5 . 2 0 1 8}$ | $\mathbf{1 0 . 6 . 2 0 1 8}$ | 10.9 .2018 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Brussels <br> Airlines | 222,17 | 222,61 | 36,38 | 103,90 | 36,38 |
| ČSA | 153,02 | 46,47 | 46,47 | 104,47 | 46,47 |
| Ryanair | 28,72 | 29,03 | 21,99 | 21,99 | 21,99 |

Table 13: Comparison of prices on route Prague - Brussels ${ }^{60}$
As we can see from the table there're 3 choices of airlines to fly with. For 222,17 Eur Brussels Airlines offer the highest fare Flex\&Fast that includes 23kg baggage, refund, changing the ticket, priority, snacks and newspapers. Ryanair for 100Eur offer Flexi Plus fare with similar benefits. The main difference is the airport on arrival, snacks, newspapers, collected miles (Loops), service desk in case of any problem. And finally Czech Airlins offer their Flex fare for 217 Eur but even for this price the refund isn't included in ticket price ( still there is a 60 Eur fee). In case the passenger doesn't need a flexibility or refund he'll probably choose a ticket with Ryanair in Plus Fare that includes checked bag and priority. Students and others who just need to fly from point A to B will decide for Ryanair's Standard fare for 28,72 Eur.

The 3rd research is really interesting for discussion because in table we can see the lowest ticket price from all 3 carriers. The question is which airline to choose for purchasing a ticket. Traditional and low cost carrier offer the lowest fare without any luggage and service on board. Czech airlines offer newspapers, 8kg cabin luggage without personal item or refund for a 60 Eur fee plus difference in fare, Brussels airlines don't allow any change in ticket, refund only airport taxes and allow taking 12 kg cabin luggage with a personal item. But from my experience nobody checks the weight of cabin luggage at airport. Checked-in luggage can be added by Czech and Brussels airlines in both cases for 25 Eur. But it doesn't make so much sense because passenger for the same price can upgrade to the second fare of economy class where checked bag and seating choice is already included. Ryanair offers to add check-in bag also for 25 Eur. Considering ticket

[^35]prices, comfort of travel, airport location, transport from the airport, provided services, time savings I would go for Brussels Airlines.

The data from the table are summarized in the chart below:


Figure 12: Prague - Brussels, Ticket prices through time ${ }^{61}$
Ticket prices are really interesting. For example Ryanair offers ticket price on 11.5.2018 for 21,99 Eur and in Czech currency the website shows 579 Kč. By simple calculation we get the course 26,33 while the official exchange rate of the Czech National Bank is 25,44 CZK / 1 Eur. Prices do not appear only on carriers sites. For comparing prices we can use several websites: skyscanner.net, kayak.com, www.google.com/flights, momondo.co.uk and others. There we can find tickets for a few Euros cheaper. For example for $10^{\text {th }}$ June 2018 the picture below shows a really different price by Czech Airlines. But we should be careful about what the seller is. In case of any difficulties, we will communicate with this seller and not with the airline.

[^36]

Figure 13: Prague - Brussels, Ticket prices on skyscanner ${ }^{62}$
The fourth case (10.6.2018) is interesting from a business passenger perspective. That's because Brussels and Czech airlines offer practically same price around 105 Eur in the lowest price package. In my opinion the choice will depend on whether the person is a member of any alliance, possibility of purchasing a meal on board, language, time preferences and also if the person will have a connecting flight later on. As we can see Ryanair offers a very low price that goes to travelers who do not want to spend so much for a ticket.

In the following article we look at price changes. The graph below shows the average prices within 12 weeks. From the line chart we can conclude that Ryanair clearly offers the cheapest ticket price on this route, because the average weekly price is still less than 50 Eur. Brussels Airlines comes with the highest average price in the first seven weeks. From traditional airlines Czech Airlines is the cheapest until the beginning of the $8^{\text {th }}$ week. Afterwards Brussels Airlines offers an average price slightly above 50 Eur and becomes cheaper than Czech Airlines.

[^37]

Figure 14: Prague - Brussels, Average weekly prices March - May ${ }^{63}$

In next charts we will discuss the average prices of the days of the week. For being able to see the differences I chose March and May. The first graph shows the price change in March depending on the day of the week. How we can see the price is at traditional airlines and low cost carrier higher on Sunday. The average price for this day is by Czech Airlines even higher than by Brussels Airlines but as we have seen in the previous chart, there the average weekly price was lower for Czech Airlines. It means CSA offers much lower prices during the whole week and on Sunday the ticket is usually overpriced. The chart also gives information that ticket prices in March with Brussels Airlines are practically the same for all days of the week with a small exception on Sunday.

[^38]

Figure 15: Prague - Brussels, Average daily prices in March ${ }^{64}$
The second graph shows the price change in May depending on the day of the week. It gives information that the average prices of carriers came closer. Brussels airlines approached the price of Ryanair from Tuesday to Saturday with an average price between 25 and 50 Eur. As in the previous chart Sunday has the highest ticket price from all days of the week among all 3 carriers. The second most expensive day was Monday where traditional airlines had almost the same average ticket price between 50 and 75 Euros,
while the average ticket price with Ryanair was less than 50 Eur.


Figure 16: Prague - Brussels, Average daily prices in May ${ }^{65}$

[^39]
## 5 Results and Discussion

### 5.1 Product and services

|  | VUELING |  |  | TRANSAVIA |  |  | RYANAIR |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Basic | Optima | Excell | Basic | Plus | Max | Standard | Plus | Flexi |
| Instant boarding Pass | X | YES | YES | X | X | X | X | X | X |
| Checked baggage | X | YES | YES | X | YES | YES | X | YES | YES |
| Hand luggage | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Priority boarding | X | X | YES | X | X | YES | X | YES | YES |
| Seating choice | X | YES | YES | X | YES | YES | X | YES | YES |
| Priority seats | X | X | YES | X | X | YES | X | X | YES |
| Random allocation of seats | YES | X | X | YES | X | X | YES | X | X |
| Snack/refre shment | X | X | YES | X | X | X | X | X | X |
| Newspaper <br> s | X | X | X | X | X | X | X | X | X |
| Refund | X | X | YES | X | X | X | X | X | X |
| Total flexibility on changes | X | X | YES | X | YES | YES | X | X | YES |
| Earlier departure | X | YES | YES | X | X | X | X | X | X |
| Airport check-in | YES | YES | YES | YES | YES | YES | X | X | YES |
| Online check-in | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Miles/point s | YES | YES | YES | X | YES | YES | X | X | X |
| Lounge entrance | X | X | YES | X | X | X | X | X | X |

Table 14: Lowcost product comparison ${ }^{66}$
The table above shows that the differences in basic (standards) fare among these 3 low cost airlines aren't so large. The only difference is by Vueling that this fare also offers miles for flying. On the other hand Ryanair doesn't offer absolutely anything. In my opinion Transavia is the best choice for the second highest fare because offers flexibility

[^40]on change. This option can be for many travellers really an interesting point. In the highest fare of low cost carriers is the winner Vueling again. The biggest advantage I see in the possibility of refunding the ticket. This is something that is privileged for traditional airlines.

|  | AIR FRANCE |  |  | CZECH AIRLINES |  |  | BRUSSELS AIRLINES |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Light | Standard | Flex | Lite | Plus | Flex | $\begin{aligned} & \text { Check } \\ & \text { \&Go } \end{aligned}$ | Light\& Relax | Flex\& Fast |
| Instant boarding Pass | X | X | X | X | X | X | X | X | X |
| Checked baggage | X | YES | YES | X | YES | YES | X | YES | YES |
| Hand luggage | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Priority boarding | X | X | YES | X | X | YES | X | X | YES |
| Seating choice | YES | YES | YES | X | YES | YES | X | YES | YES |
| Priority seats | X | X | YES | X | X | YES | X | X | YES |
| Random allocation of seats | X | X | X | YES | X | X | YES | X | X |
| Snack/refr eshment | YES | YES | YES | X | X | YES | X | X | YES |
| Newspape rs | YES | YES | YES | YES | YES | YES | X | X | YES |
| Refund | X | X | YES | X | X | YES | X | X | YES |
| Total flexibility on changes | X | YES | YES | YES | $\underset{*}{\text { YES }}$ | YES | X | X | YES |
| Earlier departure | X | X | YES | X | X | X | X | YES | YES |
| Airport check-in | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Online check-in | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Miles/poi nts | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Lounge entrance | X | X | X | X | X | X | X | X | X |

Table 15: Traditional airline product comparison ${ }^{67}$
*fee 60 Eur
${ }^{67}$ Own work, data from carrier's websites

### 5.1.1 Comparison of the lowest fares (Light, Lite, Check\&Go, Basic and Standard)

As we can see from the tables above traditional airlines and low cost airlines differ in the lowest fare mainly in collecting miles for each segment flown. All traditional airlines offer miles while by low cost carriers it's only Vueling. From low cost carriers airport check-in is offered by Vueling and Transavia but not Ryanair. Actually check-in at airport is something that is the privilege of traditional airlines. Another "surprise" is the random allocation of seats. This option the person can expect by low cost carriers but really not by traditional carriers such as CSA and Brussels Airlines. Air France is the only carrier that provides refreshments on board.

Taking into account all criteria the best product in this price package offers Air France from traditional airlines and Vueling from low cost carriers. The order of the carriers according to the best offered product $1^{\text {st }}$ Air France, $2^{\text {nd }}$ CSA, 3-4rd Vueling and Brussels Airlines, $5^{\text {th }}$ Transavia $6^{\text {th }}$ Ryanair.

### 5.1.2 Comparison of middle fares Standard, Plus, Light\&Relax, Optima and Plus (by low cost carriers)

In the second lowest fare all 6 companies offer checked baggage as hand baggage, seating choice and online check-in. Interesting is that Ryanair as a low cost carrier is the only one that comes with Priority boarding. Choice of flexibility is a plus of Transavia and Air France, by Czech Airlines it's for fee. Instead of flexibility Vueling brings the possibility of earlier departure.

If we summarize it the lowest product offer Ryanair mostly because of missing the airport check-in. This price package is mostly about having a 23 kg (by traditional airlines) or 20 kg (by low cost airlines) checked bag. The best product is offered by Air France and Transavia from low cost airlines.

### 5.1.3 Comparison of the last fare Flex, Flex\&Fast, Excellent, Max and Flexi

All 6 carriers have in common: seating choice, priority seats, airport check-in, flexibility on changes. Therefore the packages are mostly called Flexi. The best offer from low cost carriers offers Vueling because of possibility to refund the ticket, snacks and
beverages on board and also it's the only airline that allows you to enter into selected vip lounges. The exactly same product is served by Air France and Brussels Airlines. On the contrary Czech Airlines failed to compete with traditional airlines because they still offer a refund for 60 Eur in this category.

Vueling is a big surprise in this price package, especially thanks to the free entrance to the lounge occupies the first place. The second best choice is Air France and Brussels Airlines. The third place is taken by Czech Airlines followed by Transavia. The last place is again for Ryanair.

### 5.2 Comparison of prices

The graphs from the analytical section showing average weekly prices on specific routes were converted to the following table. It serves for comparison ticket prices of traditional and low cost carriers. We can read from the table that all 3 traditional carriers can be expensive several weeks/days before departure.

|  | Prague - Paris |  |  |  | Prague - Brussels |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Traditional airlines |  | Low cost airlines |  | Traditional airlines |  | Low cost |
|  | AF | CSA | Vueling | Transavia | Brussels | CSA | Ryanair |
| Week 1 | 112,14 | 74,16 | 82,49 | 61 | 235,1 | 154,02 | 39,84 |
| Week 2 | 100,57 | 85,08 | 69,99 | 63,17 | 222,17 | 88,88 | 29,72 |
| Week 3 | 80,14 | 75,76 | 58,99 | 54,71 | 221,61 | 93,18 | $\mathbf{2 0 , 1 3}$ |
| Week 4 | 86 | 68,9 | 75,99 | 64,71 | 221,61 | $\mathbf{5 8 , 0 4}$ | 26,61 |
| Week 5 | $\mathbf{6 8 , 2 9}$ | $\mathbf{5 9 , 0 4}$ | $\mathbf{4 6 , 9 9 ( 2 )}$ | $\mathbf{4 8 , 2 9}$ | 226,96 | 75,33 | 25,85 |
| Week 6 | 79,29 | 71,33 | 54,99 | 61,14 | 221,61 | 62,61 | 23,7 |
| Week 7 | 84,29 | 81,18 | 66,99 | 78,29 | 91,78 | 69,04 | 29 |
| Week 8 | 79,14 | 76,76 | 66,99 | 71,14 | 51,26 | 59,04 | 26,79 |
| Week 9 | 106,86 | 99,47 | 112,99 | 110,43 | 55,44 | 61,18 | 24,81 |
| Week 10 | $\mathbf{6 7 , 5 7}$ | 75,47 | 62,99 | 65,43 | 80,69 | 86,61 | 36,12 |
| Week 11 | 70,43 | 82,9 | 71,99 | 61,86 | $\mathbf{4 7 , 7 1}$ | 63,76 | 30,2 |
| Week 12 | 71 | 76,9 | $\mathbf{4 4 , 9 9 ( 1 )}$ | 54,71 | 60,52 | 65,33 | 26,47 |

Table 16: Average weekly prices ${ }^{68}$
**cheapest prices are bolded in the table
The best time for buying a ticket with Air France, Czech Airlines and also Vueling is about a month before departure. Surprise is the situation by Brussels Airlines. When a

[^41]person plans to buy a ticket with this carrier he should buy it minimally 7 weeks in advance.

As we can see the low cost airlines like Ryanair have the cheapest ticket prices usually from the $3^{\text {rd }}$ week before departure. From the table above we can assume that in all cases we should plan to buy the ticket in advance. For the ticket with a traditional airline we should count with more time while with low cost airline we can hesitate to buy a ticket a little bit longer. Closer is the time of departure more expensive will be the ticket.

The lowest price of all 6 airlines was offered by Ryanair 16.67 Eur during the fourth week from Tuesday to Friday. From traditional airlines the lowest fare was proposed by Brussels Airlins 36,38 Eur during the $7^{\text {th }}$ week from Tuesday to Thursday.

If the person is on a budget the best day for flying is Wednesday. The cheapest flight tickets can be found from Tuesday to Thursday. On the contrary the most expensive day is in all six cases Sunday, followed by Monday.

## 6 Conclusion

The goal of this study was to provide information about traditional and low cost model and also about their representatives on the European market. The main aim was to compare airline products together with services. The last objective was to compare ticket prices of traditional and low cost carriers on selected routes.

The theoretical part first dealt with the aviation history. Afterwards the airlines were divided according to different criteria; one of them was the character of product. It divided the airlines to traditional and low cost airlines. Further the part was dedicated to introduction of 2 airline models - traditional and low cost. This part explained several terms such as alliance, frequent flyer programme or club membership. There were also presented the main differences, advantages and disadvantages of flying with traditional and low cost airlines. The last section was dedicated to airline strategy - the type of market and product strategy.

The analytical part focused on representatives of traditional and low cost carriers. In this section were introduced 6 companies. For each carrier were given basic information about the company, destinations, fleet, products and services. The next section focused on ticket prices. I chose two routes: Prague to Paris and Prague to Brussels. For each route I chose 5 dates in the future and compared the actual air fares between each individual company. I was also dealing with the average ticket prices depending on the days of the week and the number of weeks before departure.

In results I compared all price packages offered by traditional and low cost airlines. In the cheapest fare the best product and service was offered by Air France, followed by Czech Airlines. On the contrary the worst product was provided by low cost carrier Ryanair. The surprise was the highest fare, where dominated the low cost airline Vueling.

It can be said that the basic product is practically the same for low cost airlines and traditional airlines today. In this price package everyone will only get a flight and nothing else. But still a person has to decide with what company he will fly. It depends predominantly on the preference and choice of each passenger for which airline he decides. Afterwards I compared traditional and low cost carriers according to average weekly ticket prices. The result of it was that a ticket with traditional companies we should buy at least a
month in advance, while by a low-cost carrier type Ryanair would be better to wait until the 3rd week before departure.

In my opinion information about all these companies and their comparisons can attract those who are beginning to fly or people who are really interested in this topic. In both cases it will help them to get more involved in the issue and then being less surprised by provided products, services and prices.

The future of traditional and low cost airlines I see in further convergence of their products and prices. After the saturation of the European Market, it means that practically all regional and secondary airports will be occupied by low cost companies. If there won't be place for further expansion they will also start to concentrate on the east market. It will be really difficult for traditional airlines being able to compete with them. So probably in future we can expect foundation of subsidiaries of traditional airlines that will focus mainly on long haul service.

## 7 References

### 7.1 Literature

BÍNA, L., ŠOUREK, D., ŽIHLA, Z.: Letecká doprava II. VŠO v Praze, o. p. s., Praha, 2007. ISBN 978-80-86841-07-6.

CENTO, Alessandro. The Airline Industry: Challenges in the 21st Century. Physica Verlag Heidelberg, 2008. ISBN 9783790820874.

DOGANIS, Rigas. The airline business. 2nd ed. New York: Routledge, 2006.ISBN 9780415346153.

FEDORCO, Hospodka: Airline Pricing Strategies in European airline market. From www: http://pernerscontacts.upce.cz/30_2013/Fedorco.pdf

HANLON, J.P. Global airlines : competition in a transnational industry. 3rd ed., Oxford: Butterworth-Heinemann,2007. ISBN 0750664398.

HOLLOWAY, Stephen, 1952- Straight and level : practical airline economics. 3rd ed. Burlington, VT: Ashgate Pub, 2008. SBN 978-0-7546-7256-2.

MABONGA, F.: Introduction to aviation. AUTHORHOUSE, 2015. ISBN 978-1-4969-6995-8.

PRŮŠA, J. a kol.: Svět letecké dopravy. Praha: Galileo CEE Service ČR, 2007. 315 s. ISBN 978-80-239-9206-9.

### 7.2 Internet resources

580 killed in history's air disaster: Crash cause still in doubt. Eugene Register Guard [online]. 1977 [cit. 2018-02-02]. Available at:
https://news.google.com/newspapers?id=j9ZVAAAAIBAJ\&sjid=JOADAAAAIBAJ\&pg= 6267\%2C6928131

A Brief History of Aviation by JustFly [online]. 2016 [cit. 2018-02-02]. Available at: http://www.historynet.com/a-brief-history-of-aviation-by-justfly.htm

A380 - Technology. Airbus [online]. [cit. 2018-05-02]. Available at: http://www.airbus.com/aircraft/passenger-aircraft/a380-family/technology.html

About ICAO. ICAO [online]. [cit. 2018-02-02]. Available at https://www.icao.int/abouticao/Pages/default.aspx

Aircraft Fleet. Czech Airlines [online]. [cit. 2018-02-15]. Available at: https://www.csa.cz/cz-en/fleet/

Air France Fleet Details and History. Planespotters [online]. 2018 [cit. 2018-02-
17]. Available at: https://www.planespotters.net/airline/Air-France

All about hand luggage. Brussels Airlines [online]. [cit. 2018-02-20]. Available at: https://www.brusselsairlines.com/en-nl/practical-information/travel-info/before-the-flight/luggage-info/hand-baggage/default.aspx

Aviation. Britannica [online].[cit.2018-02-02]. Available at : https://www.britannica.com/technology/aviation

Beauvais Airport Passenger Numbers. Beauvais Airport [online]. [cit. 2018-02-05]. Available at: https://www.beauvaisairport.net/passenger-statistics.shtml

Brussels airlines destinations. Brussels Airlines [online]. [cit. 2018-02-19]. Available at: https://press.brusselsairlines.com/brussels-airlines-welcomes-winter-season-with-ten-newdestinations

Brussels Airlines Fleet Details and History. Plane spotters [online]. 2018 [cit. 2018-02-20]. Available at: https://www.planespotters.net/airline/Brussels-Airlines

Brussels Airlines welcomes winter season with ten new destinations. Brussels Airlines[online]. 2017 [cit. 2018-02-19]. Available at: https://press.brusselsairlines.com/brussels-airlines-welcomes-winter-season-with-ten-newdestinations

Chytré létání 1 - Jak to všechno začalo [online]. 2016 [cit. 2018-02-02]. Available at: https://www.flying-revue.cz/chytre-letani-1?sibling_page=6

CONVENTION RELATING TO THE REGULATION OF AERIAL NAVIGATION SIGNED AT PARIS, OCTOBER 13,
1919. Webarchive.org [online]. [cit. 2018-02-02]. Available at:
https://web.archive.org/web/20120705050026/http://www.aviation.go.th/airtrans/airlaw/19 14.html

Destinations We Cover. Czech Airlines [online]. [cit. 2018-02-15]. Available at: https://www.csa.cz/cz-en/destinations/

FARHOUD, Nada. What it's REALLY like to work for Ryanair: Staff threatened with punishments if they miss sales targets, work for meagre salaries and pay $£ 300$ for their own uniforms. Mirror [online]. 2017 [cit. 2018-02-10]. Available at : https://www.mirror.co.uk/money/what-its-really-like-work-11209793

Fees. Ryanair [online]. [cit. 2018-02-14]. Available at : https://www.ryanair.com/ie/en/useful-info/help-centre/fees

History of Ryanair. Ryanair [online]. [cit. 2018-02-10]. Available at : https://corporate.ryanair.com/about-us/history-of-ryanair/

Information \& Services: WIZZ Discount Club. Wizzair [online]. [cit. 2018-02-07]. Available at: https://wizzair.com/en-gb/information-and-services/wizz-services/wizz-discount-club\#/

KAMINSKI-MORROW, David. Czech Airlines switches order to A320neo. FlightGlobal [online]. London, 2016 [cit. 2018-02-19]. Available at: https://www.flightglobal.com/news/articles/czech-airlines-switches-order-to-a320neo423632/

KAMINSKI-MORROW, David. Travel Service to acquire almost all of Czech Airlines. Flightglobal[online]. London, 2017 [cit. 2018-02-17]. Available at:
https://www.flightglobal.com/news/articles/travel-service-to-acquire-almost-all-of-czech-airlin-441963/

Louis Blériot, il y a un siècle... [online]. 2009 [cit. 2018-02-02]. Available at: https://www.francetvinfo.fr/france/louis-bleriot-il-y-a-un-siecle_245929.html

Megavolotea. Volotea [online]. [cit. 2018-02-07]. Available at :
http://www.volotea.com/en/megavolotea/

Milestones in KLM's History. KLM [online]. 2017 [cit. 2018-02-02]. Available at: https://www.klm.com/corporate/en/about-klm/history/index.html

Number of Checked Passengers at Václav Havel Airport Prague Grew by Nearly 18\% Last Year. Prague Airport [online]. 2018 [cit. 2018-02-20]. Available at: http://www.prg.aero/en/prague-airport/press-center/press-releases/number-of-checked-passengers-at-vaclav-havel-airport-prague-grew-by-nearly-18-last-year/

Orders and deliveries. Airbus [online]. [cit. 2018-05-02]. Available at : http://www.airbus.com/aircraft/market/orders-deliveries.html

PRAVEEN, Duddu. The world's longest running airlines. Plane spotters [online]. 2015 [cit. 2018-02-17]. Available at: http://www.airport-technology.com/features/featurethe-worlds-longest-running-airlines-4681681/

Record passenger numbers for Brussels Airlines in 2017. Brussels Airlines [online]. 2018 [cit. 2018-02-19]. Available at: https://press.brusselsairlines.com/record-passenger-numbers-for-brussels-airlines-in-2017

Ryanair Fleet Details and History. Plane spotters [online]. [cit. 2018-02-10]. Available at: https://www.planespotters.net/airline/Ryanair

Statistics. Charleroi airport [online]. [cit. 2018-02-07]. Available at: https://www.charleroi-airport.com/en/the-airport/statistics/index.html

Study into the impact of the global economic crisis on airframe utilisation. Eurocontrol[online]. London, 2011,40 [cit. 2018-02-05]. Available at: https://www.eurocontrol.int/sites/default/files/content/documents/official-documents/facts-and-figures/coda-reports/study-impact-global-economic-crisis-2011.pdf

The Founding of IATA. IATA [online]. [cit. 2018-02-02]. Available at : http://www.iata.org/about/Pages/history.aspxHistory:

Traffic report 2017. Prague Airport [online]. 2018 [cit. 2018-02-20]. Available at: http://www.prg.aero/en/business-section/aviation-business/statistics-and-reports/prague-airport-traffic-
reports/Contents.4/0/7BE4E075CDD833D42778BE6B802FBA4D/resource.pdf

Transavia France Fleet Details and History. Planespotters [online]. 2018 [cit. 2018-02-10]. Available at: https://www.planespotters.net/airline/Transavia-France

Vueling Fleet Details and History. Planespotters [online]. 2018 [cit. 2018-02-10]. Available at: https://www.planespotters.net/airline/Vueling

What cabin baggage can I carry?. Ryanair [online]. 2017 [cit. 2018-02-14]. Available at https://www.ryanair.com/gb/en/useful-info/help-centre/faq-overview\#1-1

Where we fly. Vueling [online]. [cit. 2018-02-12]. Available at: http://www.vueling.com/en/book-your-flight/where-we-fly

WOODS, Killian. Ryanair is talking to Boeing about adding the biggest planes yet to its fleet.Fora [online]. 2017 [cit. 2018-02-12]. Available at: https://fora.ie/ryanair-boeing-fleet-737-max-10-3443171-Jun2017/


[^0]:    ${ }^{1}$ Chytré létání 1 - Jak to všechno začalo [online]. 2016.

[^1]:    ${ }^{2}$ MABONGA, F.: Introduction to aviation. AUTHORHOUSE, 2015.
    ${ }^{3}$ Aviation. Britannica [online].
    ${ }^{4}$ Louis Blériot, il y a un siècle... [online]. 2009.
    ${ }^{5}$ A Brief History of Aviation by JustFly [online]. 2016.

[^2]:    ${ }^{6}$ The Founding of IATA. IATA [online].
    ${ }^{7}$ CONVENTION RELATING TO THE REGULATION OF AERIAL NAVIGATION SIGNED AT PARIS, OCTOBER 13, 1919. Webarchive.org [online].
    ${ }^{8}$ About ICAO. ICAO [online].
    ${ }^{9}$ Milestones in KLM's History. KLM [online]. 2017

[^3]:    ${ }^{10}$ DOGANIS, Rigas. The airline business. New York: Routledge, 2006., p.296.
    ${ }^{11}$ Guard [online]. 1977.
    ${ }^{12}$ A380-Technology. Airbus [online].
    ${ }^{13}$ Orders and deliveries. Airbus [online].

[^4]:    ${ }^{14}$ Study into the impact of the global economic crisis on airframe utilisation. Eurocontrol[online]. London, 2011.

[^5]:    ${ }^{15}$ PRUŠA, J. a kol.: Svět letecké dopravy. Praha: Galileo CEE Service ČR, 2007.

[^6]:    ${ }^{16}$ BÍNA, L., ŠOUREK, D., ŽIHLA, Z.: Letecká doprava II. VŠO v Praze, o. p. s., Praha, 2007.p.30.

[^7]:    ${ }^{17}$ Beauvais Airport Passenger Numbers. Beauvais Airport [online].
    ${ }^{18}$ Statistics. Charleroi airport [online].

[^8]:    ${ }^{19}$ Information \& Services: WIZZ Discount Club. Wizzair [online].
    ${ }^{20}$ Megavolotea. Volotea [online].

[^9]:    ${ }^{21}$ Fedorco, Hospodka: Airline Pricing Strategies in European airline market.
    ${ }^{22}$ FARHOUD, Nada. What it's REALLY like to work for Ryanair: Staff threatened with punishments if they miss sales targets, work for meagre salaries and pay $£ 300$ for their own uniforms. Mirror [online]. 2017.

[^10]:    ${ }^{23}$ CENTO, Alessandro. The Airline Industry: Challenges in the 21st Century.2008. p.32.

[^11]:    ${ }^{24}$ CENTO, Alessandro. The Airline Industry: Challenges in the 21st Century.2008.p.32.

[^12]:    ${ }^{25}$ Where we fly. Vueling [online].
    ${ }^{26}$ Vueling Fleet Details and History. Planespotters [online]. 2018.

[^13]:    ${ }^{27}$ Own work, data collected from carrier's website.

[^14]:    ${ }^{28}$ Transavia France Fleet Details and History. Planespotters [online]. 2018.

[^15]:    ${ }^{29}$ Own work, data collected from carrier's website.
    ${ }^{30}$ History of Ryanair. Ryanair [online].

[^16]:    ${ }^{31}$ Ryanair Fleet Details and History. Plane spotters [online].
    ${ }^{32}$ WOODS, Killian. Ryanair is talking to Boeing about adding the biggest planes yet to its fleet.Fora [online]. 2017.
    ${ }^{33}$ What cabin baggage can I carry?. Ryanair [online]. 2017.

[^17]:    ${ }^{34}$ Fees. Ryanair [online].
    ${ }^{35}$ Own work, data collected from carrier's website.

[^18]:    ${ }^{36}$ Air France Fleet Details and History. Plane spotters [online]. 2018.

[^19]:    ${ }^{37}$ Own work, data collected from carrier's website.
    ${ }^{38}$ PRAVEEN, Duddu. The world's longest running airlines. Plane spotters [online]. 2015.

[^20]:    ${ }^{39}$ KAMINSKI-MORROW, David. Travel Service to acquire almost all of Czech Airlines. Flightglobal[online]. London, 2017.
    ${ }^{40}$ Destinations We Cover. Czech Airlines [online].

[^21]:    ${ }^{41}$ Aircraft Fleet. Czech Airlines [online].
    ${ }^{42}$ KAMINSKI-MORROW, David. Czech Airlines switches order to A320neo. FlightGlobal [online]. London, 2016.

[^22]:    ${ }^{43}$ Own work, data collected from carrier's website.

[^23]:    ${ }^{44}$ Record passenger numbers for Brussels Airlines in 2017. Brussels Airlines [online]. 2018.
    ${ }^{45}$ Brussels airlines destinations. Brussels Airlines [online].
    ${ }^{46}$ Brussels Airlines welcomes winter season with ten new destinations. Brussels Airlines[online]. 2017.

[^24]:    ${ }^{47}$ Brussels Airlines Fleet Details and History. Plane spotters [online]. 2018.
    ${ }^{48}$ All about hand luggage. Brussels Airlines [online].

[^25]:    ${ }^{49}$ Own work data collected from carrier's website.

[^26]:    ${ }^{50}$ Number of Checked Passengers at Václav Havel Airport Prague Grew by Nearly 18\% Last Year. Prague Airport [online]. 2018.

[^27]:    ${ }^{51}$ Own work, data collected from carriers.

[^28]:    ${ }^{52}$ Picture from reservation system of Czech Airlines

[^29]:    ${ }^{53}$ Picture from reservation system of Air France.

[^30]:    ${ }^{54}$ Own work from Air France reservation system.

[^31]:    ${ }^{55}$ Own work, data from airline websites

[^32]:    ${ }^{56}$ Own work, data from airline websites..

[^33]:    ${ }^{57}$ Own work data from airline websites.

[^34]:    ${ }^{58}$ Own work data from airline websites.
    ${ }^{59}$ Traffic report 2017. Prague Airport [online]. 2018.

[^35]:    ${ }^{60}$ Own work, data collected from carriers.

[^36]:    ${ }^{61}$ Own work, data from carrier's website

[^37]:    ${ }^{62}$ Picture from Skyscanner website.

[^38]:    ${ }^{63}$ Own work, data from carrier's website.

[^39]:    ${ }^{64}$ Own work, data from carrier's websites
    ${ }^{65}$ Own work, data from carrier's websites.

[^40]:    ${ }^{66}$ Own work, data from carrier's websites

[^41]:    ${ }^{68}$ Own work, data from carrier's websites

