

**Wizz Air Operation Analysis at Kosice International Airport****S. Szabo<sup>1</sup>, M. Pilat<sup>2</sup>, S. Mako<sup>3</sup>, P. Hanak<sup>4</sup>, A. Tobisova<sup>5</sup>**<sup>1</sup>*Technical university of Kosice, Faculty of aeronautics, Rampova 7, 04001, Kosice, Slovak Republic, E-mail: [Stanislav.Szabo@tuke.sk](mailto:Stanislav.Szabo@tuke.sk)*<sup>2</sup>*Technical university of Kosice, Faculty of aeronautics, Rampova 7, 04001, Kosice, Slovak Republic, E-mail: [marek.pilat@tuke.sk](mailto:marek.pilat@tuke.sk)*<sup>3</sup>*Technical university of Kosice, Faculty of aeronautics, Rampova 7, 04001, Kosice, Slovak Republic, E-mail: [sebastian.mako@tuke.sk](mailto:sebastian.mako@tuke.sk)*<sup>4</sup>*Technical university of Kosice, Faculty of aeronautics, Rampova 7, 04001, Kosice, Slovak Republic, E-mail: [peter.hanak@tuke.sk](mailto:peter.hanak@tuke.sk)*<sup>5</sup>*Technical university of Kosice, Faculty of aeronautics, Rampova 7, 04001, Kosice, Slovak Republic, E-mail: [alica.tobisova@tuke.sk](mailto:alica.tobisova@tuke.sk)***Abstract**

At the beginning we discussed about operational changes during Wizz air operation at Kosice airport. Statistically the destinations, flight frequencies and total number of all the flights operated in the past are briefly compared to the current single route with larger aircraft. The main aim of the article are to compare the selected months in 2019 depending on manifested load factor and boarded load factor. Another factor is the average ticket prices and their summarization. The last significant factor is the extra charges at the airport thanks to which low cost carriers may increase their profits. A detailed explanation of the extra charges and the total revenue from them are discussed in detail with the resulting fee amount for each selected months. The data scale was chosen for the months of January, February and March 2019.

**KEY WORDS:** *Load factor, airport, average ticket price, extra charges*

**1. Introduction**

Three months in 2019 were selected for this study included load factor, average prices, and extra charges. We talk about manifested and boarded load factor, average ticket prices in January, February and March 2019 and extra final charges for selected months.

Service quality delivery in a cross-national context where authors said that Consumption of a broad range of services ranging from tourism to hospitality by an increasingly global mix of customers, especially from the new millennium of the emerging middle class, is creating an interesting challenge for service providers [1]. Explaining changes and trends in the airline industry: Economies of density, multiproduct scale, and spatial scope where authors said that changes in the shape and size of airline networks have not been explained clearly from a cost perspective based on the finding of increasing returns to density for given route structures and constant returns to scale for variable network size [2]. The economic effects of air transportation where author dealt with the economic strength of world regions it is important to analyse the changing regulatory framework that actuated fundamental impacts on airline competition and air transportation. The various stages of openness in global aviation markets have implications on special patterns of air industry and market power in several continents [3]. Air transport liberalization and its effects on airline competition and traffic growth – an overview where author said that liberalization allows airlines to optimize their networks, and thus may introduce substantial demand and financial uncertainty to airports. Vertical arrangements between airlines and airports may offer a wide range of benefits to the parties involved, yet such arrangements could also lead to airline entry barriers which reduce the effects of liberalization [4]. Flight delays, capacity investment and social welfare under air transport supply-demand equilibrium where authors analyse benefits from aviation infrastructure investment under competitive supply-demand equilibrium. The analysis recognizes that, in the air transportation system where economies of density is an inherent characteristic, capacity change would trigger a complicated set of adjustment of and interplay among passenger demand, air fare, flight frequency, aircraft size, and flight delays, leading to an equilibrium shift [5]. The evolution of low-cost Carrier operational strategies pre- and post-recession where authors presented an analysis of low-cost carrier (LCC) competition strategies for Continental US (CONUS) domestic markets [6]. Is spatial dispersal the dominant trend in air transport development? A global analysis for 2006–2015 where said that economic performance of a city or region is considered to be intertwined with its air travel capability. It is thus important for planners and stakeholders to understand the changes in the global aviation network [7]. The airfare pricing and seat allocation problem in full-service carriers and subsidiary low-cost carriers where author investigated the competitive market situation in the air transport industry considering full-service carriers (FSC), subsidiary low-cost carriers (LCC) and rival LCCs on the flight-leg level while subsidiary LCCs are established by FSCs against rival LCCs to keep the market share and to make more profit [8]. Aircraft routing for on-demand air transportation with service upgrade and maintenance events: Compact model and case study where authors addressed a

problem faced by airline companies that offer on-demand flight services. Given a list of flight requests, the company has to assign its aircraft to these requests while minimizing operational costs. The main issue in this planning process involves the positioning of aircraft when they are not available at the airports of customer departure. The cost of this positioning should be as low as possible, as the customers' expenditures are proportional to the requested flight hours only [9]. Model of passenger behaviour choice under flight delay based on dynamic reference point where authors said that Flight delay has always been a concern of scholars, but in previous studies, there has been little discussion of passenger behaviour choice after flight delay [10]. Market strategy development and innovation to strengthen consumer-based equity: The case of Brazilian airlines where authors mentioned that a brand valued by passengers would be able to convey quality and credibility, adds value to air transport the service, and increases passengers' willingness to pay a premium for tickets [11].

## 2. Operational Changes for Wizz Air Flights from Kosice Airport and New Statistics

Wizz Air following the closure of several lines from Kosice airport based on the opening of a base and a number of destinations from Vienna airport. Airline modified the type of aircraft on last line from Kosice to London Luton. Compared to the original version of the Airbus A320 with a capacity of 180 passengers it deployed the A321 with a capacity of 230 passengers. The larger version of the aircraft was an alternative to keeping the clientele due to cancelled flights. Original destinations KSC-DSA (2 times per week), KSC-TLV (3 times per week), KSC-CGN (2 times per week) and KSC-LTN (7 times per week).

Imagine the full capacity of the A320 that has been deployed on these lines. Table 1 shows the destinations, the frequencies and the total number of passengers carried per week on all the lines with full occupancy.

Table 1

Transported passengers per week with full occupancy from KSC (4 routes)

Destination	Frequency per week x 180PAX	Total PAX
KSC-DSA	2x180	360
KSC-TLV	3x180	540
KSC-CGN	2x180	360
KSC-LTN	7x180	1 260

With entry data from Table 1 Kosice Airport in cooperation with Wizz Air carried 2520 passengers per week at full capacity. After cancelling the lines and leaving only one line to London Luton Wizz Air deployed an Airbus A321 with a capacity of 230. Table 2 shows the number of passengers carried on this line similar to Table 1.

Table 2

Transported passengers per week with full occupancy from KSC (1 route)

Destination	Frequency per week x 230 PAX	Total PAX
KSC-LTN	7x230	1610

In summary after the cancellation of three flights and the deployment of a larger aircraft to London companies lost 910 passengers at full weekly occupancy.

### 2.1. Operational Statistics at Kosice Airport

Months of January, February and March 2019 were selected for this study. Fig. 1 shows manifested Load factor and boarded Load factor values. These two values represent the actual state of booked and in fact carried passengers.

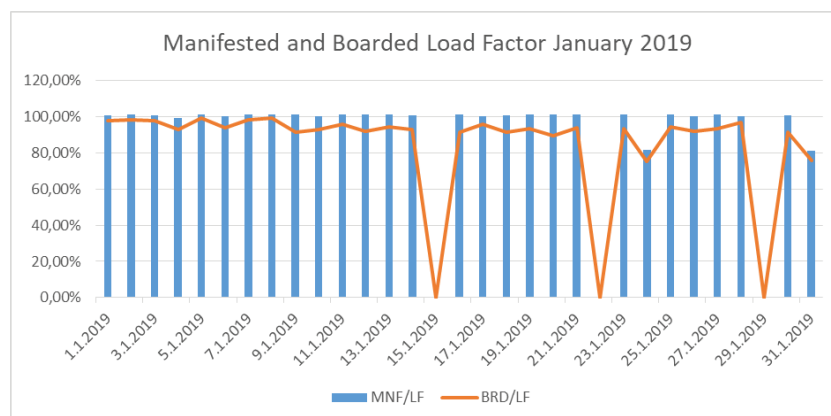


Fig. 1 Load factors January 2019

Days 15.1, 22.1 and 29.1 flights from Kosice and London were not operated. As can be seen Wizz Air in January

had a high load factor around 90%. In the case of two days the load factor dropped below 80% and in the case of 24.1 and 31.1 the load factor was above 80% and in most cases above 90%.

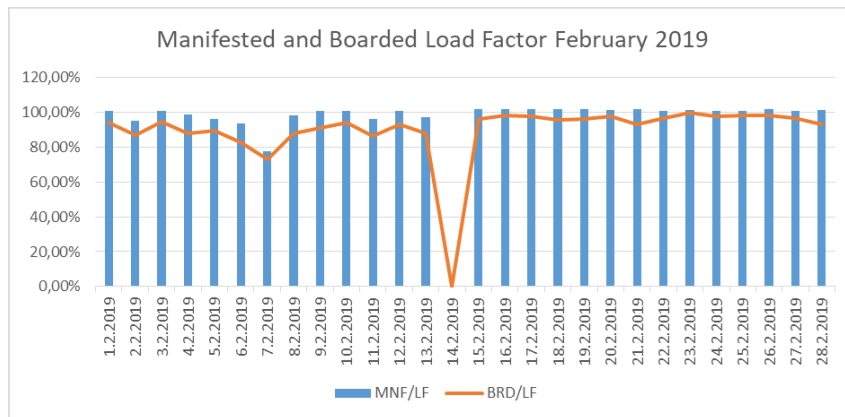


Fig. 2 Load factors February 2019

Fig. 2 shows the February 2019 where a similar load factor can be seen as in January. The only one day of the month when the load factor fell below 80% is 7.2 with a load factor of 73,04%. Most load factor numbers of transported passengers are over 90%. On February 14th the KSC-LTN line was not operated due to the planned cancellation of this flight.

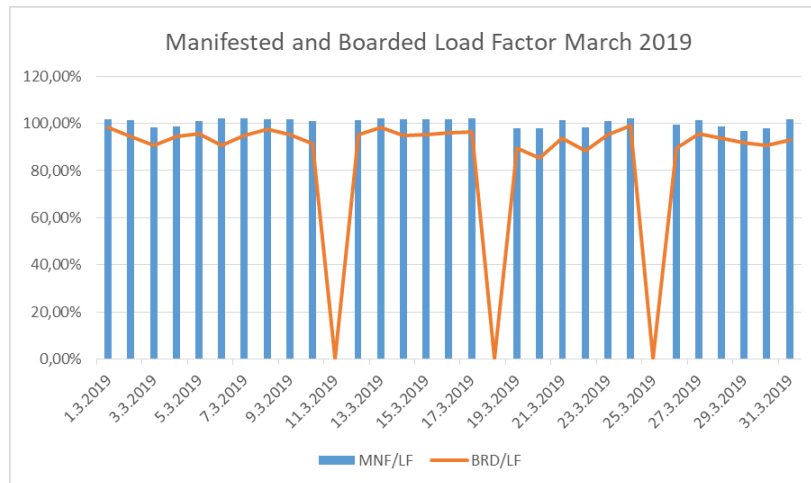


Fig. 3 Load factors March 2019

Fig. 3 shows the data in March when the load factor was high as in previous months. The Load factor value fell below 90% only in 4 cases. It should be noted that the values was just little bit below 90%. On 11, 18, and 25, KSC-LTN flights were not operated by Wizz air.

## 2.2. Average Ticket Price

This section discusses about average ticket prices for selected months in 2019. Fig. 4 shows average price for January 2019.

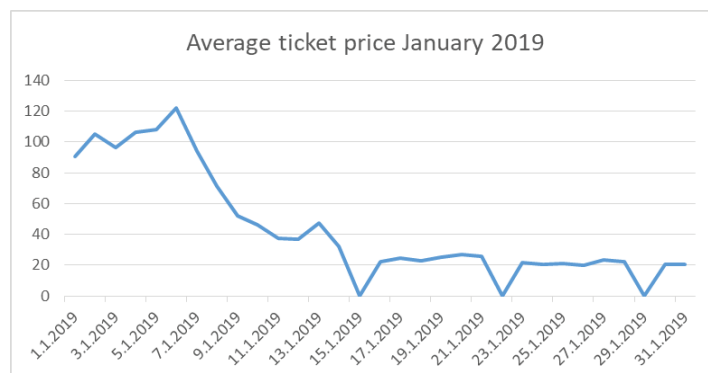


Fig. 4 Average ticket price January 2019

In this month the ticket prices ranged from 19,76 € to 121,91 €. It's obvious that prices at the beginning of the new year will be greater and the company counted with fact about the demand for transport to London. This factor caused a higher ticket price in these days.

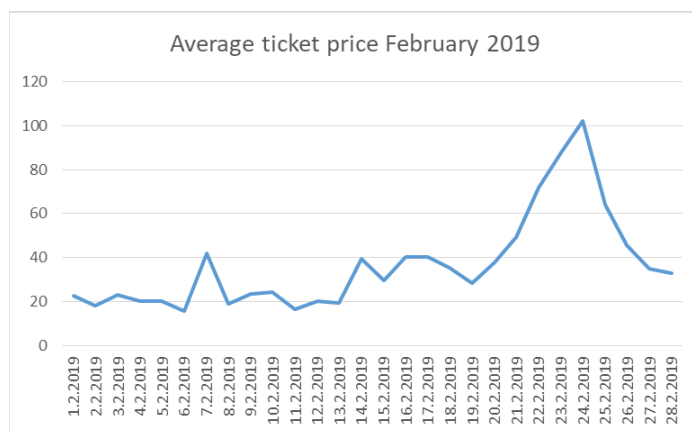


Fig. 5 Average ticket price February 2019

Fig. 5 shows prices for February 2019. Prices this month ranged from 15,64 € to 102,06 €. The rapid increase was only on 24th when the ticket price reached 102,06 €. Most prices fluctuated from 30-50 € and over 50 € at the end of the month.

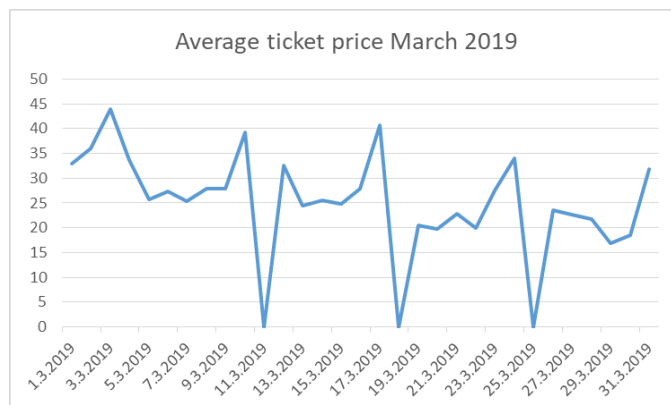


Fig. 6 Average ticket price March 2019

Fig. 6 shows the average ticket prices in March 2019. Prices ranged from 16,88 € to 43,92 €. The cheapest tickets at average prices were on 29th and the most expensive price at the beginning in 3rd March 2019.

### 2.3. Extra Charges

This chapter discusses the extra charges outside the ticket prices that the company has collected from passengers for non-compliance with the Airline transportation conditions. Most often, passengers were paying for the introduction of Wizz air's new rules. The new policy of simplicity meant that if a passenger did not buy Priority boarding on board, he was only allowed to take a small carry-on baggage (backpack size). If this passenger did not meet this rule he paid for his hand luggage under the acronym LCBC. Table 3 shows the fees collected in January for a total of 4360 €. The value of extra baggage allowances was 1875 €. The second important item is that the passengers doesn't print the boarding pass at home and the airport staff needed to print it out at airport. Acronym CHKA for Airport check-in in value 1110 € in January 2019. If you don't purchase your checked baggage you must also pay your luggage at the airport. The abbreviation BAGD / G represents this fee of 605 €. Wizz Air offers passengers baggage types up to 20 kg and up to 32 kg. If the passenger has a luggage up to 20 kg in the ticket and exceeds the limit he will pay an additional 10 € for each kilo. BAGEXC is an abbreviation that represent this extra charge with value 530 € for January. Purchasing priority boarding at the airport reached in January 240 €.

Extra charges at Kosice Airport in February 2019 reached a sum of 4699,71 € where the largest value was hand luggage in the amount of 1950 € and airport check-in value of 1470 €. These fees are shown in Table 4. The different charges compared to January are NCG, MFF and FCHG. Where NCG is a Name change and represents a change of name in the ticket due to marriage unless it matches the name in the reservation with a name on the ID or passport. Missed flight fee under the abbreviation MFF represents a missed flight fee and a subsequent FCHG flight change fee. In some cases it is worthwhile for a passenger to purchase a new ticket that is cheaper than the above-mentioned total sum.

Table 3  
Extra charges January 2019

JAN19	TOTAL
LACBC	1875
BAGD/G	605
BAGEXC	530
CHKA	1110
PRBD	240
<b>TOTAL</b>	<b>4360,00</b>

Table 4  
Extra charges February 2019

FEB19	TOTAL
LACBC	1950
BAGD/G	550
BAGEXC	180
CHKA	1470
PRBD	80
NCG	60
MFF	70
FCHG	299,71
BALANCE	40
<b>TOTAL</b>	<b>4699,71</b>

Table 5  
Extra charges March 2019

LACBC	1 690,00
BAGD/G	330,00
CHKA	1 260,00
UBGL1	78,00
PRBD	120,00
SEAT	10,00
<b>TOTAL</b>	<b>3 488,00</b>

Table 5 shows the extra charges for the last discussed month of March 2019. The largest items were recorded at 1690 € for large hand luggage and 1260 € for Airport check-in.

The total extra charges for March amounted to 3488 €. A new factor in this month is 10 € charge for seat change.

### 3. Conclusion

The conclusion of this study points to significant operational changes of the carrier at Kosice airport. Route cancellations were caused by the relocation a lot of aircraft to Vienna International Airport where low-cost companies had a difficult time entering the market. Leaving one KSC-LTN line and deploying a larger Airbus A321 the airport and air carrier lost 910 passengers per week in full occupancy. What is an acceptable number since three routes with load factor over 80% have been cancelled.

Route occupancy in selected months was high at over 95% as seen in this study. Average prices for discussed months were volatile. Prices ranged from 15 € to 120 € where prices depended on several factors such as early purchase, number of places sold and others.

An important factor, not only for Wizz Air, but also for other airlines are the extra charges at the airport for not complying with the detailed transport conditions of the carriers. Wizz Air earned 12 547,71 € at extra fees on KSC-LTN flights in selected months.

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