

# THE FLIGHTS IN KOŠICE AND POPRAD BEFORE CRISIS

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This article describes the issue of flights between various airports. The original data was used in analysis from some airlines. The schedule flights also as charter flights were surveyed in analysis. The primary analysis was appointed to Košice and Poprad airport.

Key words: schedule flights, analysis, airlines, passenger analysis, airport.

## 1 INTRODUCTION

To determine the trends in number of passengers of chosen flights from/to Košice International Airport and Poprad-Tatry International Airport was used the datasets from XX airlines<sup>1</sup>. The datasets include Departure airport and Arrival airport, identification of time (concrete month and year), number of flights (NoF) on this link between these airports in concrete month and number of passengers (NoP) on board of these flights. From this information we calculate the Average number of passengers (ANoP) which was calculated as

$$ANoP = \frac{NoP}{NoF}$$

Košice International Airport is the second biggest in Slovak Republic. It is situated 6 km on South from the centre of Košice. One runway is used for taking off and landing airplanes. The parameters of runway are in next Table 1.

**Table 1: Parameters of runway of Košice International Airport (KSC)**

|        |        |
|--------|--------|
| Length | 3100 m |
| Width  | 45 m   |

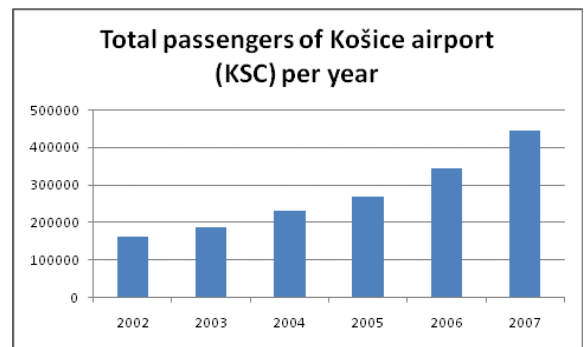
The orientation of runway is 09°22,7'/189°23,1'<sup>2</sup>. The maximum capacity of airport terminal is about 700000 passengers per year. In two terminals 8 check-in points and 6

<sup>1</sup> In whole paper we use „XX Airlines“ as company name because it is not allowed to use the real name of airlines from which are these data. Other information and values are not changed.

<sup>2</sup> This azimuth is based on magnetic orientation system.

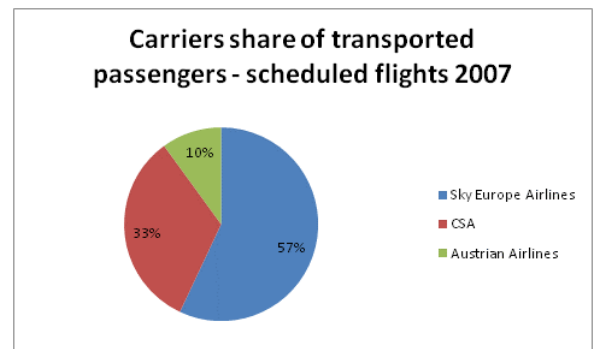
departure gates are situated. The arriving passengers could use two arriving halls. The total passengers of Košice airport per year has rising trend. In 2007 about 450000 passengers used this airport through schedule or charter flights. When we check the situation in schedule flights, the Sky Europe Airlines has about 57 % share. The next two carriers are shown in Figure 2.

**Figure 1**



(1)

**Figure 2**



The second international airport situated in East Slovakia is Poprad-Tatry International Airport (TAT). This airport is the gate to High Tatras for the tourist, mostly from East Europe. The total capacity of airport terminal is about 300 passengers per hour (150 arrival/150 departure). The altitude of airport is the highest in Central Europe (718 m/2356 ft). The airport is situated 5 km to the west from the centre of Poprad. One runway is used for taking off and landing airplanes. The parameters of runway are in next Table 1.

**Table 2: Parameters of runway of Poprad-Tatry International Airport (TAT)**

|        |        |
|--------|--------|
| Length | 2600 m |
| Width  | 45 m   |

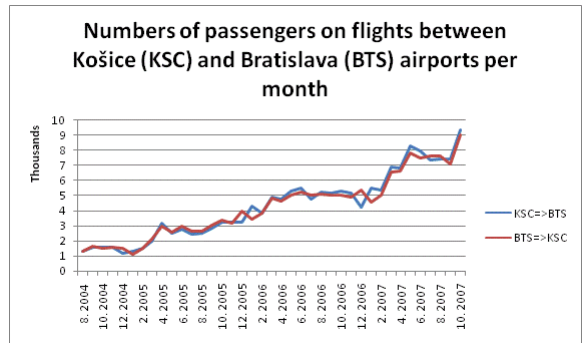
The orientation of runway is  $90^{\circ}/270^{\circ}$ <sup>3</sup>. In 2007 over 60 thousand passengers travelled through Poprad-Tatry International Airport. In 2006 it was only about 40 thousand. From Poprad-Tatry International Airport schedule flights are directed only to London Luton.

**2 SCHEDULE FLIGHTS BETWEEN KOŠICE AIRPORT (KSC) AND BRATISLAVA AIRPORT (BTS)**

The most used flight link from and to Košice is air line Bratislava airport (BTS) – Košice airport (KSC). The rising of number of passengers could be seemed through whole time which we use for description. Only in 11.2006 fell down the number of passengers from Košice (KSC) to Bratislava (BTS). In next month the number of passengers was fallen down for air link in opposite direction from Bratislava (BTS) to Košice (KSC). By linear regression analysis the trend of number of passenger could be drawn by next function, which is  $y = 179,35x + 673,71$  and the R-square criterion has the value  $R^2 = 0,93$ . The opposite link could be described by  $y = 188,51x + 548,97$  and the R-square criterion has the value  $R^2 = 0,9219$ .

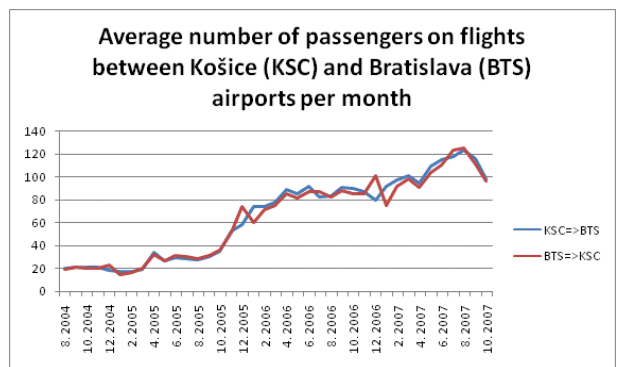
<sup>3</sup> This azimuth is based on magnetic orientation system.

**Figure 3**



The rising of average number of passengers on flights was very slow from the beginning of the described time to the end of the year 2005. We checked very fast rising average number of passengers on flights from Košice to Bratislava and also from Bratislava to Košice in October 2005. This grow was stopped in April 2006 and til it the average number of passengers was stable. From the beginning of the year 2007 the increasing of average number of passengers is checked. This increasing reached the top in August 2007. After this month, the average number of passengers on flights between these two destinations is fallen down.

**Figure 4**

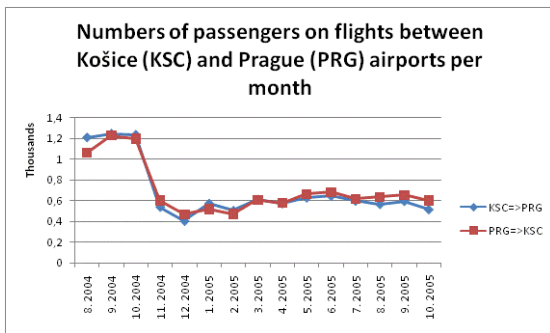


**3 SCHEDULE FLIGHTS BETWEEN KOŠICE AIRPORT (KSC) AND PRAGUE AIRPORT (PRG)**

As we can see on the next Figure 5, the number of passengers on flights between destinations Košice airport (KSC) and Prague airport (PRG) are stable (or the increasing is very

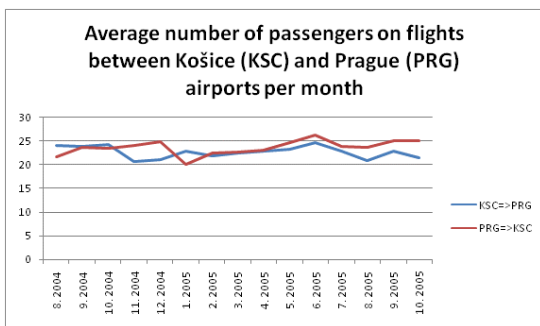
slow) from November 2004 to October 2005. In October 2007 the XX airlines restarted this link again and the number of passengers for this first month was lower than the value in October 2005 in both directions (KSC=>PRG Only between August and October 2004 the number of passengers per month was higher than 1000 passengers/month. In this time the airlines cancelled this link in both directions. For passengers from Košice to Prague the airlines offer the link through Bratislava airport where they have to change the flight. The situation in opposite direction is the same.

Figure 5



The average number of passengers on flights between Košice airport (KSC) and Prague airport (PRG) is relatively stable when its values was achieved in interval from 20 to 25 passengers per flight in actual month. The load factor of link from Košice (KSC) to Prague (PRG) is lower than load factor of opposite link. Only in October 2007 the average numbers of passengers on flights was over four times higher than the average numbers of passengers in October 2005.

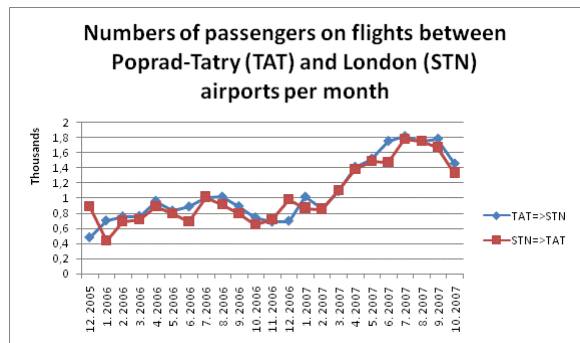
Figure 6



#### 4 SCHEDULE FLIGHTS BETWEEN POPRAD-TATRY AIRPORT (TAT) AND LONDON STANFORD AIRPORT (STN)

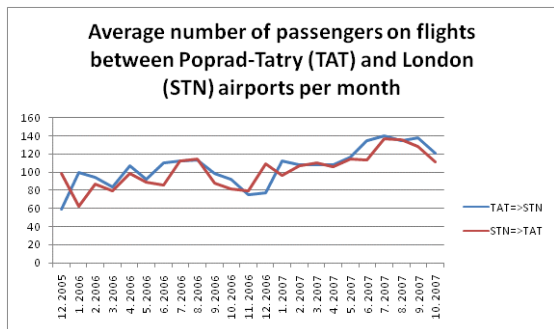
XX airlines have only one schedule link from Poprad-Tatry airport (TAT). The destination of this link is London Stansted (STN). The number of passengers per month gains the top in the summer 2007. In October 2007 the number of passengers per month was decreased. The rising of number of passengers per month on these flights was slow through whole of year 2006 and it was in few waves. From January 2007 to July 2007 the number of passengers on flights per month rises nearly two-times. In this time XX airlines offer flights to London also from Bratislava airport. In this time the flights from Poprad-Tatry airport are arriving to London Luton airport (LTN).

Figure 7



Average number of passengers on flights per month is higher in summer months than other time. We can describe the increase of it from 2006 to 2007. The situation in 2007 is similar than situation in 2006. In 2006 from September to December the decreasing of average number of passengers is checked.

**Figure 8**

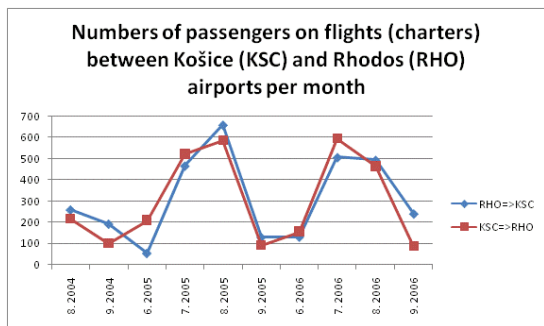


### 5 CHARTER FLIGHTS FROM (TO) KOŠICE AIRPORT (KSC)

In previous part of this paper we described the situation about schedule flights from/to Košice airport (KSC). In this part the charter flights will be shown. The charter flights on Košice airports are used mostly in summer months.

The season of charter flights from Košice (KSC) to Rhodos (RHO) is in summer months from June to September, included. The highest number of passengers on board of flights is in July and August. On next Figure 9 the situation of load factor of flights are described.

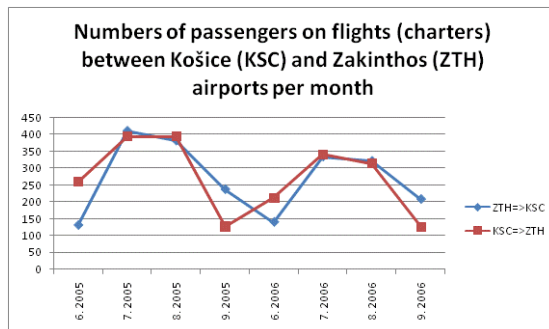
**Figure 9**



The popularity of Greece islands in Slovak tourists is high. The holiday in Zakinthos is very famous. The using of Košice airport for charter flights to Zakinthos has decreasing tendency. The number of passengers travelled to Zakinthos is lower which was a year before (comparing 2006 to 2005). The decreasing tendency of flights between Košice airport (KSC) and Zakinthos airport (ZTH) is based on higher using of Bratislava international airport (BTS) for charter flights of travel agencies.

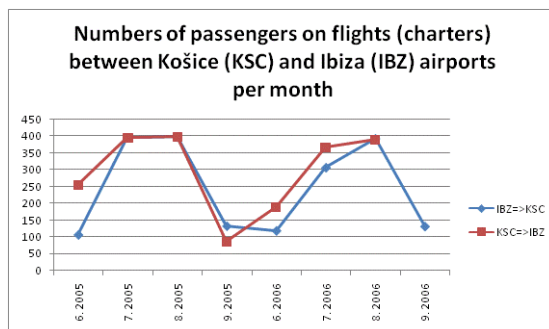
The tourist use individual transport or schedule flights from Košice to Bratislava and then they use the charter flights from Bratislava which is included in to holiday.

**Figure 10**

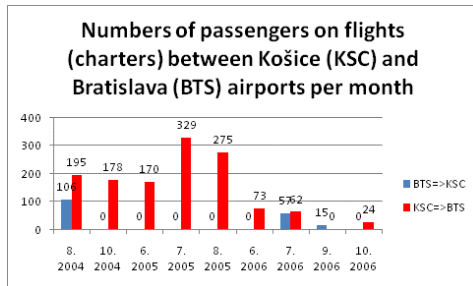


The situation of charter flights from Košice airport (KSC) to Ibiza airport (IBZ) is similar to the flights between Košice airport (KSC) and Zakinthos airport (ZTH). The flights are realised only through summer months from June to September. The frequencies are usually per week, or by requirements of travel agencies. The number of passengers on these flights through years 2005 and 2006 are shown on Figure 11.

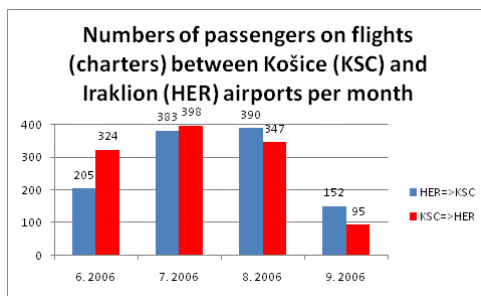
**Figure 11**



The charter flights are used mostly from Košice airport (KSC) to Bratislava airport (BTS). The most of them are only the first part of journey to holiday, when tourist also come on board in Bratislava and then plane flights to real destination. The number of passengers transported from Bratislava airport (BTS) to Košice airport (KSC) is markedly lower than in opposite direction.

**Figure 12**

The flights to Iraklion airport (HER) were realized only in the summer 2006. The number of passengers in June, July and August was high, but the number of passengers in September was only in the level of third of previous month. In year 2007 the charter flights from Košice to Iraklion were not carried on.

**Figure 13**

## 6 CONCLUSION

Košice International Airport (KSC) is used only for about half of its year capacity. XX airlines realizes only two Schedule flights from it, to Bratislava International Airport (BTS) and to Prague International Airport (PRG) in Ruzyně. In this paper we showed the number of passengers on board these schedule flights. Also XX airlines carry on schedule flights from Poprad-Tatry International Airport (TAT) to London-Stanford. In this time this link is transferred to London Luton. The charter flights from and to Poprad-Tatry International Airport are not very often. Charter flights from Košice airport are realized mostly in summer months and are pointed to

Greece and Turkish summer resorts on coast of Aegean Sea.

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