

Air transport in The Conditions of The Slovak Republic

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This contribution deals with the analysis of the air transport position in the Slovak Republic. It characterises the crucial elements of the aviation infrastructure and main entities of the transportation system of air transport. The paper describes real performances in the area of passenger air transport and freight air transport in the Slovak Republic. It presents the basic tendencies of further air transport development in the Slovak Republic.

1. INTRODUCTION

Air transport is an inseparable part of the transport system in the Slovak Republic. Its position and comparison with other kinds of transport come out of particular geographic, economic, social, historic and other conditions in the Slovak Republic. Slovakia as a comparatively small country with a dense network of ground transport categories takes advantage of air transport mainly on the international level including the transit one. In the domestic air transport it is the passenger transport that is being more developed than the freight transportation. With respect to proportionally short distances (the longest distance between two towns is 428 km), the most significant aspect of the air transport, i.e. the speed, is decreased. Besides this, in the Slovak Republic, there is a wide accessibility to towns and regions by the land means of transport (roads, railroads) showing acceptable parameters in the area of transportation speed as well. Despite this, air transport plays an important role in managing the sustainable development of mobility and in addition to the undoubted international role it also contributes to the development of particular regions.

2. DESCRIPTION OF AIR TRANSPORT INFRASTRUCTURE IN THE SLOVAK REPUBLIC

Transport infrastructure of the Slovak Republic generally falls behind the developed European countries in quality parameters. Besides historical reasons this is predominantly the consequence of limited financial sources for its development. In spite of this, the measures for the proportional development of particular branches of transport infrastructure are being carried out. The using of advantageous geographic position of the Slovak Republic, high density of existing transport infrastructure and its linking to European transport networks are the basis for the further development of transport infrastructure.

The document “Transport Policy of the Slovak Republic to 2015” characterizes the airport network as a sufficiently dense and the deployment of airports as advantageous. It is proved by the fact that there is practically no place in the Slovak Republic more than 100 km distant from an airport. The airports are characterized by the proportionally quality runway system. However, there is a need for passenger processing facilities and mostly freight processing facilities; the manipulation equipment is not sufficient, storage facilities are missing and a modern linking (railways and motorways) to the most important international airports is absent.

Air Transport Infrastructure includes the following facilities:

- Lands,
- Airport operation areas (runways, airstrips, stop-ways, turn-offs, standing and airplane processing areas, airplane parking standing, areas for defrosting airplanes, etc.),
- Airport buildings and facilities (processing terminals, car parking, hangars, energy facilities, and other logistics facilities),
- Facilities for the airport protection (fencing, controlling and signalization facilities, etc.),
- Facilities of flight operations handling (airport visual navigation means, radar, navigation and communication means outside the airports),
- Emergency and other air transport service facilities (meteorological service, fire brigade service, emergency, maintenance, airplane handling on the ground, etc.)
- Access road communications.

The air transport infrastructure creates higher potential than the one which is being used at present. The amount and location of international

and regional airports of the Slovak Republic create suitable conditions for the further development of air transport. For the necessary modernization of the processing areas of the most overextended international airports, the sources are gradually generated. Further development of infrastructure is dependant on fulfilling the measures of the national programme of civil air transport protection from the acts of illegal infringement.

Basic data on the infrastructure of air transport of the Slovak Republic are presented in Table 1 and Figure 1.

Table 1. Air Transport Infrastructure of the Slovak Republic

Facility	Data
public airports - total	14 pieces
non-public airports - total	12 pieces
military airport - total	1 piece
heliports - total	8 pieces
airports for aviation works - total	64 pieces
navigation towers - total	21 pieces
land radars - total	7 pieces
airplanes (under 9000 kg) - total	cca 590 pieces
airplanes (over 9000 kg) - total	cca 25 pieces

Source: Aviation Authority of the Slovak Republic

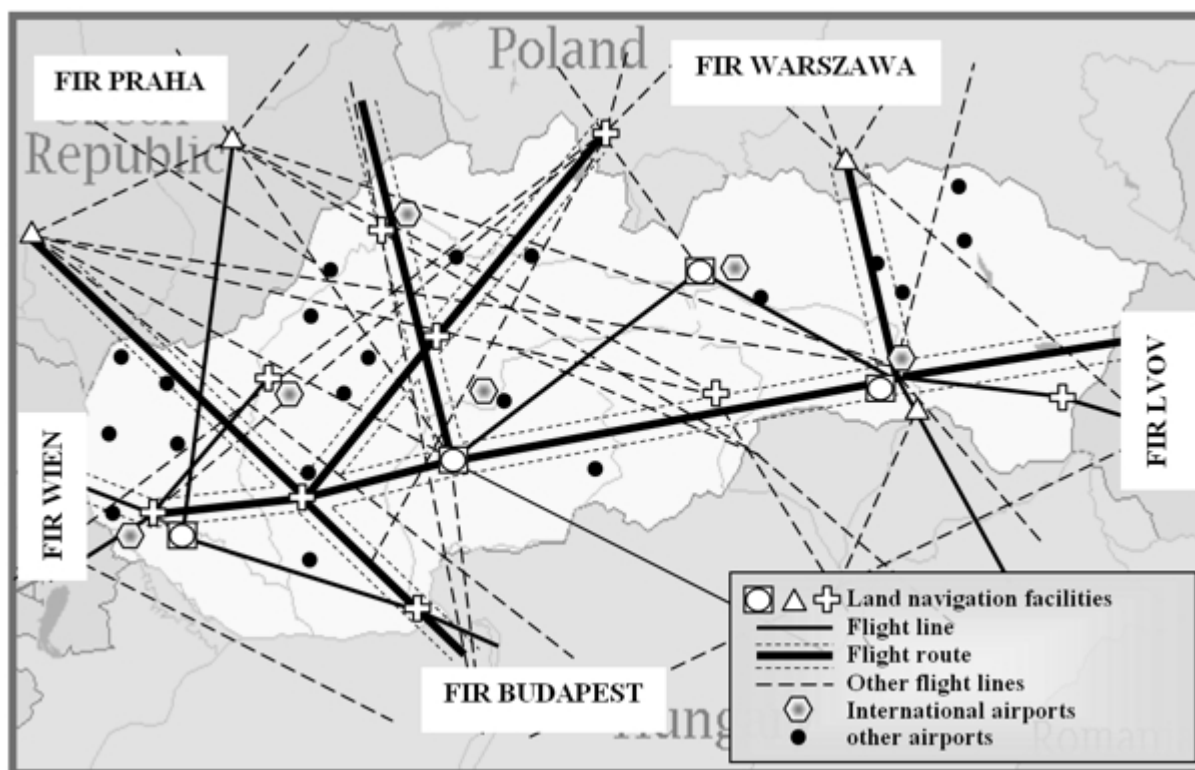


Figure 1. Air transport infrastructure of the Slovak Republic

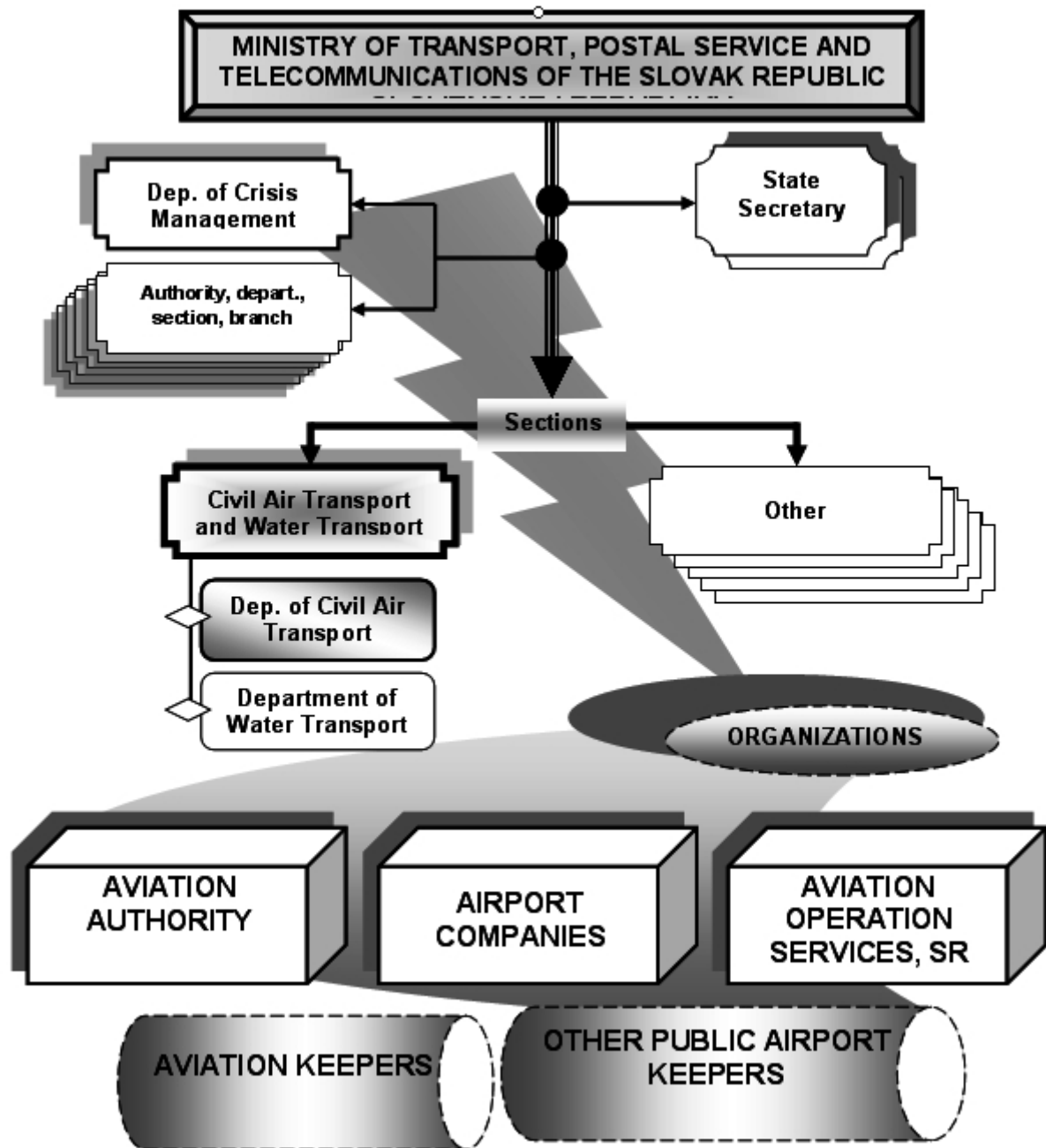


Figure 2. Air Transport Entities

The most important components of air transport infrastructure are the airports with international operation. Among eight airports permitted to have besides domestic also international flights are the airports actually used in *Bratislava, Košice, Poprad, Sliach, Žilina a Piešťany*. The airport Sliach is a military airport with civil operations, the remaining ones are run by air joint-stock companies.

The direction scheme of air transport main entities is in Figure 2.

For the purposes of complex managing and providing aviation navigation services the state enterprise *Letové prevádzkové služby SR, š.p. Bratislava* (Aviation Operation Services of the SR, Bratislava) is established. Besides aviation operation services this entity provides the aviation

telecommunication service, aviation information service and investigation and safety service.

There are five aviation keeper certificate proprietors in the Slovak Republic. Basic characteristics of the given entities are available in table 2.

Table 2. Aviation Keeper Certificate Proprietors

Company	Kind of Transport	Airplanes	
		Type	Number
AIR SLOVAKIA, Ltd., Bratislava	Passenger domestic and international transport by air-planes for 21 passengers and more	B-737	4
		B-757	2
SEAGLE AIR, Ltd., Trenčín	Freight domestic and international transport by air-planes with max. flight weight more than 10 000 kg	A-320-200	2
		B-737-300	4
		L-410	1
SkyEurope Airlines, a.s., Bratislava	passenger (less than 20 passengers) freight (flight weight less than 10 000 kg)	B-737	4
VIP WING, Ltd., Bratislava		ATR-72	3
		CESSNA 525	2
	L-410	1	
Opera Jet, Ltd., Bratislava		CESSNA 525	4

Source: Aviation Authority of the Slovak Republic

In addition there are 24 issued permissions for carrying out the aviation works, most frequently for the applications in the air, surveys, observations, patrolling, building constructions and emergency situation operations.

The execution of the state regulation and state professional supervision in the area of civil aviation is managed by the Aviation Authority of the Slovak Republic, which is a budgetary organization linked to the state budget of the Ministry of Transport, Postal Service and Telecommunications of the Slovak Republic.

3. PASSENGER AND FREIGHT TRANSPORTATION BY THE AIR TRANSPORT OF THE SLOVAK REPUBLIC

Air transport performances are besides other factors significantly dependant on following particular international measures and regulations. The Slovak Republic is as a member state of the

European Union obliged to implement its documents. The Council Directive 96/67/ES on the access to the market of ground handling services at the community airports is one of them as well.

The Slovak Republic implemented this directive into domestic regulations on January 1, 2006. The branch of civil aviation from the civil aviation and water transport section of the Ministry of Transport, Postal Service and Telecommunications of the Slovak Republic is in charge of it. A complete liberalization to the market access is exercised at the airport in Bratislava. The Aviation Authority of the Slovak Republic specifies general criteria on managing the airport traffic operations.

The measures of the mentioned directive are mostly concerning big airports. In the conditions of the Slovak Republic it is the M.R.Štefánik's Airport in Bratislava. In 2007, this airport was evaluated in the following way¹:

- Among 27 countries of the EU it was the 24th in the international passenger transportation (criterion: number of passengers) leaving behind Estonia, Luxemburg and Slovenia.
- Among 24 countries (without Luxemburg, Cyprus and Malta where no comparable data were available) it took the last position in freight transport (criterion: number of the freight weight in tons).

One of the characteristic factors used in air transportation statistics is the number of airplane movements (taking offs and landings). In recent four years, this factor in the flight information register (FIR) Bratislava has slightly increased, showing annually almost three per cent growth. During a year, the airplane movement number is uneven. The demonstrated minimal figures in February increased even two-fold in July and August.

The airplane movements' statistics in FIR Bratislava is depicted in Figure 3.

In recent years the passenger transportation by air transport has progressively increased. It is mostly the international airport in Bratislava that has a regular air connection to the majority of European countries and to Israel. The overview of

¹ Study on the Impact of Directive 96/67/EC on Ground Handling Services. Aachen, ARC, 2009

regular air transport service destinations is presented in Figure 4.

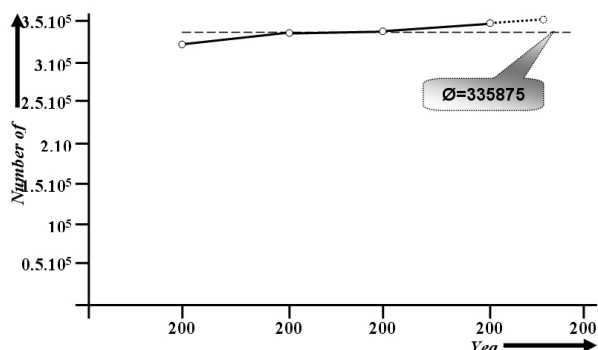


Figure 3. Statistics of movements in FIR Bratislava
Source: Flight Operation Services

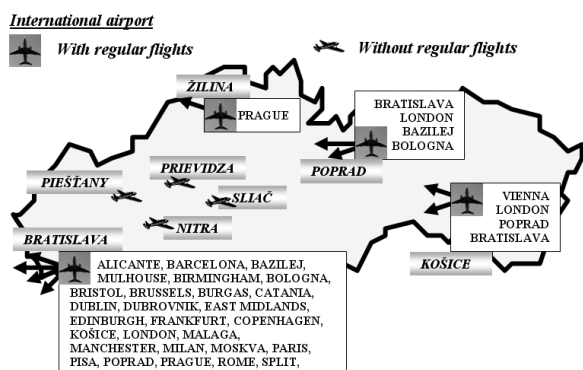


Figure 4. Regular Air Transport Service

The number of transported people by air transport in total figures (thousands of passengers) reaches approximately just 1 % of the total number of transported people (SA SR data for 2007). These figures are almost solely connected with the performance of international airports of the SR, while Bratislava airport dominates with its circa 78 %. 98 % of the transported passengers represent the commercial air transport; the rest is represented by other performances. In the recent years it has been possible to observe a weak trend of increasing the volume of domestic transport, but yet in 2007 the international transport represented 86 % of the total number of transported people.

A more noticeable portion in air transport is documented by the transportation performances (shown in thousands of person-kilometres). While the portion of public air transport in 2000

represented just 2 % of the overall transportation performances of all public transport branches, in 2007 this portion increased to 27 %. Under the comparatively small annual divergences of the overall transportation performances the long-term decreasing trend of passenger road and railroad transport has been carrying on as well as the dramatic long-term increase of transportation performances in the passenger air transport.

The trend of international airport performances in the SR is presented in Figure 5.

The development of transportation performances is shown in Figure 6.

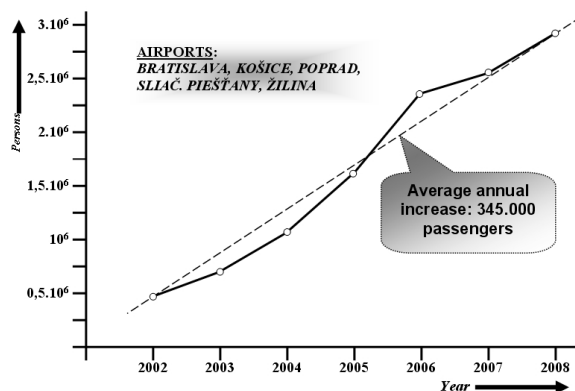


Figure 5. International airports performances - Passenger air transport
Source: Annual Reports MTPST SR

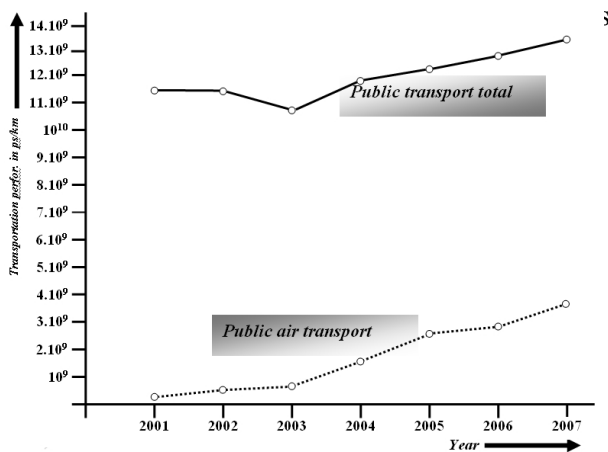


Fig. 6. Transportation performances in passenger air transport
Source: SA SR

In the area of freight air transport the portion in the total amount of transported freight by public transport is insignificant. The annual freight volume in the SR is in the scale of 220.10^6 - 250.10^6 tons, among which the air transport participates just with the figures from 40 to 1 320 tons

The SR airport performances in freight transport are presented in Fig. 7.

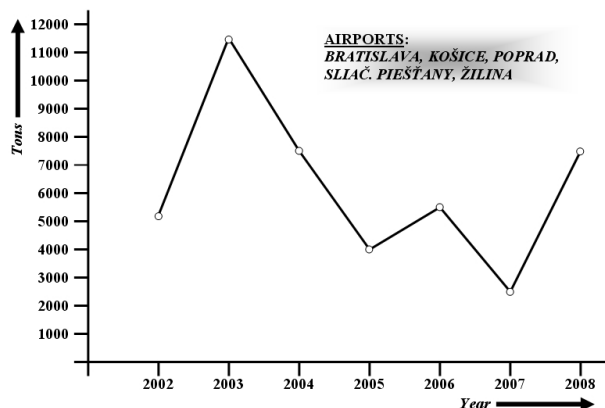


Figure 7. Performances of international airports of the SR in air freight transport

Source: Annual Reports MTPST SR

Bratislava airport represents circa 90 % of the aforementioned performances. More than 98 % of the performances are represented by commercial air transport which is almost solely international (up to 99 %).

In the same way, the portion of air freight transport to the total transportation performances flowing between 800 million and 1 milliard ton-kilometres is just about 1 % (in 2007).

4. A PERSPECTIVE AND BASIC TRENDS IN THE DEVELOPMENT OF AIR TRANSPORT OF THE SR

The trends in air transport in the Slovak Republic come out of fulfilling international agreements, standards and running implementation of the EU legislation. The necessary documents are being created and approved while respecting the national conditions and specificities of the Slovak Republic. The strategic document approved in June 2005 is "Dopravná politika SR do roku 2015" (Transport Policy of the Slovak Republic to 2015).

The document that follows this policy is „Koncepcia leteckej dopravy SR na obdobie do roku 2010“ (The SR Air Transport Conception for the Period to 2010) approved in 2008.

According to these documents, air transport in the Slovak Republic has been using its potential insufficiently so far. It is necessary to sort out the financing of air infrastructure development in the context of total transport infrastructure. This is the condition for maintaining the transport accessibility and at the same time the attractive character of the Slovak Republic area as a whole, and its particular regions mainly from the perspective of potential investors.

Within the priorities of set up goals and for the development of air transport the following priorities are inevitable

- **Liberalization of transport market** – transparent attitude of air carriers to the market, preserving public character of airport infrastructure, effective using of aviation space, operating public airports on the principles of regulated equal economic competition.
- **Harmonization of the conditions in transport market and charging the users** – differentiation of fees according to the level of negative consequences on environment, to derive airport fees from the costs of provided services at an airport, to differentiate economically the regional and airport service of managing flight operations
- **Access to traffic infrastructure** – transparent assigning of time intervals for particular carriers
- **Modernization and development of air infrastructure** - preserving public character of airport infrastructure, increasing the quality and safety of airport and airline operations, modernization of international airports including the regional ones.
- **Increasing internal safety and safety protection in transport** – increasing safety in the area of carrying out the transport operations, increasing the standard of providing services oriented towards clients, verifying airline carriers and airport keepers from the point of view of qualification, creating the airport safety systems.

It is not possible to restrict the managing of the air transport services growth as a part of sustainable mobility development just to the area of the Slovak Republic. The zone of interest of the

Slovak civil aviation also includes surrounding states.

5. CONCLUSION

Air transport as an integral part of transport system has a set of specificities and special conditions for making it real. The effective use of its advantage is significantly tied with the scale of operation space, which is a certain retarding moment mainly under the conditions of smaller countries. High financial demands not just for building and maintaining the infrastructure, but the operations as such need to be considered. One of the factors of increasing costs is the necessity to approve consistently stricter and more demanding measures in the area of air transport safety. This is also the cause of many airline carriers' bankruptcies. According to the study „*Study on Consumer Protection against Aviation Bankruptcy*“, in the period of 2000-2008, 79 European airline companies went bankrupt, even if majority of them were small regional carriers. In the meantime, even the Slovak airline carrier SkyEurope Airlines has announced its bankruptcy. That is why the scale of regular passenger transportation between the Slovak Republic and European destinations has been temporarily

restricted. Consequently, the performance of the biggest Slovak international airports is being decreased. This is also one of the instances of unexpected influences on the function of air transport in a comparatively small country.

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