THE ANALYSIS OF THE COMMERCIAL SECTOR OF LITHUANIA AVIATION

Jonas Lazauskas

Vilnius Gediminas Technical University, Department of Transport Management
Plytinės Str. 27, LT-2016, Vilnius, Lithuania
Ph: (+370) 52744780. E-mail: jonlaz@ti.vtu.lt

The article deals with the commercial sector of Lithuanian aviation. It is a constituent part of Lithuanian economy that is open to novelties in the spheres of science and technologies; it does not require much stock and has qualified specialists.

This article examines the particularities of the companies that provide transportation service, their interrelationship, the division of traffic flows according to the airlines companies, the routes of the airlines companies and parks for their planes. The data is compared with Latvian national airlines "Air Baltic" and Estonian State Airlines “Estonian Air”. Attention is paid to the situation of Lithuanian airports and landing-fields, moreover the rates of Lithuanian, Middle and Eastern Europe airports are being analysed, as well as the demand for aviation specialists in Lithuania in the years 2004-2009.

Keywords: air transport, airlines companies, carriers of passengers, freight carriers, traffic flows, airport

INTRODUCTION

Lithuanian civil aviation sector is an integral part of the Lithuanian economy, which is open to scientific and technical innovations, is rather cost-effective, and has qualified specialists. One of the best aviation infrastructures in the Baltic States is founded in Lithuania with considerable experience in aircraft construction and production.

The major aim of the civil aviation sector is providing passenger carrying and cargo transportation services. The production is directly influenced by the following factors: 1) industrial enterprises producing mechanical systems, engines, computers, electronics, software, materials, and chemicals for aviation; 2) state regulatory institutions issuing laws and regulatory acts, aviation administration, customs, borders; 3) services covering insurance, leasing, telecommunications, technical maintenance of airplanes, supply of fuel and oils, passenger catering; 4) infrastructure covering international airports, other airports, aerodromes, air space control; 5) air transport covering the largest airlines, regional airlines, low cost airlines, charter airlines, cargo airlines and small aviation.

The buyers of air transport sector products, i.e. passengers and cargo senders, also have impact on the activity of other economic sectors. Passengers in their turn are using trains, car rent, parking lots, hotels, restaurants, retail trade, travel agencies, financial services and cargo senders/consignees are using forwarding, carrying, storage, travel agencies, and posting services.

PASSENGER AND CARGO CARRIERS

As at 1 January 2004, ten airlines were registered in Lithuania providing regular and irregular commercial passenger carrying services. These were: the airline AB Lietuvos Avialinijos (Lithuanian Airlines LAL), AB Aviakompanija Lietuva, UAB Aptatas, UAB Aviavilsa, UAB Klaipėdos Avialinijos, UAB Transviabaltika, UAB Aurela, UAB Aviapaslauga, UAB Gintarinės Avialinijos, and UAB Danų Oro Transportas (Danish Air). These air carriers were providing flights by 31 aircrafts. For better understanding of the current situation, each of the companies should be reviewed individually.

The Lithuanian Airlines (LAL) is a national air carrier of the Republic of Lithuania. 100% of the company’s authorised capital is owned by the Republic of Lithuania represented by the State Property Fund The Lithuanian Airlines was established in September 1991. The airline is being a member of the International Air Transport Association (IATA) since 1992 and of the European Regions Airline Association (ERA) since 1995. Its core activity is focused on regular air transport services. In 2003, the company had four subsidiaries:
The airline LAL has signed agreements on common routes with KLM, SN-Brussels Airlines, Finnair, Iberia, CSA Czech Airlines, and LOT Polish Airlines for flights to Amsterdam, Brussels, Helsinki, Prague, and Warsaw.

In 2003, the fleet of the airline LAL consisted of 7 airplanes of two types: Boeing 737 and SAAB-2000. The 5-year rent agreement was signed for two airplanes Boeing 737-500. These airplanes changed the before used Boeing 737-300, which belong to 2nd noise category, therefore their exploitation is forbidden in Lithuania since 2005.

In 2000, the airline LAL changed its business strategy and at the moment is developing routes with business passengers dominating and is refusing the routes taking less than 5 flights per week. In 2004, LAL was offering regular flights to the following cities: Kiev, Amsterdam, London, Frankfurt, Moscow, Helsinki, Copenhagen, Stockholm, Paris, Brussels, Berlin, and Tallinn. In 2003, the flight to Paris was cancelled due to the low number of passengers. In 2003 the number of flights to Amsterdam was increased from 10 to 13 and to London from 7 to 10. In London LAL changed Heathrow airport for Gatwick since the airport service costs are lower than those in Heathrow. The increasing number of passengers for flights to Amsterdam was conditioned by the common code agreement signed between LAL and KLM airlines, which ensured convenient junctions, coordinated prices and schedules. Similar reasons influenced the increase in number of passengers flying to London. LAL refused flights “from point to point” and is focusing on the routes offering good junctions from the largest European airports. In flights to Amsterdam and London, unlike in flights to e.g. Frankfurt and Copenhagen, LAL is the only airline to take flights to these cities from Vilnius.

The Technical Department of Lietuvos Avialinijos is certified according to JAR-145 standards. In 2003, LAL signed an agreement with the French airline Regional on periodical C-check of airplanes Saab 2000 and with Air Botnia, a subsidiary of SAS, on periodical C-check of airplanes Saab 340a. These agreements enable efficient and periodical CoC checks of airplanes registered in EU and open the possibilities for air transport development and higher profit seeking.

In 2003, LAL held 42% of flights in Vilnius airport passenger market. Compared to 2002, LAL market share reduced by 4%. The market share changes resulted from the following factors:

- New carriers on the market (Czech Airlines, flying to Vilnius since 2001);
- Change of the airlines flights frequency and volumes;
- External factors: global economic and political tendencies;
- Communication between the airlines.

LAL holds about 46% of the market share in Lithuania.

The main LAL competitors in the Lithuanian market are the following: SAS, Lufthansa, Austrian Airlines, Finnair, Estonian Air, Air Baltic, Czech Airlines. Most of these airlines are members of large alliances. SAS, Lufthansa, Austrian Airlines belong to Star alliance, Finnair belongs to One-world alliance, Czech Airlines to Skyteam, LOT to Qualifyler (however this alliance collapsed due to financial problems of its main members and LOT are negotiating for partnership with Star alliance).

Traffic flows distribution by airlines in 2004 is shown in Figure 1 below.

As of 1997, the shareholder of Aviakompanija Lietuva is the national AB Lietuvos Avialinijos, whose shares are owned by the republic of Lithuania represented by the Ministry of Transport and Communications and the State Property Fund.

The aircraft fleet of the company Aviakompanija Lietuva consists of two planes: ATR 42-300 of 1986 make and Lear-jet 55.

Following the agreement with TNT UAB Apatas, the company Aviakompanija Lietuva daily carries cargos by the route Kaunas–Malmö and Kaunas–Ryga. The company also carries UPS cargos UPS to Warsaw and Minsk five times per week. The fleet of UAB Apatas consists of one airplane L410 UVP, four airplanes L410 UVPE, one – CESSNA-421 and one – Lear-jet 55.

UAB Aviavilsa has two Antonov type airplanes AN-26. The company carries DHL consignments under the agreement with UAB DHL International Lietuva.

UAB Aurela offers charter flights by airplanes Jak-42. The main clients are the Lithuanian travel agencies Omnituras and Tez Tours. In 2004, the company started exploiting the airplane Boeing 737-500.
UAB Klaipėdos Avialinijos has a fleet of eight AN-2, one KA-26 and one Pipe140-28 type airplanes. UAB Klaipėdos Avialinijos offers charter flights to Gdansk, Stockholm, Gotland, Bornholm Islands, and Southern Sweden. Nearly fifty per cent of the company’s income is received from airplanes repairs and technical maintenance. The company is also engaged in specific aviation: sea and shore intelligence, forest spray by bacteriological preparations. In 2003, the company rented the airplane Panteravią P-68 and is offering air-taxi services. In 2002, the turnover amounted to about one million litas.

![Traffic flows distribution by airlines in 2004](image)

Foreign airlines offer flights to Vilnius and Palanga airports. In 2003, regular flights to Vilnius airports were organised by 9 foreign airlines: SAS, Lufthansa, Austrian Airlines, Finnair, Estonian Air, Air Baltic, CSA Czech Airlines, LOT, and Aeroflot. The Swedish Swedline and Direktflyg were flying to Palanga airport on a regular basis.

In order to better understand the situation of the Lithuanian national airline in the European context we must compare the economic ratios of the company with those of other countries’ airlines. It would be advisable to make a comparison with airlines of the nearest neighbours of the Republic of Lithuania in Latvia and Estonia since the geographic and economic situation in these countries is similar.

The national Latvian airline Air Baltic was established in 1995. At the moment the Latvian government holds 52.6% of the company’s shares, and 47.2% shares are controlled by Scandinavian Airlines/SAS. Air Baltic is flying from Riga to 15 cities: Amsterdam, Berlin, Copenhagen, Brussels, Hamburg, Helsinki, Kiev, Minsk, Moscow, Stockholm, Tallinn, Vienna, Vilnius, Warsaw, and Prague. Air Baltic together with the strategic partner SAS offers common-code flights. This allows offering a big number of junctions and optimising the passenger flows in the routes. In 2003, the company carried 347,966 passengers. The fleet consisted of one Boeing 737-500, three AVRO RJ 70, and five FOKKER 50 airplanes. The airline is based in Riga airport. In 2002, the company’s income stood at 28.6 million lats (163.02 million litas).

The national Estonian company Estijos Air was established in 1991, and in 1996 it was privatised. The state kept 34% shares, while Maers Air together with Cresco Ltd subscribed for 66% shares. In September 2003, SAS announced about purchasing of 49% shares from Maers Air. In 2002, the company carried 347,966 passengers. The fleet consisted of one Boeing 737-500, three AVRO RJ 70, and five FOKKER 50 airplanes. The airline is based in Riga airport. In 2002, the company’s income stood at 28.6 million lats (163.02 million litas).

AIRPORTS AND AERODROMES

In Lithuania there are 25 civil airports. At the moment four international airports are operating in the country: Vilnius, Kaunas, Palanga and Siauliai airports. Vilnius, Kaunas, Palanga airports are state-owned companies, while Siauliai airport is operating as a joint-stock company whose shareholders
Šiauliai City Municipality and the Ministry of Transport and Communications of the Republic of Lithuania. There are also five state aerodromes and 14 aerodromes belonging to aero clubs as well as one municipality owned aerodrome and five private aerodromes.

The annual capacity of Vilnius airport is 1,500,000 passengers and 20,000 tons of cargo. It is a member of the Airports Council International (ACI) and since 1993 – member of the European Airports Association. The airport is granted ICAO category.

Vilnius airport is the largest airport in Lithuania and the Baltic States, however compared to other Middle and East European states the passenger turnover is one of the lowest among the airports of capital cities.

The fleet of AB Lietuvos Avialinijos is based in Vilnius airport as well as the representative offices of twelve foreign airlines. Vilnius airport is constantly reconstructed and renewed to enable higher throughput of passengers and cargo, accept all types of aircrafts without any weight limitations. At the moment the following reconstruction works are in process and planned: extending and renewing of the arrival hall which is to be completed by 2005; prolonging of the current 2.5 km runway up to 3 km; reconstruction of the passenger terminal and the ground.

Kaunas international airport started operating in 1988. Kaunas is capable to serve 500,000 passengers and carry 20,000 tons of cargo per year. Kaunas international airport is located near the transport corridor junction. Two international highways intersect Kaunas: Via Baltica (Helsinki–Tallinn–Kaunas–Warsaw–Athenes) and highway Klaipėda–Kaunas–Minsk–Moscow. Two important railway lines also cross near Kaunas: St. Petersburg–Tallinn–Riga–Kaunas–Šeštokai–Warsaw and Kaliningrad–Kaunas–Vilnius–Minsk–Moscow. The Lithuanian General Territory Plan approved by the Parliament on 29 October 2002 provides that Rail Baltica of the European standard railway (ESG) must cross Kaunas HES, Palemonas and Karmėlava. The Rail Baltica is on the list of EU priority projects. The construction should be completed by 2016, and the segment to Kaunas – by 2010. The construction of inter-modal terminal is planned in eastern Kaunas (Palemonas), while Kaunas airport is planning a second runway.

Kaunas airport receives most of its income from cargo servicing. According to the preliminary data, in 2003 the turnover of Kaunas airport was 5.5 million litas. Kaunas airport has invested 4.5 million litas in the nearly constructed emergency service and the new fire station. In 2006, reconstruction of the passenger terminal and aerodrome perimeter fencing is planned. In 2006-2007 the alarm light system will be installed, the perimeter will be extended, and in 2004-2020 the noise control system will be installed. By 1 January 2005, the airport is still permitted to accept airplanes non-complying with the EU noise standards.

Palanga international airport is located near the sea, 7 km off Palanga resort, 28 km off Klaipėda seaport and is not far from the international highway Kaliningrad–Liepaja. The annual capacity of Palanga airport is 200,000 passengers and 2,000 tons of cargo.

The main passenger flow in Palanga airport comes from Scandinavia and Northern Germany; in winter season 27 regular flights are organised, while in summer season – 45 flights. Palanga airport is

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**Figure 2.** Number of passengers serviced in Middle and East European airports in 2003 (in million passengers)
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included in the Transport Investment Needs Assessment Programme (TINA). In 1997, the passenger terminal was reconstructed as well as the flight control centre, and the runway cover was renewed. The runway, passengers’ terminal and equipment will be modernised. During the Soviet occupation period a maintenance and repairs company servicing military force airplanes and Zokniai military aerodrome were established in Šiauliai international airport. In 1993, the last Soviet fighter aircrafts left Šiauliai airport. For reconstruction of the airport a loan of 29 million US dollars was taken from England’s Midland Bank under the state guarantee. After Philips carried out technical reconstruction, the airport was granted ICAO first category. The plan was to establish Šiaulių Free Economic Zone but the idea failed; therefore the perspectives of Šiauliai airport became complicated. Companies like Lufthansa, Wiggins Group and Swedish entrepreneurs were interested in the airport but there were no investors. The main advantage of the airport located 12 km off the city of Šiauliai is the longest runway in Lithuania, which allows accepting all types of aircraft without any weight limitations. The runway is 45 m wide and the airport has the annual capacity for 100,000 passengers and 20,000 tons of cargo. However, since 1 January 2004, the airport is not permitted to accept airplanes of Russian non-complying with the EU noise standards. This way Šiauliai airport lost its major customers: airlines exploiting airplanes non-complying with the noise standards. Upon accession of Lithuania in NATO, the military force airplanes and servicing officers of the organisation were dislocated in Šiauliai airport. Unlike in other Baltic States, a unique airport structure was formed in Lithuania consisting of four international airports. Investments in the airport development are divided, although it would be most rational to target them in one direction. However, such situation in Lithuania remains from the Soviet times when Estonians and Latvians managed to transfer airports from their capital cities but Lithuania did the opposite thing. Airports are one of the main factors for attracting new investments. Industrial and commercial companies prefer regions with well-developed air transport system in coordination with efficient passenger and railway transport infrastructure. The research in the EU states showed that the airport itself, besides secondary investment attracting, has a direct positive impact on the local economy development. Each million of passengers serviced in the airport during a year creates about 1,500 additional jobs.

AIR NAVIGATION AND TRAINING ESTABLISHMENTS

Every country provides air navigation services in the air space over its own territory, i.e. different air traffic control technologies are used, flight routes are inconvenient, and problems arise in crossing the state borders.

With intensifying air traffic, the European air traffic service system is starting to strand. Due to delayed flights, airlines annually incur losses of about 1.5 million euro. Besides, dividing it in separate segments does not efficiently use the current air space. Therefore, the airlines and other air space users together need a totally changed attitude towards providing of air navigation services. The Eurocontrol (European Organisation for the Safety of Air Navigation) and other international organisations took the initiative to solve the problem. This way the idea of “Common European Sky” started providing for developing of the common air space, uniform flight control standards and procedures. The number of flights carried out in the Lithuanian air space in 1999-2004 is shown in Figure 3.

Upon accession of Lithuania to the European Union, the legal acts related with air navigation became binding to our country. Lithuania is preparing for implementation of the “uniform sky” project, which is developed generally by the specialists of Civil Aviation Administration, State Enterprise Air Navigation as well as other companies and institutions. According to the preliminary calculations, the future reform will require considerable investments. We will have to reorganise the country’s air traffic service system, modernise the control, communications and surveillance devices, implement the air traffic service quality and security management systems, and prepare the flight guidelines following the new European standards.

Aiming to integrate in the common European Union sky, in 2001 Lithuania established a state enterprise Oro Navigacija (Air Navigation) and a budget institution Civil Aviation Administration. In 2003, the sales and services of the company Oro Navigacija amounted to 44.56 million litas, where 98.1% of income was received for the airport and air navigation services, and 86% of all inflows were income from navigation of foreign airlines’ planes, 14% – from navigation of Lithuanian airlines’ aircrafts.
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In 2003, income for the air navigation of foreign airlines’ aircrafts (transit) made up 81% of the total income. In 2003, the main transit foreign airlines by income were Lufthansa (Germany), Aeroflot (Russia), Finnair (Finland), Air France (France), SAS (Sweden).

Before membership of Lithuania in the European Union, the specialists of the Lithuanian Civil Aviation Administration and French Civil Aviation together were implementing the Twinning project for a year financed by the European Union. The French experts introduced the implementation practice of the main JAA standards to the Lithuanian aviation specialists basing on this project. Following the approved program, seminars were organised analysing the issues of assessment of civil aviation carriers, personnel, certified designing, production and technical maintenance organisations as well as aircraft compliance and other issues.

It was decided to continue cooperation after the Twinning project was completed. The issues were discussed related with the possibility to prepare specialists in the aviation institute named after A. Gustaitis, air traffic control, assessment procedures for aerodromes and airports, disaster management, preparing of flight managers, and improving of flight security management system in providing air traffic services.

Further cooperation will be continued according to the Twinning Light project, which is estimated to cost 250 thousand euro in total. In case the European Commission approves the project, the French General Civil Aviation Direction will also support Lithuania in implementation of other important projects. One of these would be the improvement of standards and procedures for performance assessment of the state enterprise Oro Navigacija following the newly approved directives of the European Parliament.

In Lithuania civil aviation specialists are prepared (re-qualified) in over 20 aviation-training establishments. The largest of them is the Aviation Institute named after Antanas Gustaitis under Vilnius Gedimino Technical University, which prepares flight managers and pilots. The Transport Engineering Department in the Mechanics Faculty of Kaunas Technology University prepares aviation engineers. Other training establishments are operating in airlines, technical service organisations, and aero-clubs. Several independent aviation schools and training centres were established, which are successfully developing their activities.

The Aviation Institute named after Antanas Gustaitis under Vilnius Gedimino Technical University (hereinafter - AGAI) prepares flight managers and pilots. This education institution was established in 1993. At the moment AGAI is preparing specialist according to the following programs: aircraft piloting, aviation mechanics, aviation electronics, aviation electronics devices, and aviation business management. The programs comply with ICAO and JAA standards. The training base of the institute include two flight simulators, 10 training planes CESSNA, one flight control tower simulator, access and air space control trainer as well as other equipment, laboratory premises. AGAI is also using Kyviškių flying base. Since 1993 the institute has prepared 324 specialists, of
which 200 are or were employed in the Lithuanian aviation structures. The training centre at the institute has been operating since 2001, which has organised courses for 350 aviation specialists.

**Table 1. The Need for Aviation Specialists in 2004-2009**

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<th>Training program</th>
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<td>Aviation mechanics, Electronics, automation</td>
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The tariffs of aviation specialists in Lithuania are 2-3 times lower than in West Europe and 3-4 times lower than in Canada and USA.

Vilnius Transport College prepares specialists of aircrafts and engines using and production technology and passenger service in airports. Kaunas Technology University, Mechanics Faculty prepares aviation engineers-mechanics. The training centre of Lietuvos Avialinijos prepares pilots qualifying for Boeing and SAAB type aircrafts; technicians/engineers for servicing of the aforementioned airplanes, flight attendants and other specialists required by the company. The airline Lietuva re-qualifies pilots to fly by plane ATR 42-300. UAB Klaipėdos Avialinijos prepares amateur pilots and re-qualifies pilots to fly by planes AN-2 and AN-28. Technical staff to repair helicopters is re-qualified at UAB Aviabaltika and UAB Helisota. Pilots and technical staff are also re-qualified by UAB Termika, UAB Nerka, and UAB Apatas. Air clubs of Alytus, Biržai, Kaunas, Jurbarkas, Panevėžys, Šiauliai, and Vilnius; Klaipėda gliding club and Flying School of Vytautas Lapėnas prepare amateur pilots. The Aeronautics Centre, Vilnius Aeronautics School prepares aerostat pilots.

**CONCLUSIONS**

1. The Lithuanian passenger flights leader LAL last year increased the number of passengers by 2.54 per cent up to 312 thousand persons. Seeking to ensure profitability, this year the company is planning to develop important marketing and IT projects aiming at adopting elements characteristic of the so-called low-cost airlines.

2. On the international level the main two national passenger carriers are rather small therefore they were merged. However, the exploitation ratios are still not totally satisfactory. The fleet capacity is not sufficiently used, i.e. the load ratios are low in the sense of both local and international carryings compared to the carriers of West Europe or East and Middle Europe countries. The situation is saved by subsidies.

3. In Lithuania much more aviation specialists are prepared than it is in the country, however the need for aviation specialists in other countries is rather high, therefore high qualification specialists are popular and can easily find employment in foreign airlines. Upon accession of Lithuania in the European Union and harmonising the qualification requirements for aviation specialists, new professional possibilities in the European Union region are opened for Lithuanian aviation graduates.

**References**

[9] www.transp.lt