

THE IMPACT OF AIR TRANSPORT ON ECONOMY

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The aim of this contribution is to clarify the impact of air transport on economy and discuss its economic and social benefits. The first part of the contribution contains of a brief introduction providing basic information about the solved problem. The second part talks about the economic and social benefits of air transport in general. The third part is focused on the description of the economic and social profile of air transport in Europe. The fourth part talks about the economic character of air transport in Austria. The last part of the contribution focuses on summarizing and interpreting the main ideas of the contribution.

K e y w o r d s: air transport, impact, benefit, social, employment

1 INTRODUCTION

Air transport contributes to rapprochement and better availability of populations within the whole Europe and thus makes them more mobile. One of the main objectives of the single European market is to secure and stabilize the economic prosperity of the region by creating space that would ensure beneficial free competition, where free movement of people and capital can be ensured and that creates a healthy environment, thus ensures business growth and increase of work efficiency, skills and specialization. The European Union has a unique location and it can be called a point of contact between East and West from global perspective. This along with other factors causes that the European continent is an important center of economic and social connection with the whole world. This so-called connection depends on relations which condition and influence right the aviation sector in a great measure.

2 ECONOMIC AND SOCIAL BENEFITS OF AIR TRANSPORT

Air transport is an innovative industry that controls economic and social progress. It connects people, countries and cultures, provides an access to international markets and creates the business opportunities and tourism. It also creates a connection between developed and developing countries.

2.1 Economic benefits of air transport

The airline industry has a significant economic impact on its own operations, as well as on the other activities of different industries. Its contribution includes direct, indirect and induced impacts that affect the total revenues in the airline industry.

Direct impacts

The aviation industry is a significant generator of employment and economic activity in the aviation and airport operation of aircraft, air traffic control and airline operations that directly serve passengers of air transport (check - in, handling, retail and catering facilities). Direct impacts also include activities of aerospace manufacturers selling aircraft and components for airlines and related enterprises. According to the statistics of the ATAG

company air transport creates 8.4 million direct working places globally created by the airline industry:

- 0.8 million people work in the civil aviation sector, contributing to the production of aircraft systems, frames and engines - which is 10% of number mentioned above.
- 2.2 million people work for airlines and handling agencies, including the flight crew, check - in and maintenance staff - which is 26% of mentioned number.
- 0.5 million people are employed at the airside, in management, in the maintenance and security sector - which is 6% of mentioned number.
- 4.9 million people have different kind of jobs related to the airport - retail outlets, hotels, restaurants and passport control - which is 58% of the mentioned number.

Indirect impacts

Indirect impacts include the working places and activities of suppliers for the aviation industry, such as suppliers of aviation fuel, construction companies that build airport facilities, suppliers of components used in aircraft, producers of goods sold at the airports, and a wide range of activities in the sector of business services such as call centers, information technologies providing computer systems and accounting.

According the statistics of ATAG company more than 9.3 million of indirect jobs worldwide are generated through the purchase of goods and services from businesses in the aviation sector and these indirect jobs contributed to global GDP in 2010, with an amount about \$ 618 trillion.

2.1.1 Impact of the air transport to the international trade

Air transport by its productivity in the global economy contributes to the improvement and development of transport networks and thus expands the market where single enterprises operate. The increase of the international trade has been achieved through:

- **Reduction of the international trade barriers** by creating a free market through the North American Free Trade Agreement (NAFTA) and the Single European Sky project.
- **Increased specialization of countries** that specialize on activities in which they have a comparative advantage and trade with countries that specialize on trade with other goods or services,

- **Globalization** - more businesses are added to or creates an international operating activities or foreign subsidiaries, which leads to homogenization of the domestic market, production and import of other international brands and greater market penetration,
- **Technological progress** - improvement of communication systems allows companies to bring their products on market globally and collaborate with customers and suppliers worldwide
- **Political development** - favorable political circumstances increased the number of potential business partners, including former communist countries, some EU member countries and some remaining communist economies such as China and Vietnam. The forecasts indicate that the global economy will be in the next decade even more dependent on the trade. Doubling of world trade is expected and global GDP will rise to more than double its rate.

Air transport improves the efficiency of the supply chain (many industries can effectively shorten the delivery time as a part of their just-in-time delivery system thanks to using air transport, which enables them to provide products to customers quickly and reliably).

Global supply chain is becoming increasingly dependent on fast and reliable delivery of expensive and light components, such as computer components, via air transport. It also provides fast and reliable delivery of high-quality products that are needed especially for modern dynamic sectors, such as pharmaceutical / biotechnology and telecommunications sectors.

2.2 Social benefits of air transport

Impact of the aviation sector is not only a result of its economic activity. Air transport affects also the quality of life in many other ways that are not captured by standard economic indicators, for example:

- Significantly contributes to sustainable development by supporting international tourism. Tourism helps to reduce poverty via economic growth achievement, providing job opportunities, increasing taxes collection, and support of the development and maintenance of protected areas and environment. In fact environmental protection attracts tourism and developing the tourism industry, which allows funding of the protection of nature and cultural heritage, thereby increase the contribution of protected areas in the country.
- Provides access to remote areas which the other kind of transport can not reach or their access to these areas is restricted. Air transport is therefore used as a mean of transporting of essential supplies. Many services such as hospitals, schools, post office, etc., would not be available

for people in these places without the presence of air services.

- Air transport services play a crucial role in providing humanitarian assistance in areas affected by natural disasters, wars (fast delivery of medical supplies and personnel).

3 ECONOMIC AND SOCIAL PROFILE OF AIR TRANSPORT IN EUROPE

The airline industry creates a work environment of a global nature, which generates more than 7.8 million working places in the European Union, thus contributes to the formation of gross domestic product worth about 475 billion euros, representing 3.9 % GDP of EU.

Air transport is one of the leading factors that contribute to enhancing the economic prosperity of the old continent and is characterized as a key player of benefits for the European economy, with more than 150 airlines, network forming about 400 airports and 60 air traffic service providers. Aviation sector employs more than 3 million people in the EU. Airlines and airports contribute more than € 140 million of European GDP. Around 800 million passengers departed or arrived at airports in the EU, which is a value corresponding of statistics from last years.

Air transport plays an significant role in the integration and competitiveness of Europe within the interconnection of people and regions, as well as its interaction with the world. All this is thanks to the creation of a single aviation market in the 1990s. Internal market has removed all commercial restrictions for airlines flying within the EU, such as a restriction on the routes, flight number or destination timetable. The prices dropped dramatically, mainly in terms of the most popular routes and varied menu of their offer, which represents significant progress. European policy has fundamentally transformed itself in this industry via conditions for competitiveness created, enhance the security, quality of services and safety levels. Consumers, airlines, airports and employees all have own benefits. This policy has led to greater activity of expansion and construction of new routes and airports, greater offer, lower cost and increased overall service quality.

Even the Treaty on European Union, in its first paragraphs inflects terms like "European integrity", "free movement of its inhabitants" and "stronger social union", which gives impulse for the expansion of the European transport network between citizens of the EU as well as other business partners of other parties and also provides suitable space for the creation of major channel merging trade, tourism and economic growth.

Airline industry brings a wide range of benefits. It does not provide only service to customers who are flying somewhere or people who work in this sector but also supports economic growth in the context of global trade and tourism.

For illustration, if the Air transport of European Union was one of its member states in the size of the gross domestic product Air transport would be finished in seventh place. All airports in European Union offer their customers about 12,314 different routes from which they can choose. Almost 23% of business with other parts of the world happens using some of the airway. In 2010 the passengers of EU represented 23% of the total number of passengers transported by air in the world.

4 ECONOMIC CHARACTER OF AIR TRANSPORT IN AUSTRIA

All factors affecting the economy of the region and the overall development of air transport as an airlines, airports, manufacturing companies in aviation industry and ancillary services, such as air traffic control, form a capital and create an intensive sector that invests in aircraft systems and other advanced technologies.

Productivity by sectors	
Air transport services	€ 87,909
Austrian economics	€ 60,782
Austrian industry	€ 80,541

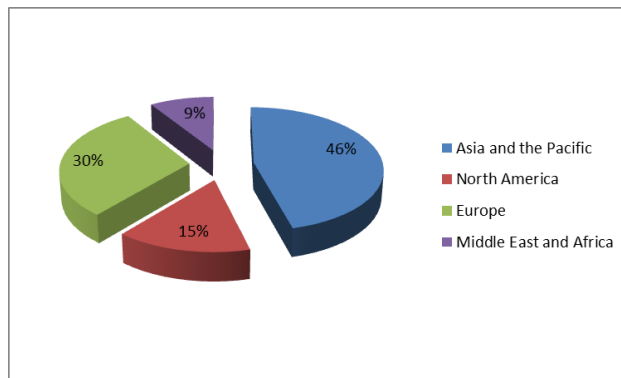
Tab. 1 Productivity by sectors

(Zdroj: ACI, IATA, Oxford Economics)

Table 1 shows the investment difficulty of aviation sector, measured by its investment and the share of gross value added (GVA). Measured values as GVA per employee, productivity of air transport services (air and ground infrastructure with the exception of retail trade and catering services at airports) are calculated via estimate of € 87,909. It is more than the average productivity of the Austria economics as a whole (€ 60,782). This high level of productivity means that all the funds currently used in the aviation sector have been used effectively. Otherwise, these indicators would have been accompanied by a decrease of total production and income. For example, if the productivity of the aviation is equal to the average productivity of the local economy as a whole, then the level of Austrian GDP produced by air transport is around 0.04%, which represents only a minimal increase.

4.1 Benefits of air transport for the Austrian trade and tourism

Air transport is located in the center of global trade and tourism. Thanks to its speed, convenience and availability air transport has expanded and has become a global intermediary of transport for passengers, tourists and business travelers worldwide, allowing more people to experience the diversity of geography, climate, culture and markets.



Obr. 1 Austrian trading with the rest of the world

(Zdroj: ACI, IATA, Oxford Economics)

Measurement in recent years found out that more than 45% of trade routes connecting Austria with the Asia-Pacific region was made and a further 30% in respect of trade with the rest of Europe. Freight Transportation to North America was equal to 15% of the total amount and the remaining 9% was related with the Middle East and Africa.

Increasing of air connections between regions contributes improving of the economic performance of the whole economy by increasing the overall level of labor productivity. This improvement of productivity in enterprises outside of the aviation sector comes through two main channels:

- through its impact on domestic firms, resulting from better access on foreign markets, thereby increasing foreign competition on the domestic market and
- freer movement of investment capital and workers between countries.

Austria provide improved opportunities of connection for the enterprises established in its territory in the form of better access to foreign markets, export support, increased competition and choice on the domestic market from foreign producers. By this way, Austria encourages firms to specialize in areas in which they hold a comparative advantage.

Geographic location and air transport network in Austria gives to business blocs good assumptions for trading focused on Eastern European markets. In case of companies and their comparative advantages, international trade provides a better use of savings, reduce their costs and prices and thus plays in behalf of domestic consumers by reducing the fees for their services.

Opening of domestic markets to foreign competition may be an important driving force for cutting production costs per unit either by forcing domestic firms to adopt best international practices in the field of production and management techniques or by promoting innovation. Such a competitive competition may also be used by domestic customers via reducing additional fees which air service companies charge their customers, particularly at the places where domestic companies have not worked without any competitive competition.

Tourism is a great benefit for both business and for leisure purposes for the Austrian economy, while enabling foreign visitors contribute an amount almost € 15.2 billion each year.

Approximately 5.3% of those visitors arrive by air, which is significantly lower value than the European Union average. Such passengers who travel by air, contribute to the local economy by amount of almost EUR 801 million € per year.



Obr. 2 Austrian air links with the world
(Source:IATA)

Improvement of air services can also increase the performance of the economy, thus enables companies to invest outside of their home country, which is known for its foreign direct investment (FDI).

It is obvious that the link between aviation and FDI could be closely related, because foreign investments necessarily carry with themselves the need of movement of workers, whether it is about a transfer of know - how or an increase of management control.

The actual level of connection allows enterprises to take advantage of the speed and reliability of air transport to remote destinations. Less tangible, but perhaps equally important is the belief that better connectivity would prefer Austria in the eyes of foreign investors for the increased level of passenger transport and trade, creating favorable climate for foreign firms to implement their business plans.

4.2 Impact of airlines on the regional economy

Airlines registered in Austria transport 13 million passengers and 125,000 tons of cargo annually and inside Austria. Passengers travel by air for many reasons. People rely on air transport when they travel on vacation to visit family and friends, while enterprises travel by air to meet their clients and for rapid and reliable delivery of consignments and goods over long distances.

Airlines registered in Austria, directly employ more than 10,000 people and a further 6,000 jobs are directly supported through the supply chain. One example of these supply chains are in distribution of providing an aviation fuel and jobs in the catering and preparing meals for airlines.

Another about 3000 jobs are supported through expenditure of households that are employed by the

airlines and their supply chains. These airlines directly contribute to the Austrian economy (GDP) of amount 788 million euros. Sector contributes indirectly further € 397 million through outputs, which are supported by supply chain. Another almost € 216 million comes from expenditures on airline employees. Overall, airlines contribute nearly 1.4 million. € on the economy and support more than 19,000 jobs in Austria.

5 CONCLUSION

Aviation is a vital part of the increasingly globalised world economy, facilitating the growth of international trade, tourism and international investment, and connecting people across continents. There were issued many studies clarifying the link between air transport and growth of GDP as well as its impact on the employment. The main economic and social impact of air transport rests in providing the only worldwide transportation system which makes it essential for global business and tourism as well as in providing working place for millions of people all over the world, broadening people's leisure and cultural experiences via wide choice/affordable access to destinations across the globe, improving living standards and alleviating poverty through tourism and serving as the only means of transportation to remote areas promoting social inclusion.

BIBLIOGRAPHY

- [1] IATA: Economic and Social Benefits of Air Transport, available on:
<http://aviationbenefitsbeyondborders.org/>
- [2] Oxford Economics: The economic impact of changing the Air Transport Levy in Austria, October 2012, available on:
https://www.wko.at/Content.Node/branchen/k/TransportVerkehr/Autobus-Luftfahrt-und-Schiffahrtunternehmen-Fachverband/Austrian_Air_Transport_Levy_-_Oxford_Study_-_Final.pdf
- [3] ATAG: The Economic and Social benefits of Air Transport, available on:
http://www.icao.int/Meetings/wrds2011/Documents/JointWorkshop2005/ATAG_SocialBenefitsAirTransport.pdf

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