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## The impact of business aviation on the economy of Europe

On the one hand, today we can see that the provision of business aviation services is one of the most promising avenue in the development of the national economy, which are involved in the aviation industry. On the other hand, the fact that the market for aviation services is a relatively new market, in fact, is a largely unexplored topic. All these things make this topic actual.

Business aviation is an important component of the European economy, both in terms of jet production and in terms of services provided by the industry. Further, we will consider the impact of business aviation on the EU economy with a focus on services.

Business aviation, with a large number of multinational companies that relates directly or indirectly to the operation and maintenance of aircraft. All this features make a significant contribution to the European economy.

The development of business aviation in Europe is growing rapidly. This is due to several factors:

- the increasing demand for instant movement to anywhere from anywhere using the airplane;
- business airline customers try to avoid large commercial airports and therefore keep their time;
- the development of new business models, such as the principle of share ownership, reduces the cost of customers;
- the usage of lighter jets, which allows the industry to conquer new segments of the market [1].

The usage of business aviation allows to develop rapidly and efficiently newly established business relationships, which accelerates the process of investing and doing business. The ability to run a business faster and beyond the home country is a major advantage of business aviation for the European economy.

The overall economic impact of business aviation will be considered in terms of three effects (Fig. 1).


Fig. 1. Types of economic impact on business aviation

1. Direct effect - direct infusion of money into the economy by creating new jobs, raising wages, paying taxes. By all segments of "Business Aviation," the employment in the European Business Aviation sector in 2017 is estimated to be $6 \%$ higher than in 2014. In general, $56 \%$ of all employees work in the field of operation of business aircraft (ie with operators of aircraft), and $44 \%$ are engaged in tasks related to business aviation, at the level of manufacturers of airplanes and components [2].
2. Indirect effects are changes in production, employment levels, and incomes in related industries, which are suppliers for business aviation operators. The effect of the indirect effect brought the European economy 35.4 billion euros, of which 19.6 billion field operatives [1].
3. Induced effect occurs when employees of the company (employees of companies in related industries are also accounted for) spend their money on goods and services of local production. The induced effect brought the European economy 6.3 billion euros, of which 3.4 billion euros ( $43 \%$ ) share of exploitation and maintenance. There were 53 thousand employees, with a total salary of 2.5 billion euros in 2017 [2].

As Table 1 shows, the most influential on the European economy in 2017 was the direct effect ( 45.3 billion euros).

Table 1

Total economic impact of the Business Aviation sector in Europe

| 2017 | Employment | Output <br> (billion euro) | Gross Value <br> Added (billion <br> euro) | Salaries <br> (billion euro) |
| :---: | :---: | :---: | :---: | :---: |
| Direct Effects | 92798 | 45,3 | 12,3 | 12 |
| Indirect Effects | 227610 | 35,4 | 15,7 | 10,1 |
| Induced Effects | 53635 | 6,3 | 4,0 | 2,5 |
| TOTAL EFFECTS | $\mathbf{3 7 4 0 4 3}$ | $\mathbf{8 7}$ | $\mathbf{3 2}$ | $\mathbf{2 4 , 6}$ |

The main economic benefits and consequences of business aviation (including the production of business planes and components) are created in Western Europe. France, Switzerland, Germany and the United Kingdom account for $76 \%$ of the total average industrial production in Europe. These countries have a large share of business airplanes, as well as owners of large companies engaged in MRO and important manufacturers of business aircraft and / or components. The last one is particularly relevant for France, where large producers are located.

Figure 2 shows the total number of employees in the field of operation of commercial airplanes by a European country, which shows that the top 3 countries on the employment list in business aviation are Germany, United Kingdom and Switzerland [1].


Fig. 2. Number of employed in the field of business aviation in thousand people.
The largest output of the business aviation sphere from companies entering the economy of France, Germany, Switzerland, United Kingdom and Italy - these countries account for almost 70 billion euros, which in total accounts for $80 \%$ of the total turnover of business aviation in the EU (fig. 3) [1].


Fig. 3. Output of the BizAv Sector in billion euro.
France, Germany and the UK are leading according to the high concentration of companies manufacturing airplanes, combined with a large number of flights and a large fleet of aircraft registered in these countries.

Austria, Switzerland and Portugal also show high profits from business aviation, but this is due to the fact that a large number of service organizations are based in these countries [3].

If we consider the impact of business aviation from the position of its particle in the aviation market of each country - the top countries by share are Slovakia, Switzerland, Luxembourg, Austria (Fig. 4) [2].


Fig. 4. Business aviation market share (\% of total).

Also, the direct impact of business aviation on the economy of Europe are the number of flights. So the top 3 countries for this criterion are France, Germany, UK, Italy, Switzerland. Comparing to 2016, France has increased the number of flights by $2.6 \%$, Germany by $3.5 \%$, UK by $5.3 \%$, Italy by $3.7 \%$, Switzerland by $3 \%$.

## Conclusion

To sum up, the growth of the business aviation market is growing rapidly in Europe. In 2017, business aviation brought more than 85 billion euros to the European economy, employing more than 360,000 people across Europe. All of this led to increasing of $6 \%$ compared to the previous year. The reason for this was a number of factors, the main of which is the development of new business models, such as partial ownership, which significantly reduces the cost of business aviation services.

## References

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