

*Popovka S. A., student,
Faculty of Transport, Management and Logistics,
National Aviation University, Kyiv*
*Antonets O. I., student,
Faculty of Transport, Management and Logistics,
National Aviation University, Kyiv*
*Scientific advisor: Shevchenko Y.V.,
PhD in Economics, Associate Professor,
Associate Professor of
Air Transportation Management Department,
National Aviation University, Kyiv*

PROBLEMS AND PROSPECTS FOR THE DEVELOPMENT OF AIR TRANSPORTATION AND TECHNOLOGY

During the sixty years since the first practical aeroplane flew in 1905, aviation has developed almost entirely as a result of large-scale government defense expenditure in every industrialized country of the world. Defense budgets have paid for practically all air development, because the great bulk of aviation activity has been in the military field, in which spending by the governments has historically always been on a lavish scale. Now, it is beginning to penetrate, to a significant extent, the medium and even short-haul scheduled passenger travel market and is increasingly carrying certain classes of freight over similar stage length. It seems, the most remarkable feature of this development has been that it has resulted from an indiscriminating belief among a relatively small band of enthusiasts in the possibilities of the new form of transport.

Despite the fact that aviation industry is one of the most developed, it has some problems:

- The aviation industry needs regular repairing. For instance, Ukraine has an outdated fleet and, as a result, can't compete with other countries that have more developed infrastructure. Also, outdated fleets reduce security of transportations of cargo and passengers.
- Military-political situation between countries influences the aviation industry. For instance, there is a stoppage of aviation transportations between Ukraine and Russia from October 25, 2015 because of an unsteady political situation. As a result, it influences the economy of the aviation industry of both countries. In these situations, the aviation activity of each country needs to be untouched.
- The aviation industry has the biggest impact on the environment in the world. Aircrafts give off harmful gases into the atmosphere, and these gases destroy the Ozone Layer. So, alternative types of fuel are needed to be used in the aviation industry.

- Delivery structure. Aviation transport is inseparably connected with the system of airports. So, there is no opportunity to send a plane to the point of destination, where any airport isn't located.
- An airline can get new airplanes and use them during certain seasons, but it's impossible to use them during other seasons [1], [2].

From time to time, designers publish concepts for the future of aircraft, due to the rapid growth of the air travel market. Airbus, considered an aerospace giant, has tested an unmanned flying taxi. It was created during the Vahana project. Airbus has launched a project using innovative technologies that include machine vision and electric propulsion to "democratize private flying." This year Waymo plans to create a network of autonomous passenger unmanned aerial vehicles, self-propelled vehicles for transporting passengers. However, the Airbus project has more global goals. Today, many companies are competing to create the first widespread supersonic aircraft. Elon Musk, known as the founder of US-based Space X, is proposing the introduction of reusable BFR launch vehicles to transport passengers around the world. At the moment, development is underway to reduce the flight time of aircraft. The main idea is based on the creation of "quiet" supersonic passenger aircraft. Their appearance is expected in the early 2020s, which will lead to a 2-fold reduction in the amount of time spent on a flight on already created routes [3].

Aviation industry plays an essential role in the modern world, but unfortunately it has problems. However, people will be able to tackle some of the problems over time. Also, the aviation industry has prospects for implementation of which we need large monetary resources, new technology and a lot of time.

Reference list:

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