

UDC 656

CHALLENGES AND TRENDS OF AIRLINES LOGISTICS IN A PANDEMIC

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Plan:

- 1) Describe the situation in the research area before the pandemic
- 2) Name the factors that influenced the change
- 3) Describe the main trends in global logistics
- 4) Analyze the state of the industry at the moment and show upcoming change

The aim is to study and describe the situation that has developed in the field of air transport logistics, taking into account the restrictions imposed by the pandemic.

Introduction:

The Coronavirus pandemic, in which we all have had to live for quite some time, has had a huge impact both on the life of each individual, and on global industries and markets. Obviously, such global measures to contain the pandemic, such as lockdown and social isolation, the transition to remote operation, could not but affect the logistics sector. Unfortunately, despite the fact that drawing up new development and adaptation strategies is one of the priorities for each company, all airlines are still in a state of crisis.

Situation before the pandemic:

World:

According to research companies based on data from international organizations and banks, 2020 has become the worst year for the world economy since the end of the last global crisis in 2009.

If before the pandemic we observed a steady increase in passenger traffic both in terms of world indicators, then with the onset of the pandemic, everything changed.

From the start of the pandemic to the end of April 2020, two stages can be distinguished in the relationship between logistics providers and cargo owners. The first stage, when the transport customers did not yet realize the full depth of the problem and did not have knowledge of the development of quarantine measures in the markets, there was panic on their part due to the tightening of requirements. It was a period of a shortage of transport and an increase in freight rates.

At the second stage, when the cargo owners had an understanding of the depth of the problem, the restructuring of work at all levels began. This stage was marked by a decrease in traffic volumes, a drop in freight rates, a revision of tender obligations, pauses in decision-making and a suspension of tender procedures (Fig. 1–3).

At the same time, air transport suffers the most due to COVID-19: the reduction in the number of flights has a negative impact on the operational and financial performance of airlines. Airlines' revenue for the first time went into the zone of negative values.

Russia:

Before the pandemic, about 80 % of freight routes were served by air, and 20 % by ground. At the moment, aviation in Russia is mainly used for those cities where delivery by land transport is unprofitable, takes a long time or is completely impossible, for example, to some cities in Siberia and the Far East. In general, the volume of cargo transportation by air

decreased by 9.6 %, to 2 billion tonne-kilometers. This percentage is almost twice as high as for pipeline and rail transport.

Also, the losses of Russian airlines, according to Infraone Research, amounted to half of the total losses of Russian transport companies from restrictions due to the pandemic.

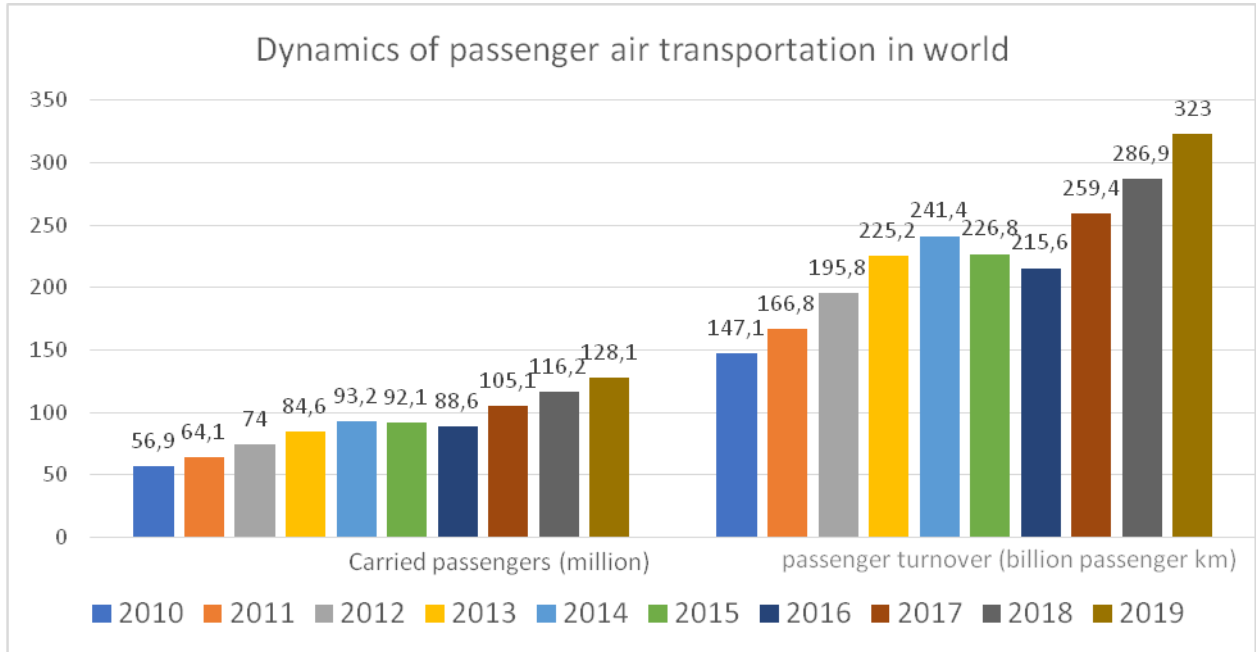


Fig. 1

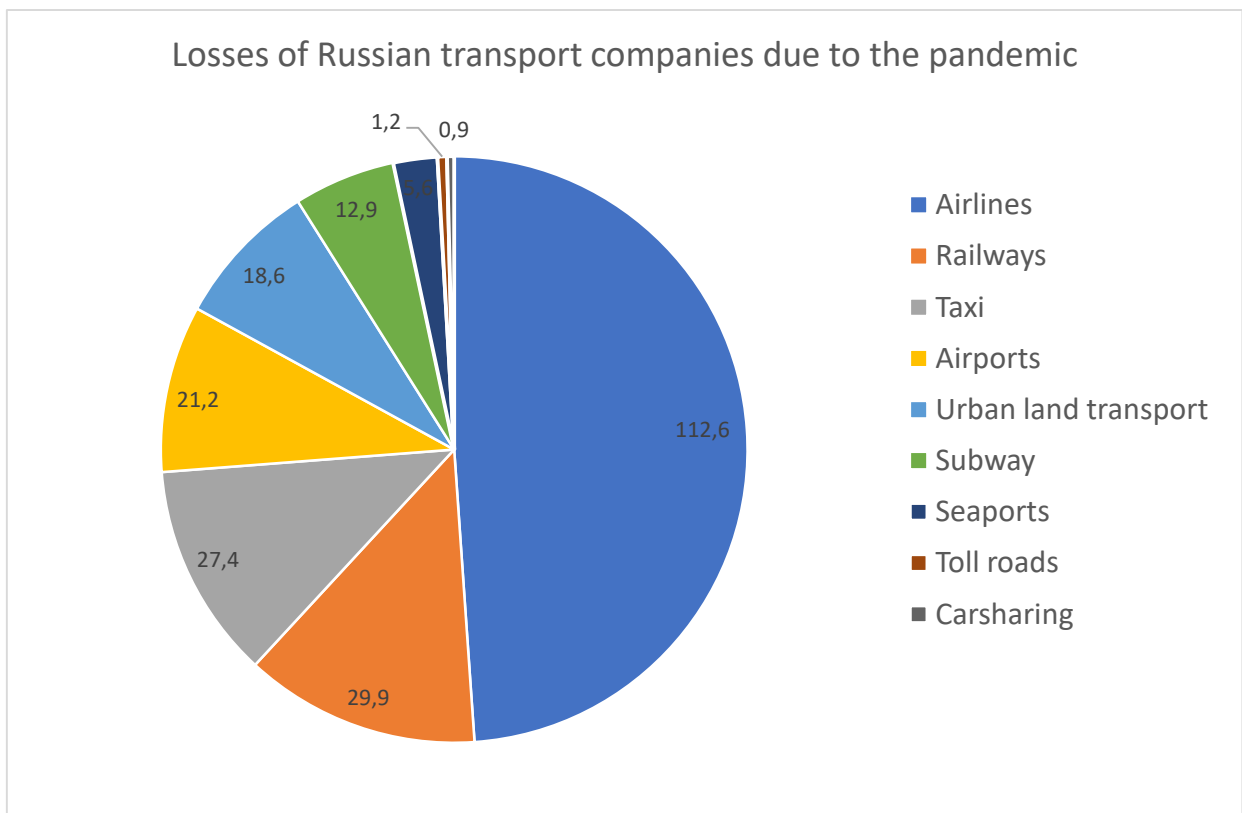


Fig. 2

Considering the passenger turnover, one can notice a tendency of growth in the volume of passenger traffic by Russian airlines both on international flights and within the country. These indicators do not differ in terms of trends from the global ones.

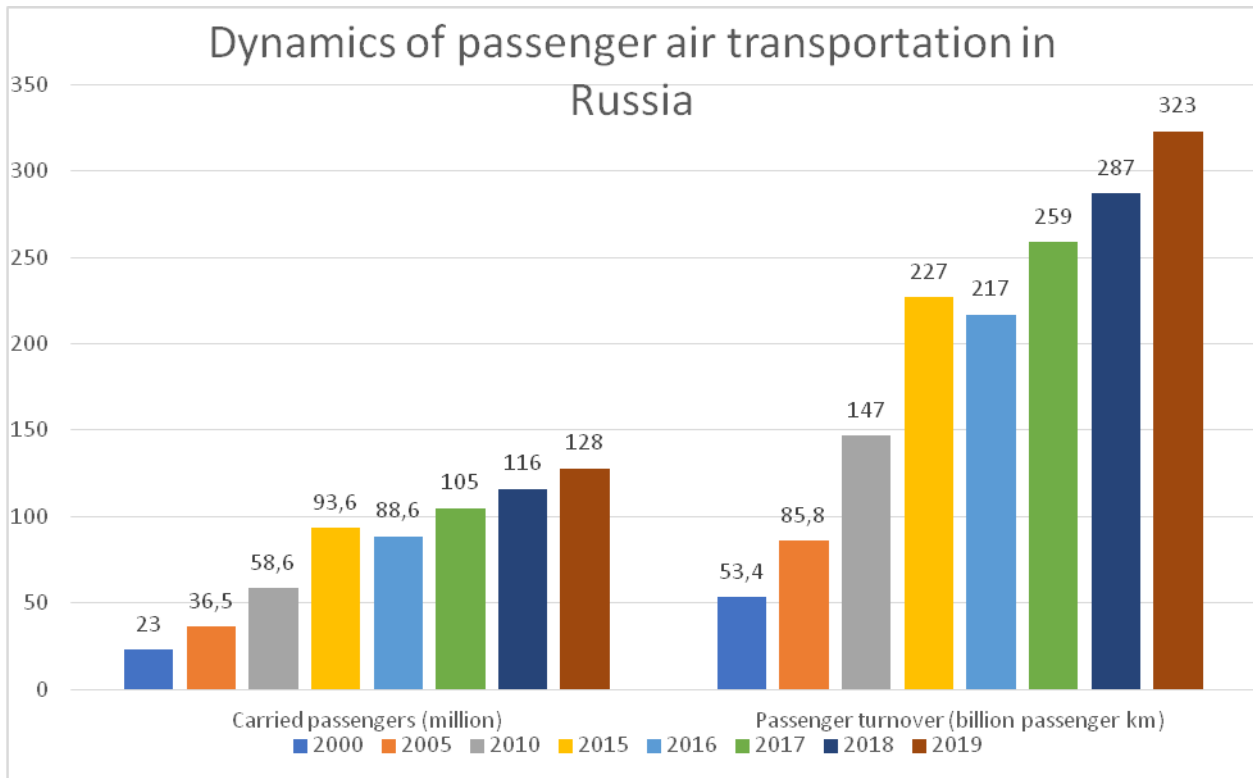


Fig. 3

The factors that influenced the change in supply chain management:

According to data published on the official website of WHO, it can be judged that the visible impact of the pandemic on logistics began in March 2020. A number of countries, including Russia, have limited passenger air travel. Researchers concluded that «travel restrictions are most useful in the early and late phase of an epidemic» and «restrictions of travel from Wuhan unfortunately came too late».

In July, there was a message that there was a shortage of drugs, they had to be transported from other countries and new products were delivered to the points of sale in greater volumes.

By August, several countries, such as Lebanon, needed help with the supply of medical supplies dedicated to helping those affected by the epidemic's riots. Unfortunately, the situation is still relevant, but in many more countries.

«Aircraft manufacturers, airlines and airports are taking additional measures to minimize the risk of contamination to passengers.» – noted the head of ICAO. As a result, the flight preparation time and the passenger check-in process have increased.

The pandemic spread to the rest of the world, leading to lockdowns and border closures that restricted the movement of goods. Additional protocols (such as social distancing at warehouses) introduced to ensure the safety of workers contributed to bottlenecks for freight.

In general, the freight segment will suffer significantly less than passenger traffic. Thus, the decline in cargo and mail traffic in the luggage compartments of passenger aircraft may be offset by the conversion of passenger aircraft for cargo flights, including for the delivery of medical equipment, medicines and essential goods (including food). This practice has been used by airlines in the US, UK and other countries since March 2020. Frederic Gomer, partner at B2G Consulting in Singapore said a single Boeing 777 freighter, or Airbus A340/A350, could carry a million vaccine doses.

Main trends in global logistics:

- One of the unique features of the ongoing crisis is that both supply and demand have been affected.

On the one hand, many passenger flights have been cancelled. On the other hand, air transport demand has also collapsed. Although there are far fewer passengers and flights, airports and airlines still have high fixed costs, including for the maintenance of aircraft, airfields and terminals, and for the application of strict sanitary measures.

- Implementation of the latest IT technologies

Optimization and digitalization have been talked about for a long time, but only few people dared to make real and fundamental changes in the approach. During the COVID-19 pandemic, many companies decided to move all work on a «new track». The IT revolution has begun in logistics. It is worth noting the use of IT platforms for logistics companies in order to exchange tariffs and rates.

- Development of domestic cargo transportation and logistics chains

Recently, most of the traffic was aimed at exporting or importing goods. The crisis gave a powerful impulse to the development of the domestic product, the development of industries within the country. A significant decrease in cargo flows from Asian countries has pushed up domestic production. With the development of internal logistics, its quality will grow.

- Development of «autopilot» deliveries

Drones are also related to aviation. This trend came from Asia as a continuation of the idea of contactless delivery. During the pandemic in China, most parcels were delivered «to your home» in this way.

- Compliance with sanitary standards, disinfection of equipment, vehicles will become the norm and requirement on the part of recipients

For safety reasons, logistics companies will be forced to continue to comply with sanitary standards.

- Shift of ocean cargo to air, despite higher shipping rates and a scramble for space.

- Use of air charters for urgent, high-value cargo that would otherwise go aboard freighter aircraft or in the belly of widebody passenger flights;

- Conversion of empty passenger aircraft to «passenger-freighters» that can carry cargo in specially packed passenger cabins, in addition to belly cargo;

- Geographic risk

The crisis also provides an opportunity to re-evaluate supply chain locations.

Conclusions and upcoming changes:

I think that at the moment the logistics are still in the process of being improved. Despite the fact that the pandemic has not ended, and countries open their borders for flights, many destinations are closed, and tourism is not very popular.

Aviation logistics is suffering losses and needs financial support. Many narrow specialists lost their jobs in the aviation field, the number of workers was reduced, as did the number of flights and demand. Aviation could be helped by reducing fixed costs, such as lowering the cost of spare parts for vehicles.

One of the key tasks is to safeguard the functionality of the air cargo supply chain to the maximum extent possible. A presumably stable element in recovery scenarios, air cargo will play a significant role in supporting the recovery of the global supply chain and the economy. One important condition is the facilitation and flexibility of rules.

Despite the big losses, the logistics sector is in for a big change in the near future. In the future, the emergence of new, specialized airports and aircraft, the expansion of the air transportation network within the country, digitalization, a significant increase in safety for passengers, and the reorganization of supply chains. Logistics experts point out that the industry is facing a successful but long-term recovery.