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CHALLENGES AND THREATS FOR UKRAINE AIRPORTS CAUSED BY THE GLOBAL PANDEMIC

Today the world has changed. Unpredictable and rapid spread of the COVID-19 pandemic has completely shattered all the plans and strategies that have been built up over the years. The tense pandemiological situation in the world, state restrictions and the closure of borders between countries to counter the spread of the virus has directly affected the global and domestic aviation industries. And the temporary suspension of airlines and air infrastructure, caused by a sharp drop in passenger traffic, has led not only to the bankruptcy of airlines and massive staff reductions, but also to global changes in the services of the aviation industry as a whole.

According to the results of the economic analysis "Impact of COVID-19 on the airport business" conducted by the Airport Council International (ACI), the situation is disappointing for the global aviation industry [1]. In particular, the airport sector expects a reduction in passenger volume by 59.6% in 2020 compared to the initial projected baseline to COVID-19 and a reduction in passengers by 58.4% compared to 2019. This is equivalent to a decrease of 5.6 billion passengers per year.

The Airport Council International World also highlights the significant level of uncertainty surrounding the prospects for the recovery of the industry. According to forecasts, the recovery of world passenger traffic at the level of 2019 will take place no earlier than 2023, and markets with significant international traffic will recover only by 2024.

The situation for the Ukrainian aviation industry has also become difficult. The closure of state borders in many countries in order to combat the spread of COVID-19 and as a result of the suspension of scheduled air services in Ukraine from March 17, 2020, has provoked a significant reduction in aviation activities. Therefore, one of the first disappointing situations was experienced by the domestic airport industry.

In the analytical report published by the State Aviation Service of Ukraine, following the results of 9 months of 2020, there is a significant reduction in the production performance of aviation enterprises compared to the same period last year [2]. From January 2020 to October 2020, 70.9 thousand aircraft were serviced by Ukrainian airports. Compared to the corresponding period of 2019, when the number of serviced aircraft was 153.9 thousand, the volume has more than halved. At the same time, passenger traffic through the airports of Ukraine decreased by 63 percent, mail and cargo traffic - by 12.5 percent and amounted to 6856.8 thousand people and 37 thousand tons, respectively.

In total commercial flights of domestic and foreign airlines served 19 Ukrainian airports and airfields during the reporting period. It should be noted that almost 98 percent of all passenger and mail flows are provided by the 6 leading airports in the country.

Thus, the share of the leading airports in the total volume of passenger traffic through the airports of Ukraine was distributed as follows. The share of Boryspil International Airport (KBP) was 59 percent, Lviv International Airport. Danylo Halytskyi (LWO) - 10 percent, Kyiv International Airport (Zhulyany) (IEV) - 9 percent, shares of Odessa International Airport (ODS) and Kharkiv International Airport (HRK) were 8 percent each, Zaporizhzhia International Airport (OZH) - 4 interest.

Following the results of 9 months of 2020, there was a reduction in passenger traffic at all airports without exception, in particular, the number of passengers served by the main airport of Kyiv (Boryspil) decreased compared to January-September of the previous 2019 by 65.1 percent. Passenger traffic through Kyiv (Zhulyany) airport decreased by 70.1 percent, Lviv - by 58 percent, Odessa - by 56.7 percent, Kharkiv - by 47.1 percent, Zaporizhzhia - by 26.9 percent.

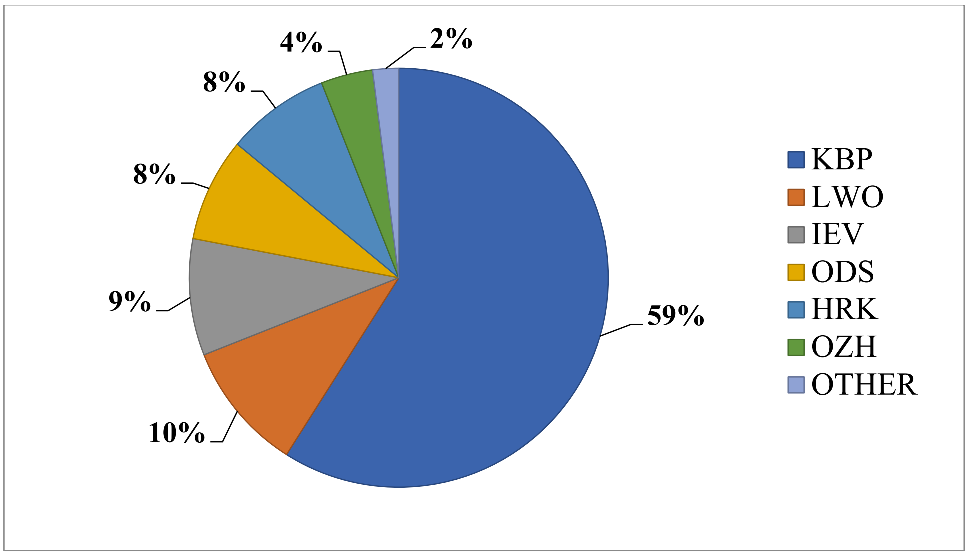

Figure 1. The share of leading airports in the total volume of passenger traffic through the airports of Ukraine for 9 months of 2020.
Built by the author based on [2]

All participants of the aviation market suffer from the disappointing situation in the domestic aviation industry. After all, today's realities have created extraordinary challenges and threats for the future development of the airport sector.

One of the first challenges for domestic airports was the task of ensuring the activities of enterprises in the global crisis. Rapid development in previous years has inspired companies to implement development strategies and ensure the modernization of infrastructure. However, March 2020 was the beginning of a probationary period for airports. The closure of borders and the suspension of air services have led airports to develop anti-crisis measures to save businesses at an accelerated pace. The threat of shutting down existing airports has forced the introduction of operational optimization at enterprises, which can handle not all airports.

Thus, for 9 months of 2020, 2 percent of the total volume of passenger traffic through the airports of Ukraine fell on 13 regional airports. It is these regional airports that have found themselves in the most difficult position, as they all exist on the verge of bankruptcy. The urgent need for airports has been to seek subsidized funding from the state to save businesses or at least provide legislative support. The threat of closing most of these airports is the result of state inaction. Investing in the infrastructure of regional airports, which is planned for next year, raises not only the question of rationality and relevance, but its feasibility. We now need to focus on improving the economic situation and focusing on current issues and challenges.

The lack of support from the state and the relevant ministry was also a threat to the resumption of airport operations. The heads of aviation companies, in particular, emphasize the established dialogue between government agencies and business. However, to date, the state is not ready to provide assistance to the aviation sector; but moreover, the relevant government agencies have not yet created a clear plan for overcoming the crisis. The airport industry now needs a professional analysis of the market situation and the development of recovery programs. Today's challenges for the state include preventing bankruptcy and closing major airports, which provide 98 percent of all air traffic. Termination of at least one of them will lead to serious economic losses for the country. The shutdown of airports will potentially provoke a significant increase in unemployment by almost 12 percent, given the overall unemployment rate in Ukraine [3]. This situation will inevitably lead to problems related to lower tax revenues, social problems and exacerbate political instability in the country.

Thus the government should create a clear program to support existing airports and be able to meet with businesses for cooperation, and provide at least legislative support in the near future. The intention to open new regional airports is not timely now, so the government must carefully analyze the state of the aviation industry. After all, the main challenge and task with an asterisk is still to bring the aviation industry out of the crisis, rather than fulfilling pre-crisis promises and plans.

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INFORMATION SUPPORT OF THE SUPPLY CHAIN MODELING PROCESS

The widespread penetration of logistics into the economy has been made possible in large part by the computerization of material flow management. Continuous improvement of quantitative indicators of microprocessor technology (speed, memory, ease of communication with a computer, cost) provided a qualitative opportunity to integrate various participants in logistics processes into a single system, exceeding the traditional boundaries of enterprises and reaching national and international boundaries. However, in such integrated systems the requirements of operational management of material flows are actualized, which means the need to ensure parallelism in time of material and information flows, i.e. to ensure the collection, processing and transmission of information in real time. The creation of multi-level automated material flow management systems, although it requires significant costs for software development and database formation, on the one hand, should ensure the versatility of the system, and on the other - a high level of integration of all supply chain participants [1].

The rapid development of information technology actively affects all aspects of business development, including logistics. The various information flows circulating inside and between the elements of the logistics system, between the