

### **ECONOMIC FACTORS OF FORMATION OF CAPACITY OF THE AIRPORT**

Major factors of economic efficiency of accumulation of capacity which the Borispol airport is capable to provide are revealed.

*Keywords: economic validity, efficiency, capacity, GI IA «Borispol»*

**Problem statement:** In the conditions of dynamic development of aviation technologies of transportations, growth of volumes of air transportation at the expense of activation of processes of synchronization of different types of transport in interaction points, for example, at the airports, sharply there is a problem of low capacity, a level of quality of service and economic feasibility of accumulation of volumes of service. In a basis of this article are put an economic justification of capacity of a passenger turnover on the example of the State enterprise "International Airport "Borispol"".

**Analysis of the last researches and publications:** The general analysis of tendencies of economic management passenger traffics in the aviation sphere was made by such domestic and foreign scientists as M.P.Harchenko, E.M.Sych, Yu.F.Kulaev, D.A.Bugayko, S. Bogdanov, A.Fedyaev, D. Bailey, and others [1-2]. However scientific works in which it would accurately be shined current trends of an economic justification of capacity and its influence on overall performance of the airport, unfortunately, are absent.

**Problem definition:** Research problem is the economic justification of efficiency of capacity and the analysis of its level at the Borispol airport.

**Statement of the main material:** With development of jet aircraft at the end of 1950-x years requirements to quality of infrastructure increased. Before the management of USSR and civil aviation there was a question of construction of the airport, capable to serve planes weighing more than 100 tons. As option airport reconstruction in Zhulyany was considered, however was decided to build the new airport near a complex voyenno - air forces in Borispol. It was promoted by existence there the automobile highway, corresponding vzletno - a landing strip with a firm covering, and opportunity temporary, the general with military, basings. In May 1959 Council of ministers of the USSR adopted the resolution on creation on the basis of military airfield "Borispol" of the airport of Merchant air fleet Kiev (Central) and obliged to provide it with modern planes, the land equipment and radio engineering means. Development of aviation branch in Ukraine gains more and more powerful value. Carrying out in Ukraine of the FIFA World Cup "EURO - 2012" became one of the main steps to it.

Capacity of the airport is a number of passengers, baggage and freight and aircrafts on types that is served at the airport for the determined period of time (a capacity combination runway strip, air terminal and platforms). Capacity of the airport is defined by capacity runway strips and station terminals.

The international airport "Borispol" is the largest and the most powerful in Ukraine. It provides about 65% of air passenger traffic of Ukraine, and annually serves more than 8 million passengers. "Borispol" is successfully located on crossing of many airways uniting Asia with Europe and America. About 50 national and foreign airlines carry out from "Borispol" transportations of passengers and freights on more than 100 regular routes. In

June, 2012 at the airport the largest is open and the most modern in Ukraine a terminal complex - the passenger D terminal. "Borispol" became the state's first operator providing a full range of handling services. At the airport the unique project - official service "Sky Taxi" which guarantees safety and quality of service of passengers is developed and realized. Development of the main airport of the country testifies to positive dynamics in aviation branch. Here the infrastructure develops, new airlines are attracted, the passenger traffic increases, quality of service improves.

The main functions of the International airport "Borispol" are directed on service of passengers and their baggage. The air terminal complex of the airport consists of three terminals. The terminal "B" serves first of all the air passengers traveling within Ukraine. The terminal also is used for service of part of air passengers of the international flights. Capacity: On the international flights of 1200 passengers / hours (on a departure) and 1100 passengers / hours (on an arrival). Across Ukraine: 650 passengers / hours (on a departure) and 600/year. (on an arrival). The F terminal was open in 2010. In it technological processes simple and convenient for passengers are realized, conditions of their service are improved, the latest engineering and information technologies are introduced, modern systems of safety are applied. Now the F terminal serves exclusively international flights. Capacity: 900 passengers / hours (on a departure) and as much on an arrival; during the peak period possibility of service to 1500 passengers / hours (on a departure). The D terminal is open in 2012 the most powerful in Ukraine the passenger D terminal is logical development of infrastructure of the airport which brings him to essentially new level of quantity and quality of air transportation. Capacity: The terminal can provide a passenger traffic at the level of 10 million a year. The 3000th passengers / hour (on a departure) and as much on an arrival.

At the airport there are two runway strips with an artificial covering 4000 meters and 3500 meters long [5]. Now there is a need of full reconstruction of the flight zone No. 2, including runway-2 and the related objects of the airport which is dictated by an unsatisfactory condition of airfield coverings, artificial basis, water waste - drainage system through full of development of a standard resource of coverings and their long-term operation by aircrafts, created loadings one covering considerable, than those on which they were calculated. For reconstruction and increase of capacity of a passenger turnover by the state it was allocated from the budget of 542 690 000 UAH [4]. This money was spent for power supply reconstruction, development of the project, reconstruction of two platforms - S and F and construction of the new terminal. Problems of a technical condition of runway weren't included in the reconstruction project. The UEFA requirement at the time of carrying out Euro - 2012 is the capacity of terminals of the Borispol airport in 4150 passengers in rush hour. However by means of the public financing, the expected capacity of all terminals of the international airport "Borispol" in 2012 made 6050 passengers in rush hour, covers requirements of the championship and creates a scope for port development. Considering increase in demand for air transportation, the airport prepared for a long time for increase in capacities.

The described conditions of implementation of activity of the airport allowed to formulate the major factors influencing formation of level of capacity: equipment - technological; the political; the economic; level of development of resource potential; infrastructure level of development.

Equipment - technology factors provoke change of duration of service, influences final overall performance of the airport. So far as concerns airport capacity, the quantity of PS which can be served (take-off / landing / take off and landing) for a certain unit of time (most

often, hour) means. Equipment - technological problem of capacity of the airport can be solved by two ways:

- 1 . because of construction of new runway;
- 2 . because of time reduction, occupies the aircraft on runway.

The first option rather expensive, and sometimes also it is impossible. whereas the second option can be realized about rather short term (1-2 years) and doesn't demand large-scale expenses.

Technological process of increase of capacity of the airport has to consist of the following steps:

- 1 . Creation of group of management by process of increase of capacity of the airport.
- 2 . Assessment of capacity of the airport for establishment of a starting point of process of improvement of work of the airport.(the solution of a question of a choice like measurements; carrying out operations of measurement of capacity of the airport; the analysis of the received results).
- 3 . Involvement in process of pilots and dispatchers.
- 4 . Informational content increase about possible ways of increase of capacity of the airport. [1] ] .

It should be noted that there are the technical restrictions interfering increase of capacity of the airport [1]. Among them:

- 1 . Safety. The pilot is the major link in protection of safety of flight and bears full responsibility for safety of VS. It is absolutely causeless and wrong to demand safety deterioration for the purpose of increase of capacity of runway. In these conditions the pilot has the decisive word in questions of acceptance or rejection of methods. The confidence that the aircraft regularly works has to be a priority for the pilot, is safely placed that permissions of Service of management of air space are accurately clear both placement and operations of other aircrafts are known. As when landing by a priority the safe landing on runway and plane braking is.

- 2 . Ergonomics of methods. For example, if it is a question of aircraft brakes, it is very expensive part of the plane, and often repeating sharp braking can reduce term of their service by 25%.

- 3 . Comfort of passengers. There is a certain limit to which it can be applied braking. Sharp braking and strong return draft can disturb very much to passengers, breaking their comfort. The airline will disagree on methods which safety of passengers threaten.

However after airport and termination reconstruction "EURO-2012" the increase in a passenger turnover didn't occur. For this purpose that Kyiv didn't become neither business formed the bases, nor the tourist center, and the agreement on "the open sky" who would allow the western airlines to land more simply in Borispol, isn't signed. Therefore through service of new infrastructure and the credits taken for "Euro-2012" when the income airport incurs losses. In the first quarter 2013 the international airport "Borispol" received net loss of 60,6 million UAH whereas the airport finished the first quarter 2012 from 167 500 000 UAH of net profit. Thus net income of the airport in the first quarter 2013 made 279, 4 million UAH that is 17,4% less, than in January - March, 2012 [4]. It should be noted that the employed personnel after carrying out the championship got to the Borispol airport under reduction because of low load to a passenger turnover, supported with above-mentioned problems.

Now the passenger turnover at the international airport "Borispol" in rush hour reaches 1840 passengers that testifies to load of the airport only for 30%. Doesn't promote

development of "Borispol" and bankruptcy of the "Aerosvit" which routes still didn't master other airlines. And every third flight of the airport belonged to bankrupt airline.

Considering all above-mentioned factors of ensuring economic efficiency of capacity of the international airport "Borispol", it is expedient to note need of signing of the contract on "The open sky". According to the contract not less than 15 million passengers from Ukraine have to be declared. Besides, the agreement will allow to improve pricing system in aviation branch (for example, the size of rates on airport collecting) that will positively affect increase in demand for transportations at the expense of depreciation of tickets for the population. One of reserves of growth of efficiency of the airport is increase of level of compliance to the international standards. For example, idle time of the plane of the international airport "Borispol" not registered in a hangar costs one many more, than the "empty" plane to return to the native hangar. This factor provokes decrease in the income from service of aircrafts.

Therefore, economic validity of accumulation of capacity at the airports of Ukraine is a little expedient. It influences all above-mentioned problems which interfere for development of the aviation sphere, namely to increase in a passenger traffic of the airport.

**Conclusions:** Conducted research revealed major factors of ensuring effective management of the airport capacity to which are carried equipment - technological and economic, factors of the international integration and interaction of different types of transport. The received results provoke carrying out further researches for search of sources of increase of efficiency of accumulation of capacity for the Ukrainian airports.

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