

## THE METHOD FOR EVALUATING THE EFFICIENCY AIRLINE FLEET IN THE AIRLINES

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One of the most important areas of international interaction is transportation. This may be explained in two ways: first, by the need to improve external trade relations, and second, by the technological distinctiveness of the transportation process. Research methods The management of the aircraft fleet in the airline should be carried out only after researching the transportation process, whether they are passenger or cargo, there is no difference [1]. The process involves the transportation of passengers or cargo, which is carried out by the airline on aircraft at a fixed cost and conditions that are stipulated in contracts.

**Results.**he choice of a rational aircraft fleet is one of the most important issues of the airline, it may be relevant when creating a company or directly during the operation of the airline. The correct and timely selection of the optimal aircraft fleet can affect all branches of the airline, which in turn affects financial indicators such as profitability, payback and others, economic, such as success in the airline's market, superiority over competitors, etc and, in general, for the entire work of the airline, the creation of new air routes, the number of work places required, the choice or feasibility of replacing the base or hub airport and other nuances that may be associated with the operation of one or another aircraft. As we all know, there are no ancient airplanes; instead, there are those that have experienced a series of maintenance operations, repairs of varying kinds, and some of the units and components of several systems have been fixed or simply replaced with new ones throughout decades of operation.

However, the airline will need to renew its aircraft fleet at some time, which might be owing to the aircraft's systems and components becoming obsolete and having to be replaced, or the difficulty to find the key components or tools for linear and basic maintenance or to meet the environmental requirements that every year become more stringent. Do not forget about the necessity to introduce a decent, more economically profitable type of aircraft or the desire to develop new routes that require, for example, an aircraft capable of flying longer distances and so on. There might be a variety of reasons for this, but the most important thing is to determine whether it is really essential. To comprehend this, you must first determine if the current aircraft

fleet is effective, if it will be effective when more routes are added, or whether replacing it with a new type of aircraft is the best option. First and foremost, we must decide on the way of purchasing the airplane. In general, airplanes are purchased via one of two methods: financial leasing or bank credit [2]. Always carefully assess your costs before purchasing an airline and choose the finest options. As the company is still young and does not yet have the necessary high savings, «Fly Sky Airlines» LLC is offered to use such a form as leasing. To substantiate this, we will conduct a comparative analysis of two methodologies: traditional lending and leasing. The cost of one An-70 military transport aircraft is about \$ 67 million [3] under the condition of release from the assembly line when the price of a Boeing 737-400f manufactured in 1990 is about \$ 8 million [1]. Taking into consideration all of these factors, as well as the fact that the airline LLC "Fly Sky Airlines" profits are on the rise and will continue to rise, the airline earned a net profit of 1.2 million hryvnias in April 2021, which was higher than the projected. As a result, in both circumstances, it is recommended that the airline employ the leasing system. The utilization of the An-70 as well as the Boeing 737-400f will prove to be advantageous. And because the usage of the An-70 as well as the Boeing 737-400f would boost the company's earnings and profitability, the implementation of such an operation to modernize the company's aircraft fleet looks reasonable and opportune. It is more cost-effective to lease a Boeing 737-400f aircraft, although the qualities of the An-70 do not exclude a high price, according to the calculations made. Using the example of «Fly Sky Airlines» LLC, in order to meet the needs for rejuvenation of the aircraft fleet, it was explained how to study the efficiency of the existing aircraft fleet and choose the most rational type of aircraft for the airline using feasibility studies on transportation. The feasibility study demonstrated how to determine the possible range of distances for each of the aircraft, which further contributed to their assessment, productivity per flight, specific fuel consumption, flight costs and specific costs on transportation and apply this study to existing airline routes. After receiving all of the necessary data, it was ultimately decided to employ a point selection technique to summarize and select the best aircraft to replace the Il-76TD in the future, with the best aircraft being a pair of Boeing 737- 400f and An-70. This system awarded 1 point for the best performance and 0 points for everything else. The maximum number of points is equal to the number of examinations, which is 8 in this case. The following criteria were used to select and evaluate candidates: maximum payload and range of flights; aircrafts productivity; fuel burn; specific fuel consumption; duration of the flight time; flight costs; specific transportation costs; indicators for the Al Maktoum International Airport – Muwaffaq Salti Air Base flight. Conclusion Finally, we got the An-70's undisputed leader, who received 7 points under this system, putting Boeing 737-400f 4 points ahead of his pursuer. As a result, we've determined that is the most appropriate aircraft to replace the Il-76TD in the future.

After all, we did an economic analysis of the technique of airline fleet renewal and found that in both cases, the leasing system is recommended. The use of the An-70 as well as the Boeing 737-400f will show to be beneficial. And because the deployment of the An-70 as well as the Boeing 737-400f would increase the company's revenues and profitability, such an operation to update the company's aircraft fleet appears logical and suitable.

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