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PROSPECTS OF UKRAINE LOW-COST AVIATION

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Abstract

Purpose: The purpose of the article is to show that the budgetary development of aviation in the market of domestic flights in Ukraine will not only increase the use of the aircraft by the end user, but also maximize the profits for the domestic airlines. **Methods:** We used economic analysis methods to assess the costs for air travel. The necessity of the use of passengers load factor was justified, indicators of the efficiency of the airline were calculated. The advantages of the air transport compared to the rail transport were shown on the basis of a comparative analysis. **Results:** We considered the relationship between the volume of air traffic and the revenue of the potential clients. The feasibility of reducing prices on air tickets to the level of railway tariffs was proved. The concept of low cost airlines was defined, the factors to decrease the air travel prices were identified. Maximisation of the airline profits can be achieved with an affordable price, which will increase passenger traffic. **Discussion:** In Ukraine there is an urgent need for new solutions that would help airlines to successfully conduct its business and meet the needs of passengers on domestic routes. There is no doubt that in times of economic crisis, inflation has a significant impact on the real incomes of consumers, and this study proves the feasibility of establishing a low-budget domestic aviation and its use on domestic routes during the economic crisis.

Keywords: airline; airlines; low-cost aviation; pricing; profit..

Modern Ukraine is characterized by relatively high economic development and active implementation of new technologies and innovative strategies in various sectors. On the one hand, these factors favorably affect the living standards of the population, demand and form new, more complex needs. On the other hand, representatives of the business and service sectors must be prepared to respond to changing market requirements, prepare to overcome the difficulties of the economic crisis.

An important and integral part of developing economies are air transportation. Despite the positive growth (15.5% in 2012-2014) in domestic flights of Ukraine today there are complex of system problems. The feature of the air transportation market is that model which is now used by national airline is not entirely relevant for both domestic and foreign markets for air travel.

The end consumer is not willing or is unable to pay such a high price for a ticket, which now offer airline. This is explained by the fact that in times of economic crisis, inflation significantly affects the income of consumers. Profit maximization airlines must be achieved at the expense of affordable pricing on the flights, which will increase passenger traffic.

The problems of air transport enterprises engaged Ukrainian scientists such as N. Antoschyshyna, D. Buhayko, G. Grigoriev, G Gurin, K. Kalda, Y. Kulayev, S. Pereverzev, N. Poljanskaya, J. Kozlyuk, M. Semeryahina and others [1-3]. Scientists in multi direction were uncovered activities of air transport enterprises and defined perspective directions of development. However, the theoretical and methodological level is formulated business model of low-cost airlines and the estimation of the prospects of the airline market in Ukraine.

The purpose of this article - to prove that the development of low-cost aviation in Ukraine for domestic air transportation will not only increase the aircraft utilization for the end consumer but also maximize profits ADE airlines.

In the years 2014-2015 there has been a significant reduction in key indicators of enterprises of aviation industry of Ukraine (Fig.).

Among the main factors that led to a decline in demand for air travel - current military-political situation in the country, the annexation of Crimea, the recommendations of the safety of a number of international organizations and EU agencies avoid alternative routes airspace of Ukraine and the

associated deterioration in overall total the state of the current economic situation. During the year some domestic airports didn't work, many airlines

have significantly reduced route network, a number of general areas were minimized.

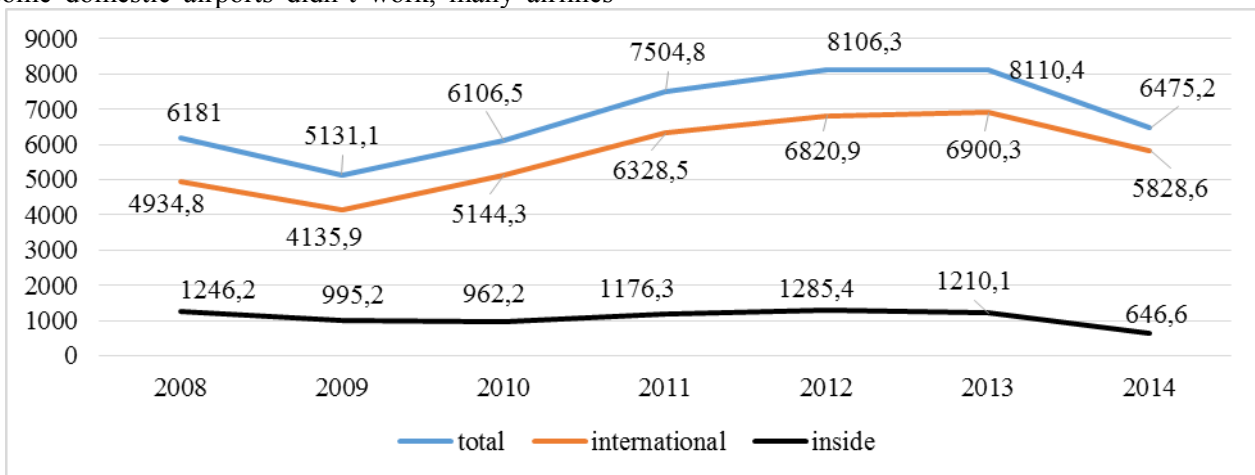


Fig. Dynamics of air transportation in Ukraine, thou people [4]

Passenger and cargo traffic performed by 35 domestic airlines, according to statistical data - 6,475.2 thousand passengers and 78.7 thousand tons of cargo and mail (2014 reduction was 20.2% and 20.7% respectively).

In the market of passenger traffic during 2014 worked 25 domestic airlines, the major passenger airlines are "Ukraine International Airlines" (reduction of transportation by 14.6% compared with 2013), "Wizz Air Ukraine" (reduction by 19.4%), "UTair-Ukraine" (reduction by 24.1%), "Wind Rose" (reduction by 11.9%), "Kharkiv

Airlines" (increase of 33.9%) and "Dniproavia" (increase of 20.7%) [1]. The increase in airline companies "Kharkiv Airlines" and "Dniproavia" was due to the redistribution of passenger traffic due to the closure of the airport in Donetsk.

The volume of passenger traffic is directly related to the level of income. The correlation coefficient between the volume of air transportation and wages is 0.988 (\$) and 0.948 (UAN.). Unlike air traffic volume of passenger traffic on the railroad does not depend on income.

Table 1. The dynamics of passenger traffic and income Ukraine [5]

Year	Airfreight		Rail transport		Average monthly salary	
	thou people	m. pass. km	thou people	m. pass. km	UAH	\$
2001	1289,9	1745	467825	49655	311	57,91
2002	1767,5	2400	464810	50400	376	70,54
2003	2374,7	3300	476742	52200	462	86,68
2004	3228,5	5300	452226	51800	590	110,90
2005	3813,1	6100	445553	52400	806	157,42
2006	4350,9	8600	448422	53400	1041	206,14
2007	4928,6	9500	447094	53400	1351	267,52
2008	6181	10776,8	445466	53225,4	1806	331,38
2009	5131,2	9020,5	425975	48274	1906	244,67
2010	6106,5	10968,8	427241	50038,4	2239	281,99
2011	7504,8	13761	429785	50837,4	2633	331,19
2012	8106,3	14406	429115	49443,9	3041	380,60
2013	8107,2	12568,2	425217	49098,3	3282	410,76
2014	6473,3	11583,7	389306	35623,5	3480	292,68

The results suggest that the volume of air transportation and airline revenue connected with income prospects. The concept of low-cost traffic is that if the price is comparable with railway fares, the consumer is able to save significant time to optimize your personal schedule by offering high frequency of flights at different times of day. And that control the price of tickets is one of the main tools of the aviation industry in Ukraine.

Low cost airlines (or discounters airlines) have built an entirely new business model, which is based on high productivity and low costs.

Today is the following popular low-cost companies as: Air Berlin, Vueling Airlines, Norwegian, Niki, Pegasus Airlines, Wizz Air and Air Arabia. Flights are now carried out not only in Europe, but also in Asia, Australia and America. Adopting experience Easy Jet, other low cost airlines have begun to develop their own strategies to minimize the cost of the flight [6].

The most important factor in the low-cost airlines is the efficiency of doing business is higher than traditional carriers. They provide tickets at very low prices, thereby increasing passenger traffic. This allows airlines to get more aircraft hours, more profit on the number of employees and lower costs for each passenger seat.

The main factors to achieve this effect, the use of modern and young fleet (new aircraft consume less fuel and less likely to break), the exclusion of costs for optional items such I have food on board, using fewer staff, ticket sales via the Internet (at cost traditional airline commission agents or maintenance of city ticket offices are about 10% of the ticket price).

So book your ticket and pay only on the airline's website, thus avoiding additional costs for services agency for booking flights. To free luggage hand luggage is allowed only specified size and weight. And almost everywhere there is no business class cabin. If necessary, you can order any service, but it is paid extra. Value-added services based on the company's carrier start from 10 euros. And yet, low-cost aircraft companies differ increased comfort and service on board at a very high level.

One of its distinctive features is the low profitability of operating carriers. Modern, traditional airlines faced with such uncontrollable external factors such as rising prices for aviation fuel (up to 50% of costs), political barriers, infrastructural constraints, low load on separate tracks [7]. A large amount of money spent on the

purchase of new equipment, maintenance of diverse fleet and training.

Another feature air transportation market in Ukraine is that the traditional model of air transportation is not always effective on domestic routes. The efficiency of the airline depends on end users, i.e. passengers. After all, they determine how and where airlines fly that route to develop and which are not. Modern passengers a much greater degree differentiated by their needs, compared with the passengers last century.

Differences in age, income level, the purpose of travel, form different perceptions of factors such as price, service quality, schedule and so on. However, trying to meet a variety of consumer requests in adverse environments, air carriers, after all, offer a very similar set of services, sometimes of poor quality, which does not speak of the existence of competitive advantage.

As a result, the profitability of many airlines is sometimes reduced to zero and during the global economic downturn, when the impact of external factors on the business becomes stronger and almost not subject to management and control, many industry players are forced to leave the market, leaving a multimillion-dollar debt. In terms of passenger demand, it causes a dissatisfaction and transfer part of its volume of alternative transportation options, such as rail or road.

Thus, in Ukraine there is an urgent need for new solutions that could help airlines operating on domestic routes, successfully conduct its business and meet the needs of passengers. One of these solutions is the so-called low-cost operating model, the expediency of which is confirmed by several market research.

Currently in Ukraine there is no "real" airline low-cost. Thus, the airline "WizzAir Ukraine", which entered the Ukrainian market in 2008, took his base in Ukraine as a result of the difficult economic situation and the continuing problems in the airline market. The new company entered the maker in September 2015 - Turkish Atlasjet Airlines, which plans to combine domestic flights Kiev and Odessa to Lviv. But Atlasjet is a purely Turkish company based in Istanbul.

Flights from Ukraine are populated by low-cost airlines that take routes of traditional airlines and also try to give our customers competitive rates for at least some of their seats.

For example, a situation we can see in the common European destinations the largest national carrier MAU and "Wizz Air".

Today, in times of economic crisis, desires and needs of modern man include not only an efficient use of their money, but also an efficient use of the time.

During the period from September 2014 to September 2015, prices were rapidly changing due to various factors. One such factor is that each plane flies in different directions. That is, the higher the cost of the aircraft and its maintenance cost (takeoff / landing, aviation safety, towing, fuel, etc.) - the higher the price per ticket. So it should be noted, that low-cost companies should develop in the domestic market of air transportation.

A low-cost segment in Ukraine will grow rapidly only in conjunction with the welfare of citizens, as well as simplification of visa regime with the European Union. At the same time lowering ticket prices and expanding routes carries big risks. In fact, in Ukraine demand for air transport is not elastic. For example, in Europe at lower prices an increase in passenger traffic, which amounts to cover financial losses as a result of lower prices.

Foreign airlines do not risk to open in Ukraine new routes, given that connections to major European cities are already established, and passenger traffic is formed.

Constraining factors in the development of the European area are difficulties with a Schengen visa. Wealthy Ukrainians who fly often, are easier to obtain a Schengen visa, but this category of citizens often uses traditional airlines. A low-cost prefers mostly middle class, and many of its representatives cannot fly due to lack of visas.

The development of low-cost airlines is an important and relevant aspect of the domestic air transportation market of Ukraine. Unfortunately, not every modern person can afford to spend a significant amount of funds for the ticket. The method provides a low-cost maximum reduction in ticket prices, and is designed for people with low and middle income countries.

Given the fact that in times of economic crisis, inflation greatly influences the real income of consumers, this study allows to prove the feasibility of establishing a low-budget domestic aviation and its use on domestic routes.

We have analyzed the feasibility of using an aircraft for domestic low-cost method for domestic flights and short distances. Baselines taken the route Kyiv-Lviv, whose length is 497 km airspace. The time spent on overcoming distance plane - 60 minutes. For comparison, calculate the net profit from the implementation flight Boeing 737-100

aircraft and the AN-148-100 for 12 months, taking into account seasonal load aircraft [8].

Passenger aircraft, Boeing 737-100 takes 103 persons, fuel consumption - 2000kg / h (at a price of 11,000 UAH / 1000kg), salary crew (2 + 3 pilot flight attendant) is an average of 1100 UAH per day, the cost of operating the aircraft - 185888.88 UAH per day.

Passenger aircraft AN-148-100 is 80 persons, fuel consumption - 1550kg / h (at 9,000 UAH / 1,000 kg), salary crew (2 + 2 pilot flight attendant) is 732 UAH per day, the cost of operating the aircraft - 35407.41 UAH per day.

It should be noted that when calculating the cost of servicing the aircraft, changing only the cost of fuel while the cost of the daily service (amortization of aircraft, the costs for wages, maintenance "Daily Check", parking etc.) remain constant.

Also note that the cost of a first class ticket on the train "Intercity" in the direction Kyiv-Lviv is 510 USD., Distance to the ground is 564 km and the time spent to overcome this distance takes 5 hours 20 minutes. Reduced ticket prices to the level of rail traffic will increase demand and allow for 4 flights (go / back) per day.

Unfortunately, in the aviation practice practically no route has a hundred percent of the passenger load per month or per year. Typically, the load factor passenger load is calculated by key analysts in a month, to predict future demand for tickets to this or that direction, as well as for forecasting passenger for the future. Often, airlines use factor 0.7 (load factor passenger seats), which means that the incomplete utilization of the aircraft 70% of tickets will be sold, and 30% of the seats remain empty.

So, calculate profit from the executing morning and evening flight and two flights of intermediate (at 70% load) in the direction Kyiv-Lviv aircraft AN-148-100 and present it to the table 2.

Thus, lowering the cost of a ticket to the ticket price for first class train "Intercity", the airline is able to profit in the amount of 943,777.1 per day. Subject to completion of the four flights (morning, evening and two intermediate) in both directions. Thus, the airline will receive 28 million USD profit directly from one airline in the domestic market for the month. In addition, a 2.5 times increase the number of passengers.

Currently, it is extremely important for a person who is committed to the rational use of their time, can save nearly 4 hours and 20 minutes of their time to overcome the distance Kyiv-Lviv.

Table 2. Profit from the implementation of air traffic in the direction Kyiv-Lviv

Period	Boeing 737-100 (fact)			AH-148-100A (forecast)		
	The number of passengers per day (1 flight back / back), persons	Tickets, UAH	Profit, UAH	The number of passengers per day (4 flights back / back), persons	Tickets, UAH	Profit, UAH
October 2014	196	2 700,00	670611,12	408	510	52 340,59
November 2014	176	4 600,00	1018611,12	408	510	52 340,59
December 2014	200	7 100,00	1249011,12	544	510	121 700,59
January 2015	200	7 400,00	1289011,12	408	510	52 340,59
February 2015	190	7 600,00	1365011,12	408	510	52 340,59
March 2015	156	8 400,00	1112795,12	544	510	121 700,59
April 2015	174	8 614,00	1126211,12	544	510	121 700,59
May 2015	200	7 800,00	1569011,12	517	510	107 930,59
June 2015	176	9 000,00	877811,12	374	510	35 000,59
July 2015	160	6 300,00	1289 011,12	367	510	31 430,59
August 2015	148	9 500,00	1219455,52	524	510	111 500,59
September 2015	166	9 800,30	1047211,12	469		83 450,59
Σ	2142		13833761,8	5515		943777,1

From the calculations, we can conclude the feasibility of companies, based on a low-cost method for domestic air transport. Significant discounts for air travel achieved through the following tasks:

1. Denial of traditional types of service on the board. These include lack of nutrition, interior division into classes, greater passenger capacity of the aircraft, allowing you to take on more passengers.

2. Optimize routing schemas. One way to do business for airlines that refused traditional services, and needs to be cost-effective and profitable is to maximize the use of the existing fleet and reduce downtime. In other words, effective economies of scale - the larger the deposit, the lower the total cost. Low-cost companies are mainly oriented to short and medium distances (approximately 2000 km.) [9]. The long duration of the flight makes unattractive for the buyer and the lack of food on board, and high density loading of the aircraft. 3. Unification fleet of the airline. This condition reduces the cost of training of flight personnel, purchase of training equipment, the cost of spare parts and maintenance of aircraft.

4. The use of secondary airports. As the traditional ticket price includes airport taxes and sometimes quite high, the use of secondary airports

can reduce these costs.

5. On-line ticket sales, thereby reducing the cost of maintaining their own offices and use of global distribution systems.

Thus, in Ukraine there is an urgent need for new solutions that could help airlines operating on domestic routes, successfully conduct its business and meet the needs of passengers. One of these solutions is the so-called low-cost operating model, the expediency of which is confirmed by a number of market research [10]. The concept of low-cost traffic is that if the price is comparable with railway tariffs, the consumer is able to save significant time to optimize their personal schedule by offering high frequency of flights at different times of day.

References

- [1] *Antoschyshyna, N.* Sustainability of business models of airlines in crisis. – Problems efficiency infrastructure, 2013, № 37, P. 3-16. (In Ukrainian).
- [2] *Kozlyuk, J.* Air transport: current problems and prospects. / Bulletin of the National Transport University, 2012, № 17, P 289-294. (In Ukrainian).
- [3] *Semeryahina, M., Poljanskaya, N.* Model airline operates autsortsynh business process // Problems efficiency infrastructure Collected Works. – Is. 22. – Kyiv: NAU, 2009, P. 140–147 (In

Ukrainian).

[4] Results of the aviation industry of Ukraine for 2014. – Access: <http://avia.gov.ua/uploads/documents/9458.pdf>

[5] Statistical Yearbook of Ukraine, 2014, Kyiv: Consultant. 586 p. (in Ukraine)

[6] Antoschyshyna N.I. Problems and prospects of low-budget airlines in Ukraine. – Kyiv: NAU, 2009, P. 66-73. (In Ukrainian).

[7] Low cost airlines and their features. – Access: <http://travelwithme.in.ua/ru/interesnye-fakty/byudzhetye-aviakompanii-i-ix-osobennosti.html>

[8] Morrell, P. Can long-haul low-cost airlines be successful? Research in Transportation Economics, Volume 24, Issue 1, The Economics of Low Cost Airlines, 2008, P. 61-67

[9] Smyth, M., Pearce, B. Airline Cost Performance // Iata economics briefing. – № 5. – 2006. – Access: https://www.iata.org/whatwedo/Documents/economics/airline_cost_performance.pdf

[10] Campisi, D., Costa, R., Mancuso, P. The Effects of Low Cost Airlines Growth in Italy. – Modern Economy, 2010, 1, 59-67. – Access: http://file.scirp.org/pdf/ME20100200008_99239537.pdf

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Н.В Касьянова, К.О. Суворова. Перспективи розвитку малобюджетної авіації в Україні

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Мета: Мета статті – довести, що розвиток бюджетної авіації на ринку внутрішніх авіаперевезень України дозволить не тільки збільшити використання літаків кінцевим споживачем, а й максимізувати прибуток вітчизняних авіакомпаній. **Методи:** Було використано методи економічного аналізу для оцінки витрат на авіаперевезення. Обґрунтовано необхідність використання коефіцієнта завантаження пасажирських місць, розраховано показники ефективності роботи авіакомпанії. На основі порівняльного аналізу показано переваги повітряного транспорту в порівнянні з залізничними перевезеннями. **Результати:** Розглянуто взаємозв'язок між обсягом авіаперевезень і доходами потенційних клієнтів, доведено доцільність зниження цін на авіаквитки до рівня залізничних тарифів. Обґрунтовано концепцію низької вартості авіаперевезень, визначено фактори здешевлення авіаперельотів. Максимізація прибутку авіакомпанії повинна бути досягнута за рахунок доступної ціни, що дозволить збільшити пасажиропотік. **Обговорення:** В Україні існує гостра потреба в нових рішеннях, які могли б допомогти авіакомпаніям успішно вести свій бізнес і задовольняти потреби пасажирів на внутрішніх повітряних лініях. Не викликає сумніву той факт, що за часів економічної кризи, інфляція істотно впливає на реальні доходи споживачів, а це дослідження дозволяє обґрунтувати доцільність створення малобюджетної вітчизняної авіації та її використання на внутрішніх лініях в умовах економічної кризи.

Ключові слова: авіакомпанія; авіаперевезення; малобюджетна авіація; прибуток; цінова політика.

Н.В Касьянова, Е.А. Суворова. Перспективы развития малобюджетной авиации в Украине

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Цель: Цель статьи – доказать, что развитие бюджетной авиации на рынке внутренних авиаперевозок Украины позволит не только увеличить использование самолета конечным потребителем, но и максимизировать прибыль отечественных авиакомпаний. **Методы:** Были использованы методы экономического анализа для оценки расходов на авиаперевозки. Обоснована необходимость использования коэффициента загрузки пассажирских мест, рассчитаны показатели эффективности работы авиакомпании. На основе сравнительного анализа показаны преимущества воздушного транспорта по сравнению с железнодорожными перевозками. **Результаты:** Рассмотрена взаимосвязь между объемом авиаперевозок и доходами потенциальных клиентов, доказана целесообразность снижения цен на авиабилеты до уровня железнодорожных тарифов. Обоснована концепция низкой стоимости авиаперевозок, определены факторы удешевления авиAPERелетов. Максимизация прибыли авиакомпании должна быть достигнута за счет доступной цены, что позволит увеличить пассажиропоток. **Обсуждение:** В Украине существует острая потребность в новых решениях, которые могли бы помочь авиакомпаниям успешно вести свой бизнес и удовлетворять потребности пассажиров на внутренних воздушных линиях. Не вызывает сомнения тот факт, что во времена экономического кризиса, инфляция существенно влияет на реальные доходы потребителей, а данное исследование позволяет обосновать целесообразность создания малобюджетной отечественной авиации и ее использования на внутренних линиях в условиях экономического кризиса.

Ключевые слова: авиакомпания; авиаперевозки; малобюджетная авиация; прибыль; ценовая политика.

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