DEVELOPMENT OF THE MARKET OF AVIATION TRANSPORTATION IN UKRAINE: PROBLEMS AND PROSPECTS

Развитие рынка авиационных перевозок в Украине: проблемы и перспективы

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Abstract: *It is determined that civil aviation in Ukraine has a number of problems that are the result of a chronic crisis in the deep fields of the industry. It is revealed that the "open sky" policy acts as an incentive to increase competition. The analysis of dynamics of the air transportation market of Ukraine is carried out. The decline in demand for air transportation in Ukraine is considered as a continuation of the negative trends in the national economy. The analysis of the Ukrainian airlines market has showed that the share of 4 leading airlines in the total volume of passenger traffic was almost 93 %. Regular flights between Ukraine and rest of the world were carried out by 9 domestic airlines (to 39 countries of the world) and 35 foreign airlines from 29 countries of the world. The ratio between international and domestic transportations of Ukrainian carriers during the year amounted to 85 % and 15 % in favor of international ones. It was found out that leading aviation carriers do not meet the modern requirements of the world aviation community. The study of the air transportation market in relation to specialization by types of business has revealed that nine major types of air carriers were formed. Functioning of Low Cost business model on the market provides a significant change in the structure of aviation. The main specific features of the stages of development of Low Cost business-model airlines are determined. The analysis of the situation on the air transport market was conducted on the basis of PEST-analysis. Measures that make it possible to intensify the process of development of the market of aviation transportations are listed: renewal of the airport infrastructure; establishment of high technical standards for airplanes and air services; security enhancement; modernization of air traffic control procedures; updating sectoral legislation. The prospects for the development of the air transport market of Ukraine are the creation of new organizational forms that fully meet the requirements of the market. Consolidation can occur in several areas: the formation of a national carrier-flagship, merger with foreign companies or consolidation with domestic players in the market.*

KEYWORDS: AVIATION, AIR TRANSPORTATION MARKET, BUSINESS-MODEL, AIRPORT INFRASTRUCTURE, PEST-ANALYSIS

1. Introduction

A number of problems, that Ukrainian civil aviation now faces, are, in fact, a consequence of the chronic crisis in the underlying areas of the industry. Organizational crisis is a condition in which forms of organization of market entities do not allow them to function effectively in conditions where the external environment is positively adjusted to these entities.

The "open sky" policy, to which Ukraine aspires, acts as an incentive for competition and, accordingly, an increase in the number of operators (mostly European ones). It will lower the fares and increase the quality of service. However, Ukrainian carriers may lose their positions. In response to increased competition, it is necessary to increase capacity and improve the efficiency of airlines. It is possible to reach this goal in various ways, in particular through consolidation with other participants in the aviation transport market [1].

The study of problems and organizational and economic changes in air transport should begin with the diagnosis of a market situation, because this factor is the most important in eliminating the problems that exist in Ukrainian airlines.

2. Analysis of dynamics of the air transport market in Ukraine

In Ukraine, 78 aviation organizations engaged in transportation or aeronautical chemical works were registered in January 2017. Almost a third of carriers specialize exclusively in passenger transportation. According to experts, more than 85% of passenger traffic is carried out on regular flights and only 15% – on charter flights, with the freight traffic the opposite is the case – almost 90% is on charter flights.

There were 33 domestic airlines operated on the passenger and freight market in 2016. According to the statistics, during the year, 66,300 commercial flights were performed (by 2015 – 74.8 thousand). The number of passengers carried decreased by 2.7 percent compared to the previous year and amounted to 6302.7 thousand people (Table 1). The volume of cargo and mail was 69.1 thousand tons (in 2015 - 78.7 thousand tons).

Table 1. *Volumes of transportations by air transport of Ukraine [2]*

Indicators	Units	Total			including international ones		
		2015	2016	% 16/15	2015	2016	% 16/15
Passengers transported	thousand people	6475,2	6302,7	97,3	5828,6	5678,0	97,4
including on regular lines	–	4553,9	4629,8	101,7	3924,7	4018,3	102,4
Passengers-kilometers completed	billion. pas. km	11,6	11,4	98,3	11,3	11,1	98,2
including on regular lines	–	7,6	8,1	106,	7,3	7,8	106,6
Cargo and mail transported	thousand tons	78,7	69,1	87,8	78,2	68,8	88,0
including on regular lines	–	10,9	13,8	126,6	10,6	13,5	127,4
Tonne-kilometers completed (cargo and mail)	million tkm	239,3	211,0	88,2	238,9	210,8	88,2
including on regular lines	–	30,4	39,6	130,3	30,2	39,5	130,8
Committed flights	thousand	74,8	66,3	88,6	61,3	56,0	91,4
including on regular lines	–	50,3	45,8	91,1	39,6	37,1	93,7

The decline in demand for air transportation is a continuation of the negative trends of 2015, which arose because of an unstable military-political and economic situation in the country and stoppage of air services between Ukraine and the Russian Federation from October 25, 2015.

A general overview of air transportation by Ukrainian companies is important for analyzing the airline's operating environment (Figure 1).

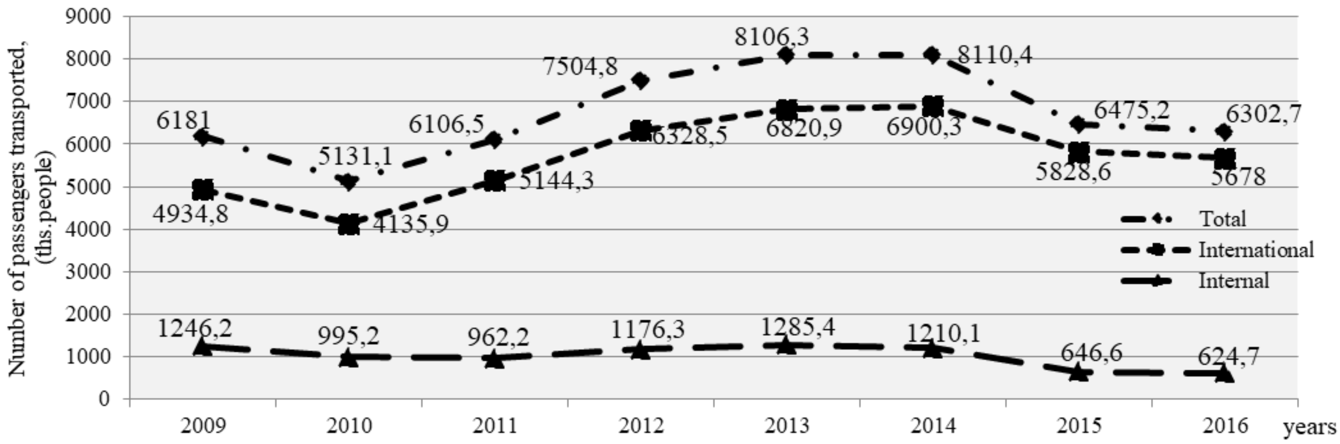


Figure 1. *Volumes of passenger transportation by air transport of Ukraine (2009-2016), thousand people [2]*

Commercial flights of domestic and foreign airlines were served by 20 Ukrainian airports in 2015. According to statistics, the number of the aircrafts sent and arrived during the year was 120.7 thousand (versus 142,400 in the previous year). Passenger traffic through Ukraine's airports decreased by 1.8% and amounted to 10695.2 thousand people, mail traffic – by 9.5% and totaled 34.4 thousand tons. At the same time, 68 percent of all serviced passengers and almost 88 percent of cargo flows fell on the Boryspil airport. According to the results of 2016, passenger traffic through the main airport of country, Boryspil increased by 5.6% compared to 2015. There was also growth in passenger traffic at airports in Odessa (at 9.8%), Zaporizhzhya (at 69.9%), and Kherson (by 7.8 times). Passenger traffic through Dnipropetrovsk airport decreased by 22.5%, Kharkiv - by 14.6%, Kyiv (Zhulyany) - by 13.6%, Lviv - by 2.5%. According to the results of 2016, passenger traffic through the Boryspil airport increased by 5.6% compared to 2015.

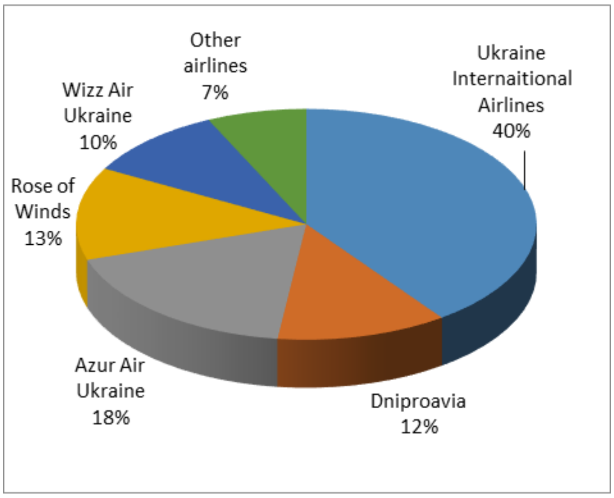
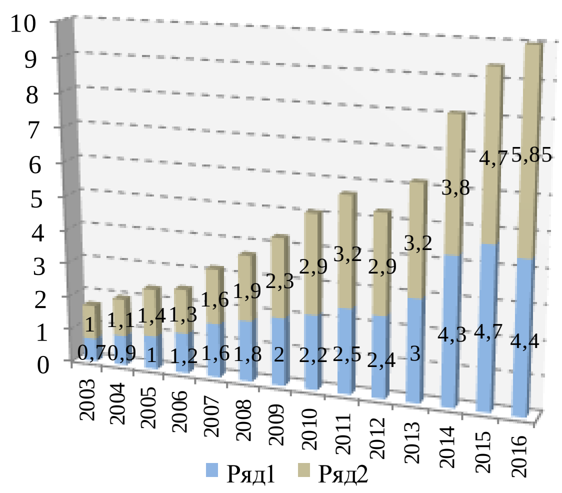


Figure 2. *The share of airline companies in the total volume of passenger transportation by air, (%) [3]*

3. Analysis of the market by types of air carriers

Passenger traffic was performed by 21 Ukrainian airlines in 2016. The share of 4 leading airlines (Ukraine International Airlines, Azure Air Ukraine (Utelier Ukraine), Rose of Winds and Dniproavia) in total passenger transportation accounted for almost 93 percent (Figure 2). At the same time, the growth of volumes of transportation took place only in the airline "International Airlines of Ukraine" (by 28.2%). Passenger transportation of the Azure Air Ukraine (UTair Ukraine) decreased by 12.2% compared to 2015, Dniproavia - by 13.5%, Wind Rose - by 54.9%.

Regular flights between Ukraine and other countries were carried out by 9 domestic airlines to 39 countries of the world and 35 foreign airlines from 29 countries of the world. Ukrainian Airlines transported 4,018.3 thousand people (growth - by 2.4%), and foreign airlines – 3769.3 thousand people (reduction - by 1.1%) (Figure 3). During 2016, five new international airlines were launched on a regular basis: Dniproavia airline from Dnipropetrovsk to Bourgas and from Odessa to Batumi, Ukraine International Airlines from Odessa to Vilnius and from Lviv to Bologna, Atlantic airline Ukraine from Zaporozhye to Istanbul. Passenger transportation between nine Ukrainian cities was carried out by 5 Ukrainian airlines on domestic regular lines, and 611.5 thousand people were transported (versus 629.2 thousand people in 2015).



Ряд 1 – Ukrainian Airlines *Ряд 2 – Foreign airlines*

Figure 3. *Volumes of passenger air transportation on regular lines between Ukraine and other countries of the world, million people [4]*

The average percentage of passenger load on international regular flights of Ukrainian airlines in the reporting period increased compared with the previous year by 6.4 percentage points and reached 79.4%, and on domestic regular flights – by 6.1 percentage points and was 71%.

Transportation of goods and mail in the reporting period was carried out by 19 domestic airlines, 76% of the total volume of traffic was performed by ANTK "Antonov", "Ukrainian International Airlines", "Maximus Airlines", "Zeta Avia" and "Urga". Most of the transportation was carried out by charter flights in other states within the framework of the UN humanitarian and peacekeeping programs, as well as contracts and agreements with other customers.

The correlation between international and domestic transportations of Ukrainian airlines was 85% to 15% in favor of international ones in 2016.

Unlike international regular flights of Ukrainian airlines, which have not fully recovered compared to the indicator of the previous 2016, a significant increase in traffic volumes was observed in the segment of international charter flights (Figure 4). According to statistics, in 2015 domestic airlines carried out 26.1 thousand commercial charter flights against 23.2 thousand flights in previous year, the number of passengers transported increased by 18.1% and amounted to 2.5 million passengers. Significant volumes of chartered transportation were carried out by the following airlines: "Roze of Winds", "Ukrainian International Airlines", "Utelier-Ukraine", "Aviatrans K" and "Kharkiv Airlines".

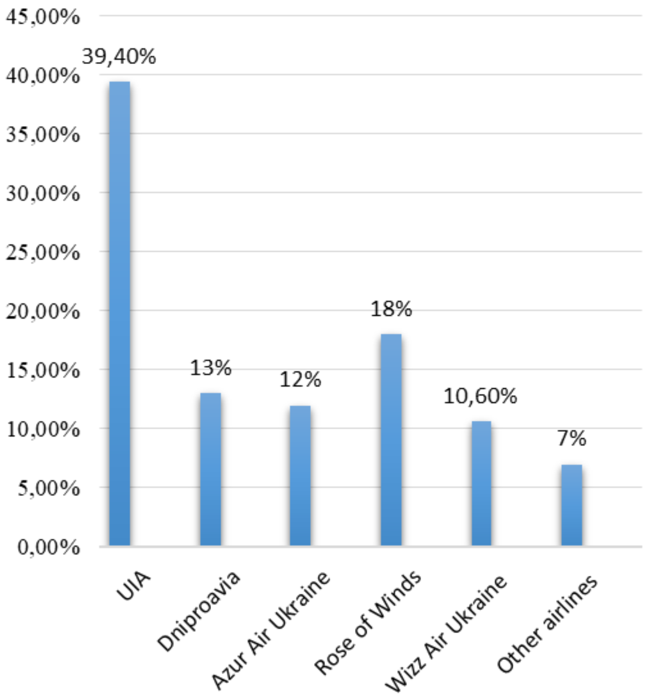


Fig. 4 *Ukrainian charter flights market in 2016 (%) [5]*

4. Business models in the air transportation market

In the air transportation market, there is a certain specialization in the types of business, resulting in the formation of nine major varieties of air carriers: network airlines; regular international carriers and regional carriers; charter transportation airlines; combined express carriers; cargo operators; mixed airlines; isolated airlines; low cost airlines.

The operation of the relatively new Low Cost business-model in the market makes significant changes to the structure of air transportation, since it is aimed at minimizing costs by refusing additional service. The arrival of low-budget airlines in the market forces national carriers to lower their tariffs, as well as to implement customer loyalty programs. All this affects the general level of competition of Ukrainian carriers.

The Table 2 demonstrates the main features of development stages of Low Cost airlines.

Table 2. *Characteristics of development stages of Low Cost airlines [6]*

Stage	The name of the business-model at the development stage	Characteristics
1	Classical Low Cost (70s, 20th century)	Oriented on max minimizing costs and lack of free service. Flights are carried out to secondary airports at an awkward time, passengers carry luggage independently, the distance between the seats is reduced, and money is not returned to passengers in case of cancellation of the flight.
2	Low Cost with additional services (80s, 20th century)	Flights are carried out from major airports, soft drinks and light snacks are distributed during the flight, transit flights through hub airports are offered. Example: American "Frontier", British "EasyJet", German "Air Berlin".
3	Low Cost with a full set of services (90s, 20th century)	Airlines use exclusively new aircrafts, the distance between the seats in the cabin is increased, television and the Internet are on board. Example: American "JetBlue", Canadian "WestJet".
4	Low Cost with Business Class (2000s, XXI Century)	Airlines offered business class travel at prices 30-50% lower than traditional airlines; flights were carried out long distances (Europe-Asia, Asia-USA, Europe-USA). They did not survive the competitive struggle with traditional companies and left the market.
5	Long Range Low Cost (2010s, XXI Century)	Reduced costs are due to the same type of aircraft, reduced costs for ticket sales, low tariffs for intercontinental airlines, minimum free service. Example: Asian "Air Asia X", Australian "Jetstar".

It should be noted that the competitive pressure on the Ukrainian airlines by foreigners causes certain concerns not only to weak regional companies, but also to leaders. Unlike foreign competitors, regional airlines, as a rule, do not occupy significant positions in the international market and attract for flights to the cities of Ukraine for some reason far from being the best aircrafts and commercial potential. First-class foreign airlines ("British Airways", "Lufthansa"), as well as airlines of the CIS countries, offering world-class services with almost dumped prices ("Transaero", "Estonian Airlines", etc.) are competitors of Kyiv-based airline leaders. Therefore, the confrontation with this pressure requires the mobilization of all resources of airlines and their maximum concentration in this direction. The principle of moving away from internal competition in favor of concentrating maximum efforts on the external one gets even more urgent.

5. PEST - Analysis of Airlines of Ukraine

Dynamic development of the air transportation market of Ukraine takes place, despite certain problems related to the economic situation in the country. To investigate the situation in the air transportation market, PEST-analysis was conducted, which made it possible to analyze the conditions of companies in the domestic aviation market and external factors that affect the conduct of business at an adequate level. PEST analysis is designed to identify political factors (P - political), economic impact (E - economic), social tendencies (S - social) and technological innovations (T - technologies). The work was carried out in two stages: at the first stage, the degree of influence of factors on the activity of airlines in the form of relative normalized weighted coefficients was determined, and at the second stage - the probability of their influence on the five-point evaluation system, with 5 - the greatest impact, and 1 - the smallest (Table 3).

Table 3. *The degree of probability of the influence of factors on the activities of airlines*

Factors	Weight Coef-ficient	Direction of influ-ence	Experts (degree of influence)				Ave-rage rating	Ave-rage weigh-ted
			E1	E2	E3	E4		
1. Political								
Lack of basic state policy for Ukrainian airlines	0,07	+	3	5	2	4	3,5	0,25
Incompatibility of Ukrainian legislation in the field of air transportation to international requirements	0,01	+	1	2	1	3	1,75	0,02
Weak state regulation of competition in the aviation market	0,08	+	5	5	4	3	4,25	0,34
Lack of means to combat "oligarchization" in the aviation industry	0,04	+	1	2	3	4	2,5	0,10
2. Economic								
The unstable economic situation in the country	0,04	-	3	2	4	5	3,5	0,14
Weak investment climate	0,05	+	4	2	3	3	3	0,15
High customs duties and tariffs	0,06	-	3	3	2	5	3,25	0,20
Low income level of population	0,08	+	5	4	5	2	4	0,32
3. Technological								
An outdated fleet of rolling stock	0,08	-	5	5	4	4	4,5	0,36
Inappropriate level of technology in the organization of the transportation process	0,07	-	2	4	5	5	4	0,28
Insufficient level of infrastructure development of regional and international airports of Ukraine	0,08	-	5	4	5	3	4,25	0,34
Insufficient level of the system of transport-logistic complexes	0,05	+	1	3	4	3	2,75	0,14
4. Social								
Age structure of the population	0,07	+	2	4	5	4	3,75	0,26
Training level	0,06	-	4	3	4	2	3,25	0,20
Educational level	0,08	+	4	3	5	5	4,25	0,34
Cultural level	0,06	+	3	2	4	2	2,75	0,17

The following specialists were selected as experts: personnel policy specialists, marketers of the public relations department, economists of the economic and analytical department, legal advisers, leading aviation specialists and employees of the Ministry of Infrastructure of Ukraine.

Insufficient state support is a major factor among the political factors. There is no basic state policy for Ukrainian airlines in a difficult competitive environment. The weak point is also a discrepancy legislation of Ukraine in the field of air transport to international and European standards, including the International Civil Aviation Organization (ICAO), the European Union, the European Civil Aviation Conference (ECAC), and the European Organization for the Safety of Air Navigation (EUROCONTROL). Gradual displacement of a domestic air carrier to foreigners is due to weak state regulation of competition in the aviation market.

Regarding "oligarchization", there are no effective market means to combat this negative phenomenon today. Real methods of counteracting excessive monopolization and seizing control over the market by one entity are only direct administrative power and prohibitive actions, very unpopular and counteracting normal market laws. Therefore, it is necessary to take measures to prevent the situation with the prerequisites for the oligarchic seizure of the market to eliminate this problem.

For Ukraine, "open skies" means the intensification of the process of the air transportations market development due to: update of airport infrastructure; establishment of high technical standards for airplanes and air services; security enhancement; modernization of air traffic control procedures; updating sectoral legislation, etc. In order to solve these problems, it is necessary to implement the provisions of the Concept for the development of the aviation complex and the development of programs for the period up to 2020 and to ensure the safety of flights by improving the mechanisms of supervision and control of transport activities.

Economic factors include: weak investment climate in the domestic aviation industry; high customs duties and tariffs during the flight; an increase in the inflation rate that affects the rise in fuel prices; the growth of fares for flights. The price policy of flights is controlled and regulated not by the government, but by airlines, which leads to fluctuations in prices for services of various airlines. The growth of the rates of conclusion of various types of agreements with other airline companies for the sale of commercial rights (interlays, block-space agreements, marketing agreements, code-ranging agreements, agreements on joint operation of airlines), as well as the creation of aviation alliances take place. In accordance with social factors, here it is possible to note the regulation of relations in the field of training; taking into account the age structure of the population, the level of education and culture.

Among the technological factors, insufficient level of the system of transport-logistic complexes, insufficient level of regional and international airports infrastructure development in Ukraine can be distinguished. It is necessary for the government of the country to adopt uniform concepts for the development of airports, which will allow passengers to travel more quickly and with greater comfort. There is reluctance to use domestic airplanes for air transportation. There is an inappropriate level of technology in the organization of the transportation process, insufficient information provision.

This issue can be addressed through the introduction of CNS / ATM global satellite systems for air traffic services, automation and computerization of airlines at international level; the creation of a system of transport and logistics complexes (to shorten shipping time, reduce transportation costs and optimize tariffs) and further development of information and logistics technologies [7].

The result of PEST analysis is the selection of key environmental factors that will create the ability and smooth out the threats to companies in the projected period. Analysis of Table 3 allows us to conclude that: the absence of basic public policy for Ukrainian airlines does not allow opportunities to expand business; the lack of compliance of Ukrainian legislation in the field of air transportation with international requirements has little impact; weak state regulation of competition in the aviation market is a major threat to companies, as well as the economy as a whole; economic instability in the country is a threat to the company.

6. Prospects for the development of the air transportation market in Ukraine

Regarding the structure of the aviation market of Ukraine, it should be noted that it is quite clearly divided functionally (airlines, airports, service and provision of structures, aircraft factories, etc.) and technologically (airlines for general transportation and special purpose). However, the global trend of civil aviation development shows that every year in the world aviation practice a large consolidation and integration of market actors is carried out both on a functional and a technological basis – powerful consortia and alliances of air carriers and structures providing them are created. Alliance forms of interaction have become a necessary condition of existence on the market under current conditions of the economy.

There are three stages of creating alliances:

I. The first stage focused mainly on the production of additional revenue by attracting more passengers by expanding route network and joint marketing.

II. The second stage focuses on cost savings, as well as the continuation and strengthening of cooperation in the first stage, and involves separate agreements in one or more specific areas where joint activities can reduce costs. The implementation of the first two stages does not necessarily combine a long-term alliance. Its disintegration or exit from it are possible; although the longer the alliance exists, the more it is close, especially if cooperation is mainly carried out in the area of cost reduction.

III. The third stage is to unite the alliance, when partners start mixing their assets together and using them jointly, including joint product development and joint ventures to regulate various aspects of their activities. The final stage is the full merger of alliance member companies.

In order to overcome the organizational crisis, it is necessary to create new organizational forms that fully meet the requirements of the market, while the principle of integration and consolidation should become the general line. In the direction of consolidation, the result should be the unification of air companies under the joint coordination and supply – the creation of "alliances" or "consolidated air carriers" (at the state level – a national carrier, at the regional level – regional carrier, at the enterprise level – a specialized group, for example, a consortiumof airlines). Consolidation will allow us to solve a number of issues at once, such as the distribution of a competitive market, optimal use of unused capacities, etc.

In the direction of integration, the results should be the merger of air companies with structures whose activities, directly or indirectly, are aimed at ensuring the process of aviation commercial operations. Integration will provide a positive solution to marketing and competition issues, issues of reducing the cost of airline and tariff policy, the problems of efficient supply, the issue of ensuring the inflow of financial resources on favorable terms. Economic mechanisms for solving this are the principles of acquiring (selling) shares, entering (accepting) into an authorized fund, lease relations, long-term preferential investment, establishment of subsidiaries, privatization.

Consequently, consolidation can take place in several areas: the formation of a national carrier-flagman, merger with foreign companies or consolidation with domestic actors in the market. Any reaction to factors of influence will lead to organizational and economic changes in the airlines themselves.

7. Conclusions

Investigation of the factors of influence becomes important in the analysis of the airline's activity. To determine the future behavior of the organization, its management needi to know as the internal and the external environment, its potential and trends, and its place among other organizations. The impact of both external and internal factors on the enterprise is diverse. An analysis of the environment gives the company the ability to minimize the dangers and negative effects that it encounters during its operation. Analysis of the internal environment allows company to identify the strengths and weaknesses of the enterprise and outline the prospects for its development. The following specialists were selected as experts: personnel policy specialists, marketers of the public relations department, economists of the economic and analytical department, legal advisers, leading aviation specialists and employees of the Ministry of Infrastructure of Ukraine.

Insufficient state support is a major factor among the political factors. There is no basic state policy for Ukrainian airlines in a difficult competitive environment. The weak point is also a discrepancy legislation of Ukraine in the field of air transport to international and European standards, including the International Civil Aviation Organization (ICAO), the European Union, the European Civil Aviation Conference (ECAC), and the European Organization for the Safety of Air Navigation (EUROCONTROL). Gradual displacement of a domestic air carrier to foreigners is due to weak state regulation of competition in the aviation market.

In sum, it can be argued that the "open sky" policy, increased competition and ownership change have the most significant effect on organizational and economic changes.

Expansion of the presence of foreign airlines in the market significantly affects the competitive situation. The union of Ukrainian airlines is one of the options for strengthening the position of Ukrainian civil aviation, another option may be an alliance with major foreign airlines.

It should be noted that the leading domestic air carriers do not meet the modern requirements of the world aviation community, which results in the low competitiveness of our airlines in the air transportation market in Ukraine and in the world. However, the achievement of high requirements is possible only with the gradual harmonization of Ukrainian legislation with the international, implementation and application of international aviation standards in Ukraine.

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