



Building an Airline Strategy



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ABSTRACT

The need for adaptation and development of airlines under the conditions of complex and dynamic environment determines comprehensive strategising on their activities based on identification of strengths and weaknesses, opportunities and threats. The objective of the study is to conduct a comprehensive analysis of an airline's activities with the allocation of the main development areas necessary for strategy development. The research was based on the scientific principles of a system approach, while a variety of empirical methods, including statistical analysis tools were applied to comprehensively study different activity areas.

The scheme of building an airline's strategy includes performance analysis and problem decomposition with subsequent aggregation and ranking of development strategies. The approach to strategising on airline activities based on internal and external factors analysis summary (IFAS / EFAS) and OTSW

analysis reveals many new threats. In this case, the main (Maxi-Maxi or Maximax) strategy of the airline development should consider the effective use of existing opportunities and accumulated capacity. OTSW analysis is a method of strategic planning based on a modification of the SWOT analysis. It includes the study of the factors of internal and external environment. To conduct this analysis, an OTSW matrix is created, which allows comparing external opportunities and threats with internal strengths and weaknesses selected based on expert assessments. Following the results of the analysis, it can be concluded that one or another airline has several opportunities and is exposed to potential threats imposed by the impact of economic, political, social and technological factors. The main (Maxi/Maxi) development strategy of an airline should be aimed at using existing opportunities and capacity, providing for revealing, introducing and implementing of most promising strategic trends.

Keywords: airline, strategising on activity, OTSW analysis, Maxi/Maxi strategy.

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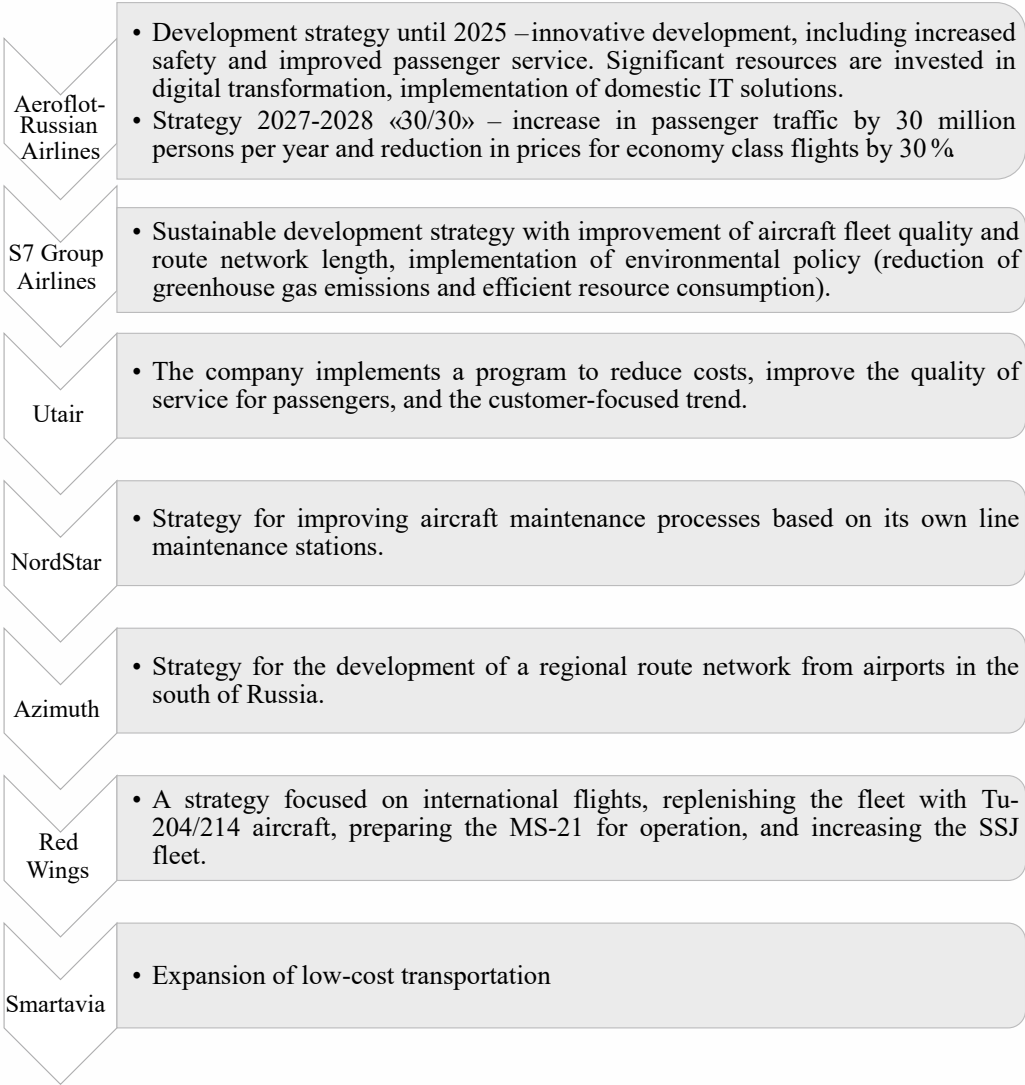
MATERIALS AND METHODS

Civil aviation is important for the economy of any country, and for Russia with its large territory and geographical scale, this industry provides great opportunities for development and becomes irreplaceable in some situations. Thus, for the regions of the Far North, Siberia, and the Far East, air transportation is the main tool of transport connectivity with other regions of the country.

Russian airlines implement the approved strategic development plans (Pic. 1).

The *scientific problem of the research* is defined as a comprehensive strategising on activity with identification of strengths and weaknesses, opportunities and threats, the

solution of which will allow obtaining scientifically based recommendations for the development of airline development strategies in conditions of uncertainty. The object of the research is the activity of the leading airlines of the Russian Federation. The information base of the research includes statistical data, airlines data, and other sources. The theoretical and methodological foundations of the research are scientific provisions of the systems approach. The study used empirical methods as well as expert methods and consulting sessions with industry experts, which allowed obtaining high-quality assessments on airlines strategies. The scientific novelty of the study is determined by the adaptation of the OTSW analysis methodology,



Pic. 1. Some key aspects of strategic plans of Russian airlines
[compiled by the author based on open-source data].



the Delphi method, the external and internal factors analysis summary (IFAS / EFAS), etc. to the strategising on the airlines' activity.

DISCUSSION

The significance of increasing the competitiveness of transport companies predetermines the relevance of the study on their development strategies under modern conditions. In this regard, several works of Russian researchers can be mentioned that were devoted to different aspects of the topic. Thus, O. I. Dontsova, A. V. Volokhov, D. E. Morkovkin studied global prospects for the development of civil aviation [1]. D. G. Kakhrimanova and M. A. Okolov studied the trends in the development of the Russian air transportation industry [2]. M. M. Brutyan analysed the Indian air transportation market and identified the prospects for its development [3]. Research on the development prospects of other modes of transport is also relevant [4–7]. A. V. Korolev substantiated the approaches to developing a strategy for passenger transport under new conditions of reorganisation of integration processes [8]. The concept of strategy development is becoming increasingly in demand and aimed at the practical implementation of theoretical foundations and methodological provisions. Yu. V. Nesterov and A. B. Fraiman established the importance of the paradigm of strategic management of air transport [9].

At the same time, the methodology of strategisation intended for enterprises, industries, complexes, regions in the modern period is in the process of formation. The methodology of strategisation was introduced in Russian science and practice by V. L. Kvint [10; 11]. V. L. Kvint suggests using the SWOT analysis method as a basis with further decomposition of factors by levels of strategic directions, which will allow developing effective development strategies [12; 13]. In the strategy, much attention is paid to the analysis of factors of the external and internal environment, therefore many researchers conduct factor analysis. Among the recent works related to the study of the factors of environment, one can note the work of I. V. Zakharova [14]. S. E. Ramenskaya and Yu. V. Fisun presented an analysis of the choice of development strategy for an airline [15].

Despite the studies being conducted, the relevance of the topic of strategising activities and devising an effective development strategy

for an airline, including considering factors of uncertainty and constant political and economic changes, requires new research.

RESEARCH RESULTS

The general scheme of strategising on the activities of airlines includes analysis of the functioning and decomposition of problems with subsequent aggregation and ranking of development strategies (Pic. 2).

An analysis of four groups of factors of the external environment of the airline's activities is carried out.

The first group of factors includes political factors, both external including changes in geopolitical situation, and internal, aimed at development of air transportation, e.g. the state program to support the air transportation industry, adopted in 2022¹.

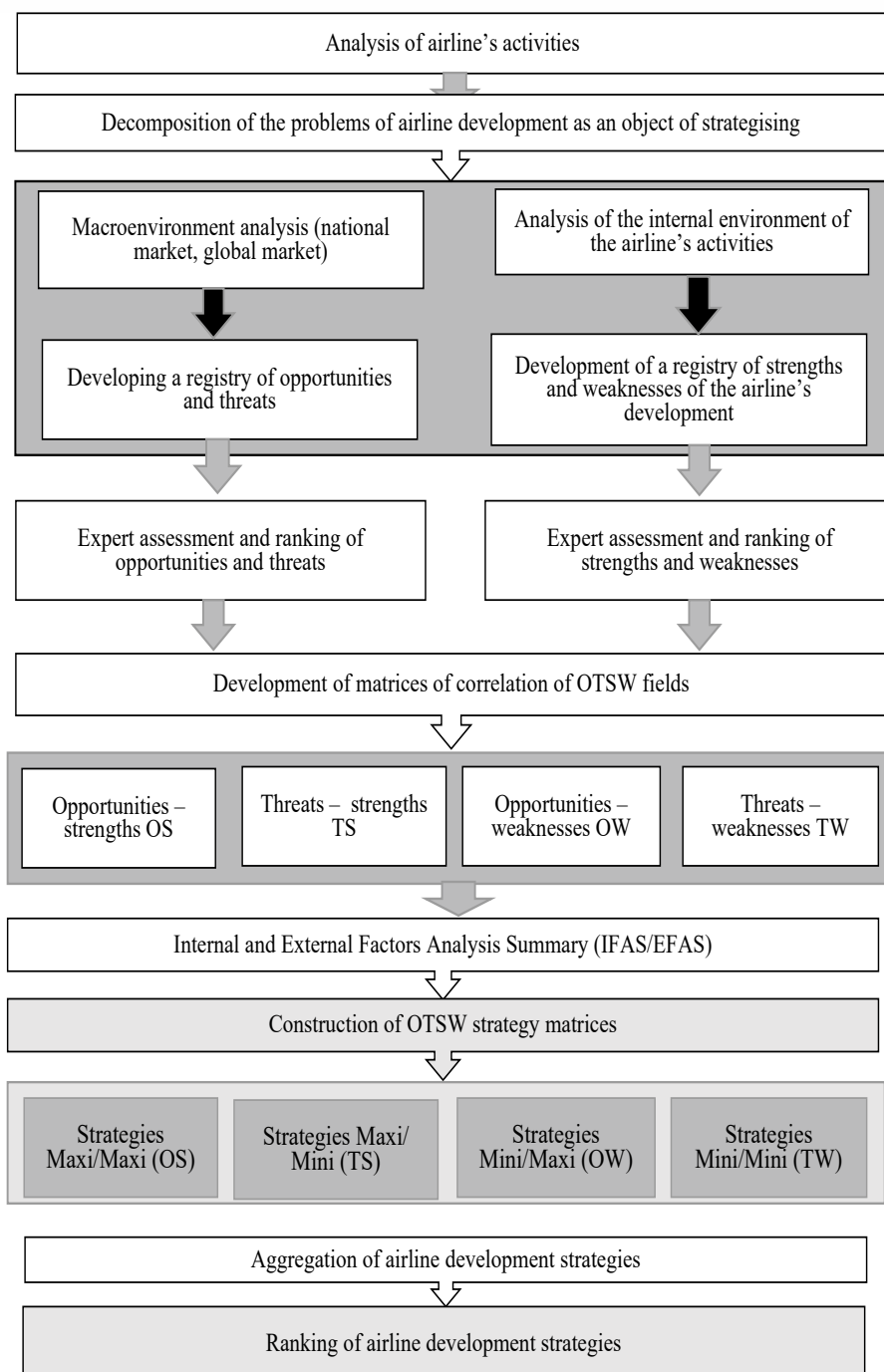
An analysis of economic factors has shown that several significant determinants can be outlined:

1. Changes in fuel prices, aircraft rental, etc., and therefore, in airline revenues.
2. Fluctuations in passenger demand for air travel.
3. An increase in the tax load on airlines, including due to an increase in excise taxes on fuel, which may increase the costs of air carriers and create an additional financial burden.
4. Government subsidies (particularly, due to them the net profit of airlines has increased significantly in 2023).

Social factors can have a positive or negative impact on airline operations:

1. Demographic trends can affect the need for air travel and depending on this create opportunities for new routes or reduce demand for existing ones.
2. Changes in consumer habits and preferences of air passengers may lead to a decrease in demand for some routes or, on the contrary, to an increase for others.
3. Increased access to data and services leads to air passengers becoming more informed. This allows them to compare offers from different airlines more easily, which in turn increases the level of competition: companies are forced not only to improve the quality of their goods and

¹ Order of the Government of the Russian Federation of June 25, 2022, No. 1693. [Electronic resource]: <https://www.garant.ru/products/ipo/prime/doc/404798711/?ysclid=lv5ndpc80898790885>. Last accessed 27.05.2024.



Pic. 2. Algorithm for strategising airline's activities [developed by the author based on experimental data and open-source data].

services, but also to offer more flexible and attractive conditions to retain passengers.

Important factors of the macroenvironment are technological aspects that are positive for the activities of airlines:

1. Processes of automation processes improve the overall quality of passenger service and

ensure the minimisation of costs of the airline.

2. New aviation technologies ensure the reliability and safety of flights and reduce operating costs.

3. Increased equipment productivity provides airlines with the opportunity to use their resources more efficiently.



Table 1

Elements of decomposition of factors of the competitive environment of an airline

No.	Elements of decomposition of competitive environment factors	Experts' assessments
1	Degree of differentiation of goods/services of the airline	2/3
2	The share of passenger purchases in the airline's sales volume	1/3
3	Passenger income level for the target segment	2/3
4	The share of airline's services in the structure of passenger purchases	3/3
5	Excellence of airline's services	4/3
6	Availability of information about airline services and the whole civil aviation industry	2/3
7	Cost of refocusing a passenger of the target segment to other airline services	4/3
8	Barriers to airline's exit from the air transportation industry	3/4
9	The degree of diversification of the air transportation business	4/3
10	Potential of the air transportation market	3/4
11	Airlines' pursuit of the «experience curve» effect	2/1
12	The amount of capital investment required for an airline to enter the air transportation market	3/4
13	Prices that hinder entry into the air transportation market	2/3
14	The activity of airlines in response to the market penetrating by new companies	3/2
15	Level of government support for airlines	4/3
16	Availability of distribution channels for new airlines	2/2
17	Airline brand loyalty	3/3
18	Number of analogues of airline services on the market	1/1
19	Degree of differentiation of airline services	2/2
20	Importance of passenger purchase volume for suppliers	4/3
21	Coordination of airlines' activities	4/3
22	Price/quality ratio level for airline service substitute	2/2
23	Profitability of airline services – substitutes for airline services	3/2

Source: developed by the author based on experimental data and open-source data.

Table 2

Determination of the force of factors' pressure on the airline's activities

J	Causal factors	Influence of the factor on the resulting assessment	Factor weight (W)	Average assessment of the expert factor	Assessment considering the influence of the factor (X)	W*X
1	Degree of differentiation of airline services (low – high)	–	0,17	2	5–2 = 3	0,56
2	Share of air passenger in airline's sales (small – large)	+	0,16	1	1	0,16
3	The share of airline services in the structure of passenger purchases (small – large)	–	0,15	3	5–3 = 2	0,30
4	Income level of passengers within the target segment (low – high)	+	0,21	3	3	0,63
5	Quality of airline services (low – high)	–	0,19	3	5–3 = 2	0,38
6	Passenger access to information about airline services and the air transportation industry (limited – free)	+	0,11	2	2	0,21
Assessing the force of pressure on the airline from air passengers						2,23
1	Air transportation market growth potential (small – large)	-	0,19	4	5–4 = 1	0,19
2	The magnitude of barriers to airline's exit from the air transportation industry (low – high)	+	0,24	4	4	0,95

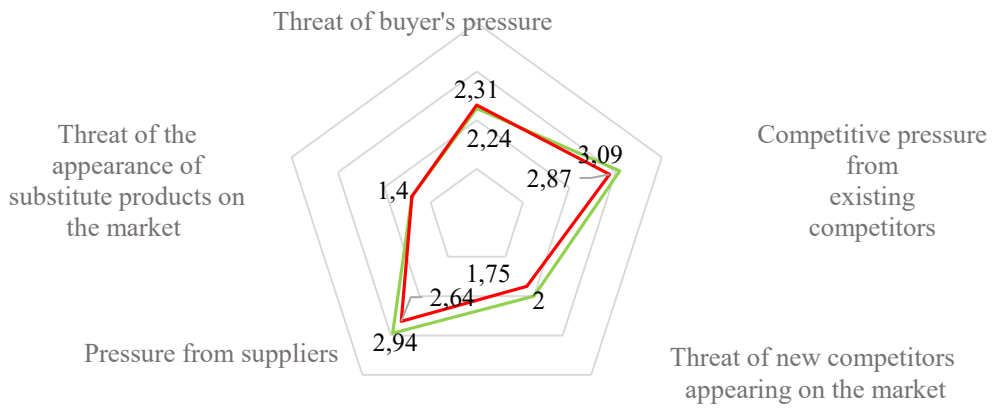
Table 2

Determination of the force of factors' pressure on the airline's activities (end of the table)

J	Causal factors	Influence of the factor on the resulting assessment	Factor weight (W)	Average assessment of the expert factor	Assessment considering the influence of the factor (X)	W*X
3	Cost of switching target segment's air passengers to other airline services (low – high)	–	0,15	3	5–3 = 2	0,33
4	Airlines' focus on the «experience curve» effect (weak – strong)	+	0,16	4	4	0,64
5	Degree of diversification of the airline's activities (low – high)	–	0,24	1	5–1 =4	0,96
Assessing the pressure on the airline from existing competitors						3,09
1	Air transportation price trends that deter market entry (low – high)	–	0,06	3	5–3 =2	0,12
2	Airline's activity in response to new airlines' attempts to enter the market (low – high)	–	0,10	3	5–3 =2	0,20
3	Level of capital investment for an airline to enter the air transportation industry (low – high)	–	0,24	3	5–3 =2	0,50
4	Degree of loyalty of passengers of the target segment to the airline brand (low – high)	–	0,25	3	5–3 =2	0,50
5	Availability of distribution channels in the air transportation industry for new airlines (low – high)	+	0,2	2	2	0,40
6	Degree of government support for airlines already operating in the air transportation industry (low – high)	–	0,15	3	5–3 =2	0,32
Assessing the pressure on the airline from new competitors						2,00
1	Number of interchangeable services in the air transportation market (small – large)	–	0,25	1	5–1 = 4	1,00
2	Level of differentiation of airline services (low – high)	+	0,23	2	2	0,46
3	Importance for suppliers of passenger purchase volume (low – high)	–	0,3	3	5–3 = 2	0,6
4	Degree of coordination of airlines' activities (low – high)	+	0,21	4	4	0,84
Assessing the pressure on an airline and competitors from suppliers						2,94
1	Price/quality ratio of airline services (low – high)	–	0,7	4	5–4=1	0,70
2	Profitability of airline services substituting existing airline services (low – high)	+	0,3	2	2	0,60
Assessing the pressure on an airline and competitors due to the emergence of substituting airline services						1,30

Source: developed by the author based on experimental data and open-source data.





Pic. 3. Competitive benchmarking radar diagram
[developed by the author based on experimental, simulated and open-source data].

Table 3

Key opportunities and threats to airlines based on OTSW analysis

	Opportunities		Strengths
O1	Route network expansion: The company can expand its route network to attract more passengers and increase its market share.	S1	Wide route network: the airline operates regular flights to various regions of Russia and beyond, providing passengers with a wide choice of destinations.
O2	Implementation of new technologies: The airline may implement new technologies such as online booking systems to provide more convenient and faster access to services.	S2	Competitive prices: The airline offers affordable ticket prices, including special fares.
O3	Improving additional services: The company can improve its baggage and transportation services to attract new and retain existing passengers.	S3	Passenger safety: The company actively implements safety and security measures and technological innovations to ensure safe flight.
O4	Expanding cooperation with other airlines to facilitate passenger transfers between flights, and interaction not only with airlines but also with other businesses in various industries to increase brand awareness and attract new customers		
	Threats		Weaknesses
T1	Competition with other airlines offering similar services and prices.	W1	Small market share: The airline has a small share of the air travel market, making it difficult for it to compete with larger companies.
T2	Reduction in the number of travellers and, accordingly, a decrease in passenger traffic.	W2	Lack of a loyalty program for passengers: Compared to other leading airlines, the airline is far behind them in this regard.
T8	Increase in fuel costs: Volatility in fuel prices is a significant threat to airlines as it significantly impacts their financial sustainability.	W3	Outdated airline fare groups: Due to the unstable market of some airline services and strong competition from other airlines, the airline needs to adapt its policies to strengthen its competitiveness and attractiveness to passengers.

Source: developed by the author based on experimental data.

Expert assessments of :

the degree of significance of the i^{th} strength for using the k^{th} opportunity;

the degree of significance of the i^{th} strength for counteracting the m^{th} threat;

the degree of influence of the j^{th} weakness on the prospects for using the k^{th} opportunity;

the degree of influence of the j^{th} weakness on the aggravation of the possible consequences of the implementation of the m^{th} threat;

the probability of occurrence of the k^{th} opportunity;

the degree of significance of the k^{th} opportunity for business development;

probability of occurrence of the m^{th} threat;

the severity of possible consequences when the m^{th} threat is realized.

Pic. 4. Expert assessment of the combination of opportunities and threats to the strengths and weaknesses of the airline's activities.

Table 4
OTSW analysis of an airline’s activities with rating assessments

Expansion of the route network		Opportunities (O)				Threats (T)		
		Expansion of the route network	Implementation of new technologies	Improving additional services	Expanding cooperation with other airlines	Increased competition with other airlines	Unstable economic situation	Increase in fuel costs
Strengths (S)	Wide network of routes	(5;4;5)	(3;5;4)	(3;2;3)	(5;3;4)	(5;4;5)	(3;4;4)	(2;3;4)
	Competitive prices	(4;4;5)	(2;5;4)	(3;2;3)	(4;3;4)	(5;4;5)	(3;4;4)	(4;3;4)
	Passenger safety	(2;4;5)	(1;5;4)	(1;2;3)	(3;3;4)	(3;4;5)	(2;4;4)	(1;3;4)
Weaknesses (W)	Small market share	(4;4;5)	(2;5;4)	(2;2;3)	(4;3;4)	(5;4;5)	(3;4;4)	(2;3;4)
	Lack of loyalty program for passengers	(3;4;5)	(4;5;4)	(1;2;3)	(3;3;4)	(4;4;5)	(1;4;4)	(1;3;4)
	Outdated tariff groups of the company	(5;4;5)	(2;5;4)	(3;2;3)	(2;3;4)	(5;4;5)	(1;4;4)	(4;3;4)

Source: developed by the author based on experimental, simulated and open-source data.



Table 5

OTSW factor matrix

	Strengths (S)	Weaknesses (W)
Opportunities (O)	Maxi/Maxi strategies	Mini/Maxi strategies
Threats (T)	Maxi/ Mini strategies	Mini/Mini strategies

Analysis of the external environment shows that airlines are in a highly competitive environment, where they must constantly adapt to new economic, political, social and technological factors. To assess the market situation, an analysis of threats (competitive forces) is carried out by dividing them into separate components (determining factors). Then, based on expert assessments, the significance of each element of the decomposition is determined by establishing weighting factors (Table 1).

The resulting assessment Y_i of expert opinions for ranking i -threats is determined by the expression:

$$Y_i = \sum W_{ij} \cdot X_{ij} \quad (1)$$

where W_{ij} are weight coefficients of j^{th} elements of decomposition of i^{th} threats;

X_{ij} are assessments of j^{th} elements of decomposition of i^{th} threats;

Next, a quantitative assessment of threats to the analysed airline and its direct competitors is carried out. The Table 2 shows an example of a quantitative assessment relative to the simulated conditions and environment.

The results of the competitive forces assessments for such a simulated situation are shown in the diagram (Pic. 3).

OTSW analysis is a method of strategic planning, which is a modification of SWOT analysis, and includes an analysis of factors of internal and external environment. This analysis is based on the development of the OTSW matrix (Table 3), which allows comparing external opportunities and threats with internal strengths and weaknesses, which were selected based on the resulting expert assessments.

The next stage involves an analysis of the correspondence between the opportunities and threats and the strengths and weaknesses of the airline's activity (Pic. 4).

The results of the OTSW analysis of a conditional simulated example of rating assessment of an airline are shown in Table 4.

Based on the obtained OTSW matrix of factors, it is possible to form four well-known groups of alternative strategies while prioritising

the Maxi/Maxi strategy. The development of those strategies results from a combination of opportunities and strengths (Table 5).

Therefore, based on the results of the analysis, it can be concluded that an airline, the environment of activity of which has been simulated during an experiment, has enough of both opportunities and faces potential threats, imposed by a set of economic, political, social and technological factors. In a considered example, preferable is variant of strategic designing of a company aimed at implementing existing opportunities and accumulated potential (Maxi/Maxi), which involves the implementation of series of strategic directions. Among them, the main opportunity is associated with expanding the airline's route network. Further developing the route network will strengthen the company's position in the air transportation market and ensure an influx of passenger traffic. However, the implementation of this opportunity is threatened by the company's weakness – increased internal competition, which can greatly affect its activities. However, such strengths as a wide route network and competitive prices will help to counter this threat, due to which the airline can compete with other airlines on the routes and maintain demand for air transportation. Passengers will continue to choose the airline brand due to market prices for tickets and the ability to choose where to fly. An important direction of the Maxi/Maxi strategy is the development and implementation of a cost reduction program. Overall, to fully take advantage of opportunities and counter threats, airlines should concentrate their efforts on solving the problems identified during the above-described analysis.

CONCLUSION

Strategic planning enables airlines to anticipate potential risks and opportunities and develop flexible and adaptive approaches to business management.

Under the conditions of uncertainty such as pandemics, climate change and conflicts, airlines are forced to quickly adapt to them and innovate.

This may include implementing new technologies, improving passenger service, and finding new markets and partnerships. Strategic thinking and proactivity are becoming key success factors, allowing airlines not only to survive but also to grow in the face of constant change. To devise an effective airline development strategy, it is necessary to conduct a deep analysis of the internal and external factors affecting the business. Internal factors include the company's structure, its financial condition, technological capabilities and human resources. At the same time, external factors such as changes in legislation, fluctuations in fuel prices, demand for air travel and the competitive environment also play an important role.

Thus, the approach to strategising on the activities of airlines based on internal and external factors analysis summary (IFAS/EFAS) and OTSW analysis allows revealing new threats and consider in the main airline development strategy (Maxi/Maxi) the effective use of existing opportunities and accumulated potential.

The practical significance of the study of the possibility of introducing OTSW analysis in devising airline strategy is determined by the relevance of air transportation development within the framework of achieving national goals, implementing national projects providing for further creating efficient transport system.

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