SOME ASPECTS OF AVIATION SERVICE MARKET

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The present day globalization in economy is closely connected with the development of air transport-one of the fastest growing sectors of economy, which provides long-distance transport, primarily to passengers. The mobility of population has increased and as a consequence the single transport space has been formed. After the crisis of 2015–2016 the economy of civil aviation is characterized by the rapid growth, increased passenger turnover, a high percentage of seat occupancy and the change in the structure of the air transportation market. The state of the air transportation market is characterized by globalization, deregulation, information and privatization. The services which air companies offer to the market are related to a high-tech product. At the same time, modern conditions require airlines to take measures to improve their performance, taking into account the internal and external factors affecting this business, as well as a set of incentive measures for workers in this industry. Thus, the article discusses the process of industry deregulation, gives several examples of market functioning models, highlights their main characteristics and shows options for making managerial decisions. Efficiency evaluation is a prerequisite condition for the implementation of airline development strategies. The principles of market economy required the restructuring of relations in distributive system and material incentive. In this regard, we summarize the experience of several labor remuneration decisions, as an integral part of airline management. The article gives an overview of the modern air transportation market characteristics, identifies the problems and prospects for its development. The relevance of the article is stipulated by the expanded presence of airlines in the world market and, as a consequence, by the necessity to investigate the up-to-date trends in market development, exposure the main factors that affect the competitiveness of air companies. The article is of interest for aviation experts as well as for readers who are keen on aircraft.

Key words: airline, cargo, innovation, passengers, flights, market, transport, efficiency.

INTRODUCTION

In the present day conditions of globalization in the basic processes of social and economic life of mankind, the possibility of rapid movement for people and cargo for long distances to various places, including the remotest destinations of the world, makes the air transportation market one of the most promising and dynamic transport markets. The development of aviation has led to the increase in mobility of population and to the decrease of distances between different regions of the world. The service of single transport, finance, telecommunication and production has been formed. Due to these changes, airlines must timely modify and improve their work efficiency, revise the organizing mechanism of the enterprise economic life, re-think the conceptual approaches, and change the business model itself.

MODELS OF AIR TRANSPORTATION MARKET

There are three main models of the passenger air transportation market: paternalistic, liberal and mixed. By the paternalistic model we understand large airlines controlled by the state. The examples are countries such as: Thailand, Singapore, UAE, Finland, and China. By the liberal model we observe the state provided free competition and the state itself does not interfere in the economic activities of airlines. Russia, Italy, Malaysia, etc. adhere to the principles of market competition and consequently, implement a mixed model. The market of air passenger transportation in these countries is characterized by the fact that the state, as a rule, owns the controlling stake in the airline and affects its production activities, restraining competition.
AIR TRANSPORT MANAGEMENT

The efficiency of the airline in the management of passenger traffic is considered when we take into account the development trends of the air transportation industry: the expansion of the air transportation market including the tourist segments of the market; Erasing the boundaries between regular and charter airlines; growth of costs (aircraft-engine fleet, control and transportation control systems). The current state of the market is characterized by: globalization; deregulation; informatization; privatization.

MOTIVATION OF STAFF

For effective functioning of the airline, it is necessary to use every employee’s diversity for his psycho-physiological and motivational potential. In Russia, nowadays, grading is widely used (evaluation of the employee by his rank in the company). In Sweden, for example, equal pay for equal work is established. In Japan, two rates are used: personal (based on seniority and age of employees) and labor (depending on the qualification and performance of work). The system of individualization of wages is applied in France. The UK implemented the system of payment for individual contracts. In the US, the combination of piecework and time systems, applicable collective bonus systems are often available, individual enterprises apply the system of labor remuneration, in which the increase depends on the growth of skills and the number of professions mastered.

Pilots are the most expensive specialists in the labor market in terms of price/ labor ratio. The average monthly salary of the captain of foreign types of aircraft in 2016 amounted to: in the US – from $11 to $33 thousand; in Europe – about 7 thousand euro; in Turkey – about 3,5 thousand euro, but additional compensations are paid; in Russia – from $5 to $10 thousand; China – up to $29 thousand. The salary of pilot flying in the low-cost companies is more modest. For example, in Jet Blue it is about $7.7 thousand1.

ECONOMIC INDICATORS

The airline, having a set of basic economic indicators, conducts a comparative analysis which is the basis for management decisions made. However, the structure of the operating costs for airlines flying along long-haul routes and airlines serving routes of short distances is very different. The strategy of enterprises is also different. A number of airlines perform a significant share of technical maintenance of an aircraft engineering on their own, have their own handling units, others, turn to service-oriented companies.

Accordingly, the structure of income and expenses in airlines differs from each other. The economic indicators used are: the number of passengers carried, the volume of traffic carried, the number of aircraft and motor fleet, etc. One of the indicators of the airline's efficiency is the ratio of the result achieved to the investments in personnel.

EFFICIENCY OF AIRLINES

It is important for the airline to monitor performance in comparison to other air carriers. Carrying out a comparative analysis, managers work in the direction which is aimed at the airline performance improvement. The efficiency of functioning including technical, economic and financial

indicators is determined by the DEA method (data envelopment analysis) [13]. With the help of this method, the limits of the airline production capabilities are built, and their effectiveness is estimated. The evaluation of functioning efficiency is a prerequisite for the development and implementation of the airline development strategies. Evaluation of airlines efficiency is important from the position of shareholders, investors, and the society as a whole.

**CHARACTERISTICS OF THE AIR TRANSPORTATION MARKET**

We are going to analyze the development of air transportation world market in the past 5 years. Freight air transport, the volume of cargo, express and diplomatic mail, transported at each stage of the flight (starting from take off of the aircraft to the next landing), are measured in metric tons multiplied by the number of kilometers traveled. Figure 1 shows the dynamics of air cargo transportation performed by the world transportation leaders.

![Fig. 1. Air cargo transported by world leaders in 2013–2017, million tons-km](image)

Looking at the volume of air cargo we see that the world leaders in transportation are the United States, China, the United Arab Emirates, Hong Kong, South Korea. If we compare years 2017 and 2013, we can see that the indicators increased by 12–45% for all countries except South Korea (a decrease of 1%). The decrease in freight traffic was noted in the United States in 2015 and in South Korea in 2016. In the remaining periods, all the surveyed countries had an increasing rate of air cargo transportation.

The US is the leader. In recent years, the US market has shown moderate growth, due to its maturity. The growth of transportation in the region is facilitated by the favorable economic situation and economic growth of the country [16, p. 78]. Passenger air transportation is shown in Figure 2. The amount of passengers transported by airplanes includes both domestic passengers and passengers of international air carriers registered in the country.

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Fig. 2. Dynamics of passenger transportation by air transport performed by world leaders in 2013–2017, mil

For all the leading countries there has been an increase in the rate of passengers transported by air over the past 5 years. At the moment, the undisputed leader in terms of passenger traffic – is the United States. The country shows a high rate due to the great intensity of domestic traffic to the extensive areas, the relatively even location of large cities in the eastern part of the country, as well as a high degree of mobility of the population.

The dynamics of the world’s passenger flow is presented in Figure 3.

Fig. 3. Dynamics of world passenger traffic in 2013–2017, billion people

It is evident that the world passenger flow increases annually. The main factors that influenced the world demand dynamics in 2017 (8% growth) were the following two – gradual growth in demand from the countries of the East and the continued collapse of oil prices, which led to the decline in fuel prices and the cost of flights.

The dynamics of the registered take-offs of air transport will be studied in Figure 4. The number of registered take-offs of air transport is the domestic and foreign flights that have been registered in the country.
Fig. 4. Dynamics of the registered air transport take-offs of world leaders in 2013–2017, million units

All the countries surveyed, with the exception of the United States, recorded the annual increase in the rise of air transport, and the US had only growth in 2016 (although it is the largest in the world, the US remains the leader). We will analyze the main indicators of civil aviation in the Russian Federation in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2013 Yr.</th>
<th>2014 Yr.</th>
<th>2015 Yr.</th>
<th>2016 Yr.</th>
<th>2017 Yr.</th>
<th>From 2017 to 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamics of passenger traffic in the country, billion pass. km.</td>
<td>225,2</td>
<td>241,4</td>
<td>226,8</td>
<td>215,6</td>
<td>259,4</td>
<td>34,2</td>
</tr>
<tr>
<td>Dynamics of cargo turnover in the country, thousand tkm</td>
<td>5011591</td>
<td>5151564</td>
<td>5450618</td>
<td>6579350</td>
<td>7591534</td>
<td>2579942</td>
</tr>
<tr>
<td>Passenger transport volume, mln.</td>
<td>85</td>
<td>93</td>
<td>92</td>
<td>89</td>
<td>105</td>
<td>20</td>
</tr>
</tbody>
</table>

The freight turnover in the country increased annually over the last 5 years. Such indicators as passenger traffic and passenger transportation increased in 2014 and 2017 and declined in 2015–2016. In general, the contraction of the air transportation market in 2015–2016 was due to both the general economic decline, the decrease in real incomes of the population and the devaluation of the ruble, which led to the rise of air tickets cost and holidays abroad, as well as a number of external factors unrelated to the economy. In particular, the shock to the Russian air transportation market was the cessation of air travel between Russia and Egypt and the suspension of almost for a year the charter flights.

with Turkey\(^4\). At the same time, it was Turkey and Egypt that together accounted for about 40% of the organized outbound tourist flow from Russia [11, p. 185]. The maximum decrease in the number of passenger air travel was achieved in 2016, when the decline was 4%. There have been major changes during these years: a decrease in real incomes of population, partial reorientation to domestic tourism. But in just 2017, the airline market was marked by a large increase by 19%, because of: deferred demand; strengthening of the ruble, which had a positive impact on international flights; the growth of domestic resort flights, flight resumption with Turkey and partially with Egypt, the increase of the low-cost airlines flights share by 30% and a 7% decrease in prices due to the refusal of carrying baggage and elimination of catering on board. It is possible to analyze the dynamics in the number of passengers carried by the largest companies of the Russian Federation in 2013–2017 in Table 2\(^5\).

### Table 2

<table>
<thead>
<tr>
<th>Name of airline</th>
<th>2013 Yr.</th>
<th>2014 Yr.</th>
<th>2015 Yr.</th>
<th>2016 Yr.</th>
<th>2017 Yr.</th>
<th>From 2017 to 2013</th>
</tr>
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<tbody>
<tr>
<td>Aeroflot–Russian Airlines</td>
<td>20,9</td>
<td>23,61</td>
<td>26,11</td>
<td>28,98</td>
<td>32,85</td>
<td>12</td>
</tr>
<tr>
<td>Russia</td>
<td>4,6</td>
<td>5,2</td>
<td>4,75</td>
<td>8,1</td>
<td>11,15</td>
<td>7</td>
</tr>
<tr>
<td>Siberia</td>
<td>7,1</td>
<td>7,9</td>
<td>8,2</td>
<td>9,5</td>
<td>9,95</td>
<td>3</td>
</tr>
<tr>
<td>UralAirlines</td>
<td>4,4</td>
<td>5,1</td>
<td>5,4</td>
<td>6,47</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>&quot;UTairAviationCompany&quot;</td>
<td>8,2</td>
<td>8,56</td>
<td>5,5</td>
<td>6,65</td>
<td>7,3</td>
<td>–1</td>
</tr>
<tr>
<td>Transaero</td>
<td>12,5</td>
<td>13,2</td>
<td>11,2</td>
<td>0</td>
<td>0</td>
<td>–13</td>
</tr>
<tr>
<td>The share of 5 airline-leaders in terms of the number of passengers carried from the total volume of civil aviation,%</td>
<td>63</td>
<td>62,8</td>
<td>61,4</td>
<td>67,4</td>
<td>65,9</td>
<td>3</td>
</tr>
</tbody>
</table>

The past 5 years showed a rapid growth among the following airlines: Aeroflot, Russia, Siberia (S7), Ural Airlines. The share of the 5 leading airlines in terms of the passenger number carried has also increased by 3 percent from the total volume of civil aviation. At the same time, 85–90% of Russian carriers are weak in terms of their material base, financial capabilities and other indicators. The remaining 10% of airlines account for a greater number of air traffic, for example, such leaders as Aeroflot, UTair, Siberia, etc. [10, p. 58].

The Russian air service market is characterized by a differentiated oligopoly: the presence of several large airlines, differentiation of products (on the time of flight departure, on the quality of service on board, on advertising campaigns, etc.) [1, p. 19].

**PROBLEMS AND PROSPECTS OF AVIATION SERVICES MARKET DEVELOPMENT**

The total volume of the results shown by the Russian airlines differs significantly from the results of the world's leading air carriers (American Airlines, United Airlines and Delta Air lines, Turk-
ish Airlines, Lufthansa, Air France and British Airways, Qatar Airways) as much as dozens of times (according to profits, number of passengers carried, etc.). Russian airlines also lose in the quality and diversity of services and customer services, in terms of technical equipment, frequency of flights, the number of routes in certain directions, etc.

Despite the number of undeniable advantages of Russian air carriers (low tariffs for international flights, the efficiency of the route network, the successful geographical location of Russia, linking Europe and Asia), there are different points of view and a number of shortcomings and problems in the market of aviation services.

Kholopov K.V. and Sokolova O.V. think that in terms of cargo transportation, Russian transport companies have poorly organized transportation process; there are too many air carriers on the routes [14, p.119]. Nikiforova N.Y.U. believes that most Russian transport companies need to upgrade their fixed assets. The existing problem is particularly related to airlines [9, p. 124]. In Russia, about 80% of air travel is from Moscow, to Moscow or through Moscow [6, p. 189]. Jamay E.V. and Demin S.S. think that the development of air transportation market in the country is hindered by the insufficient development of the airport infrastructure in some regions of the country [4].

Another problem is the lack of investment. Today, the main pusher of transport infrastructure development sector is public investment in various targeted programs, including private investment which is also important for the successful development of transport infrastructure.

According to Khryseva A.A. and Chekalova A.A. it is necessary to increase attention to the development of safety management systems for aircraft, develop regional and local airports and widely introduce IT technologies [15, p. 54].

Toporkov A.M. believes that it is necessary to develop the Russian domestic aviation industry in such areas as modernization of aircraft industry complex technological base; formation of a full cycle development and production of civil aircraft; improvement of lending mechanisms for the supply of domestic aviation equipment and the aviation leasing system; improvement of state regulation and corporate management system in aviation industry; formation of a large-scale long-term program for state purchases of aviation equipment [12].

In order to increase the profitability of Russian airlines, it is necessary to optimize costs through energy-efficiency programs, including methods like updating the fleet of aircraft; creating loyalty programs; increasing the motivation and qualification of staff [2].

Danilin A.A. considers that it is necessary to reduce the rate of value added taxes on the transportation of national airlines within Russia; create the conditions for the acquisition of domestic aircraft (interest rate financing, soft loans and loans, subsidies) by Russian air carriers; improve the regulations and standards for luggage transportation, registration of passengers, in general, the provision of services by Aeroflot [3].

According to the opinion of Matveeva AV and Maltsev AA. the development of low-cost airlines will accelerate the dynamics of world passenger traffic [8, p. 80].

Problems in the low-cost passenger air transportation market in Russia require special attention. At present we can only see "Pobeda" airline in the segment of domestic low-cost airlines while several years before there were SkyExpress, "Avianova", "Dobrolet" airlines [5, p. 176].

Matveeva A.V. believes that an effective mechanism for the development of local and regional passenger air travel in Russia lies in the development of low-cost airlines and the formation of low-cost units [7].

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CONCLUSION

The globalization of economy has significantly changed the structure of air transportation and increased the requirements for the efficiency of transport systems. This article provides an opportunity to visualize a number of hidden problems that enable the state and the leadership of airlines to concentrate their efforts on such measures that will improve the overall indicators.

The current state of the aviation services industry, taking into account the high-tech nature of its development, involves all kinds of innovations. It is necessary to renew fixed assets, increase investment, develop airport infrastructure, introduce IT technologies, and increase flight safety.

The further development of aviation services market in Russia, the development of domestic aviation industry, the increase in low-cost units (low-budget air passenger services), the development of regional and local airports, and the improvement of airline taxations is necessary.

Taking into account the experience of leading airlines, it is necessary to raise the salaries of the airline personnel, to improve aviation services: to create loyalty programs, to promote sales through mobile applications, to improve the comfort of flights (comfortable seats, interesting entertainment, USB connectors, the use of headphones with noise reduction, flexible configuration of seats in the cabin, the possibility of organizing on-board business meetings, etc.).

The authors used scientific and analytical works of scientists specializing in aviation transport issues, as well as the Internet materials.

The recommendations given in the article can be used at different levels of the airlines management decision process.

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НЕКОТОРЫЕ АСПЕКТЫ РЫНКА АВИАЦИОННЫХ УСЛУГ

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Нынешняя глобализация мировой экономики тесно связана с развитием воздушного транспорта, который является одной из самых быстрорастущих отраслей экономики, обеспечивая дальнее транспортное пространство. Экономика гражданской авиации после кризиса 2015–2016 годов характеризуется быстрым ростом, увеличением пассажирооборота, высоким процентом занятости кресел, изменением самой структуры рынка авиаперевозок. Состояние рынка авиаперевозок характеризуют глобализация, дерегулирование, информационность, приватизация. Выставляемые авиакомпаниями на рынок услуги относятся к высокотехнологичному продукту. В то же время современные условия требуют от авиакомпаний принятия мер для повышения их эффективности функционирования с учетом внутренних и внешних факторов, воздействующих на этот бизнес, а также комплекса мер стимулирования труда работников отрасли. Рассмотрены процессы дерегулирования отрасли, приведены некоторые примеры моделей функционирования рынка, выделены их основные характеристики, показаны некоторые варианты принятия управленческих решений. Оценка эффективности – необходимое условие реализации стратегий развития авиакомпаний. Принципы рыночной экономики потребовали перестройки системы распределительных отношений и материального стимулирования. В этой связи обобщен опыт ряда решений в области оплаты труда как составной части управления авиапредприятием. В статье дан обзор характеристик современного рынка авиаперевозок, выявлены проблемы и перспективы развития. Актуальность статьи обусловлена расширением присутствия авиакомпаний на мировом рынке и, как следствие, необходимостью исследования современных тенденций развития рынка, выявления основных факторов, определяющих конкурентоспособность авиакомпаний. Статья представляет интерес как для специалистов в области авиации, так и для читателей, интересующихся авиационной тематикой.

Ключевые слова: авиакомпания, грузоперевозки, инновации, пассажиры, перелеты, рынок, транспорт, эффективность.

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