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THE IMPACT OF THE SAFETY INDICATOR ON THE POSSIBILITY OF THE AIRLINE JOINING THE STRATEGIC ALLIANCE

Taghiyev Tahir Taghi, Damirov Mahir Rasim, Bugayko Dmytro. *"The Impact of The Safety Indicator On The Possibility Of The Airline Joining The Strategic Alliance".* The airlines themselves and competent civil aviation organizations constantly monitor and improve activities aimed at improving safety. Safety reports are constantly being printed, all cases of disasters and incidents are thoroughly investigated, and the results of the investigation are published in the open press. This gives people the opportunity to decide which airline they will use. Along with safety, users are also interested in the issues of self-replacement achievement of the scheduled item, comfort and quality of service during the flight, convenience of the schedule and the possibility of easily purchasing a ticket for the flight of interest. As ties between countries expanded, tourism developed and more and more people wanted to get acquainted with the culture and history of other peoples. The number of trips has increased many times and there is a need to reduce travel time. It is clear that one, even a large airline, if chosen by a passenger, cannot cover all continents and countries of the world, not to mention cities. Hence the need for airline interaction in order to jointly provide passengers with the opportunity to catch up with the intended goal with the least cost and time. If at the beginning of the airline achieved these goals by concluding bilateral agreements such as interline or code-sharing, then further tightening of competition led them to the idea of creating associations of airlines – alliances. As you know, today there are three global alliances in the world, under the control of which there are more than 60% of air transportation in the world.

This is Star Alliance, One world and Sky Team. Currently, many airlines are seeking to join one of these alliances, but for this they must meet certain requirements and one of them is – high level of security.

Keywords: security, route network, airline, alliance, rating, airport

Тазієв Тахір Тагі, Даміров Махір Расім, Бугайко Дмитро. «Вплив індикатора безпеки на можливість приєднання авіакомпанії до стратегічного альянсу». Авіакомпанії та компетентні організації цивільної авіації постійно контролюють та вдосконалюють діяльність, спрямовану на підвищення безпеки. Звіти про безпеку постійно друкуються, всі випадки катастроф та інцидентів ретельно розслідуються, а результати розслідування публікуються у відкритій пресі. Це дає людям можливість вирішити, яку авіакомпанію вони використовуватимуть. Поряд із безпекою, користувачів також цікавлять питання заміни дати запланованого рейсу, комфорту та якості обслуговування під час польоту, зручність розкладу та можливість легко придбати квиток на цікавий рейс. В процесі розширення міжнародних зв'язків між країнами активно розвивався туризм, і все більше людей хотіли ознайомитись з культурою та історією інших народів. Кількість поїздок багато разів зростала, і потрібно було скоротити час подорожі. Зрозуміло, що одна, навіть велика авіакомпанія, якщо її обирає пасажир, не може охопити всі континенти та країни світу, не кажучи вже про міста. Звідси необхідність взаємодії авіакомпанії, з метою спільного забезпечення можливості забезпечення широкої географії польотів з найменшими витратами та часом. Якщо на початку авіакомпанії досягали цих цілей шляхом розвитку двосторонніх угоди, таких як інтерлайн та код шер угоди, потім подальше посилення конкуренції призвело їх до ідеї створення асоціацій авіакомпаній – альянсів. Як відомо, сьогодні у світі існує три глобальні альянси, під контролем яких понад 60% повітряних перевезень у світі. Це Star Alliance, Oneworld та Sky Team. В даний час багато авіакомпаній прагнуть приєднатися до одного з цих альянсів, але для цього вони повинні відповідати певним вимогам, і одна з них – високий рівень безпеки.

Ключові слова: безпека, маршрутна мережа, авіакомпанія, альянс, рейтинг, аеропорт.

Introduction. The assertion that aviation — is the safest mode of transport is already axiomatic. According to the International Air Transport Association (IATA), over 15 billion passengers were transported by air in 2019-23. As a result of accidents during this transport, 926 people were killed (in the number not included in the process of military transportation). Except for 176 passengers killed in a Ukrainian plane shot down in Tehran (IR) in 2020, which took place not due to the fault of air transport enterprises, this number is 750 people. As noted in the UN General Assembly, this figure is even higher in road transport (about 1.3 million people).

Of course, these figures do not objectively reflect the real situation, as if some 4.5 billion people are transported annually by air, the number of passengers transported by rail and road is now transported, many times more. Thus, in Azerbaijan alone, 1.5 million

passengers are transported annually by these modes of transport. In this regard, let us turn to figures that more objectively reflect the situation. If on air transport for every 160 million km (100 million miles) the number of deaths is 0.6, this figure in rail transport is 0.9 and 1.6 in road transport. It should also be noted that the latter figure is not included in motorcycles and mopeds. In these two modes of transport, 160 million km of deaths reach 42. Thus, it can be concluded once again that air transport – is the safest mode of transport.

Presentation of the main results. The high level of safety in air transport is due to the fact that this issue is the most important, even an absolute indicator of the industry. All other indicators – economic, environmental, social, etc., directly depend on the level of security. It is for this reason that from the first moments of the operation of air transport as an independent industry of countries and the

world economy as a whole, much work has been done and continues to be done towards bringing security to a high level and maintaining it's at this level. These include making appropriate adjustments to the design of aircraft, training flight and maintenance personnel at a higher level and regular retraining throughout their entire period of operation, carrying out repair work at a higher level, improving fuel quality and other issues.

It should be noted that the rigidity of competition in civil aviation also forces airlines to pay attention to maintaining a high level of security. This issue is one of the main priorities of ICAO (International Civil Aviation Organization). ICAO pays serious attention to the continuous improvement of aviation activities, as well as the control and management of aviation security of its member states. For other associations existing in world civil aviation, including IATA, European Civil Aviation Conference (ECAC), uniting more than 44 CA administrations, African Civil Aviation Commission (ACAC), with 54 members, Latin American Civil Aviation Commission (LACAC), which brings together representatives of 20 countries and others, security issues are also a priority in their activities.

It is known that safety in aviation consists of two parts:

- aviation security;
- flight safety.

Flight safety refers to navigation tasks performed in the management of air traffic and the provision of meteorological information. It should be noted that to date, the accident (collision of two aircraft in 1977), resulting in the death of the largest number of passengers (578 people), it was due to misunderstandings between the Spanish manager and the crew of the Dutch aircraft. Similar incidents have occurred in other parts of the world. For example, in Croatia, in 1976, two aircraft were found in the air as a result of an error by the dispatcher, killing 176 people. As a result of the error of the dispatchers there are cases of collision of aircraft with

mountains. In 1993 in North Macedonia (116 deaths), in 1997 in Indonesia (234 deaths), etc. The examples given show that this part of the security problem is very important and there is always a need to take the work being done in this direction more seriously and to improve it.

The second part of the security problem – aviation security – is related to the solution of broader issues. Here, in addition to the activities of the security services of airlines, the work of the relevant airport services, the activities of customs and immigration services and the correct establishment of relations between them are of great importance.

Observation of passengers from the moment of their entry into the airport, detection of persons wanted by law enforcement agencies and law enforcement agencies through the use of modern facial recognition systems, checking of baggage and the passenger itself without direct contact. The implementation of such conditions will allow, on the one hand, to ensure a thorough inspection of passengers, causing them a minimum of inconvenience, and on the other hand, will increase the capacity of airports by reducing time, spent on checking each passenger.

The urgency of the problem of increasing capacity for major modern airports and for the civil aviation sector as a whole is constantly increasing. Currently, the busiest airports in the world serve millions of passengers a year. This can be seen in the table below. Looking at the numbers in the table, we see that the 10 busiest airports in 2022 served more than 679.5 million passengers. According to IATA, about 3 billion passengers were transported in that year as a whole. Thus, 23% of all passengers transported were transported at least through one of these ten airports. On average, 1.86 million passengers pass through these airports in one day. Thus, each of these airports should receive and send an average of 7.75 thousand passengers per hour. Of course, checking them all is a complex technical and social problem in itself.

There is also an indirect effect of the widespread use of the above-mentioned systems. The departing and arriving passengers remain more satisfied as they spend less time at airports, which increases

the rating of this airport and indirectly improves the image of the airline, using this airport as a base port.

Table 1. The busiest airports in the world in 2022

	Airport name	Code IATA	Country	Number of passengers
1.	Hartsfield–Jackson Atlanta International Airport	ATL	USA	93 699 630
2	Dallas Fort Worth International Airport	DFW	USA	73 362 946
3	Denver International Airport	DEN	USA	69 286 461
4.	O'Hare International Airport	ORD	USA	68 340 619
5.	Dubai International Airport	DXB	UAE	66 069 981
6.	Los Angeles International Airport	LAX	USA	65 924 298
7.	Istanbul Airport	IST	Turkey	64 289 107
8.	Heathrow Airport	LHR	U. Kingdom	61 614 508
9.	Indira Gandhi International Airport	DEL	India	59 490 074
10.	Charles de Gaulle Airport	CDG	France	57 474 033

Source: International Airport Council report "World Airport Traffic Dataset 2022"

It should be noted that practical work is being carried out at all eight international airports of Azerbaijan to maintain a high level of aviation security. Airports are equipped with the necessary equipment, all work on training of personnel is carried out. At Heydar Aliyev airport, which is the main air gate of our republic, a large amount of work has been carried out in these directions, which continue today. As a result, in 2014, the airport was awarded 4 stars from SKYTRAX, a prestigious private English consulting company specializing in the study of services offered by airlines and airports. In 2018, the number of stars reached five. In 2023, the airport received two SKYTRAX – awards the best airport in Central Asia and the CIS and the airport with the best staff. As mentioned above, these awards have a positive impact on the image of "Azerbaijan Airlines – AZAL" and «Silkway Airlines» based here. Of course, the high image gives the airline additional opportunities in competition, increases the number of customers and, as a consequence, provides an opportunity to get higher profits. High profits, in turn, allow the use of more

modern equipment, attract high-level specialists and thus create favorable conditions for more active work in the direction of improving the quality of services provided.

As is known, in the field of civil aviation, several authoritative organizations are engaged in the analysis of security issues and the compilation of airline ratings.

The German company JACDEC annually publishes the rating of airlines. All accidents on board the aircraft are studied for its co-production. The criterion for drawing up the re-tiring is the security index. Newly established airlines are assigned an indicator of 0. The index of 0.001 is considered a good indicator without mortality. JACDEC accident database is limited to 30 years. Incidents during training, freight and test flights are not taken into account. Only flights with passengers are taken into account.

According to the experts of the Swiss agency ATRA, one of the criteria for calculating the safety factor is the level of training of pilots and dispatchers.

As a result of the analysis of accidents and accidents, ATRA identified 15 main safety factors:

- Financial position of the company;
- Passenger occupancy;
- Number of employees and pilots on board;
- Total flight carried out by plane;
- Number of aircraft in service and discontinued;
- Average age of aircraft in operation (service life);
- Composition of aircraft fleet (Airbus or Boeing);
- Number of aircraft at risk;
- Number of accidents in the last 10 years.

The data for the calculations are taken from IATA materials and Flight Global aerospace magazine.

The main goal of any – enterprise is to exist and work as long as possible. The company, including the airline, must be successful in order to achieve its goals. Tough competition in the air transport market forces airlines to use different types of cooperation. At the dawn of the development of this industry, airlines were more likely to prefer agency or «pool» contracts. Thanks to these agreements, airlines have been able to expand their route network. Thanks to «pool» contracts, relatively small and limited airlines have been able to manage specific routes on equal terms with large transnational airlines, and the profits earned are more equitable. Later, the companies began to give preference to «code-sharing» agreements.

However, as the number of companies increased and the air transport market expanded, the effectiveness of these contracts was insufficient. It is for this reason that at the end of the XX century multilateral agreements were concluded between airlines and the formation of alliances began. The Alliance is an association of airlines in order to achieve the maximum level of cooperation in the field of air transport on a paid basis. Each member of the alliance, while maintaining its independence, must follow certain general rules.

Air carriers are united in alliances primarily for mutual benefit and cost minimization. The airline, which is a member of the alliance, can offer its customers a route of any length and complexity, as part of this route will be performed by another member or members of the alliance. This gives the airline an opportunity to expand the route network without the purchase of new aircraft and additional staff. In addition, members of the alliance can use the same reservation systems (distribution), sometimes can attract the same staff at airports and other service points, can jointly purchase various equipment and thus achieve significant savings. Joining the alliance allows airlines to solve some legal issues and overcome the legislative restrictions of different countries. For example, «Lufthansa» (Germany) allows the passenger to carry only one piece of baggage free of charge during a flight from Europe to America or back. Turkish Airlines, which is with him in one alliance (Star Alliance), allows two free seats on this route. If a passenger bought a ticket from «Turkish Airlines», but flies by plane «Lufthansa», he is allowed to carry two pieces of baggage free of charge.

There are currently three global strategic alliances in the global air transport market: Star Alliance, Sky Team, One World.

It is clear that only the interests of airlines are not enough to join alliances. Alliances themselves should be interested in making this company a member. First of all, the airline's contribution to the alliance is to expand the route network and create the possibility of entering new regional markets. In our opinion, "Azerbaijan Airlines – AZAL" from this point of view are in an advantageous position. Russia's continued aggression against Ukraine has left a large Russian air transport market outside the world airbase. Since political interests prevail over economic interests in this case, many airlines in the world do not have the opportunity and desire to fly to various cities of Russia, at the same time, Russian airlines are unable to fly to many foreign countries. With this in mind, alliances

may be interested in having "Azerbaijan Airlines – AZAL" become their member to

restore its route network through it both in Ukraine and in Russia.

Table 2. Strategic alliances in the air transport market

Title	Star Alliance	Sky Team	One World
Time of education	1997	2000	1999
Number of participants	26	19	13
Service area (countries)	over 195	over 170	over 158
Number of destinations	over 1300	over 1036	over 1000
Number of daily departures	over 19000	over 15445	over 14000
Number of passengers (per year)	over 762 mln.	over 676 mln.	over 528 mln.

Source: Star Alliance, Sky Team, One World

To become a member of the alliance, the airline must meet certain requirements, in addition to being of interest to the alliance for the above reasons, and among these requirements, security issues are in the forefront. This can be seen from the table compiled by JACDEC for 2023 and supplemented by the author.

As can be seen from the table, eight of the ten largest airlines are members of a global

alliance. Taking into account that the two companies from the UAE, which are in the top ten, «Etihad Airways» and «Emirates», are themselves founding members of the regional alliance and do not want to be members of strategic alliances, that number could have been higher.

Table 3. List of airlines ranked first ten in 2023

No	Name of the airline	Country	Number of aircraft	Average age of aircraft, years	Member of which alliance
1.	Qantas Airlines	Australia	125	12	One World
2.	Air New Zealand	N. Zealand	107	9,2	Star Alliance
3.	Etihad Airways	UAE	90	7,0	-
4.	Qatar Airways	Qatar	255	5,0	One World
5.	Singapore Airlines	Singapore	152	7,0	Star Alliance
6.	TAP Air	Portugal	84	11,5	Star Alliance
7.	Emirates	UAE	272	9	-
8.	Alaska Airlines	USA	~ 300	8	One World
9.	EVA Air	Taiwan	86	8,5	Star Alliance
10.	Virgin Australia /Atlantic (Group)	Australia/Great Britain	87 41	11,7 7	Sky Team

Conclusions. It should be noted that AZAL is a suitable candidate for joining the strategic alliance and from the point of view of security. To verify this, we will refer to the list of the top 100 companies in the world, compiled by Skytrax. In compiling the list, the

company refers to various indicators, among which safety indicators come to the fore. "Azerbaijan Airlines – AZAL" is in 50th place on this list, and this can be seen as a very good indicator, as well as an argument in favor of its candidacy.

Referring to the question of which of the alliances is more preferable for "Azerbaijan Airlines – AZAL", it seems to us that the most suitable is «Star Alliance». Two arguments lead us to this conclusion: first, the «Star Alliance» includes many European and American airlines and they may have interests through us to open the Central Asian air market; secondly, a member of this alliance is

«Turkish Airlines», which can support AZAL, which is important in the process of receiving a airline, thirdly, participation in the alliance will make us interesting for russian, iranian tourists who want to get to the countries of the west, which will benefit the alliance itself.

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