

TRANSPORT ECONOMIC AS A FUNCTION FOR AIRLINE OPTIMIZATION

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ABSTRACT

Optimizing airline positioning and operational efficiency in the highly competitive European aviation market hinges on comprehensive business planning, accurate benchmarking, and adaptive strategies that respond to dynamic market and regulatory conditions. Developing versatile business plans that account for service sales, air traffic management, and regional coordination, especially amid Europe's fragmented skies, is crucial for long-term success. The push for a unified European airspace, through reforms and technological upgrades under the Single European Sky initiative, aims to reduce delays, costs, and environmental impact while enhancing safety and service quality, thereby enabling airlines to better meet traveler demands and sustain growth in an increasingly complex environment.

1.0 INTRODUCTION

Air traffic in recent decades has shown a very dynamic development. All branches of the Air Force after the Second World War achieved significant progress, as well as development under the conditions of institutionalization and state regulation. In accordance with the Agreement on a Single European Airspace, a single European aviation market was created. The unified agreement for aviation and regulation of air traffic has raised questions about the development of air traffic in the future. The implementation of the Open Agreement does not stop with the key conditions for the case of air traffic to the European Union. Air traffic primarily has an international character of passenger transport with a lot of significance in relation to the transport of livestock.

There are many professional and scientific works that deal with the topic of client satisfaction. We are witnesses that today management systems as a whole are increasingly turning towards the unreserved satisfaction of the client or production. His Highness, the user, as he is often called, is beginning to deserve the attention of modern managers in our work systems. Many organizations and institutions for consumer protection are starting to appear in the feedback system, or as it is often called the feedback system.

However, as is usually the case with our systems, these implementation and improvement processes are very long-lasting, inflexible and often unrealistic or misunderstood, where the return and complaint process takes a lot of time and often ends with dissatisfaction from the client. However, compared to the not so distant conditions in our economy and our market, things are changing and now we have mechanisms of action in relation to the roles and possibilities of the users. Of course, these mechanisms should be put into essential function with maximum capacity as soon as possible to fit into modern working conditions as soon as

possible. Likewise, all conditions and mechanisms can be copied and applied in the case of optimization of air traffic users.

1.1 Aims at research

The main goal of this research is: to provide an economical, safe, fast and regular flow of air traffic in the entire structure of air traffic, services that are proportionate and adaptable to all the demands of users from the area of European air traffic. Serve what you need to fulfill the requirements for national security, you need to be globally harmonized, ecologically sustainable and functional according to unified principles and to satisfy the demand.

1.2 Setting a research target

Optimization (lat. optimus - the best) is a way of conceptualizing-programming or modifying within the framework of a program where an existing programming platform, or in our case a service, is adapted for use with a specific platform, or cooperates with other applications in order to increase the speed and quality of execution, to reduce the burden on resources, etc., i.e. in short: efficiency gains.

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- 1) Objectives should be set in order to find a better solution for optimization.
 - 2) When setting each goal, care must be taken to ensure that it is related to and in harmony with other goals.
 - 3) Every set goal must be measured so that it can be followed.
 - 4) Goals must be a challenge to be motivating.
 - 5) Clear, consistent, measurable and challenging goals should be achievable in practice, because only achievable goals make sense.

Figure 1, Setting the target to work¹

2.0 OPTIMIZATION OF AIR TRAFFIC

2.1. Legal framework – International regulations in aviation

→ Warsaw Convention (1929.)

¹ <https://www.boundless.com/management/textbooks/boundless-management-textbook/introduction-to-management-1/core-requirements-of-successful-managers-19/the-importance-of-performance-targets-125-3922/>

An international legal act was established that regulates civil aviation. The Warsaw Convention introduces the airline as a basic passenger document that every airline is obliged to issue, which laid a solid foundation for civil aviation and is the basis of today's regulations².

→ Chicago Convention (1944.)

This Convention establishes the so-called "five freedoms" in aviation. The most important decisions made at the meeting in Chicago are related to airspace sovereignty, that is, the rights and obligations of all signatory countries. The basic text of this convention guarantees all countries exclusive sovereignty in the sky over their territory, and thus airplanes become free seats and this enables the development of duty-free shops at airports³.

→ Geneva Convention (1948.)

This Convention introduces a series of rules for dealing with airlines in the event of flight incidents or aircraft accidents. The liability of airlines to passengers and owners of transported livestock and baggage has been introduced⁴.

→ The Hague Protocol (1955.)

New changes were made to the Warsaw Convention and its adaptation was made at that time to new traffic conditions, especially in terms of luggage transport. Baggage that is handed over to an authorized employee of the airline without protest becomes the responsibility of the airline from that moment on. Any suspicious contents, irregular weight or dimensions of checked baggage will be examined by an airline official and objections will be made if any of the above is contrary to the rules or regulations for the carriage of the airline⁵.

→ Paris Protocol (1956.)

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2.2. International Aviation Organizations

The international sources of aviation laws cannot be presented without explaining the role and tasks of certain international organizations and associations dealing with civil aviation. The activity of such organizations also has its own special legal component in the form of numerous resolutions, recommendations and other acts adopted by these bodies and implemented by the signatory states and the airlines of the member states. The most important organization is the International Civil Aviation Organization (ICAO⁷), based in Montreal. ICAO's jurisdiction is

² <http://www.iatatravelcentre.com/e-ticket-notice/Croatia/Croatian/>

³ https://hr.wikipedia.org/wiki/Konvencija_o_me%C4%91unarnom_civilnom_zrakoplovstvu

⁴ https://hr.wikipedia.org/wiki/%C5%BDenevske_konvencije

⁵ <http://www.aviokarta.net/konvencije-o-civilnoj-avijaciji/>

⁶ [https://hr.wikipedia.org/wiki/Pari%C5%A1ki_ugovor_\(1951.\)](https://hr.wikipedia.org/wiki/Pari%C5%A1ki_ugovor_(1951.))

⁷ www.icao.int

determined by the provisions of the Convention in Chicago and is reduced to three basic functions: administrative, legislative and judicial. This aviation organization achieves the following goals: Provides harmonious and rapid development of civil aviation worldwide, supports the development of aviation roads, airports and air navigation devices, contributes to the safety of international air navigation, etc. In addition to ICAO, as a universal international organization and various regional international civil aviation organizations, there are both professional trade and non -profit international aviation organizations. The most important is the International Air Traffic Association (International Air Transport Association – IATA⁸). This association was founded in 1945 in Havana. It is the successor to the International Air Traffic Union. Today, IATA has 270 members in more than 140 countries around the world.

The purpose of the organization is to help airlines achieve legal competition and price uniformity. International Organization of Pilots⁹ and International Organization of Controllers¹⁰ are explicitly professional world organizations whose task is to deal with professional issues of interest to their members. The Association of European Airlines (AEA – Association of European Airlines¹¹) It was established in 1952 by the largest airlines from Western Europe then (Air France, British Airways, KLM, Swissair, Lufthansa and Sabena).

2.3 Agreement to Establish the European Common Aviation Space

The purpose of the agreement is to form a common European aviation space (European Common Aviation Area – ECAA¹²). ECAA is based on access to free market, freedom of establishment, balance and general rules in the field of (Safety) security, (Security) safety, air traffic management, social problems and the environment¹³.

The contracting parties will take all appropriate measures, whether they are general or individual, to ensure the fulfillment of the obligations arising from this Agreement and to refrain from any measures that may endanger the achievement of the goals of this Agreement. There are no restrictions on the freedom of establishment of enterprises from the nation's nationality of the EU or partner ECAA on the territory of any of them.

In order to protect the civil aviation from unlawful security, the parties will ensure that common basic standards and mechanisms for monitoring air safety are applied to any airport located on their territories. Contracting parties will, on request, give each other all the necessary assistance to prevent the abduction of civilian aircraft and other illegal activities against aircraft, passengers and crew members, airports and navigation aids, as well as all other dangers to safety. Civil aviation.

⁸ www.iata.org

⁹ www.ifalpa.org

¹⁰ www.canso.org

¹¹ https://en.wikipedia.org/wiki/Association_of_European_Airlines

¹² https://en.wikipedia.org/wiki/European_Common_Aviation_Area

¹³ Multilateralni Sporazum između Evropske zajednice i njenih država članica, R. Albanija, Bosna i Hercegovina, R. Bugarske, R. Hrvatske, Makedonije, R. Island, R. Crne Gore, Kraljevine Norveške, Rumunije, R. Srbije i Misije privremene uprave Ujedinjenih nacija na Kosovu, Multilateralni sporazum o uspostavljanju Zajedničkog evropskog vazduhoplovnog područja

In the event of an incident or threat of kidnapping or other illegal action against aircraft safety, contracting parties will assist each other by facilitating communication and other measures designed to quickly and safely complete such an incident or threat of an incident. The signatories of the agreement are cooperating in the field of air traffic management to expand the only European skies to ECAA, in order to improve existing security standards and overall efficiency of general air traffic standards in Europe, in order to optimize capacity and to Reduce delays.

In the first transitional period, the parties should implement all the aviation security legislation, separate air traffic and regulatory service providers, to form oversight bodies for air traffic control services, to initiate airspace reorganization and implement flexible use Airspace: to ratify the Convention in Montreal. Member is included as a fulfiller in the work of the European Air Security Agency (EUROCONTROL)¹⁴.

2.4 A contract for air transport

The air transport contract obliges the air carrier to carry out the contracted transport from the departure site to the place of the destination at the agreed time, and the other contracting party - the contracting authority, ie the passenger is obliged to pay the contracted or appropriate shipment for the service. A carrier is a person who, according to a carriage contract, transports passengers and goods. Air traffic user can be in a different legal position and have different powers and obligations under the air traffic agreement.

In air traffic, air traffic contracts are not the only agreements that regulate the trade exploitation of aircraft. In business practice, the most important is the division of air transport into international air services and within a country.

The specifics of international air traffic are mainly manifested in terms of the special international air traffic and special state control, as well as customs regulations. Of particular importance is the division of air transport into the air transport of goods and air transport of passengers and luggage¹⁵.

Agreement on the Air Transport of Things in Our Law is regulated by the Law on Obligations and the Basis of Property and Law Relations in Aerial Traffic in 2011¹⁶.

With a contract for the transportation of goods by plane, the contracting carrier undertakes to the contracting authority to transport the material by plane, and the contracting authority to pay for the shipment. The contract for the carriage of goods may refer to one or more wagons or carriage for a fixed time, with the entire capacity of the aircraft, with a certain amount of goods or an individual job. The quantity of things to be handed over for carriage may be determined by number, piece, mass, volume, dimensions or a combination thereof. The air carrier has the right to ask the shipper to draw up and hand over the air document, and the shipper has the right to ask the air carrier to receive the document. The absence or irregularity of the cargo

¹⁴ <http://www.eurocontrol.int>

¹⁵ Posebnu podvrstu vazdušnog prevoza predstavlja vazdušni poštanski prevoz

¹⁶ http://www.paragraf.rs/dnevne-vesti/310715/310715-zakon_o_obligacionim_odosima-u-vazdusnom-saobracaju.html

does not affect the existence or validity of the contract for the carriage of goods by air. The consignor is responsible for the accuracy of the details and statements in the waybill that he/she enters or, upon request, provided by the air carrier. The sender compiles the document in three original copies and hands them to the air carrier together with the items. The first copy is retained by the airline, the second copy follows the first, and the third copy is handed over to the sender by the airline after signing. The submission of the third copy of the shipment to the sender is considered to have concluded the contract of carriage and that the item has been accepted for carriage under the conditions specified in the waybill. The air carrier must transport the goods by contracted air. Also, he must deliver things at the agreed time. The amount and method of payment of the price are determined by contract. The price is paid only for the goods that are transported and made available to the consignee at the place of final destination. If the consignee fails to fulfill his obligations, the air carrier has the right to keep the object and hand it over to a public warehouse or other appropriate person or to take it for safekeeping, for which he is obliged to notify the consignee and the sender without delay¹⁷.

2.5 National administrations directorates or agencies

The agencies or directorates are national aviation oversight bodies, in accordance with EU regulations, and as such issue certificates of competence for the provision of air navigation services and certify that air navigation service providers continue to meet service provision requirements. It adopts regulations and administrative acts, issues public documents, keeps records, inspects aviation entities, participates in the work of international aviation organizations and institutions and their working bodies, cooperates with competent authorities of other countries. Their organization mainly includes sections such as: → Air Traffic Management Department (ATM – Air Traffic Management¹⁸),

→ surveillance CNS (Communication Navigation Surveillance¹⁹).

National administrations participate in the development of by-laws in the field of air traffic management and airports and supervise their implementation within the air traffic control organization.

Directorate (or agency) The Civil Aviation Authority determines the airworthiness of aircraft, issues permits and authorizations to fly, and enters aircraft in the civil aircraft registry in the aircraft records. Aircraft of all categories are registered in the Aircraft Register. The directorate (or agency) is responsible for issuing the air operator certificate to (AOC – Air Operator's Certificate²⁰), It also performs regular and extraordinary inspections and checks the work of the AOC. National Directors (agencies) actively cooperate with the European Commission in the field of air navigation, especially to meet the requirements for full implementation of the ECAA Agreement (European Common Aviation Agreement²¹) Agreement in ATM work (Air Traffic Management²²) as within the ISIS program (Implementation of the European Sky in

¹⁷ <https://www.scribd.com/document/111501801/Prevoz-Robe>

¹⁸ https://en.wikipedia.org/wiki/Air_traffic_management

¹⁹ <https://www.eurocontrol.int/dossiers/communications-navigation-and-surveillance>

²⁰ https://en.wikipedia.org/wiki/Air_operator%27s_certificate

²¹ https://ec.europa.eu/transport/modes/air/international_aviation/country_index/ecaa_en

²² <http://www.eurocontrol.int/articles/what-air-traffic-management>

South East Europe²³). Directors (or agencies) Air navigation is mainly nominated as a national body in the area of air navigation NSA (National Supervisor Authority²⁴).

2.6 Interoperability traffic and transport

Traffic and transportation are immense logistics processes for the interoperability of processes in space and time. Interoperability is the most important feature of the logistics for functioning, regulating, controlling and improving systems.

Liks (Logical Information and Communication System) was developed to manage the inflicted network procurement. This allows the Liks ability to access key information and transportation to make individual and collective participants more dynamic and effective. Interoperability is achieved through the formation of electronic e-infrastructure that connects participants via email and services. The main purpose of this structure is to make the customer service more efficient. The quality of interoperability is evaluated through the display of degrees. This point is a conceptual model for the design of operating systems for management, planning, implementation and control of logistics flows²⁵.

→ Defining interoperability

"Interoperability is the ability of systems or products, whose interfaces are fully known, to communicate and function with other products and systems without any restrictions on access and implementation."

1. SYNTACTIC INTEROPERABILITY

•e When two systems communicate and exchange data. Specific data formats and communication protocols are the basis for this Operability, in principle, XML and SQL standards provide syntactic operability (valid for lower levels of data formats, such as providing alphabeticals stored in ASCII format and in both communication systems).

2. SEMANTIC INTEROPERABILITY

is the ability when two or more computers exchange information, as well as automatic and significant interpretation of the information exchanged, as well as precise shaping of the results (as defined by end users). Both sides must respect the reference model when exchanging information, and the content must be unequivocal (what we send must be the same as we think).

Graph, 1 Division of interoperable²⁶

Interoperability refers to the possibility of collaboration between different systems and organizations. The term is often used in terms of engineering technical systems, or alternatively

²³ <http://www.isisprogramme.com/>

²⁴ http://ec.europa.eu/transport/modes/air/single_european_sky/national_supervisory_en

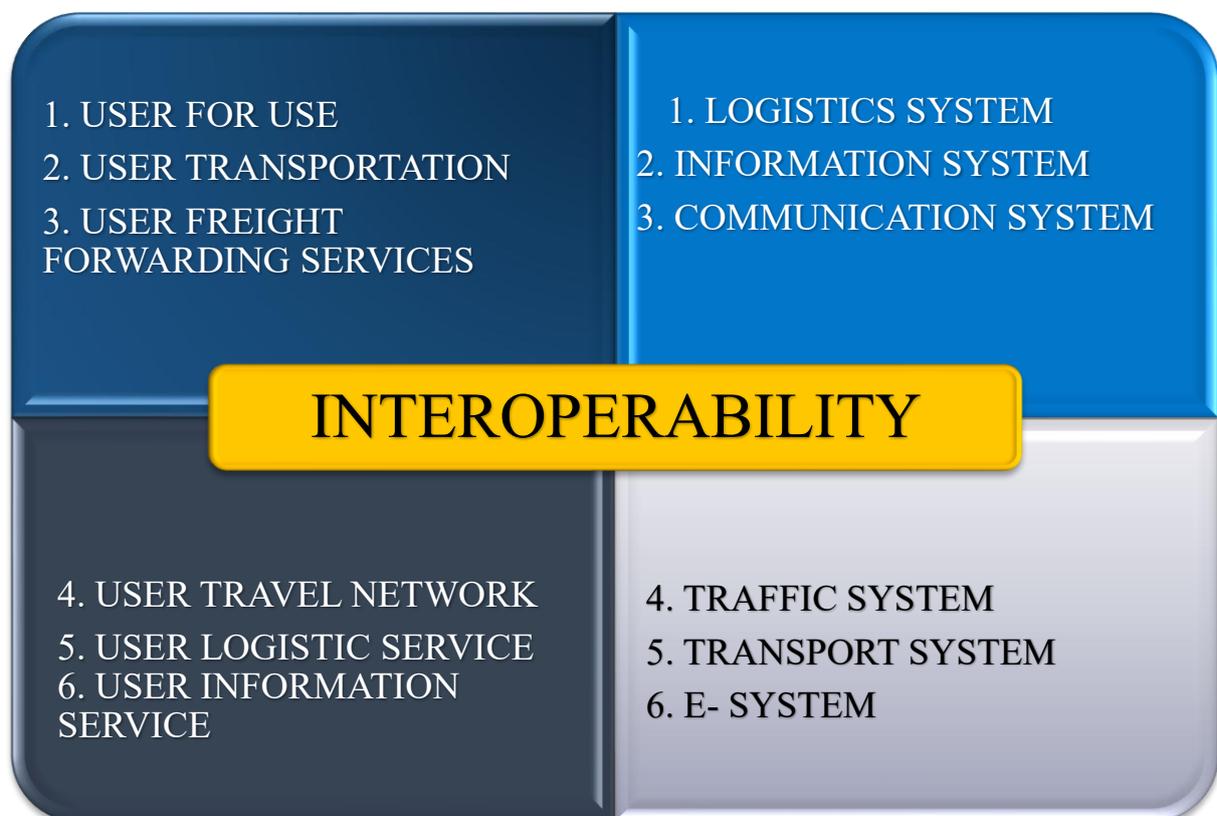
²⁵ <https://prezi.com/q9e8726ezn9v/logistic-information-system/>

²⁶ <http://autopoiesis.foi.hr/wiki.php?name=KM+-+Tim+12&parent=NULL&page=interoperabilnost>

wider, taking into account the social, political and organizational factors that affect the performance of the system.

Both types of interoperability are important because of the joint interaction in contribution and development, especially in SCM (Supply Chain Management)²⁷ and SC (SupplyChain)²⁸ where all the elements are connected together.

→ Structure of Traffic and Transport Settings for Interoperability



Graph, 2 Arhitecture interoperable²⁹

Interoperability requires consistency based on technical, semantic and institutional parameters.

Level of interoperable	Prerequisites for the realization of interoperable	Current status
Institutional	Willingness for interoperability	Mostly different and silent
Models of information	Formalization and data descriptors	The early stages of development
Data scheme	Accepting Database Standards	Very dependent on the sector

²⁷ https://en.wikipedia.org/wiki/Supply_chain_management

²⁸ https://en.wikipedia.org/wiki/Supply_chain

²⁹ DELJANIN, Abidin, Logistika I ITS- Interna skripta, Fakultet za saobraćaj i komunikacije, Sarajevo, 2011.godine.

		traffic and transport
Data exchange	Applicable standards	Availability in expansion
Networks	Standard network protocols	Adoptions are widely used

Table, 1 Consistency of interoperability³⁰

2.7 Integrated transport system

Traditionally, the "competition" between different modes of transport has resulted in a system that is segmented and fragmented. Each mode of transport tries to exploit its advantages in terms of cost, service, reliability and safety, and often at odds with its technical characteristics of operation. It is often the case that transport requests respond to one mode of transport (eg Bulk Rail Freight) to implement another mode (passenger transport). In addition, participants in different types of traffic present their competitors with suspicion and mistrust, which leads to insufficient cooperation between modes of transport in one transport chain.

Integrated transport system - means to take advantage of all modes of transport during the intermodal transport chain concept.

Definition of intermodal transport e: Intermodal transport → is a system that implies door-to-door transport under the responsibility of one carrier that is an intermodal transport operator, involving at least two aspects of transport (cargo transport without changing the unit plant). Considering that the concept of intermodal is mainly related to the transport of goods in the following text, attention will be paid to intermodal freight traffic³¹.

2.8 Interconnection

Air Transport Objectives: To control air traffic growth, to deal with air traffic congestion ("Heaven's Heavy"), to maintain air safety standards (EU air safety standards are currently the best in the world) and improve environmental protection.

In addition to these measures regarding airspace restructuring, the Commission wants to harmonize flight controllers with the introduction of a joint flight controller license. In addition to creating Single Sky, a number of measures are being taken in the field of more efficient use of (existing) airport capacity: The 2003 slot amendment defines a system of slot distribution at individual time intervals at airports (distribution of landing / landing rights In a given time interval at the airport), so that a number of new measures have been proposed by the Commission on this topic: Regulation and harmonization of airport prices in order to redistribute flight Restricting negative environmental impacts, especially noise, greenhouse gas emissions, introduction of kerosene taxes and the opportunity to introduce VAT on airline tickets³².

³⁰ Marko Subotić, Milorad K. Banjanin, Branko Miletić, INTEROPERABILNOST LIKS-a U SAOBRAĆAJU I TRANSPORTU, 2009.

³¹ https://en.wikipedia.org/wiki/Integrated_Transport_Information_System

³² <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R1315>

2.9 Concept of sustainable development

The consumption of non-renewable energy has increased and the result is worrying global and local environmental pollution with global and local consequences. The main goal of the EU is the development of a transport system that will be able to efficiently meet transport needs at a very high level of quality with as little impact on the environment as possible.

All strategic goals must be consistent with sustainable development



Figure 2. Sustainable development³³

Sustainable transport refers to the broad subject of transport that is sustainable in terms of social, environmental and climate impacts and the ability to supply, globally, indefinitely. Sustainability assessment components include specific vehicles used for road, water or air transport; energy source; and infrastructure used to accommodate shipping (roads, railways, airways, waterways, canals and terminals). The second component for evaluation is a pipeline for transporting liquids or gases of materials. Transportation operations and logistics, as well as transit-oriented development, are also included in the assessment. The sustainability of transport is mainly measured by the efficiency of the transport system and the efficiency, as well as the environmental and climate impacts of the system.

Short-term activities are often promoted by incrementally improved fuel economy and vehicle emission control, while long-term goals include shifting transportation from solar energy to other alternatives, such as the use of renewable energy and other renewable sources. The entire life cycle of transportation systems is subject to sustainability measurements and optimization.

³³ https://en.wikipedia.org/wiki/Sustainable_development

Sustainable transportation systems make a positive contribution to maintaining the livelihood, social and economic sustainability of the communities they serve. Transportation systems exist to provide social and economic connections, and people are quick to take advantage of the opportunities offered by increased mobility. The benefits of increased mobility must be weighed against the environmental, social and economic costs of transport systems.

Transport systems have a significant impact on the environment, accounting for between 20% and 25% of carbon dioxide consumption and emissions in the energy world. Greenhouse gas emissions from transportation are increasing at a rate faster than any other energy-using sector. Road transport is also a major contributor to air pollution.

The social costs of transport include traffic accidents, air pollution, physical inactivity taken away from family, while migrants and sensitivity to fuel price increases. Many of these negative impacts fall disproportionately on those social groups who are also least likely to own and drive cars. Traffic congestion imposes an economic cost of wasting people's time and slowing down the delivery of goods and services.

Traditional transport planning aims to improve vehicles and cannot adequately address the broader impacts. But the real goal of traffic is access - jobs, education, good and services, friends and family - and there are proven techniques to improve access while reducing social impacts on the environment and manage community traffic jams. Improving the sustainability of their transport networks do it as part of a wider sustainable development program such as for the environment³⁴.

2.10 Sustainable development of aerodromes

Environmental care is an essential prerequisite for long-term and sustainable development. Sustainable development of environmental management is an attempt to have a synergistic effect on the preservation of inherited natural resources and the needs of modern society and any individual. Therefore, all airports should systematically manage the environment. They need to build and implement an environmental management system, in accordance with international standards such as ISO 14001. First, to identify significant aspects of the environment of established control and measurement programs to reduce environmental impact³⁵.

³⁴ <http://www.icao.int/Newsroom/Pages/icao-sg-civil-aviation-crucial-to-global-sustainable-development.aspx>

³⁵ <https://www.faa.gov/airports/environmental/sustainability/>



Figure 3 Sustainable development of aerodromes³⁶

3.0 MARKET POSITIONING FACTORS IN AIR COMPANY

3.1 Optimization of air traffic

The environment in which airlines operate is very competitive and dynamic. To be profitable, an airline must anticipate future market conditions and allocate resources to match supply and demand. An airline's planning and marketing functions are responsible for defining the product and determining how it is marketed. These activities are parallel, because for each flight, planning and marketing, they start five years or more earlier and continue continuously from the passenger board to the destination.

The optimal positioning of the airline for profitability is largely determined by the appropriate adjustment of supply and demand. Planning and marketing functions can be represented as a process, each of which controlled and specific aspects of the process is aimed at service users.

The main aim and purpose of the paper is to point out the factors that significantly contribute to the optimal positioning of the airline in the daily competition on the market.

Although there are numerous professional and scientific papers covering this topic, it is possible to speak generally about the following basic factors which are shown in the scheme.

³⁶ <https://www.faa.gov/airports/environmental/sustainability/media/airportSustainability2.png>

Below, some parameters of these factors identify and analyze, and it is necessary to have appropriate knowledge that helps in the optimization process³⁷.

3.2 Aviation trends

The global aviation industry continues to grow rapidly, but consistent and stable profitability is elusive. Measured by revenue, the industry has doubled in size over the last ten years, from \$746 billion in 2014, according to the International Air Transport Association (IATA)³⁸.

Much of this growth has been driven by low-cost carriers (LCCs), which now control about 25% of the global market and are rapidly expanding into new markets. Growth also came as a result of continued gains from carriers in developed markets, IATA reported. However, the profit margin is still low, less than 3% overall.

In the commercial aviation sector, almost every group in the aviation industry chain - airports, aircraft manufacturers, travel agencies and service companies - makes a profit. This is seemingly ironic as the airlines that transport passengers from one place to another, the most important link in the chain, struggle to turn a profit.

Given these circumstances, airlines should continue to focus on top-line growth, as their limited profitability depends almost exclusively on revenue, while increasing productivity to support and perhaps even increase margins. How the commercial airline industry reacts to the movement of several trends playing out around the world will determine the performance of the carriers in the coming years³⁹.

3.3 Flight schedule

The planning and marketing process begins with a flight schedule that determines where and when the airline will fly. The flight schedule is designed to attract as many customers as possible to the wide market (origin-destination) market, and the key is the profitability through which the company responds to demand. On the other hand, the profitability of the set flight schedule depends on the possibility of attracting revenue from passengers and goods, as well as the cost of operating the flight schedule itself. The analysis of potential revenues includes the competitiveness of the company's flight schedule for each pair of cities to which passengers or goods may travel. In general, a company can generate significant revenues if it offers a relatively attractive service in a market with high potential for passengers and goods.

The flight schedule should be attractive to potential passengers, although it is set on the principle of cost minimization, so it must ensure that both conditions are often met. The attractiveness of the flight schedule is reflected in the correct and reasoned choice of the number of destinations, the correct choice of the airport in the selected destinations, the sufficient number of frequencies between the departure and arrival airports, appropriate and stable take-off and landing times, harmonized times within the schedule on the flight of the parent company with the flights of other partner airlines. Further criteria may be the preference

³⁷ http://www.consumerpsychologist.com/cb_Segmentation.html

³⁸ <http://www.iata.org/Pages/default.aspx>

³⁹ https://en.wikipedia.org/wiki/Airport_and_airline_management

for a direct point-to-point flight between two destinations for long-haul flights, the correct selection of the capacity of the aircraft type for traffic to a particular destination, the availability of the airline service in relation to seat reservation time constraints , etc.

A number of external factors prevent airlines from implementing the most attractive flight schedule that requires a minimum price. Limiting factors are: airport opening hours, airport capacity, slot allocation policy, ie. landing and take-off times, restrictions in the field of air traffic control (saturation of air corridors, flight restrictions, obligations of assigned, longer and less suitable air corridors, etc.), restrictions resulting from state regulations for air traffic, existence of time during which the aircraft must be maintained and kept on the ground to prepare for the next flight, regulation of the working hours of the crew, flight and cabin crew, the number of crew members depending on the type of aircraft and the length of the flight , relations between countries, relations between individual airlines, etc.

In everyday business, every flight of attractiveness, existing restrictions in and out of the airline and principles of cost minimization. Apart from the fact that the attractiveness of the flight schedule depends more or less on the optimized factors mentioned above, the related service segments, in addition to the creation of the flight schedule, also contribute to the choice of the passengers of this airline, who are also a sales organization, organizing the process of reservation and availability of seats, as well as quality communication of the airline with potential passengers in the selected market segment⁴⁰.

3.4 Creating a tariff and pricing elasticity

The process of determining the structure of the tariff supply is often defined as prices in professional terminology. The flight schedule and prices together define the company's product. In the current environment of deregulation, prices have become an extremely complex process. Before deregulation, companies served specific markets with a relatively unique static tariff structure. Regular carriers offered service to the business segment of passengers and charter carriers to the tourism segment. Regular carriers achieved a relatively low load factor with real profitability to regulate competition restrictions. Immediately before deregulation, regular carriers began offering additional products on the tourist trip market segment to fill the empty spots. At the same time, they introduced restrictions to prevent the use of discounts for the business trip segment (purchasing tickets in advance, weeks, etc.). When setting prices, the company should receive information that will predict the demand for travel and the traveler's willingness to pay for the trip. Adjusting prices to the competitive market means determining an optimal strategy for saving or growth of market share and revenue.

Lately, pricing elasticity has been influenced by demand

Price elasticity = % change in demand / % price change

The demand for a particular service depends on a number of factors. The most important factor involves the use of clients, the level of income, price and quality of service subject to replacement. In order to obtain a useful assessment of pricing sensitivity, researchers must carefully control all factors that influence demand. The general rule is that when other factors

⁴⁰ https://en.wikipedia.org/wiki/Airline_timetable

affecting demand remain unchanged, the higher cost of the service results in lower demand. The price corresponds to demand and varies depending on the market. The impact of pricing elasticity on service demand measures the response to demand for price changes when other demand factors remain unchanged. It is defined as a percentage change in the quantity required as a result of the percentage increase in price change⁴¹.

<i>Short-haul transportation</i>	-1,5
<i>Tourist and VFR trips</i>	-0,7
<i>Business trips</i>	
<i>Long-haul transportation</i>	
<i>Homemade</i>	
<i>Tourist and VFR trips</i>	-1,1
<i>Business trips</i>	-1,1
<i>International</i>	
<i>Tourist and VFR trips</i>	-1,0
<i>Business trips</i>	-0,3
Total air freight	-1,1

Table 2 Estimates of the price elasticity of demand for air traffic services⁴²

Depending on the type of market and passenger segmentation, business tourism travel, long-haul travel, short-haul travel, etc., will depend on the elasticity of demand. Because of the possibility of alternative modes of transportation that can replace long-haul transportation given the length of the trip, the demand for air travel will be less elastic for long-haul flights than for shorter flights. Also, international travel is longer than domestic travel, so the cost is lower relative to the total cost, making international traffic less sensitive to price changes. Private trips will be easier to postpone if there is an increase in prices or those destinations that are more affordable will be bought.

Thus, the elasticity varies depending on the type of trip and the distance. On the other hand, price sensitivity increases with more intensive use of the internet, more intensive presence of low cost - no frill airlines and more intensive application of corporate business arrangements. Existing analyzes are based on realizations of price elasticity based on air transport performance over the last 15-20 years and are clearly outdated. Recent research shows the following results:

Note, a price elasticity of -1.5 means that a 10% increase in price causes demand to increase by 15%.

This result suggests that with an average price for intra-European air travel of €140, a fuel tax of €10 that increases the price by 7 percent means a reduction in demand of approximately 11%. For business travelers with an average price of €1,230, the same fee would mean just 0.8 percent of the increase, while a price elasticity of -0.7 suggests a drop in business traveler

⁴¹ https://en.wikipedia.org/wiki/Price_elasticity_of_demand

⁴² http://www.fin.gc.ca/consultresp/airtravel/airtravstdy_1-eng.asp

interest of just 0.6 percent. However, easyJet found a price elasticity of -4 in its research, meaning a 7 per cent increase in prices would mean a 28 per cent drop in passengers. All of the above is important to know the best positioning of an airline in the market⁴³.

3.5 Forming prices in air traffic

3.5.1 Specifics in forming prices in air traffic

Air traffic is characterized by its most important competitive advantages, which are the speed of transportation as well as the possibility of covering large distances in a very short period of time. Full affirmation is achieved in the segments of international transport, and special emphasis is placed on the question of the formation of prices from different aspects of the territorial principle, type of air carrier, type of traffic and type of transport. Changes in regulation methods and price formation systems in the service market in this type of traffic have multifaceted specificity.

Characteristics that have an influence on the formation of the price are:

national, classic carrier and low-cost carriers - as opposed to domestic and international transport and cargo and passenger, VIP, special transport and regular (line) and non-regular (charter) traffic. Due to its special differences and specificities, each type of traffic is observed separately, especially international and domestic.

The implementation of the European regulations allows any air carrier to bid for a route, while the beginning and end of the given flight does not have to end in the same country. The growing number of low-cost carriers LCC in Europe differ with a different business strategy compared to the classic national airlines. Revenues and profits grow in parallel with the process of liberalization, i.e. with the application of the Open Sky Agreement.

Cargo air transport is generally carried out in two ways:

1. By renting the free space for the transport of goods on the regular lines to which passengers are transported (smaller quantities of goods);
2. By renting specialized aircraft that own the so -called. Logistics providers (DHL, Fedeh, UPS, etc.).

In the first case pricing is based on standard tariff packages, and in the latter case it is applied free to determine the price of each user lease of a whole aircraft.

The process of setting prices on the world airline is divided into two stages:

1. Forming prices according to IATA rules and bilateral agreements,
2. Forming prices after deregulation executed,

⁴³ <http://www.fin.gc.ca/consultresp/airtravel/airtravstdy1-eng.asp>

In the last 30 years in North America it has been dynamic, and in the last 20 years in Europe, including between these two markets (IATA agreements have not been formally suspended and the processes of deregulation are virtually no longer in application).

Bilateral "exchange" between the agreed countries continues in airline. Most of the world's aviation market are the United States and European countries, where deregulation has been replaced by IATA prices that is most of the world's cake in the aviation.

3.5.2 Methodology of Forming Prices in Air Transport Based on IATA Regulation

In regular international air traffic, prices are formed towards IATA (International Aviation Transport Association).

Members of the ITA The amount of prices were set by conferences:

- The first conference covered the territory of North, Central and South America, Greenland and the surrounding islands;
- The second conference covered Europe, Africa and the Middle East;
- The third conference was covered by Asia (without the Middle East), Australia, New Zealand, Indonesia and the surrounding islands.

Subcommittees were created in the narrower regional units of the IATA conferences: the first conference formed four, the second three and the third four subcommittees, where each conference determined a price according to the length and duration of the given flight, and the amount of the prices was determined by the subcommittees by harmonizing proposals. Carriers did not have free access when operating specific lines because the new line is preceded by an interstate and intercompany agreement. Any company, regardless of its

- size,
- economic power,
- the degree of efficiency,

had equal access and status in the process of harmonizing and deciding on the amount of the price with attention to the fluctuation of fuel costs and changes in the prices of oil derivatives on the world market. Labor costs have the largest share (about 35%), followed by fuel costs (from 20-35%), while fixed costs amount to 2/3 of the total costs, and variable costs per unit of transport service predominantly depend on the degree of utilization. of the capacities.

When calculating the prices and unit costs in regular international traffic, it starts from the assumption of the average capacity utilization (occupancy per seat) of 55% (represents the limit of fixed costs), which provides positive results for extra profit, i.e. profit.

Determining the prices within the IATA, gave them a monopoly-cartel character of two very important reasons that affect:

1. Basis that the plane will be filled only by 55% and
2. Defining the price for the fact that even the most original carrier of the given line made a profit.

As segmentation of all tariffs in normal and special (privileged) with many discounts were not directed to users' interests.

The privileged tariffs with a high degree of capacity utilization were given in a larger number of foundation (group, family, tourist trip, transportation of a particular category of passengers-children, Madinci, the determination and fixing of the time of travel), in the function of the business-commercial carrier policy. Gradually, a growing range of preferences and incentives in the program of aviation companies intended for extra flights to users as well as ways to lower prices as a "foreplay" for low prices in air traffic, ie. deregulation and with that availability of wider layers of population.

3.5.3 Forming a price in airline shipping in the process of its deregulation

In the early 80s, the independent British businessman Laker, who received the title of lord from this attempt, introduced a "free air bridge" in the process of deregulation at prices several times lower than those of regular lines between Great Britain and the United States. This attempt lasted only a few years, and the organized countermeasures of the big companies were quickly thrown out and his company was closed. The continuation of the same demands for deregulation is also in the USA, where they were implemented in the adoption of the "Act of Deregulation" in 1978. The passage of the US Domestic Traffic Deregulation Act, which extends to Australia, Southeast Asia and Canada, introduces free competition between carriers, but soon leads to "tariff wars" with the number of scheduled carriers in that country increasing from 36 to 123. where 25 carriers soon went bankrupt. In a very short time there was stratification and the formation of oligopolies, i.e. their concentration in several "mega" dominant carriers (United American Airlines, Delta, Texas Air Corporation and Northwest), controlling 85% of the American market. The expansion was partial at first, but it did not remain without the influence of that system. Under this influence, the strict policy of IATA loosened in the domain of tariffs in about 1986, especially in the domain of the so-called special fares when 90% of users traveled on reduced, special fares, with an average discount of about 60%, which is almost twice the normal price before 1978, when the regulatory and controlling role of IATA in the field of international fares was particularly shaken. The question of the further perspectives of deregulation and the further role of IATA in this domain was particularly expressed in the 90s. On the basis of deregulation to reduce prices, it introduces the Open Sky Policy ("open sky policy") on the routes to the USA and Europe. This intercontinental agreement was signed between the United States and 60 countries (27 EU countries) and entered into force the day after the announcement by the EU on March 30, 2008, when the possibility of free competition on intercontinental relations was opened against all possible barriers. With this agreement, key restrictive measures within the framework of IATA's bilateral agreements are abolished, that is, with the methodology of determining the price and the regulation process for the unavailability of all lines of companies on a certain route. For example, only the following carriers could fly on the route London (Heathrow airport) - USA: United Airlines, American Airlines, British Airways and later Virgin Atlantic Airways. With the open skies agreement, all companies can fly from Europe to the US from any airport in the EU, which significantly increases the degree of competition as well as liberalization in the price formation system. If more companies fly on the same route, the prices must fall, which refers to the so-called business class.

The process of gradual liberalization in Europe began during the nineties of the 20th century for all members and for those who want to be adhered Application (our country signed in 2007). In the period 1987-2004 "liberated" the European sky from all barriers (where it flies, from which the airport, lack of restriction on sabotage, etc.), leading to tariff when they began to be formed on the basis of supply and demand. The European liberalization of air transport, during the 1980s and especially in the 90s of the 20th century, formed the so-called. Low tariff companies Low-Cost Carriers representing specific European, relatively short Euro-Mediterranean lines leading to a better connection between the airport infrastructure as well as the frequency of flights. Their way of operating was set up in the United States with the company Southwest Airline in 1967, and over the last few years the LCC has been an important participant in European lines, with participation in markets growing (2004). The UK is the most interesting market for LCC development that in 2004 had as much as 50% of UK airports. At first the LCC was used by travelers who often traveled with a lower budget, and today they use them from well -existing and situers to those with a small budget.

The LCC is defined as an aerial company operating on relatively short roads in certain regions without any additional services on the basis of three important elements:

1. Simple Product- Food Services: Food, Drinks, Newspapers (ie Additionally Checked), Narrow Seats (which provide greater capacity), only one class, seats without cards, no cards- online shopping and checking ;
2. Market positioning- price-oriented users, aggressive marketing, small airports outside cities, transport from A to B- without transit flights;
3. Low operating costs- a small number of employees, a small salary, short airport stay, small fee airports, short cleaning time, direct sales of cards-online, one type of aircraft (usually Boeing 737 or Airbus A 320), the lowest Costs of service and training of pilots.

Key differences in business philosophy of traditional aerial companies and LCC are:

- Traditional carriers Low Cost carriers
- Business model
- Global strategy
- High costs
- Market strategy, low cost
- Bases and landings
- Main airports, forming global alliances
- Acorn airports, traveling from point A to point B
- Fleet: Several types of aircraft
- Standardizing product
- High card price, full package of services included in the price.
- Low card prices, non -existence of free secondary services
- Channels for sale
- Sales branches and offices, passenger agencies, internet, phone
- Direct sale by phone and internet.

The diagram shows the operating costs of four airlines: one traditional- Lufthanza and three LCC-Southwest, Ryanair and Easyjet. Costs are expressed in Euro cents/ kilometers/ seats. It can be seen that Lufthanza has the most costs than other LCC. Preliminary reports work at lower prices, with a higher level of fullness of the costs of costs despite the global economic crisis at the end of 2008 and throughout 2009, they made a profit and increased volume of transport. Ryanair, for example, in the results of the 2009, advanced without regard to the recession and assumes part of the market and users of the main European airlines, such as Lufthanza, British Airways and Air France/KLM. The net profit of companies before the payment of the narrative and interest by the end of September reached 387 million euros compared to forecasts that the same earnings would be around 377 million euros. The conclusion is that air traffic deregulation and the process of pricing did not overwhelm the system of international transportation in its entirety.

Despite the liberalization of almost all US-European relations, the airport operations management system as well as airports was not fully liberated, which means major alliances from airline companies still have the best terms while small alliance or individual companies that are now Trying to include some lines were offered less attractive terms. Trade has emerged at the highest quality terms for airport operations from individual airports, for example, the Deloitte consulting house sold for £ 30m. Specifically, the global economic crisis has left the effects of air traffic seeking all forms in operation, association, increasing the volume of capacity, with lower prices that are quite contrary to the tendencies in MAT business policy in 1991-2010 Downloading Macedonian national transport from the Turkish TAF from both national airports. In Skopje, Alexander Vliki and Ohrid St. Apostle Paul today are able to increase the reception of large airlines and increase passenger transport from one to four million passengers, with the introduction of cheap charter flights, as well as the transportation of goods . To warn the problem of attractive airports, the LCC is completely free to perform their airport operations and even provide funding to perform these bases. Small countries (such as Macedonia, Serbia, Kosovo and all countries in the Western Balkans region) towards their modest capacities of national air carriers (eg MAT in Macedonia, JataierWays in Serbia or Montenegro Airlines in Montenegro) face the fact that they miss it World Air Traffic in Free Competition and that they have results in the collapse of many small national companies. The resistance that is still present today (in our country crakes in 2009/2010) by fully accepting the state -level open -air agreement where it is applied with state regulation and monopoly structure will be soon replaced by market control by large companies guides and multinational companies. The excuse for lack of desire refers to the restructuring at the national level of the aerial companies and the liberalization of air traffic prices, especially on the regional lines. The future of every small national company in one of the world's relevant alliance with participation in the Alliance, for example, the old Alliance led by Lufthanza connects regional and wider international traffic with a greater degree of capacity, with lower operating costs and most importantly lower prices for users.

The consequences of the process of deregulation are primarily explored by reducing the absolute level of price at an international level that leads to significant shrinkage between prices in regular and Charter traffic. Charter prices were much lower than regular lines because it means complete utilization of the aircraft capacity (and not just 55% IATA). Reducing the relative height of transport prices increases the possibility of transforming potential effective demand, and increasing the volume of shipping and the extent of capacity utilization supplies

income loss on the basis of price reductions, not to endanger the cost. Working, the most obvious from the example of LCC companies' work.

3.6 Revenue management

Revenue Management - determines the amount of each product offered for sale. This process determines how many places to sell (including overbooking) and how to get the best combination of full price, discount and group reservation to make revenue. This process is very complex, especially if applied to the network and talking when it comes to multiplying and modifying tariffs on each market, or the appropriate city pair.

The main purpose of any airline in a market regulated environment is to make a profit, which means increasing revenue in minimizing costs when maximizing the number of passengers on the flight and service costs. These airlines can achieve these goals by controlling sales at different prices based on the segmentation of the air traffic market in subgroups characterized by different sensitivity to the price and quality of service.

The basic prerequisite for efficient revenue optimization is pricing policy, and the allocation of a number of places to individual state prices can manage total flight revenue. To this end, airlines develop a special business function aimed at achieving optimal total flight income. In practice, different terms in English are used for this feature, such as Inventory Management, Revenue Management and Yield Management, of which the term Revenue Management most closely reflects the purpose of this function, which is to manage total flight revenues.

The basic parts of the revenue management process are an assessment and increasing the size and structure of the demand for air service services, forecasting consumer behavior and adjusting the price policy and available capacity of market status. Flight revenue management provides information of particular importance for successful marketing campaign management, whose primary task is to stimulate demand for air service services⁴⁴.

Basic elements of the revenue management system are demand forecasting, optimization and overcapacity planning. Airline measurements of system users have shown that the implementation of such a system brings a 2-6 percent increase in total annual revenues. An important and optimal fleet structure is motivated by rationality, but also by the different number of available places⁴⁵.

The practice of overbooking is historically the oldest example of techniques for managing total flight revenue. Airlines occasionally sell more tickets for a particular flight than there are seats available for two main reasons:

- 1) reduces the risk of unsold places, with the tendency to increase revenue,
- 2) Many passengers are allowed to get a place that was their first choice.

All of this in practice should result in optimization of flight revenue, taking into account the increase in the impact of low -cost airlines, causing the revenue management systems to be

⁴⁴ https://en.wikipedia.org/wiki/Revenue_management

⁴⁵ <https://dspace.mit.edu/handle/1721.1/61191>

modified and adapted to the way the Revenue Management is, although not all are successful as the most famous. the world. (Rzan air, easy Jet, Southwest....)⁴⁶.

3.7 Sales and distribution

Distribution is the process of putting a product for sale. The first point of sale of the airline is primarily CRS (Central Reservation System)⁴⁷ and GDS (Global Distribution System)⁴⁸. The company's reservation service uses CRS to book flights and prices of its own company. Since CRS is expensive for development and maintenance, large companies have their own CRS or stakes, while small businesses use large rental reservation systems. Gradually, CRS entry was given to agencies to sell the product out of the company reservation service. Today, CRS has become global and no matter what CRS access, you can access the schedule of flights and prices of the most world airlines and reserve seats.

One of the basic strategic solutions of the airline is the extent to which it uses its own places and to what extent independent travel agencies. Since airlines pay a commission to sell their services to travel agents, they are interested in developing their own sales at specialized places or by telephone sales. The basic requirement for this approach is, of course, that employment costs of your own infrastructure and labor are less than the product paid to agents.

The basic distribution channel in the classic air transport distribution model is a computer reservation system at which the company values market prices and offers the opportunity to reserve potential travelers. Through a computer reservation system, the service is offered to the passenger in their outlets or through intermediaries composed of travel agencies, consolidators and other airlines. Today, Global Distribution Systems (GDS) around the world reach 230,000 outlets, with total reservation exceeding 3.1 million a day.

Several main suppliers of computer systems have established itself on the world market, with Sabre, Amadeus, Galileo i Worldspan. They currently have the largest market share. In addition to these services, these systems provide passengers hotel, rent cars and other services, such as rail and ferry services and cruise.

For the services provided by GDS in the distribution, airlines pay a fee for each segment of the reservation made, whether they are made by travel agencies themselves or their name. The costs of using GDS are very high, in the structure of total costs amount to 4-6% and 20-30% of the costs of sales and marketing costs in a wide sense, most of which relate to the cost of distribution and product marketing . Recently, new companies have emerged in response to the market for the high costs of established GDS, which are developing the concept of global distribution at a much lower price.

There are several main reasons why airlines require to increase the participation of electronic distribution channels. The first reason is to reduce distribution costs. Over the last few years, ticket costs, sales and promotion are 17-18 percent of the total operating costs of international airlines. According to IATA studies since 1996. The commission paid to agents and other

⁴⁶ https://en.wikipedia.org/wiki/Yield_management

⁴⁷ https://en.wikipedia.org/wiki/Central_reservation_system

⁴⁸ https://en.wikipedia.org/wiki/Global_Distribution_System

companies was nearly 42.8% of the distribution, or 7.5% of the total operating costs. Reservations and tickets participated with an additional 31% of the costs of distribution, and payments to global distribution systems 7.1%. The United States Air Traffic Alliance estimates that the cost of processing a passenger ticket sold by the agent is on average \$ 8, despite the ticket sold through its own website when it costs \$ 1. Sixteen Alliance members pay about \$ 2 billion a year to global distribution systems. The average reservation price for Star members is \$ 13, of which \$ 5 is paid for transaction costs, and the rest is divided between travel agencies and profit margin stimuli. Such a model is unsustainable for airlines given the overall trend of declines (travel per kilometer for passengers) present in the global market⁴⁹.

Today, the use of new IT advances that provide electronic tickets, internet distribution and intranet and distribution through on-line systems are increasing.

The electronic ticket, ie travel -free travel, certainly reduces distribution costs. The most famous is the so -called. Smart Card. The passenger receives a microchip card with all the information entered otherwise on the airline ticket, information on the passenger's place on the plane, the status of miles collected at FFC, etc. Despite a number of problems and disadvantages that have emerged so far in electronic distribution, airlines believe that work should be done to remove and continue their implementation.

The distribution of air services online is increasing every day. The Internet is an inexpensive medium that allows the traveler to quickly use the air system and services. By advertising fewer fulfilling flights online, airlines quickly reach passengers interested in their service. As a very fast instrument in the distribution mix for timely information provision and direct connection to the passenger. Unlike internet, intranet plays a big role in the company itself, serving to publish and facilitate access to the information that their employees need in their daily work (email, phone number, company procedures, conditions, rules, etc..)⁵⁰.

3.8 Synthesis of factors for optimal positioning of aviation companies

Due to the scope of the airline's planning and marketing process, a high level of automation and integration of these activities is needed. The airline must decide which position it wants to take into the selected market segment, ie. to clearly set the product or service.

Potential travelers rank companies based on different criteria in specific categories, compare them to other competitive companies and make a final decision. Often, decision makers fail to analyze all the necessary elements in detail, so it is airline to try to keep the positive in the minds of their potential travelers as deeply as possible.

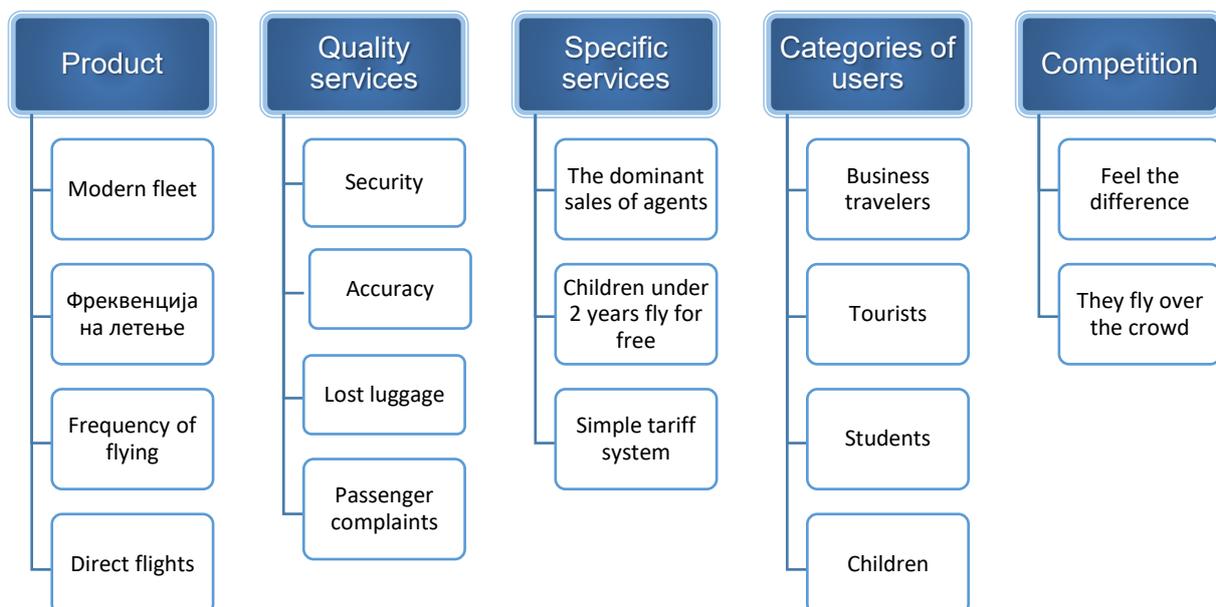
When positioning their products or services, airlines have several different strategies listed below.

⁴⁹ <http://www.iata.org/Pages/default.aspx>

⁵⁰ https://en.wikipedia.org/wiki/Aircraft_Communications_Addressing_and_Reporting_System

When choosing the right positioning strategy, it is important to choose the strategy that most emphasizes the comparative advantages over competition and it is important to continue to build positive reception among service users.

In this regard, there are in principle two models for positioning the aviation market for the network operator and the secondary player of Nishani. Network Operator such as: American Airlines, British Airways, Lufthansa or Singapore Airlines to increase its market part use the advantages of large centers (HUB) that encourages their success. Unlike these airlines, niche players work and work without the benefit of large transfer points, adapting to the different market conditions currently taking place on the market. Many of these airlines fly mostly within large domestic systems, such as. America and China, while others are working in global markets such as Virgin Atlantic Airways. In any case, these companies have found a way to compete with Network Operators network operators⁵¹.



Graph, 3 Examples of the positioning strategy of a transport company⁵²

3.9 Network Operator

Those airlines working as network operators concentrate their activities at one or more transfer airports. They strive to optimize flights across these centers so they can dominate the local market and increase their profit.

The characteristics of large centers are highly developed markets and geographical connection.

⁵¹ http://www.consumerpsychologist.com/cb_Segmentation.html

⁵² https://en.wikipedia.org/wiki/Aircraft_Communications_Addressing_and_Reporting_System

In order for a company to work successfully as a network operator, it must satisfy several elements:

- safety, accuracy, purity and neatness of aircraft;
- have a developed network of flights;
- In their fleet they have new aircraft;
- have a high -level developed service and
- Developed Frequent Flyer Programe etc.

All this makes the company image and at the same time brings all the needs of the passengers and the profitability of the company.

For example: the service of British Airways is different from the Singapore Airlines service, both being high, but they are unique and different in their image. Over the last five years, these airlines are increasingly recognizing the growth and functioning of the market, which has made them create networks, different contracts for sharing codes and alliances⁵³.

3.10 Niche players

The airlines building a marketing position in the available market spots are increasing in the airline market, with examples of Southwest, Midwest Express, Virgin Atlantic, etc.

These companies offer them a point to point of potential passengers and are characterized by the following elements:

- ❖ Safety and orderliness of aircraft
- ❖ Point to point service
- ❖ Price elasticity
- ❖ Low crumbs, etc.

So, for example, Southwest's distinctive strategy is based on simplicity and low cost. This airline does not have its own frequent flyer program based on miles like network operators, not on travel segments (for free tickets, the passenger must travel a certain number of scheduled trips).

Unlike Southwest, Midwest Express has developed its strategy to serve only business travelers, tailoring its size, schedule and other services to this segment of travelers only, thus positioning itself as a leader in its market.

Virgin Atlantic has defined its strategy by flying only long-haul aircraft to and from London. Due to the fact that the London airport is overloaded, Virgin Atlantic airports often open up new opportunities, thereby increasing the profitability of the business. So that their customers do not equate them with British Airways, their marketing strategy is based on their image NOT BA.

⁵³ <https://aviation-safety.net/database/operator/>

Each of these airlines has a different approach to the market, but what connects them is the fact that each of them has taken advantage of the economic advantages of the market in which it operates, as opposed to network operators of companies that are particularly complex to implement.

Any type of airline, whether a network operator or a niche player, will have the best opportunity to succeed if its strategy and implementation is based on capitalizing on the underlying economic benefits.

In general, considering the above, marketing strategy today occupies a dominant position in the theory and application of marketing. It has become a sign of recognition for advanced marketing at the highest stage of its development. Considering all of the above, experts and scientists especially point to the need for a more precise definition of the corporate mission of those airlines that do not completely fall into any of these two basic categories, but are somewhere in the middle. These are Finnair, LOT, Olympic, Pakistan International, Mexicana, etc.

Other divisions are also possible where low cost LCC no frill airlines play a dominant role⁵⁴.

3.11 Economic equilibrium

Economic equilibrium represents a theoretical construction of a state when market forces between supply and demand are balanced. In the real parameters of the economy, the market never reaches even though it constantly moves towards equilibrium, and economic processes are accepted as analogous to physical phenomena such as speed, friction, heat or pressure of liquids. A system reaches equilibrium when the physical forces are balanced against each other when no further changes occur.

The incentives facing buyers and sellers in the market, communicated through current prices and quantities, lead them to offer higher or lower prices and quantities that move the economy toward equilibrium. If the price is too low, then the quantity demanded by buyers is greater than the quantity offered for sale.

For example, to inflate a balloon, you need to blow air into it. Inflating air increases the air pressure in the balloon. The air pressure inside the balloon rises above the air pressure outside the balloon so the pressures are not balanced. The balloon expands, lowering the pressure inside until it equals the pressure of the air outside. As soon as the balloon expands enough so that the air pressure inside and outside are in balance, it stops expanding or reaches an equilibrium system.

If the price in a given market is too low, then the quantity demanded by buyers will be greater than the quantity sellers are willing to supply. A state of increased supply represents a state of market imbalance. In the given example, the air pressures in and around the balloon, ie supply and demand, will not be in balance.

⁵⁴ <http://www.encyclopedia.com/entrepreneurs/news-wires-white-papers-and-books/airline-company>

So something has to give; buyers will have to offer higher prices to get sellers to participate with their products. As this happens, the market price will rise to a level where the quantity demanded equals the quantity supplied, just as the bubble will expand until the pressures are equalized. Finally, it can reach equilibrium when the quantity demanded equals the quantity supplied and we can call this market equilibrium.

In microeconomics, economic equilibrium can be defined as the price at which supply equals demand for a product, in other words where the hypothetical supply and demand curves intersect. If this refers to a market for a single good, service, or factor of production, it can also be referred to as partial equilibrium, as opposed to general equilibrium, which refers to a state in which all final goods, services, and factors are found. Balance with yourself and each other simultaneously. Equilibrium can also refer to a similar state in macroeconomics, where aggregate supply and aggregate demand are in balance.

Equilibrium is a fundamentally theoretical construct that can never occur in economics, because the conditions underlying supply and demand are often dynamic and uncertain. The state of all relevant economic variables is constantly changing. Entrepreneurs compete throughout the economy, using their judgment to make educated guesses about the best combinations of goods, prices, and quantities to buy and sell. Because a market economy rewards those who guess better, through the profit mechanism, entrepreneurs are actually rewarded for moving the economy toward equilibrium. Business and financial media, price circulations and advertising, consumer and market researchers, and advances in information technology all make information about the relevant economic conditions of supply and demand available to entrepreneurs over time. This combination of market incentives that select for better assumptions about economic conditions, and the increased availability of better economic information to inform these assumptions, accelerates the economy toward the "correct" equilibrium values of prices and quantities for all the various goods and services that are produced, purchased and sell⁵⁵.

In game theory, a Nash equilibrium, named after the mathematician Johnson Forbes Nash, is a proposed solution to a non-cooperative game involving two or more players in which each player is assumed to know the equilibrium strategies of the other players, and no player has what to gain by changing only his own strategy.

In terms of game theory, if each player has chosen a strategy, and no player can benefit by changing strategies while the other players keep theirs unchanged, then the current set of strategy choices and their corresponding payoffs is a Nash equilibrium .

Game theorists use the concept of Nash equilibrium to analyze the outcome of the strategic interaction of several decision makers. In other words, it provides a way to predict what will happen if several people or institutions make decisions at the same time, and if the outcome for each depends on the decisions of the others. A simple insight underlying Nash's idea is that one cannot predict the outcome of the choice of multiple decision makers if one analyzes these decisions in isolation. Instead, one must ask what each player would do, taking into account the decision-making of others.

⁵⁵ <https://www.investopedia.com/terms/e/economic-equilibrium.asp>

Nash equilibrium is used to analyze hostile situations, how conflicts can be mitigated by re-interaction. It is also used to examine the extent to which people with different preferences can cooperate and whether they will take risks to achieve a cooperative outcome⁵⁶.

4.0 AVIATION MANAGEMENT

4.1 Benchmarking in the positioning of aviation companies in the market

Benchmarking is a comparative process aimed at measuring and analyzing a company's processes, services, and performance against others to identify areas for improvement and achieve business success, especially in competitive industries like aviation, where it supports continuous improvement and strategic planning. It involves internal and external comparisons—such as competitive, industrial, and generic benchmarking—and is most effective when repeated regularly as a systematic effort to institutionalize excellence across all functions. Leading airlines exemplify this by using benchmarks, like service quality indicators, to maintain a competitive edge and foster a culture of ongoing improvement, ultimately striving for perfection and becoming the best in their field.

Best practice→

- Defining activities
- Ranking of critical factors
- Defining best practice
- Check benchmarking information
- Action plan

However, Kotler divides that process into 7 stages, and Harrington has a slogan:

“ Become a star using the 5 stages of the benchmarking process ⁵⁷”.

When it comes to marketing strategy specifically, then the analysis of external factors must be covered: consumers, market competition and the environment, intrinsic factors and the well-known SWOT analysis of strengths, weaknesses, opportunities and threats.

Below is a comparative comparison of Airbus 319-320 daily utilization for a total of 55 airlines.

4.2 SWOT analyze

A prerequisite for choosing the right strategy is to analyze the situation. This implies that the company should consider external and internal factors to know the best way to achieve the desired goal. The increasing dynamics present in the market forces entrepreneurs to carefully choose how they will compete with their competitors.

→ S - Strengths

⁵⁶ https://en.wikipedia.org/wiki/Nash_equilibrium

⁵⁷ <http://www.zakshow.com/the-5-phases-of-benchmarking/>

- W - Weaknesses
- O - Opportunities
- T - Threats

Diagram SWOT analyze⁵⁸

→ SWOT analysis is one of the tools a manager can use to create a strategy. This is a qualitative analytical method, which through 4 factors tries to show the advantages, weaknesses, opportunities and threats for a certain phenomenon or situation. However, it should be taken into account that this is a subjective method.

Every company must take care of the internal and external environment. In this context, this analysis can be understood as a representation of the internal strengths and weaknesses of an organization and the external opportunities and threats facing the same organization.

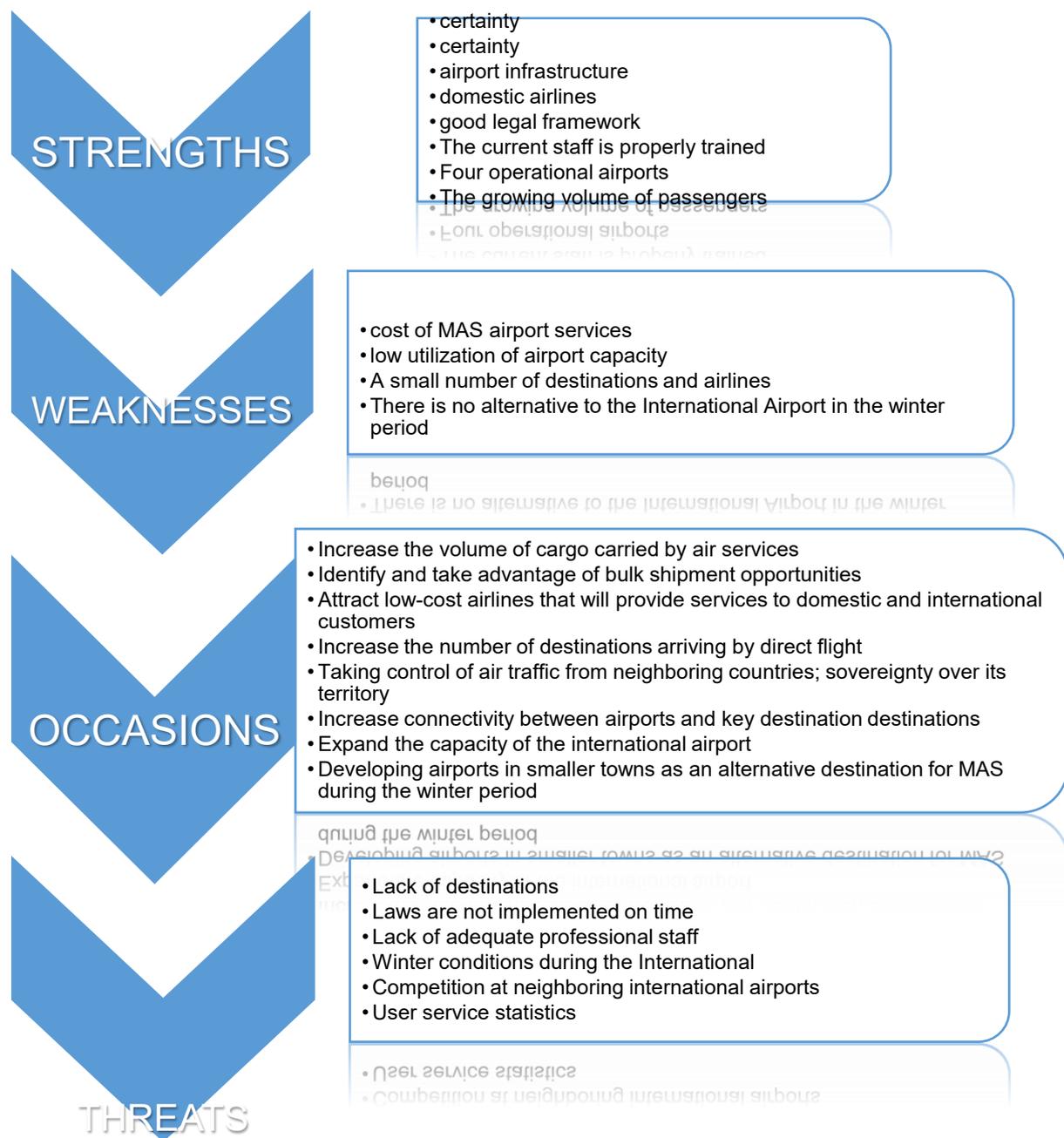
Creating a SWOT analysis is simple and does not require much formality. It is enough to create a table that then puts strengths, weaknesses, opportunities and threats.

Often (very often) it is possible to find the name of the matrix TOWS for SWOT analysis. It is easy to see that it is a reverse letter command. What can be explained is that it is logical for an organization to first pay attention to external opportunities and threats if it wants to conquer a certain market (or part of it), and only then should it consider its internal strengths and weaknesses. The logic of this thesis is that modern business must be customer-oriented, because it is he who leads the way. Unfortunately, there are still many organizations that look first at what they can produce and offer, when in fact they should notice what and how they can sell to the market, and only then analyze whether they are able to do it.

Analysis The SWOT analysis includes elements of the company's internal (strengths and weaknesses) and external environment (opportunities and threats). Before making a decision on market positioning, the company must carefully consider its previous way of doing business, identify weaknesses and omissions, and take into account the opportunities and threats coming from the external environment to decide on the best marketing strategies and ways of market positioning.

A brief overview of the SWOT analysis provides a clear insight into the current state and position of the market. The analysis shows that today the company works in conditions of very strong competition from other forms of transport, which is made possible by the rapid and comprehensive development of the air infrastructure, on which dozens of companies work today and where, due to the strong competition between them, transport prices are much lower than before.

⁵⁸ izvor: https://en.wikipedia.org/wiki/SWOT_analysis

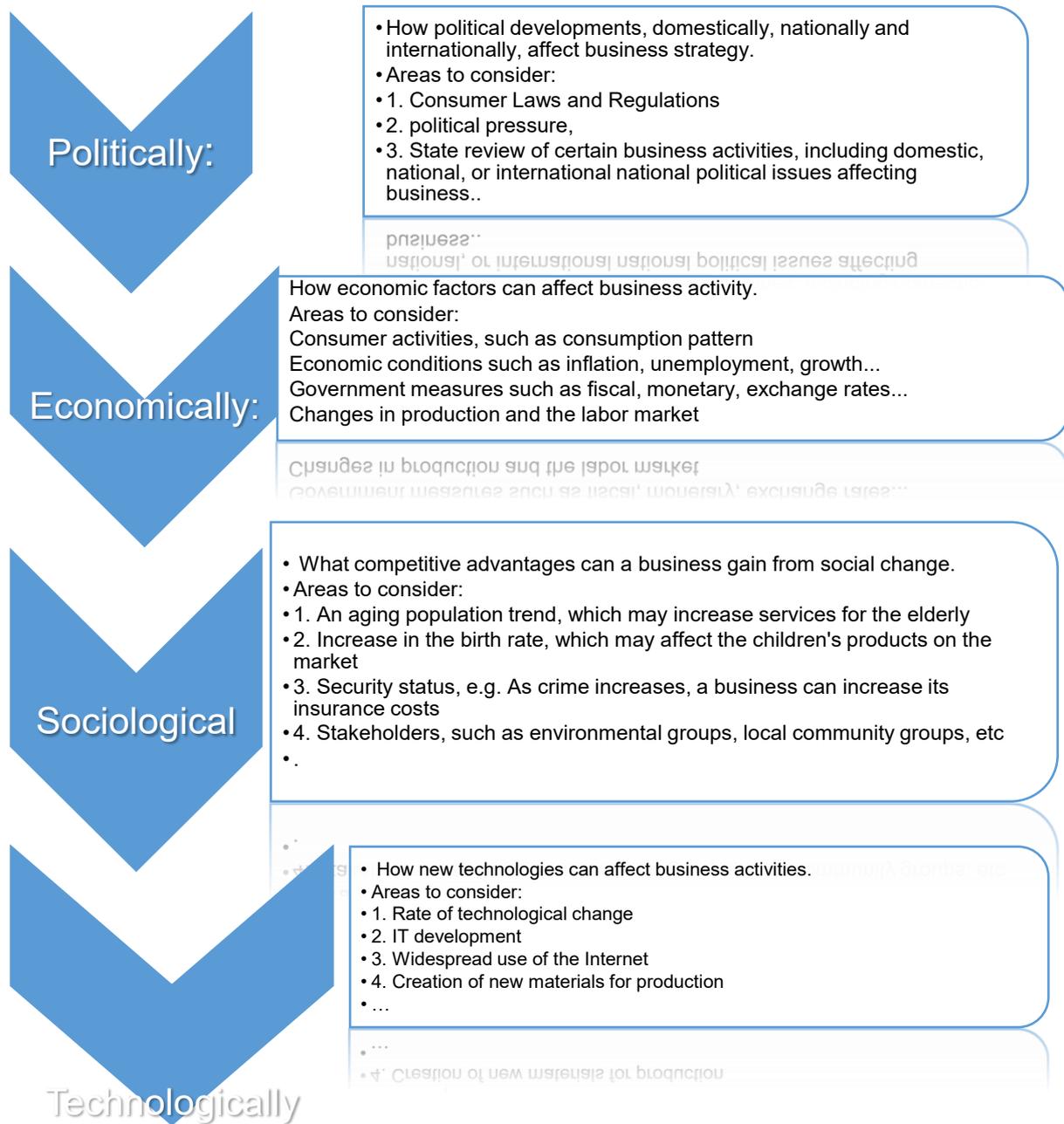


Graph, 4 SWOT analyze diagram

4.3 PEST анализа

PEST analysis is an analytical model that examines the external environment and global factors that can affect business activity. This analysis can provide a quick understanding of the external pressures facing the company and their possible constraint on the strategy. It is usually divided into 4 external conditions of functioning – political, economic, social and technological.

Graph, 5 Diagrame PEST analyze



5.0 CONCLUSION

There are numerous factors that influence the optimal positioning of the airline, among which the flight schedule, creation and setting of tariffs, revenue management, as well as sales and distribution of the airline stand out. To be able to respond effectively, it is necessary to determine the true position of the airline with a quality benchmark. These factors are key in the daily complex and dynamic competition for every passenger, a process that dominates all parts of the global aviation market. It is also important to effectively understand the dynamics of change and adapt to new circumstances. This creates the necessary prerequisites for optimizing

the positioning of an airline on the market, which is increasingly essential for its further development.

For the best start of controlling the performance of the expected business, it is necessary to plan the business and make plans. The business plan is rightly considered a fundamental document in which the company outlines its ambitions and ideas and project opportunities to achieve business success in the planned period. To make business events happen within the criteria of the business plan, it is necessary to approach the research and analysis of multiple business plans from different business models.

The analysis revealed that there is no single concept and way of making a business plan. There were also limitations of this research, where most of the analyzed business plans were related to the sale of services and goods, and a very small part of air traffic services. The contribution is that the research area is largely unexplored and that a concept has been developed that can serve a number of companies as a model and method of business plan development, or as a possible motivation for further research in this area that can also focus on research, development and comparison with business plan concepts of similar companies in the European market.

The fragmentation of European skies is the biggest cause of problems in terms of aspects of air traffic and therefore it is necessary to coordinate in terms of finding solutions - aircraft manufacturers, airlines, air traffic control services, personnel in all aviation and international institutions, such as and those responsible for regulating their activities. It is precisely the fragmentation problems that require an ambitious initiative whose goal should be the implementation of reforms and regionalization of the European air traffic control system.

The need to satisfy the increasing number of requests of travelers who are looking for better quality of service, less delays, reduced costs, increased environmental protection with 100% safety. The optimization of the single European airspace should be integrated into the existing air traffic control system through the single airspace policy across Europe and beyond. The existing architecture of the European system should be gradually upgraded with the help of sophisticated technical and technologically sophisticated solutions, accompanying regulations and thus, with overall efficiency, allow it to grow into an efficient and functional 'Single European Sky' (SES).

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