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INTRODUCTION

We are happy to invite you to get acquainted with the first issue of the new scientific and practical publication "Intellectualization of Logistics and Supply Chain Management".

We strongly believe that the launch of this magazine indicates the objective need to rethink a wide range of issues related to the development of theory and practice in logistics and supply chain management, awareness of the need to unite the scientific community and logistics practitioners, dissemination of modern knowledge and best practices for innovative development of the logistics services market.

The first issue of the magazine is published at a difficult time. The global coronavirus pandemic and the deep economic crisis have significantly worsened business activity in the world. Currently, global supply chains are collapsing, international trade is declining, and competition between global and regional logistics operators is intensifying. The most common thesis is that the world will never be the same again. Industry experts predict the emergence of new, more flexible and adaptive supply chain management strategies and approaches to logistics business process management. The trend towards collaborations, cooperation and unification of services is emerging, comprehensive proposals for clients are being developed. There is increasing talk about the need to build bimodal supply chains, which involves the development of different decision-making scenarios: the traditional approach - cost-effective efficiency, low risk, high predictability; a new approach "second mode" - rapid recognition of opportunities, adaptability, willingness to solve unexpected problems and look for new opportunities.

Radical transformations of the global and national markets for logistics services require appropriate scientific support. Logistics science has a special role to play in this process. Initiating the emergence of a new journal, we decided to focus on its coverage of problematic aspects of the formation and development of logistics systems at the micro, mezo and macro levels, supply chain management, digitization of logistics, methods and tools for optimizing processes in logistics and supply chains, sociopsychology relations and network interaction of enterprises using cloud technologies, artificial intelligence, e-learning, neural business process management systems, etc.

Therefore, we invite scientists, researchers and business representatives, as well as our colleagues from abroad, to cooperate and present the results of scientific research, to discuss and debate on them, to work together to develop the scientific theory of logistics and promote mutual intellectual enrichment.

We hope that the new scientific publication will become a theoretical guide for young researchers and representatives of other fields.

HRYHORAK Mariia
Chief Editor
TRENDS AND PROSPECTS OF DEVELOPMENT OF THE GLOBAL AND NATIONAL AIR TRANSPORT MARKETS

Sergiy Lytvynenko, Iryna Panasiuk "Trends and Prospects of the Development of the Global and National Air Transport Markets". The article identified the preconditions for the development of the world economy which included the processes of globalization and internationalization. The role of air transport in the world economy is emphasized because its weight grows every year, because it provides the development of tourism, international programs and cooperation between individual regions of the world. There has been an increase in the number of multinational corporations, increasing the mobility of business passengers what is very important for the airlines. The critical analysis of scientific publications made it possible to state that in Ukraine and abroad the development of the air transportation market was studied by many scientists and their contribution to solving a number of scientific problems related to identifying prospects and opportunities for international and national air transportation markets as well as with the optimization of air carriers is important. However, it was found that insufficient research on recent trends and prospects for the development of global and national air transport markets is in the face of new challenges including the outbreak of coronavirus infection COVID-19. It was found that air passenger traffic in the global market has grown steadily in recent years by 7-8% every year and a quarter of sales depend on the regularity of air transportation of which 70% of this type of business determine the vectors of market expansion. The analysis of aviation accidents revealed that they have a very significant impact on the performance of the carrier whose aircraft suffered them. This applies to both reputational and purely financial losses. The problems with the Boeing 737 Max type also became a serious challenge for the aviation industry due to a number of incorrect design decisions of the world's leading aviation concern and attempts to save on the training of pilots of this type of aircraft. It is noted that modern passengers are trying to minimize the time spent on travel, the trend of fragmentation of the holiday period is growing rapidly. As a result of the analysis of the domestic air transportation market, it was revealed that during 2019 there was an expansion of the market in general, as well as the activities of foreign airlines, travel from Ukraine to Europe and other parts of the world increased rapidly. A radical change in market trends was observed in mid-March 2020, when due to the spread of the COVID-19 coronavirus in the world, quarantine
was introduced and regular flights were stopped. The national air carrier Ukraine International Airlines has declared a two-stage period of resumption of work after the end of quarantine. The authors found signs of hybridization of the airline’s business models at the first stage of the restart and the transition to the airline’s business model which has features of both point-to-point models and obvious features of the model of low-cost carriers. Whereas in the second stage the transition to a partial network model with low-cost models is most likely followed by the emergence of a new already stable hybrid business model based on network principles but with stable features of a low-cost airline.

**Keywords:** tendencies, prospects, global market, world market, national market, air transportation, airline.
весомым. Однако, было обнаружено, что недостаточно исследованы последние тенденции и перспективы развития глобального и национального рынков авиационных перевозок в условиях появления новых вызовов, в том числе вспышки коронавирусной инфекции COVID-19. При анализе авиационных катастроф обнаружено, что они очень существенно влияют на успешность функционирования перевозчика, самолет которого потерпел их. Серьезным вызовом стали для авиационной индустрии и проблемы с типом Boeing 737 Max связанные с целым рядом неверных конструктивных решений и попыткой сэкономить на подготовке пилотов этого типа самолетов. Отмечено, что современные пассажиры пытаются свести к минимуму время, затрачиваемое на перемещение, распространяется тенденция дробления отпускного периода. В результате анализа отечественного рынка авиаперевозок выявлено, что в течение 2019 имело место расширение рынка в целом, а также деятельности на нем иностранных авиакомпаний, стремительно увеличилась перевозка пассажиров из Украины в Европу и в другие части света. Кардинальное изменение тенденции развития рынков отмечено в середине марта 2020 года, когда из-за распространения в мире коронавируса COVID-19 был введен карантин и прекратились регулярные рейсы. Национальный авиационный перевозчик авиакомпания «Международные авиалинии Украины» сделал заявление о двухэтапный период восстановления работы после окончания карантина. При этом авторами выявлены признаки гибридизации бизнес-моделей авиакомпании на первом этапе рестарта и переход к бизнес-модели, которая имеет признаки, как point-to-point модели, так и очевидные признаки модели низкобюджетных перевозчиков. Тогда как на втором этапе наиболее вероятным является переход к частичной сетевой модели с признаками лоукост моделей, а затем появление новой уже постоянной гибридной бизнес-модели, сформированной по сетевым принципам, с устойчивыми признаками низкобюджетного авиаперевозчика.

Ключевые слова: тенденции, перспективы, глобальный рынок, мировой рынок, национальный рынок, авиационные перевозки, авиакомпания.

Introduction. Today we are witnessing the processes of globalization and internationalization which are spreading more and more in the world economy. Even developing countries and countries with economies in transition are actively involved in international trade and the international division of labor. Air transportation is especially important because it provides the development of tourism, international programs and cooperation between individual regions of the world. Destinations to which access was previously impossible or significantly limited are gradually opening up while airlines’ profits have been rising until recently. There is a tendency to increase the number of multinational corporations as well as other international companies which stimulates among other things increased demand for business trips abroad. This segment of passenger air transportation is very important for airlines as tickets are often purchased spontaneously at high classes with the need to provide additional services on board and consequently at high prices.

Literature and researches review. Many scientists in Ukraine and abroad dealt with the development of the air transportation market, in particular T. Akimova, T. Gabrielova, M. Grigorak, V. Zagorulko, V. Koba, L. Litvinenko, S. Mizyuk, A. Novikova, S. Petrovskaia, I. Sadlovskaia, K. Sydorenko, G. Yun and others. They have made a significant contribution to solving a number of scientific problems related to the definition of prospects and opportunities for the development of international and national air transportation markets as well as with the optimization of activity of air carriers.

In their own scientific publication [1] S. Smerichevsky and I. Mykhhalchenko emphasize that the processes of globalization, liberalization and informatization have led to the dynamic development of the world air transportation market. In addition, the authors talk about the spread of hub and low-budget models of the
carrier as well as the intensification of various integrations between carriers.

Scientists T. Gavrilko and A. Gavrilenko in [2] focus on transformational changes in the world market of aviation services. It is emphasized that the key factors that will affect the dynamic development of the air transportation market will be the growth rate of the world economy, job creation, meeting future demand for air transportation, providing services to meet the needs of passengers, maintaining the image of aviation as the most environmentally friendly and safe type of transport.

The scientific work of O. Sarkisova and A. Tokar [3] is devoted to the analysis of air transportation in Ukraine. The authors come to the conclusion about the significant monopolization of the domestic market, the disproportionate development of land infrastructure as well as the weak competitiveness of a significant number of domestic airlines.

A series of scientific works is devoted to the analysis of global patterns of development of the world market of air transportation and its separate aspects. O. Lozhachevska, K. Sydorenko and S. Sidenko [4-6].

Scientists V. Koba and O. Koba in [7] came to the conclusion that it is necessary to further harmonize the aviation legislation of Ukraine with the requirements of ICAO and EU legislation, upgrade the aircraft fleet as well as strengthen and expand the infrastructure of airports on a new technical basis.

Therefore, according to the results of critical analysis of scientific publications, it can be argued that the latest trends and prospects of global and national air transport markets in the context of new challenges including the outbreak of coronavirus infection COVID-19 are insufficient.

Aim and objectives. The purpose of this article is to identify trends and prospects of the development of global and national air transport markets in the face of new challenges and the impact of man-made factors.

Results, analysis and discussion. The global air transportation market is one of the main elements of the world economy which plays an extremely important role in strengthening relations between countries. Due to the opening of borders and the spread of liberalization trends there are significant changes in the functional aspect of air carriers. The key to the successful development of airlines is a quick and easy adaptation to new conditions, consolidating its position on the world stage, a high level of competitiveness and financial stability.

Air transport is the basis of the modern global economy. Its services are used annually by more than 3 billion passengers and about 100 million tons of cargo are transported. According to economic experts, it provides jobs for 10 million people and brings in more than 1 trillion USA to the world GDP annually. According to the latest data up to 60% of the population on the African continent is employed in tourism.

International organizations such as ICAO (International Civil Aviation Organization), IATA (International Air Transport Association), WTO (World Trade Organization) and World Bank periodically analyze the state and dynamics of the air transport market, review its regulatory system with subsequent publication of activity reports of each separate subject. There is a close relationship between the nature of air traffic growth and economic trends in the dynamics of demand for them. By this we mean that the demand for them depends on the welfare of the population, their purchasing power and the level of development of a particular country. It is well known that the greatest demand for air travel is influenced by changes in wages, commercial activities and trade which determine the predisposition of the population to travel. It is also important to monitor the level of inflation, unemployment and the level of growth of gross domestic
product (GDP) per capita which is a direct indicator of the development of the state.

The annual economic effect of the global air transportation market is more than 700 billion USA dollars. Passenger traffic has grown steadily in recent years by 7-8% every year. And 25% of sales of companies depend on the regularity of air transportation of which 70% of this type of business determine the vectors of market expansion. On the agenda is the task of achieving maximum mobility in the airspace, improving the design of aircraft and proper and regular inspection. Considerable attention in aviation is paid to aviation safety. Analyzing the biggest catastrophes of 2018-2020 [8] (Table 1) it should be noted that the reasons for their occurrence are completely different – from terrorist acts to structural errors of the aircraft and crew errors.

Table 1

| Year | Place of the plane crash | Type of the plane | Country of the aircraft owner | Reasons of the crash | Number of victims |
|------|--------------------------|-------------------|-------------------------------|----------------------|------------------|
| 2018 | Indonesia                | Boeing 737 Max    | Indonesia                     | Crashed from hitting the water off the west coast of lava | 185              |
| 2018 | Cuba                     | Boeing 737        | Cuba                          | Crashed after takeoff | 104              |
| 2018 | Syria                    | An-26             | Russia                        | A military transport plane crashed during landing | 39               |
| 2018 | Russia                   | An-148            | Russia                        | Missing from radar screens through a few minutes after taking off from Domodedovo airport | 71               |
| 2019 | Russia                   | SSJ-100           | Russia                        | Made a hard landing at the airport and caught fire | 41               |
| 2019 | Ethiopia                 | Boeing 737        | Ethiopia                      | Accident after takeoff near Bishoft (Debre-Zeit) | 157              |
Aviation accidents have a very significant impact on the success of the carrier whose aircraft suffered it. Even if we talk about the example of the downing of a Boeing 737 aircraft in Iran when the carrier is clearly not to be blamed, Ukraine International Airlines has suffered considerable both reputational and purely financial damage. The situation with the Boeing 737 Max is complicated which is an example of a number of incorrect design decisions of the world’s leading aviation concern and an attempt to save on the training of pilots for this type of aircraft.

It is important to emphasize that for many countries, progress in the development of the transport sector including aviation has become a major vector of international tourism. Since today is the time of dominance of the service sector, it is especially important to ensure the welfare of the nation.

As of today, the following trends are observed:
1. Liberalization of legal and economic spheres of regulation of international air services.
2. Awareness of the negative impact on the environment.
3. Transformation of outdated business models of air carriers in commercial aviation.

As modern passengers try to minimize the time spent on travel, the trend towards fragmentation of the holiday period is growing rapidly. At this time special tariffs are offered for tourists namely inclusive tours and excursions which encourages the widespread use of low-cost airlines.

During 2019 passenger and cargo transportation was provided by 29 domestic airlines which performed a total of 79.7 thousand commercial flights (against 77.1 thousand for the same period in 2018). The air transportation market in Ukraine showed positive dynamics in 2019. During this period passenger traffic was provided by 18 domestic airlines among which the leader was Ukraine International Airlines. It is followed by Azur Air Ukraine, SkyUP, Wind Rose and Bukovyna (which has been operating since November 2018). The above-mentioned air carriers perform 97% of the total volume of domestic passenger traffic [9].

During the 2019 year 10 domestic airlines operated international scheduled passenger traffic to 45 countries of the world. During this period Ukrainian airline began operating

| 1   | 2          | 3         | 4       | 5                                                                 | 6       |
|-----|------------|-----------|---------|-------------------------------------------------------------------|---------|
| 2019| Iran       | Boeing 707| Iran    | The cargo plane failed brake on the runway and crashed into city buildings on the outskirts of Tehran | 16      |
| 2019| Kazakhstan | Fokker-100| Kazakhstan | The plane crashed during takeoff                                   | 15      |
| 2020| Iran       | Boeing 737| Ukraine | The plane caught fire in the sky and crashed near Tegeran         | 176     |

Source: grouped by authors according to [8]
flights on nine new international routes which are connected by air: Kherson and Bourgas; Zaporizhya with Barcelona; Dnipro with Bodrum; Odesa with Rimini; Kharkiv with Paris, Sharjah and Rimini; Boryspil with the cities of Sanya and Catania [9].

There was an expansion of activities in the Ukrainian market of foreign airlines in 2019. Thus 6935.9 thousand passengers used their services, in 2019 foreign airlines operated flights on 15 new routes: from Bremen, Billund and Genoa to Kyiv (Zhulyany); from Manchester, Paphos, Dublin and Bodrum to Kyiv (Boryspil); from Copenhagen and Riga to Lviv; from Milan, Krakow and Baku to Kharkiv; from Rome, Baku and Krakow to Odessa. In total in 2019 year 39 foreign airlines (including three new ones) from 36 countries of the world performed regular passenger transportation to Ukraine [9].

Transportation of goods and mail was performed in 2019 by 20 domestic airlines. The leaders of cargo transportation were: ATP SE "Antonov", airlines "International Airlines of Ukraine", "ZetAvia", "Maximus Airlines" and "Uzhmashavia". Commercial flights of domestic and foreign airlines served 19 Ukrainian airports and airfields [9].

In the period 2018-2019 Ukrainians rapidly increased their travels to Europe and other parts of the world. The question of the trend of feminism which has had a positive impact on the aviation industry is relevant. Namely, with the increase in the number of women in management and at work in general, the number of business trips and accordingly income increases.

International tourist arrivals are due to air transport and depend on connections with global markets. Internationalization of all spheres of public life, the 4th industrial revolution, total informatization and scientific research lead to the emergence of new business models, market strategies and methods of consumer satisfaction. Gradually introducing innovations can achieve a significant increase in demand and less damage to the environment what is very important today. Having analyzed the above it is appropriate to state the existing as of early 2020 transparent development of the aviation industry and globalization which we see in the manifestation of this area.

Everything has changed with the active spread of the COVID-19 coronavirus in the world. All in mid-March 2020 domestic and foreign airlines will cease to operate due to the fact that most countries around the world declare quarantine indefinitely. At this time only special flights are operated which are designed to return to the countries of their citizens. National carriers, first of all, Ukraine International Airlines and SkyUP have actively joined the process of returning Ukrainians to their homeland.

Despite the partial lifting of restrictive measures and the possible resumption of international flights from June 15 it should be noted that only a relatively small part of the flights will be resumed. Thus Ukraine International Airlines stated that it was taking all possible measures to reduce costs and generate revenue from one-time flights and was forced to reduce 900 highly professional employees while declaring a desire to keep the company and key personnel including flight [10].

In accordance with its own resumption strategy [10] Ukraine International Airlines plans to operate so-called international medium-haul point-to-point flights at the initial stage of the restart which will last until April 2021 – plans to operate so-called international medium-haul point-to-point flights that are provided mainly by non-transit passenger flows and to resume domestic flights.

That is at the first stage of the restart that the airline actually abandons the network principle of organization of work thus becoming a point-to-point carrier. It was believed that this business model of aviation business was a thing of the past and could not provide a purely competitive position to any airline in the target market, but under current
conditions it is designed to ensure a relatively painless transition to the second phase of restart for the leading national carrier.

In the second stage of the restart, the airline plans to restore the minimum international network, including long-haul flights, necessarily after the organization of key feeder routes [10]. That is the second stage of the restart which is scheduled for April 2021 involves a partial and gradual restoration of the airline’s network business model. It should be noted that at the beginning of the resumption of scheduled flights the airline plans to use up to 14 of its own aircraft with a further increase in their number to 28 aircraft. At the same time, the airline’s fleet currently has 35 aircraft. The airline also said that the long-haul fleet would be reduced based on the needs of the first phase of recovery. This is a prerequisite for survival in the current difficult conditions. Only after the completion of the second phase of the restart and the planning of a complete restoration of the route network a decision will be made on the need to expand the fleet of wide-body aircraft taking into account the demand.

In addition, the airline "International Airlines of Ukraine" stated that in order to work effectively on the changed market after the pandemic air, a number of changes are being introduced in the base product [10]. In particular, the airline plans to significantly simplify its tariff policy by washing away a significant number of intermediate tariffs. This will significantly simplify the process of tariff planning and revenue management of the airline in the first and second stages of the restart minimizing the cost of these business processes.

The airline also plans to reduce the capacity of business class cabins in aircraft, increase the share of direct sales through its own site as well as implement a full cycle service on the site which will allow passengers to make changes to the reservation [10].

It is obvious that Ukraine International Airlines understands that only minimizing costs at this stage can ensure the possibility of continued existence. The airline is based on the model of low-cost airlines in the plane of minimizing costs so at the first stage of the restart we can talk about creating a temporary forced hybrid business model of the airline which has both point-to-point model and low-cost model.

The target model of the airline at the first stage of the restart provides to maximize the utilization of the fleet and reduce unit costs while conditions must be created to maintain significant transit potential [10]. It is worth noting that the problem of relatively weak utilization of the fleet for Ukraine International Airlines compared to the world’s leading airlines has always occurred, the carrier has solved it as it could in recent decades. However today this aspect has become one of the key not only for the success of market development, but also for the survival of an airlines in a crisis caused by the spread of the world coronavirus COVID-19.

Preservation of transit potential is a strategic task of the airline and should be partially implemented during the second stage of the restart in the transition from the model of point-to-point carrier to the model of partial network carrier. At the same time the features of the low-cost carrier model at Ukraine International Airlines will obviously be preserved during the second stage of the restart. During the transition from the second stage of the restart with the return to a full-fledged network business model of the airline it is the possibility of establishing a full-fledged transit will be a key factor in the success of the carrier in the market. It is possible that even after the second stage of the restart Ukraine International Airlines will retain some of the features of a budget airline thus forming its own business model based on network principles, but with the characteristics of a low-cost airline.

Conclusion. Thus the analysis of trends and prospects for global and national air transportation markets suggests that the
opening of borders and the spread of liberalization trends have led to changes in the business models of airlines and the key to their successful development was quick and easy adaptation to new conditions, concentration on target market segments, ensuring a high level of competitiveness and financial stability. In general over the last 5 years has been noted the sustainable development of the world economy what has ensured a stable growth of air passenger traffic on the world market by an average of 7-8% annually.

Analyzing the trends in aviation security we note the different nature of the occurrence of catastrophic situations in 2018-2020. Terrorist acts and significant design errors in Boeing 737 Max aircraft as well as inadequate training of pilots on this type of aircraft became a serious threat.

It is noted that the development of the aviation sector has become one of the key vectors of international tourism. Special tariffs for tourists, namely inclusive tours and excursion offers are actively spreading.

It is established that the national market of air passenger transportation in 2016-2019 grew rapidly. Only in 2019 Ukrainian air carriers started operating flights on nine new international routes and foreign carriers opened 15 new routes during this period. During the period 2018-2019 the number of trips of Ukrainians to Europe and other parts of the world increased extremely rapidly. Thus at the beginning of 2020 there were positive trends in the volume of traffic in the international and national air transport markets.

One of the biggest challenges in recent decades for the international and national air transport markets has been the worldwide spread of the COVID-19 coronavirus and the announcement of indefinite quarantine. During the quarantine period only special flights are performed which return their citizens to the countries. Due to the quarantine measures there is a rapid increase in threats to air carriers. In particular the leader of the domestic market – the airline "International Airlines of Ukraine" declared a two-stage restart which includes significant staff reductions, drastic cost reductions, attempts to maximize fleet utilization and increase the share of direct sales, significant simplification of tariff policy. In the first stage of the restart the airline actually abandons the network principle of organization of work declaring that it becomes a point-to-point carrier. However, according to the authors, a temporary forced hybrid business model of Ukraine International Airlines is currently being created which has the features of both a point-to-point model and a low-cost model. It is obvious that the features of the low-cost model in the airline will remain during the second stage of the restart and therefore the hybrid nature of the model will remain in this period, but it will be a model that includes features of network and low-cost carrier. The authors suggest that even after the second stage of the restart the airline's business model will be formed according to network principles, but with the characteristics of a low-cost airline.

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