

Electronic scientific and practical journal  
**INTELLECTUALIZATION OF LOGISTICS  
AND SUPPLY CHAIN MANAGEMENT**

**#23 (2024)**  
**February '24**



**WWW.SMART-SCM.ORG**

**ISSN 2708-3195**

**DOI.ORG/10.46783/SMART-SCM/2024-23**

ISSN 2708-3195



9 772708 319005

## Electronic scientific and practical publication in economic sciences

Electronic scientifically and practical journal “Intellectualization of logistics and Supply Chain Management” included in the list of scientific publications of Ukraine in the field of economic sciences (category "B"): **Order of the Ministry of Education and Culture of Ukraine dated October 10, 2022 No. 894 (Appendix 2)**

**Field of science:** Economic.

**Specialties:** 051 – Economics; 073 – Management

**ISSN** 2708-3195

**DOI:** <https://doi.org/10.46783/smart-scm/2024-23>

The electronic magazine is included in the international scientometric databases:  
Index Copernicus, Google Scholar

**Released 6 times a year**

**№ 23 (2024)**

**February 2024**

**Founder:** Viold Limited Liability Company

**Editor in Chief:** Hryhorak M. Yu. – Doctor of Economics, Ass. Professor.

**Deputy editors-in-chief:** Koulyk V. A. – PhD (Economics), Professor.  
Marchuk V. Ye. – Doctor of Tech. Sci., Ass. Professor.

**Technical editor:** Harmash O. M. – PhD (Economics), Ass. Professor.

**Executive Secretary:** Davidenko V. V. – PhD (Economics), Ass. Professor.

**Members of the Editorial Board:**

SWIEKATOWSKI Ryszard – Doctor of Economics, Professor (Poland);

POSTAN M. Ya. – Doctor of Economics, Professor;

TRUSHKINA N. V. – PhD (Economics), Corresponding Member of the Academy;

KOLOSOK V. M. – Doctor of Economics, Professor;

ILCHENKO N. B. – Doctor of Economics, Ass. Professor;

SOLOMON D. I. – Doctor of Economics, Professor (Moldova);

ALKEMA V. H. – Doctor of Economics, Professor;

Henryk DŹWIGOŁ – PhD (Economics), Professor (Poland);

SUMETS O. M. – Doctor of Economics, Ass. Professor;

STRELCOVÁ Stanislava – PhD (Economics), Ass. Professor, (Slovakia);

RISTVEJ Jozef (Mr.) PhD (Economics), Professor, (Slovakia);

ZAMIAR Zenon – Doctor of Economics, Professor, (Poland);

SMERICHEVSKA S. V. – Doctor of Economics, Professor;

GRITSENKO S. I. – Doctor of Economics, Professor;

KARPENKO O. O. – Doctor of Economics, Professor;

PATKOVSKYI S. A. – Business practitioner.

The electronic scientific and practical journal is registered in international scientometric data bases, repositories and search engines. The main characteristic of the edition is the index of scientometric data bases, which reflects the importance and effectiveness of scientific publications using indicators such as quotation index, h-index and factor impact (the number of quotations within two years after publishing).

In 2020, the International Center for Periodicals (ISSN International Center, Paris) included the Electronic Scientific and Practical Edition "Intellectualization of logistics and Supply Chain Management" in the international register of periodicals and provided it with a numerical code of international identification: ISSN 2708-3195 (Online).

Recommended for dissemination on the Internet by the Academic Council of the Department of Logistics NAU (No. 7 of February 26, 2020). Released 6 times a year. Editions references are required. The view of the editorial board does not always coincide with that of the authors.

Electronic scientifically and practical journal "Intellectualization of logistics and Supply Chain Management" included in the list of scientific publications of Ukraine in the field of economic sciences (category "B"): **Order of the Ministry of Education and Culture of Ukraine dated October 10, 2022 No. 894 (Appendix 2)**

**Field of science:** Economic.

**Specialties:** 051 – Economics; 073 – Management

t.me/smart\_scm  
facebook.com/Smart.SCM.org  
twitter.com/ScmSmart

DOI: <https://doi.org/10.46783/smart-scm/2024-23>

e-mail: [support@smart-scm.org](mailto:support@smart-scm.org)

тел.: (063) 593-30-41

<https://smart-scm.org>

## Contents

INTRODUCTION	6
<b>MAKSYMОВ O.Y.</b> Phd Student, National Aviation University (Ukraine), <b>BUGAYKO D.O.</b> Doctor of Science (Economics), Professor (Associate), Corresponding Member of the Academy of Economic Sciences of Ukraine, Vice - Director of ES International Cooperation and Education Institute, Instructor of ICAO Institute, Professor of the Logistics Department National Aviation University (Ukraine)	
THE ROLE OF THE STATE IN ENSURING SUSTAINABLE DEVELOPMENT OF AIR TRANSPORT IN THE POST-WAR	7 – 16
<b>MARCHENKO V. S.</b> Postgraduate student, National Aviation University (Ukraine), <b>BUGAYKO D.O.</b> Doctor of Science (Economics), Professor (Associate), Corresponding Member of the Academy of Economic Sciences of Ukraine, Vice - Director of ES International Cooperation and Education Institute, Instructor of ICAO Institute, Professor of the Logistics Department National Aviation University (Ukraine)	
POSSIBLE WAYS OF THE SUSTAINABLE DEVELOPMENT CONCEPT REALISATION BY LOGISTICS COMPANIES, THE NECESSITY OF USING «GREEN» TECHNOLOGIES FOR DECARBONISATION OF THEIR BUSINESS ACTIVITY	17 – 36
<b>TAGHIYEV T. T.</b> PhD in Economics, Associate professor National Aviation Academy (Azerbaijan), <b>DAMIROV M. R.</b> National Aviation Academy (Azerbaijan), <b>BUGAYKO D.O.</b> Doctor of Science (Economics), Professor (Associate), Corresponding Member of the Academy of Economic Sciences of Ukraine, Vice - Director of ES International Cooperation and Education Institute, Instructor of ICAO Institute, Professor of the Logistics Department National Aviation University (Ukraine)	
THE IMPACT OF THE SAFETY INDICATOR ON THE POSSIBILITY OF THE AIRLINE JOINING THE STRATEGIC ALLIANCE	37 – 43
<b>KARPUN O.V.</b> PhD (Economics), Associate Professor, Associate Professor of Logistics Department, National Aviation University (Ukraine), <b>YAKOVENKO V.V.</b> Bachelor`s degree student of Logistics Department, National Aviation University (Ukraine)	
THE LATEST APPROACHES AND TECHNOLOGIES TO INCREASE THE COMPETITIVENESS OF AVIATION ENTERPRISES IN MODERN CONDITIONS	44 – 53



<p><b>POZNIAK O.V.</b> PhD (Economics), Associate Professor, Associate Professor of Logistics Department, National Aviation University (Ukraine), <b>YURCHENKO K.M.</b> Graduate student of Logistics Department, National Aviation University (Ukraine)  <i>ADAPTATION OF A LOGISTICS COMPANY'S BUSINESS MODEL IN THE ERA OF DIGITALIZATION</i> .....</p>	54 –66
<p><b>CHIKALKIN S.M.</b> Postgraduate student of the Department of Finance and Accounting Open International University of Human Development "Ukraine", (Ukraine)  <i>THE CONCEPT AND ESSENCE OF CORPORATE GOVERNANCE</i> .....</p>	67 –72
<p><b>DOLYNSKYI S.V.</b> PhD in Economics, Associated Professor, Carpathian Institute of Entrepreneurship, Open International University of Human Development «UKRAINE» (Ukraine), <b>SLYVKA Ya.V.</b> PhD in Economics, Associate Professor of the Department of Economics and Management Carpathian Institute of Enterprising Open International University of Human Development «UKRAINE» (Ukraine), <b>SHCHERBAN M.D.</b> PhD in Economics, Associate Professor of the Department of Economics and Management Carpathian Institute of Enterprising Open International University of Human Development «UKRAINE» (Ukraine)  <i>FUNDAMENTAL PRINCIPLES OF PLANNING INNOVATIVE ACTIVITIES AT THE ENTERPRISE</i> .....</p>	73 –81

UDC 330.46:330.366

DOI: <https://doi.org/10.46783/smart-scm/2024-23-1>

JEL Classification: M14, O11, Q10.

**Received:** 21 January 2024

**Maksymov O.Y.** Phd Student, National Aviation University (Ukraine)

**ORCID** – 0009-0009-3493-6222

**Researcher ID** – JRW-5515-2023

**Scopus author id:** –

**Bugayko D.O.** Doctor of Science (Economics), Professor, Corresponding Member of the Academy of Economic Sciences of Ukraine, Vice - Director of ES International Cooperation and Education Institute, Instructor of ICAO Institute, Professor of the Logistics Department, National Aviation University (Ukraine)

**ORCID** – 0000-0002-3240-2501

**Researcher ID** – ABF-5564-2021

**Scopus author id:** – 57216582348

## THE ROLE OF THE STATE IN ENSURING SUSTAINABLE DEVELOPMENT OF AIR TRANSPORT IN THE POST-WAR

**Oleg Maksymov, Dmytro Bugayko.** *«The role of the state in ensuring sustainable development of air transport in the post-war».* The article examines the important role of the state in ensuring the sustainable development of air transport after the war. The influence of the state on various aspects of the aviation industry, including aviation safety, financial support for airlines, aircraft leasing fleet and infrastructure, is studied. The article discusses the need to modernize the state policy to influence the support and development of the aviation sector and create a favourable investment climate in Ukraine. It is important not only to restore the aviation industry after the war, but also to ensure its modernization and sustainable development, taking into account international experience and innovative approaches.

**Keywords:** role of the state, sustainable development, air transport, recovery strategies, post-war period.

**Олег Максимов, Дмитро Бугайко.** *«Роль держави в забезпеченні сталого розвитку повітряного транспорту в післявоєнний період».* У статті розглядається важлива роль держави в забезпеченні сталого розвитку авіаційного транспорту після війни. Досліджено вплив держави на різні аспекти авіаційної галузі, включаючи авіаційну безпеку, фінансову підтримку авіакомпаній, лізинговий парк повітряних суден та інфраструктуру. У статті обговорюється необхідність модернізації державної політики впливу на підтримку та розвиток авіаційної галузі та створення сприятливого інвестиційного клімату в Україні. Важливо не лише відновити авіаційну промисловість після війни, а й забезпечити її модернізацію та сталий розвиток з урахуванням міжнародного досвіду та інноваційних підходів.

**Ключові слова:** роль держави, сталий розвиток, повітряний транспорт, стратегії відновлення, післявоєнний період

**Introduction.** Aviation plays a crucial role in promoting socio-economic development and is an integral part of today's world, contributing to economic growth, social progress, and global integration. Even before February 24, 2022, Russia's war against Ukraine had a negative impact on airlines, and since the beginning of the full-scale invasion, all components of the aviation industry of Ukraine have suffered destructive losses, including not only airlines, but also airports, airfields, maintenance and repair organizations, ground handling companies, air traffic control systems, and others. Today's challenges threaten the very existence of the industry, emphasizing the urgent need of the state to develop comprehensive scenarios for the rapid recovery and sustainable development of air transport in Ukraine. The task of creating a new, effective and successful state policy for the development of the aviation industry of Ukraine, which would meet modern challenges and risks, by improving the appropriate mechanisms for its creation and implementation, becomes extremely important.

The aim of the article is to examine and substantiate the importance of state actions in ensuring the sustainable development of the aviation industry in the post-war period.

**Analysis of literature data and clarification of problems.** The problem of post-war resumption of air transportation is considered by a large number of experts. Aviation expert K. Novikov [9] emphasizes the importance of outlining scenarios and priorities for the recovery of the aviation industry, as well as the priority of the state's role in this matter. Expert, former Deputy Director General of Boryspil Airport for Commercial Activities and Strategic Development H. Zubko [19] points to the risks of losing qualified aviation personnel, emphasizing the importance of providing them with the opportunity to train and work in Ukraine after the end of the war. Zubko [4] also analyses the factors that will affect the speed of restoration of civilian airports in Ukraine after the war. N. Horbal and Y.

Radchenko [2] analyse the peculiarities of the development and current state of the air transport industry in Ukraine, as well as the issues of rapid recovery of aviation, in particular work with remaining companies such as SkyUp. In the work of D. Bugayko et al. [20], in order to formulate strategic scenarios for post-war recovery and sustainable development of air transport in Ukraine, it is proposed to use the Concept of national management of integrated risks of air transport of Ukraine. An indeterminate problem that has conceptual relevance and practical significance is the definition of the role of the state in ensuring the sustainable development of air transport in the post-war period.

**Presentation of the main results.** The sustainable development goals of Ukraine until 2030 require the state to take care of national interests aimed at supporting sustainable economic growth, developing of civil society, and strengthening the state to improve the standards and quality of life of citizens, as well as ensuring the observance of constitutional rights and freedoms of individuals and citizens. In this context, great emphasis is placed on achieving a balance between the economic, social, environmental and security aspects of sustainable development of Ukraine, including the need to take into account the development of the aviation industry.

It is worth noting that the aviation industry suffered serious losses due to the imposition of martial law and earlier due to quarantine restrictions related to the COVID-19 pandemic. Therefore, it requires comprehensive measures of state support based on an assessment of the state of infrastructure, as well as on programs for its improvement and expansion, which were already in the process of implementation in the pre-war period.

The post-war development of the country's aviation industry will require significant investment, including foreign capital. And this requires the implementation and execution of appropriate state policy,

because the need for investment and innovative renewal of the transport industry significantly exceeds the level of funding available at the moment.

Aviation constantly faces rapid and changing market conditions and intense competition. This reality dictates the need for a swift response to these challenges and requires a scientifically substantiated strategic vision to maintain a trajectory of sustainable development, the main ideas of which, at the national, regional, and local levels, are the harmonization of economic, social, and ecological components.

Since the aviation industry is strategically important, in the post-war period it is very important to resolve a number of urgent issues and discrepancies, without which it is absolutely impossible to ensure the sustainable development of the industry. These issues include:

- Ensuring aviation safety and security is a priority issue where there can be no compromises.
- Infrastructure investments for the restoration of damaged infrastructure and the financing of reconstruction and expansion of airports, runways, and other facilities.
- Implementation of programs aimed at ensuring a high level of training and education for professionals in the aviation industry.
- Improvement of the state asset management system in the field of aviation infrastructure.
- Support for the development of the aviation sector and the creation of conditions for supporting the sustainable growth of domestic aviation carriers [13].

World air transport is a complex system that is open to the influence of many interconnected and unrelated factors. One of the most vulnerable parts of this system is the activities of airlines. Their activities as an integral component of the global transport infrastructure are extremely vulnerable in the context of military conflicts, which has profound and multifaceted consequences for

the entire industry, the country's economy, and the well-being of society as a whole.

In the post-war period, all domestic airlines will face financial difficulties and government subsidies, loans or other forms of financial support will be essential for the recovery of the industry. In addition to resource challenges, the socio-economic consequences of the conflict, such as a decline in the purchasing power of the population, will lead to a change in demand patterns for air transportation [5].

Separately, emphasizing the leading place of airlines, it should be noted that they play a central role in the global air transportation system, acting as engines of economic growth and development. Their impact on the economy exceeds the mere provision of transport services, as they contribute to the generation of passenger and cargo flows that have a cascading impact on the entire aviation infrastructure and related businesses.

In the context of the air transportation system, airlines can be considered as primary, strategic elements that initiate and support cyclical and synergistic processes in the macroeconomic system. Their role is important not only to ensure the mobility of people and goods, but also to strengthen economic resilience and progress at the national and international levels. The functioning of airlines contributes to business activity, support for tourism, cargo transportation, exports and imports, which in turn strengthens international trade and global integration. In addition, airlines are significant employers, both directly and because of the multiplier effect they create in the employment sector, initiating job creation not only in aviation but also in other industries.

Ukrainian airlines will face unprecedented challenges after the war events, which will significantly complicate the process of recovery and further development of the aviation industry in the country as a whole. The situation, characterized by limited resources, both material and financial, will



require airlines to mobilize all available means for the effective revival of their activities.

The specifics of the labour market, particularly the reduction in the number of available skilled workers due to the migration of women abroad and the loss of men during hostilities, create additional obstacles.

This new economic reality requires airlines to take a more conservative approach to expanding their route network, optimizing costs, and investing in marketing.

Financial difficulties caused by a long period of instability require a strategic approach to budgeting and investment. The restoration of the fleet, infrastructure, optimization of routes, as well as the search for reliable partners for cooperation at the international level will become key aspects of the survival and development strategy. The implementation of concessions, supervisory boards and the engagement of professional management will also contribute to the creation of a stable and competitive aviation system in Ukraine.

Aviation expert K. Novikov asserts that in the post-war period, the role of the state in ensuring the sustainable development of air transport in Ukraine is determined by a set of measures [9]. It is necessary to prioritize the restoration of airports, especially in the eastern and southern parts of the country, involving experts, taking into account the needs in passenger and cargo transportation. State support for airlines and airports, including through subsidies, exchange with foreign partners, and training programs, is important for the preservation and development of qualified personnel.

In addition, the establishment of the State Agency for Restoration and Infrastructure Development of Ukraine is a key step in the development and implementation of the recovery plan, including prioritizing projects, dialogue with business entities, compliance with European standards, combating corruption, and the creation and operation of a strategic planning system for regional development.

It is important to emphasize that air transport is one of the key backbone industries that have deep connections to all areas of the economy and social development. In the post-war period, when Ukraine expands its domestic and international transport links, increases production and improves the lives of the population, the importance of transport and its role as a system-forming factor will only grow. Under such conditions, the development and modernization of the aviation industry should be carried out on the basis of a comprehensive analysis of its current state and in deep interaction with the general trends in the socio-economic development of the country and global strategic directions in the field of economy, through the creation and implementation of an effective and efficient state policy.

To ensure sustainable and competitive development of the aviation industry in Ukraine, first of all, it is necessary to improve the business environment in the country, create an attractive investment climate and maintain confidence in the state authorities as a body responsible for the socio-economic development of the country and, accordingly, the development of the aviation sector.

The development of comprehensive state support programs aimed at stimulating the recovery of airlines may include financial incentives, tax rebates, subsidies for fleet renewal, as well as special professional training programs for training and retraining of personnel. Such a multifaceted approach will help not only stabilize the aviation industry, but also ensure a gradual economic revival, strengthening the position of Ukrainian air carriers in the international arena.

How clear the government's vision is regarding the future development of the economy influences the key aspects of the country's macroeconomic stability. This stability is determined by maintaining the level of socio-economic growth, ensuring full employment of the population, price control, stability of the exchange rate of the national

currency and balance of payments, as well as reducing public debt relative to GDP [14].

It is very important to have a favourable business environment that guarantees predictability and stability, as well as provides enterprises with the opportunity to protect their rights and reduce the regulatory burden on business. This will help Ukraine compete for investment in the international capital market and contribute to the economic growth of the state, including the aviation industry.

The main pillars on which the restoration of aviation relies are security, infrastructure, financing and investment, incentives and innovation. The state plays a key role in ensuring the safety of air transport through the establishment of safety standards, inspection, and certification of air carriers and aircraft. The State is responsible for the development and maintenance of airports and airways that are essential for the development of air transport, establishes rules and regulations for the operation and maintenance of aircraft, and promotes fair competition in the field of air transportation.

H. Zubko emphasizes the relevance and necessity of constant assessment of the levels of risks and threats to flight safety. Because Ukraine, being in the highest risk group, must adjust plans and determine the potential capabilities of the aviation sector depending on the enemy's systems and means of destruction. Zoning of the regional airspace structure is an important step for a large geographic country such as Ukraine. It is emphasized that air travel should resume on certain safe routes, hoping to open the first air routes to airports in the west of the country in the near future, provided that there are appropriate safe conditions for flights.

To ensure the sustainable development of air transport in the post-war period, the state needs to implement specific mechanisms, such as:

1. Regulatory bodies, namely the establishment and functioning of relevant agencies and bodies to regulate air transport,

which establish safety and environmental standards.

2. Aviation policy, which includes the development of national aviation policies that define strategic goals and priorities for the development of the sector.

3. Financial support, which involves providing financial assistance to airlines and investing in the modernization and expansion of airport infrastructure.

4. Environmental standards, such as establishing emission rates and requirements to reduce the impact of aviation on the environment.

5. Supporting and funding research and development aimed at reducing emissions, improving technologies, and increasing the fuel efficiency of aircraft.

6. Training and education programs for professionals in the air transport sector with a focus on safety and sustainability.

7. Subsidies and incentives to encourage the use of environmentally friendly technologies and practices in air transport [13].

These mechanisms help states achieve a balance between the development of the aviation industry, maintaining sustainable development, and preserving the environment.

To implement the aforementioned actions for the sustainable development of air transport in Ukraine, financial resources are needed. The Government of Ukraine may allocate funds from the state budget for infrastructure projects, research and aviation safety improvement programs. Ukraine can receive financial support from international financial institutions and funds for the development and modernization of aviation infrastructure. It is especially valuable to attract investments and resources of private companies for joint projects and aviation development.

It is justified to create environmental funds, implement environmental levies for compensating CO<sub>2</sub> emissions from air transportation, and finance projects to reduce

the impact of aviation on the environment [18].

The state needs to actively search for opportunities to obtain grants from international organizations or donors for the implementation of specific projects in the field of aviation. Also work on attracting foreign investors to finance projects in the field of air transport.

It is important to effectively manage and use these financial resources to achieve the specific goals of maintaining the sustainable development of air transport in Ukraine.

In the context of seeking support from investors, it is worth raising the issue of greening air transport. In our firm belief, the post-war recovery of aviation should involve a radical transformation of the current state of the industry in accordance with the principles of sustainable development. Joining the European Green Deal aims to reduce transport emissions by 90% by 2050 [11].

It should be noted that in recent years, domestic airlines and airports have not actively developed programs to implement 'green' technological solutions into their operations. There is not a single airport in Ukraine that can be considered 'green'. The situation has now worsened even further, as the Russian army has inflicted damage to airports amounting to over 200 billion hryvnias. Of the 19 functioning civil airports, 12 have been destroyed or damaged.

The Ukrainian "Marshall Plan", presented in Lugano, envisages the reconstruction of 5-7 airports, which will be determined taking into account the goals of sustainable development and will reduce the harmful impact on the environment [6]. The State Aviation Administration of Ukraine and the Ministry of Digital Transformation of Ukraine have already created the portal "Fly Green: the Way to Green Aviation", which promotes practical tools for the implementation of "green technologies" at airports and contains advice on managing finances and natural resources. In particular, this involves the use of special materials (low-carbon concrete, wood, photocatalytic membranes, biofuels,

etc.), solar panels, the installation of various energy-saving systems, etc.

Professor A. Dligach, who is a co-founder of the Center for Economic Recovery, Chairman of Advanter Group, Professor of the Taras Shevchenko National University of Kyiv, highlights that in the coming years the main tasks are to resolve the contradiction between the militarization of the economy and its rapid growth. This requires the implementation of a complete modernization, and not just reconstruction after destruction. According to the expert, "the new strategy of economic development should be based not only on historical experience (countries that were able to recover from the war or double their GDP in 10 years), but also on revolutionary ideas that could create value for the whole world." [3].

However, it is important to adhere to other principles that will ensure the effectiveness of the strategy, including:

- The vision of a new course for Ukraine.
- Creating economic opportunities through an effective state.
- Ensuring security.
- A liberal, innovative economy that attracts global attention.
- Enhancing the well-being of citizens and developing human capital.
- Utilizing opportunities in international cooperation

Therefore, Ukraine needs modernization and innovative economic growth, which should take place over the next decades.

Since some indicators of sustainable development of air transport are compared relative to Ukraine's GDP, it is necessary to analyse the current and forecast values of both nominal and real GDP of the country. There are the following forecasts for Ukraine's real GDP until 2030:

- The EBRD envisages a 20% reduction in GDP.
- The IMF predicts a 35% decline in GDP.
- The National Bank of Ukraine expects GDP to contract by 33%.
- The World Bank envisages a 45% reduction in GDP [1].

Agreeing with the opinion of Y. Romanchuk, who argues that a return to pre-war economic policy, which will make it possible to achieve the level of 2021, is possible only by 2040, which is not an optimal approach, it is proposed to consider various recovery scenarios, as proposed by A. Dligach, as well as principles that should serve as the basis of Ukraine's economy for a decade after the end of the conflict. It is important to note that these proposals are declarative in nature, which means that they are necessary but not sufficient to achieve success. The same principles are proposed by the Ministry of Economy of Ukraine. Since some of the indicators of sustainable development of air transport depend on Ukraine's GDP, it is possible to consider possible scenarios for the recovery of air transport in the post-war period [15]:

1. Realistic
2. Optimistic
3. Entering the zone of optimal sustainable development.

Moreover, a realistic scenario envisages a level close to the pre-war state, the optimistic scenario exceeds the level of sustainable development of aviation transport for all years of its existence, and the scenario of entering the optimal zone of sustainable development of EU countries is the most desirable for the state.

Therefore, the main objective of the policy is to comply with the developed strategic plan through the development of appropriate regulatory measures to achieve the desired objective. Thus, the formation of reasonable response measures to hostilities

and adaptation of the trajectory ensures sustainable development to achieve strategically defined goals [7].

Aviation expert K. Novikov asserts that the main focus for the Ukrainian state should be on the phased reconstruction. In the first phase of reconstruction, attention should be concentrated on regional airports such as Chernivtsi, Ivano-Frankivsk, Kherson, Vinnytsia, Rivne, which have significant regional and economic importance. The second basket may include airports with great potential for local transportation and the development of low-cost international carriers. Considering the security situation, the expert believes it is advisable to create a state-private management company to manage newly created or reconstructed airports. In addition, involving the Armed Forces of Ukraine in building systems to protect airfields from aerial capture and investing in airport security are also extremely important aspects. These steps will help make Ukraine a successful transit country with a doubled number of ultra-modern airports and a developed intermodal transportation system [10].

In the study, Y. Kharazishvili, O. Kvilinsky, D. Bugayko, M. Hryhorak, V. Butorina and I. Yashchyshyna carried out quantitative calculations and depicted the strategic dynamics of gross value added (GVA) index of air transport, which makes possible to build its trajectory until 2030 relative to 2010 for the analysis of certain scenarios (Fig. 1) [16].

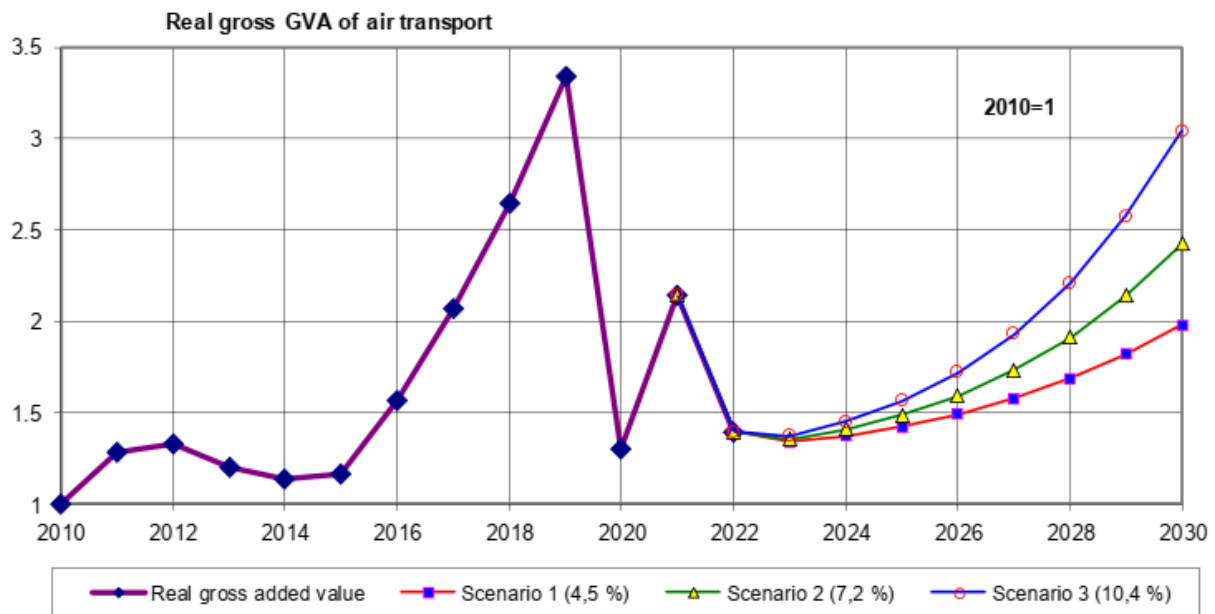


Figure 1. Strategic dynamics of GVA of air transport

Source: Kharizashvili et al. [16]

From the above figure (Fig. 1), it can be seen that under a realistic scenario, the real gross value added of air transport remains at the level of 2021; according to the optimistic scenario – at the level of 2018; according to the scenario of entering the optimal zone of sustainable development – at the level of 2019.

It is important to emphasize that the implementation of these scenarios is possible only under the condition of an absolute cessation of corruption and a significant reduction in the level of illegal schemes in the Ukrainian economy, including air transport, to the level typical for the countries of the European Union.

All the above scenarios of post-war recovery are determined by uneven development of various aspects and indicators. Therefore, the next stage after entering the optimal zone of limit values will be to achieve the criterion of sustainable development according to the integral indicator of the average optimal values of all components and all indicators [16, 20].

Institutional actions to support the positive scenario of the post-war recovery of air transport in Ukraine include [12]:

1. Updating and revising the provisions of the State Target Program for the Development of Airports for the period up to 2023, the State Target Scientific and Technical Program for the Development of the Aviation Industry for 2021-2030 and the National Transport Strategy of Ukraine for the period up to 2030, taking into account the conditions of recovery and sustainable development after military conflicts.

2. Development of mechanisms to support the aviation sector of Ukraine after the war by the state, with special attention to creating attractive conditions for attracting investors.

Together, these measures aim to ensure the profitability of Ukraine's air transport in the third year after the end of the conflict.

**Conclusions.** Summing up, modern conditions require urgent modernization of the state policy on the development of the transport industry of Ukraine using the best international experience. Solving the problems that exist in the development of the aviation industry should take into account both national and international interests of our state in this area. Thus, the state policy regarding the further development of the aviation industry of Ukraine should be based

on a combination of national and advanced international experience, as well as our own realities.

For Ukraine, which is facing military challenges, addressing security issues related to the creation of an effective transport infrastructure are the biggest and most important steps to preserve its statehood, sovereignty and territorial integrity.

In order to solve the existing problems and conflicts related to the restructuring and modernization of the state policy for the development of the transport sector of Ukraine, it is important to give the highest priority to such aspects as forecasting and strategic planning of its development in the

short, medium and long term. The state has a key role to play in the recovery, from financing to regulation and creating a favorable environment for the sustainable development of the industry [20]. The state should become the driving force for the development and implementation of comprehensive strategic scenarios that will ensure the rapid recovery and sustainable development of air transport, including infrastructure investments, development of human resources, improvement of management, support for domestic aviation entities and promotion of fair competition in the field of air transportation and stimulation of the aviation sector as a key element of the national economy.

## References

1. Audit of the economy of Ukraine 2030. URL: <https://nes2030.org.ua/docs/docaudit.pdf>
2. Horbal N. I. and Radchenko Y. P. Status and prospects for the development of the air transport industry of Ukraine in the context of European integration, post-pandemic and war. *Management and Entrepreneurship in Ukraine: Stages of Formation and Problems of Development*. 2023. № 1 (9). C. 249-260.
3. Dligach A. Principles that should become the basis of Ukraine's economy for the decade after the victory. URL: <https://forbes.ua/company/printsiipi-yakimayut-stati-osnovoyu-ekonomiki-ukraini-na-desyatirichchya-pislya-peremogi21042022-5588>
4. Zubko H. When civil airports start working in Ukraine. What determines the speed of resumption of air traffic in Ukraine and is it possible during the war? *Ekonomichna pravda*. 2022. URL: <https://www.epravda.com.ua/columns/2022/11/4/693439/>
5. Korba G. How Ukrainian Airlines Earn and Decline During the War. BBC. 2022. URL: <https://www.bbc.com/ukrainian/features-63403865>
6. Krykhtina Y. O. State Policy for the Development of the Transport Industry of Ukraine: Theory, Methodology, Practice. Kharkiv: "Disa Plus", 2022. 336 c.
7. Melnyk B. S. and Liskovych N. Y. Prospects for the development of aviation transport in Ukraine in the post-war period. Proceedings of the XVI International Scientific and Technical Conference "AVIA-2023". Kyiv: NAU, 2023. 30.28-30.30.
8. Nehoda T. Restoration of air traffic, or when Ukraine will take off again. *Ukrinform*. 2023. URL: <https://www.ukrinform.ua/rubric-vidbudova/3650935-vidnovlenna-aeroruhu-abo-koli-ukraina-znovu-zletit.html>
9. Novikov K. Air transportation after the Victory. How to start air traffic and what is needed for this? *Thepage*. 2023 URL: <https://thepage.ua/ua/experts/yak-vidnoviti-aviaperevezennya-v-ukrayini-pislya-vijnivisnovki-eksperta>

- 
10. Novikov K. Airports of Ukraine after the war. URL: [https://cfts.org.ua/blogs/aeroporti\\_ukrani\\_pislya\\_viyni\\_646](https://cfts.org.ua/blogs/aeroporti_ukrani_pislya_viyni_646).
11. On approval of the Concept of the State Target Scientific and Technical Program for the Development of the Aviation Industry for 2021-2030: Order of the Cabinet of Ministers of Ukraine dated 11.11.2020 No. 1412-p. 2020. No 223 (November 17).
12. On approval of the National Transport Strategy of Ukraine for the period up to 2030. Order of the Cabinet of Ministers of Ukraine dated May 30, 2018 No. 430-p. URL: <https://zakon.rada.gov.ua/laws/show/430-2018-%D1%80#Text>
13. Svyrydenko Y. How will Ukraine be restored? Ukrayinska Pravda. URL: <https://www.pravda.com.ua/columns/2022/04/21/7341214/>
14. Simkova T. O. and Hnatchuk O. V. "Strategical Guidelines for the Development of Aviation Enterprises of Ukraine in Post-War Time. "The 1st International scientific and practical conference "Modern research in science and education"(September 14-16, 2023). BoScience Publisher, Chicago, USA. 2023. C. 360-367.
15. Kharazishvili Y.M., Bugayko D.O. and Lyashenko V.I. Sustainable Development of Aviation Transport of Ukraine: Strategic Scenarios and Institutional Support. Y.M. Kharazishvili; National Academy of Sciences of Ukraine, Institute of Industrial Economics. Kiev, 2022. 276 c.
16. Kharazishvili Y., Kwilinski A., Bugayko D., Hryhorak M., Butorina V., Yashchyshyna I. Strategic Scenarios of the Post-War Recovery of the Aviation Transport Sustainable Development: The Case of Ukraine. Virtual Economics. 2022. № 5(3). P. 7–30. [https://doi.org/10.34021/ve.2022.05.03\(1\)](https://doi.org/10.34021/ve.2022.05.03(1))
17. Moskalenko B., Lyulyov O., Pimonenko T., Kwilinski A., Dzwigol H. Investment Attractiveness of the Country: Social, Ecological, Economic Dimension. International Journal of Environment and Pollution. 2022. № 69(1-2). P. 80-98. <https://doi.org/10.1504/IJEP.2021.125192>
18. Trzeciak M., Kopec T.P., Kwilinski A. Constructs of Project Programme Management Supporting Open Innovation at the Strategic Level of the Organisation. Journal of Open Innovation: Technology, Market, and Complexity. 2022. № 8(1). 58 p. <https://doi.org/10.3390/joitmc8010058>
19. Demchenko, D. O. State policy in the sphere of air transport in Ukraine: features and main directions of development. Economy and state. 2012. № 9. C. 115–118.
20. Bugayko D.O., Shevchenko O.R., Perederii N.M., Sokolova N.P., Podrieza M.S., Bugayko D.D. Risk management of Ukrainian aviation transport post-war recovery and sustainable development. – Intellectualization of logistics and Supply Chain Management. [Online] -vol.16, -pp.6-22. available at: <https://smart-scm.org/en/journal-16-2022/risk-management-of-ukrainian-aviation-transport-post-war-recovery-and-sustainable-development/>. DOI: <https://doi.org/10.46783/smart-scm/2022-16-1>