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IMPLEMENTATION OF AN INTEGRATED SYSTEM OF MECHANISMS FOR INTERNATIONAL PRODUCTION COOPERATION OF AIR TRANSPORT ENTERPRISES

The article identifies and justifies an integrated system of mechanisms for international production cooperation of air transport enterprises to preserve and develop national aviation potential in the face of geopolitical challenges. It is noted that forms of international economic cooperation and cooperative relations are diverse in different countries and are determined by a unique set of economic, political and technological factors. And the increasing complexity and cost of aviation sector projects, combined with the need for access to a resource base and technological expertise, highlight the importance of international cooperation to attract foreign investment and take into account the environmental context in aviation. It has been established that an integrated system of contractual, legal, organizational, financial, economic, and technological mechanisms of international production cooperation of air transport enterprises provides for the implementation of key tasks (increasing competitiveness, expanding access to international markets, integration into global production networks, attracting and producing new technologies) based on the principles (standardization and interoperability, strategic adaptation and resilience, mutual benefit, state facilitation, environmental sustainability) and is based on the interconnection of different levels of management (supranational, state, corporate). The methodological basis of the study is the scientific theories of the international division of labour, international specialization and internationalization of cooperative relations. Both general scientific and special methods of scientific knowledge were used - scientific research, analysis and synthesis, descriptive-analytical, theoretical generalization and system-structural analysis. The information basis of the article is scientific works and monographic publications of Ukrainian and foreign economists. The results of scientific research can be used for scientific substantiation and further creation of appropriate conditions for effective international cooperation of domestic air transport enterprises during the period of post-war reconstruction of Ukraine.

Keywords: cooperation, integration, internationalization, air transport, aviation enterprises, aviation complex, mechanism, potential, supply chain, alliance, joint ventures, risks.

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ВПРОВАДЖЕННЯ ІНТЕГРОВАНОЇ СИСТЕМИ МЕХАНІЗМІВ МІЖНАРОДНОЇ ВИРОБНИЧОЇ КООПЕРАЦІЇ АВІАТРАНСПОРТНИХ ПІДПРИЄМСТВ

У статті визначено та обґрунтовано інтегровану систему механізмів міжнародної виробничої кооперації авіатранспортних підприємств для збереження та розвитку національного авіаційного потенціалу в умовах геополітичних викликів. Зазначено, що форми міжнародної економічної співпраці та коопераційних відносин є різноманітними в різних країнах і обумовлені унікальним набором економічних, політичних і технологічних чинників. А зростаюча складність і вартість проектів авіаційного сектору у поєднанні з потребою доступу до ресурсної бази та технологічного досвіду підкреслюють важливість міжнародної співпраці для залучення іноземних інвестицій та врахування екологічного контексту в авіації. Встановлено, що інтегрована система договірно-правових, організаційних, фінансово-економічних, технологічних механізмів міжнародної виробничої кооперації авіатранспортних підприємств передбачає реалізацію завдань (підвищення конкурентоспроможності, розширення доступу до міжнародних ринків, інтеграція у глобальні виробничі мережі, залучення та продукування нових технологій) на основі принципів (стандартизації та інтероперабельності, стратегічної адаптації та резильєнтності, взаємної вигоди, державної фасилітації, екологічної стійкості) й базується на взаємозв'язку різних рівнів управління (наднаціональний, державний, корпоративний). Методологічною основою дослідження стали наукові теорії міжнародного поділу праці, міжнародної спеціалізації та інтернаціоналізації коопераційних відносин. Використано як загальнонаукові, так і спеціальні методи наукового пізнання – наукового дослідження, аналізу і синтезу, описово-аналітичний, теоретичного узагальнення та системно-структурного аналізу. Інформаційною основою статті є наукові праці та монографічні видання українських і закордонних економістів. Результати дослідження можуть бути використані для наукового обґрунтування та подальшого створення належних умов для ефективного міжнародного співробітництва вітчизняних авіатранспортних підприємств у період повоєнної відбудови України.

Ключові слова: кооперація, інтеграція, інтернаціоналізація, повітряний транспорт, авіаційні підприємства, авіаційний комплекс, механізм, потенціал, ланцюг поставок, альянс, спільні підприємства, ризики.

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STATEMENT OF THE PROBLEM IN GENERAL AND ITS RELATIONSHIP WITH IMPORTANT SCIENTIFIC OR PRACTICAL TASKS

International production cooperation among air transport enterprises is based on joint efforts made by entities from different countries to design, manufacture, service, and support aircraft and related components, expand the route network, enhance the level of passenger service on board aircraft and at airports, and implement environmental projects. In an increasingly interconnected world, the aviation sector is characterised by cooperative relations and emphasises the importance of cooperation arrangements in response to the increase in air transport operations. However, not all integration associations can fully realise their cooperation potential. Therefore, research into the specifics of the formation and implementation of cooperative relations in the aviation sector is relevant.

ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

The specifics of international production cooperation relations have been studied by such scientists as V.Begma [1], N.Voloshko [2], A.Halchynskiy [3], V.Heiets [4], Ju.Ghorjashhenko [5], I.Kurinna, O.Lytvyn [6], O.Lozhachevska [7], N.Nebaba [8], D.Radov, A.Rybchuk [9], P.Tolok, V.Shemayev, I.Shovkun [10] and others. Scientists have studied certain aspects of international economic cooperation in the aviation sector: V.Bilotkach [11], D.Bugayko [12], O.Hubar, Gh.Gurina [13], O.Klimova, T.Kniazieva, I.Nabok [14], L.Pobochenko [15], A.Prokopieva, E.Prushkivska [16], N.Sereda [17], S.Smerichevskiy [18], Z.Sokolova [19], N.Tatarenko [26] and others [20-25].

HIGHLIGHTING THE PREVIOUSLY UNSOLVED PARTS OF THE GENERAL PROBLEM TO WHICH THE ARTICLE IS DEDICATED

At the same time, despite the significant scientific achievements of scientists in this field, today there is an urgent need to develop an integrated system of mechanisms for international production cooperation of air transport enterprises, primarily in order to ensure the efficiency and stability of the development of the Ukrainian aviation industry.

FORMULATION OF ARTICLE OBJECTIVES

The purpose of the article is to identify and substantiate the mechanisms of international production cooperation of air transport enterprises necessary for the preservation and development of national aviation potential in the face of geopolitical challenges.

PRESENTATION OF KEY STUDY FINDINGS

International production cooperation of air transport enterprises is a systemic, multilateral interaction of aviation sector entities (including aircraft manufacturers, manufacturers of aviation components and engines, maintenance and repair organizations, as well as aviation service operators) with foreign partners. Cooperative relations in the aviation sector are implemented taking into account international standards, harmonization of national legislation with international norms, and the principles of mutual benefit, transparency and strategic adaptation. Its goal is to preserve and develop the national aviation potential in the face of geopolitical challenges and post-war reconstruction.

The tasks of international production cooperation of Ukrainian air transport enterprises are strategically important for ensuring the recovery and sustainable development of the aviation sector in challenging conditions and should be aimed at integrating Ukraine into the global aviation system.

The main tasks of international production cooperation of air transport enterprises are:

1. Increasing the competitiveness of aviation sector services.
2. Expanding access to international markets.
3. Integrating air transport companies into global production chains.
4. Ensuring fragmentation of the production cycle.
5. Coordinating the activities of partners from different countries.
6. Attracting and producing new technologies.
7. Overcoming regulatory restrictions.
8. Reducing production costs.
9. Attracting foreign investment.
10. Environmental responsibility.

It should be noted that international production cooperation of Ukrainian air transport enterprises should be based on the principle of standardization and interoperability, standardization and interoperability, strategic adaptation and resilience, mutual benefit, transparency and protection of intellectual property, innovation-oriented development and technology transfer, human capital development and academic-industrial cooperation, state facilitation, and environmental sustainability. The implementation of these scientific principles will enable the Ukrainian aviation sector to recover after the war, transform, and integrate into the global space of aviation services.

International production cooperation of air transport enterprises should be ensured by implementing mechanisms aimed at effective interaction of enterprises of different countries in the production sphere. They should be based on international agreements, state support, specialization and coordination of activities.

The fundamental basis of international production cooperation of air transport enterprises is contractual and legal mechanisms that determine the legal framework, rules and conditions under which interaction between Ukrainian entities of the aviation sector and their foreign partners is carried out. Contractual and legal mechanisms are aimed at ensuring predictability, protecting the interests of the parties and promoting integration into the global aviation system. The main contractual and legal mechanisms include international conventions and regulatory frameworks, integration agreements, commercial contracts and agreements, etc.

Thus, international organizations such as ICAO, IATA and EASA coordinate international conventions and regulatory frameworks and establish technical requirements for production that harmonize national legislation. For example, air transport companies must follow EASA standards to export products to the EU, which confirms compliance with quality requirements and is a prerequisite for concluding many international contracts.

The key instrument of integration agreements is the Common Aviation Area Agreement with the European Union, which provides for the full harmonization of Ukrainian aviation legislation with EU norms. This agreement ensures mutual recognition of certificates, licenses and standards, and serves as a basis for the integration of Ukrainian enterprises into the European aviation market.

Commercial contracts and agreements determine the stability of partnership relations through clear conditions and include:

- contracts for the export / import of aviation products and components, i.e. direct purchase and sale agreements that determine the quality conditions, delivery terms, i.e. regulate the supply of aircraft, engines, units and other aviation components;
- contracts for aircraft maintenance and repair, concluded between aircraft repair companies and aircraft manufacturers for the performance of maintenance, repair and modernization work on aviation equipment;
- agreements on joint production and development, which provide for joint activities in the design, production and sale of aviation products;
- subcontracting agreements, where one of the partners performs part of the work on behalf of the other;
- licensing agreements on the transfer of rights to use technologies, patents or brands, such as the production of aircraft under the license of a foreign manufacturer;
- agreements on the creation of joint ventures, i.e. separate legal entities for the implementation of target projects, for example, for the development of new aircraft models.

Thus, contractual and legal mechanisms should clearly establish intellectual property rights, prescribe who owns the rights to technologies developed within the framework of cooperation. They should determine payment terms, penalties for late payment, risk insurance mechanisms (for example, insurance against non-delivery of components). They should provide for the specifics of dispute resolution in international arbitrations and focus on environmental obligations.

International production cooperation of air transport enterprises should be ensured through various forms of interaction and management approaches to structural elements aimed at effective coordination and implementation of joint projects with foreign partners. Organizational mechanisms of international production cooperation should be dynamic and adapt to changes in the external environment, which becomes especially relevant in times of crisis.

Organizational mechanisms should provide for an international presence and participation of air transport companies in international exhibitions and forums to constantly maintain international relations, demonstrate potential and seek new partners. Also, create and maintain representative offices of air transport companies abroad to facilitate international operations and interaction with customers and partners [27].

International production cooperation should be implemented through various forms of joint activities and integration, such as:

- joint ventures, i.e. the creation of new legal entities or the pooling of resources for the implementation of specific projects;
- consortia and alliances, which provide for the formation of temporary or long-term associations for the implementation of large projects, exchange of experience or strategic cooperation to ensure the implementation of priority areas of integration interaction;
- public-private partnership is proposed to be legally established as a basis for the revival of the aviation sector. Public-private partnership should provide for the transfer of state and municipal aviation enterprises (airlines, airports, airfields, air traffic control enterprises, aircraft construction and design enterprises) to a concession, which allows attracting financial, technical and intellectual resources from private Ukrainian and international companies, minimizing the burden on the state budget.

Organizational mechanisms for international production cooperation of air transport enterprises should ensure the adaptation of organizational structures and business models in response to changes in the external environment. That is, create conditions for rapid reaction of enterprises and the ability to flexibly adjust their internal capabilities (resources).

Coordination and management of projects within the organizational mechanisms of international production cooperation of air transport enterprises should be supported through centralized management of strategic projects. State bodies responsible for the formation and implementation of state policy in the field of air transport and airspace use should coordinate international projects and ensure their compliance with national strategies. A comprehensive project analysis should include technical, commercial, financial, environmental, organizational, social and economic aspects for a comprehensive assessment of international cooperation projects and their effective management.

Organizational mechanisms for international production cooperation of air transport enterprises should provide for the development of human capital and educational cooperation through professional training. The emphasis is on organizing training, internships and exchange of experience for Ukrainian specialists abroad and foreign specialists in Ukraine, creating modern aviation training complexes and introducing standards of international aviation organizations into training programs.

International production cooperation of air transport enterprises should be ensured by implementing financial and economic mechanisms, i.e. a set of tools and approaches to attracting, distributing and effectively using financial resources for the implementation of joint projects, supporting operational activities and developing the industry in an international context. Financial and economic mechanisms should be aimed at creating a favorable investment climate, minimizing financial risks and maximizing economic benefits for all participants in the cooperation. The main financial and economic mechanisms include attracting investments and capital, state financial support and incentives, revenue and expense management, financial risk management and transparency.

Attracting investment and capital should involve attracting capital from foreign companies (foreign direct investment) to create new or modernize existing production facilities, develop infrastructure, and support operational activities. First, a "win-win" scenario should be considered, where the human resources and natural resources of one country are combined with the technologies and capital of another [28].

Financial and economic mechanisms should create conditions for obtaining loans, concessional or grant financing from international financial institutions, such as the World Bank and the EBRD, for the implementation of large-scale infrastructure projects, solidarity funds, etc.

We focus on providing state financial support and stimulation in the form of tax incentives, i.e. the implementation of favorable tax policies, such as zero VAT on aviation fuel and for domestic airlines leasing aircraft outside the customs territory of Ukraine. Tax incentives should also be provided for alternative energy projects at airports. Providing state guarantees for leasing payments or repayment of loans for the purchase of a modern aircraft fleet for national carriers also reduces financial risks for investors. To stimulate the development of domestic production and reduce dependence on imports, it is necessary to introduce financial incentives that provide for the use of domestic aviation equipment and services.

Financial and economic mechanisms should also create conditions for optimizing costs by implementing effective cost management systems, diversifying revenue sources, and effectively using external assistance, i.e., rational distribution and control over the use of funds received from international funds and donors, to ensure maximum impact from investments in the restoration and support of the aviation sector.

Financial risk management and transparency should focus on improving investment regulation, namely on improving the legislative framework for investments, which ensures transparency, predictability and protection of investors' rights. Ensuring financial transparency should include the implementation of strict financial reporting and auditing standards for all aviation enterprises, especially state-owned ones, to increase the trust of international partners and investors. We consider the direction of combating corruption and eliminating corruption risks and illegal actions that can undermine reputation and hinder international cooperation to be important.

Therefore, the financial and economic mechanisms of international production cooperation of air transport enterprises are interconnected and should ensure the financial viability of the Ukrainian aviation industry, its ability to attract the necessary resources for recovery and development.

International production cooperation of air transport enterprises should also take into account technological mechanisms that ensure the exchange of knowledge, technology transfer, joint development and implementation of innovations, and the modernization of production facilities in accordance with global standards. The main technological mechanisms should provide conditions for technology transfer and joint research and development work, compliance with standards and international certification, automation, sustainable development, etc.

Technology transfer and joint research and development involve the transfer of knowledge, know-how, patents, licenses and production methods from foreign partners to domestic enterprises, and joint research and development. A good example is the decision of the Government of Ukraine to involve foreign partners in the modernization of defense systems, including aviation equipment and its components, subject to the availability of the necessary permits for the transfer of military technologies and the export of relevant goods and services, which creates a legal framework for technology transfer in critical areas.

Trust and access to global markets should be ensured by bringing technological processes, products and quality management systems into line with international standards and obtaining appropriate certificates, for example, using uniform EASA (Europe) or FAA (USA) standards to simplify component integration.

The imperative for implementing technological mechanisms should be the implementation of environmental technologies and sustainable development, or the introduction of technologies aimed at reducing the negative impact of aviation on the environment, in accordance with international environmental standards.

Thus, technological mechanisms of international cooperation will allow air transport enterprises to save resources through an emphasis on specialization, accelerate innovation through joint scientific developments, and integrate into global value chains.

CONCLUSIONS FROM THIS RESEARCH AND PROSPECTS FOR FURTHER RESEARCH IN THIS DIRECTION

As a result of the analysis, it can be noted that the essence of an integrated system of contractual, legal, organizational, financial, economic, and technological mechanisms of international production cooperation of air transport enterprises is to create a structured and dynamic environment that allows the Ukrainian aviation sector to effectively use international opportunities for its own development and strengthen its role on the world stage.

To sum up, the mechanisms of cooperation should not only create conditions for survival in wartime but also lay the foundation for future sustainable development and integration into the global aviation industry. The content and structure of the developed integrated system of mechanisms for international production cooperation of air transport enterprises is universal and can be used as a basic model for the development of international production cooperation in the aviation sector.

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