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## ENVIRONMENTAL TRENDS IN THE DEVELOPMENT OF AVIATION MANAGEMENT

**Ganna Gurina, Serhii Podrieza, Volodymyr But.** *"Environmental trends in the development of aviation management".* The article considers the role of the ecological factor as a global trend in the current conditions of doing business and its impact on the competitiveness of the aviation complex. The peculiarities of the formation of competitive advantages depending on the ecological component in aviation activity are determined. The components and processes that have a direct impact on the development of the export potential of the aviation complex are analyzed. It is revealed that the issue of ecology as a factor of competitiveness of aviation enterprises remains out of the question. The purpose of the article is to determine the impact on the formation of the competitiveness of aviation complex of such a factor as ecologization. At the present stage, processes of ecologization of transport infrastructure are irreversible, and in the conditions of high non-environmental aviation transport they will have an impact on the subjects of the aviation complex market. Innovative and ecological activity in the conditions of the modern economy plays an important role in the timeliness and professionalism of making economic and ecological decisions for the development of the enterprise, the region, and the state. Limited resources, highly qualified personnel, uncertainty in the economy, changes in the market, all this has a huge impact on innovative design, but if we consider the design problem from a methodological point of view, then one of the important and defining problems is the inconsistency of the basic design models of the industry. Therefore, in each specific case, it is necessary to determine the model and adapt it according to the results of the analysis of the industry and the enterprise.

**Keywords:** aviation enterprises, ecology, competitive advantage, export potential, world development trends, management..

**Ганна Гуріна, Сергій Подреза, Володимир Бут. «Екологічні тенденції розвитку авіаційного менеджменту».** В статті розглянуто роль екологічного чинника як світового тренда в сучасних умовах менеджменту та його впливу на конкурентоспроможність авіаційних підприємств. Визначено особливості формування конкурентних переваг в залежності від екологічного складника в діяльності авіації. Проаналізовані складові та процеси, які мають безпосередній вплив на розвиток експортного потенціалу авіаційних підприємств. Виявлено, що поза увагою залишається питання екології як чинника конкурентоспроможності авіаційних підприємств. Метою статті є визначення впливу на формування конкурентоспроможності авіаційних підприємств такого чинника, як екологізація. На сучасному етапі процеси екологізації транспортної інфраструктури є пріоритетними, а в умовах високої неекологічності авіаційного транспорту - матимуть вплив на суб'єктів ринку авіаційного комплексу. Інноваційно-екологічна діяльність в умовах сучасної економіки відіграє важливу роль у своєчасності та професійності прийняття економіко-екологічних рішень розвитку підприємства, регіону, держави. Обмеженість ресурсів, висококваліфікованих кадрів, невизначеність в економіці, зміна ринку, все це має величезний вплив на інноваційне проектування діяльності авіаційних підприємств, але якщо розглянути проблему проектування з методичної точки зору, то однією з важливих і визначальних проблем є невідповідність базових моделей проектування галузевих особливостей. Тому в кожному конкретному випадку необхідно визначити модель і адаптувати за результатами аналізу галузі та підприємства.

**Ключові слова:** авіаційні підприємства, екологія, конкурентна перевага, експортний потенціал, тенденції світового розвитку, менеджмент

**Introduction.** Effective management of the competitiveness of modern aviation complex should include a solution to the issue of environmental logistics. It should be noted that management the competitiveness of the aviation complex is a certain aspect of its management, aimed at the formation, development and implementation of competitive advantages, ensuring the viability of the industry as a subject of economic competition, and should be based on the chosen competitive strategy in view of the harmonization of rules with the European Union.

Separately, it is necessary to highlight the ecological component, the importance and importance of which in the formation of the competitiveness of the aviation complex has increased recently. This is explained by the fact that in the context of the environmental crisis, countries have begun to search for an optimal combination of effective environmental and economic regulators aimed at improving the use of nature and reducing the negative impact on the

environment. An ecological approach is characteristic of all areas of socio-economic development of the modern world. Consequently, an important factor in the development of the aviation complex is the ecological optimization of the logistic flows of the enterprise, passing through the spheres of supply, production, sales, including integration processes with suppliers of raw materials, and consumers of end products.

Modern trends in world development are the widespread introduction of advances in advanced scientific and technological developments, which impetus the structural shift in the economy, stimulating the production of new high-tech high-tech products. The conditions of the global market environment and integration into the world economic space dictate the need to intensify international cooperation of Ukraine, in particular with the European Union, as one of the effective ways to increase the country's competitiveness and its further development on an intensive basis. Exports, as a result of achieving the competitiveness of the goods in

the foreign market, suggests simultaneously about the effective work of the company, both from the point of view of its counterparties, and from the point of view of the external environment.

The multitude of economic and legal changes force enterprises to quickly adapt to new conditions and rules for conducting their own activities. All changes are due to the processes of globalization and integration taking place in the world today. The effectiveness of economic activity depends on the speed of reaction to often radical transformations in the economy, which requires the introduction of corrections not only to the forms and rules of company management, but also the formation of new priorities in the minds of personnel in the direction of optimizing interaction in the "nature-human" system. Therefore, the development of environmental management as a new worldview economic and legal system is relevant for Ukrainian enterprises seeking to expand their capabilities. From the point of view of long-term prospects, Ukraine is certainly of interest to foreign investors. This factor is determined both by the general scope of the scope of foreign investment and by positive developments in market transformations, but it is still hindered by the factor of political instability. As evidenced by the practice of modern management, the mentioned problems to one degree or another take place at all levels of enterprise management - intra-production, branch, regional, state, international. Therefore, management decisions and solving issues require joint actions of each link of business activity, the formation of an appropriate development strategy and an effective management system on the part of state bodies using modern approaches to the transformation of the economy. Components that establish a certain level of competitiveness consist of such components as production and production potential, resources, marketing, management, finance, research and innovation activities. Consequently, the development of Ukrainian

industry in recent years has been chaotic, without defining and observing state priorities, in the absence of a well-thought-out state industrial policy. These years can be called a period of trial and error, when the transition to market relations was carried out through accelerated liberalization of both internal and external economic relations. Neglecting the peculiarities of the state of the national market and the mechanical use of various inconsistent measures in macroeconomic policy led to collapse inflation, a sharp decline in production and loss of control over economic activity in the country.

#### **Presentation of the main results.**

Factors of the competitiveness of the aviation enterprise, such as the legal environment, natural resource potential of the country, the state of development of commodity markets, affect individual components of competitiveness and can influence the overall results. Separately, it is necessary to highlight the environmental component, the importance and importance of which in the formation of the competitiveness of the aviation complex has increased recently. This is explained by the fact that in the conditions of the environmental crisis, countries began to search for an optimal combination of effective ecological and economic regulators, aimed at improving the use of nature and reducing the negative impact on the environment. The ecological approach is characteristic of all directions of socio-economic development of the modern world. Therefore, an important factor in the development of the aviation complex is the ecological optimization of the logistics flows of the enterprise passing through the spheres of supply, production, and sales, including integration processes with suppliers of raw materials and consumers of final products [5]. Ukraine is one of the few countries that has complete technology for the creation of aviation equipment, and occupies a leading place in the world market, which has been proven more than once in both civil and military aviation. In terms of the level of

development of aircraft construction, Ukraine is one of the most developed countries. Domestic aviation equipment has certain competitive advantages compared to foreign counterparts. The restoration of aviation equipment for the needs of the army testifies to the significant potential of the aircraft repair industry as a component of the aviation complex of Ukraine. Aircraft construction is one of the most profitable, involved in international economic relations, and, at the same time, the most capital-intensive branches of engineering, and we can also talk about the budget-forming function of the aviation industry in general. The implementation of the European integration vector of the foreign economic policy of Ukraine in particular requires new approaches and a comprehensive strategic program of qualitative improvement of both the commodity and geographical structure of exports, as well as state measures to support and stimulate it. Therefore, determining the main directions and specific prospective measures in the field of promoting the effective realization of Ukraine's export potential remains an urgent task. The development of export potential is a priority component of the country's foreign economic development, its basis is the formation of competitive advantages of the branches of the national economy. Ukraine has significant natural advantages: a sufficient number of labor force, advantageous geographical position, rich natural resources, but these are only possible potential advantages that still need to be developed and implemented. In the conditions of inefficient use of natural resources and competitive advantages that Ukraine possesses, it becomes obvious the need to study the problems of implementing the domestic policy of export promotion, development and realization of export potential [3]. It should also be noted that certain shifts and changes in legislation and the implementation of industry development programs play not the least role in building the potential of aviation companies. The most effective use and combination of science and

production is a goal that will help establish cooperation in the industry, enter international markets with competitive products. Under the potential should be understood also established cooperation with partners from other countries. To realize this strategically important goal, humanity needs to implement a whole set of global measures, which can be called "environmental policy". Environmental policy provides for the optimal structure of production, the pace of development, which ensures the reproduction of the environment and guarantees the economic prosperity of society. In order to develop a truly high-quality strategy at the national level, it is necessary to include the main postulates of the concept of sustainable development, the priority of which is the optimization of human life in conditions of environmental safety and conflict-free relations within society.

The introduction of ecologically safe, resource- and energy-saving technologies, the development of renewable energy sources, non-material nature management are happening unsystematically and too slowly. In the conditions of rising gas prices, it is necessary to take significant systemic measures aimed at increasing energy efficiency, decarbonization of the energy sector, and development of renewable energy sources.

In the field of security and defense, the issue of access to the facilities of the military-defense industrial complex must be resolved in order to carry out appropriate supervision and control over compliance with environmental legislation at these facilities, prevention of pollution of surface and ground water by oil products, destruction of natural landscapes, etc. in order to minimize consequences of activities at these facilities, which will contribute to security and defense reforms and the implementation of NATO standards.

The introduction of international standards of environmental management systems at enterprises and companies will contribute to the development of the



environmental management system and the implementation of international environmental protection initiatives in Ukraine.

Implementation of the ecosystem approach in industry policy and improvement of the system of integrated environmental management, integration of environmental policy into other policies, mandatory consideration of the environmental component during the development and approval of state planning documents and in the process of decision-making on the implementation of economic activities that may have a significant impact on the environment, in particular the ecological modernization of industrial enterprises by reducing the environmental tax rate or in the form of a fixed annual amount of compensation (tax refund), in combination with improving the environmental characteristics of products, is the way to a modern systemic environmental policy implemented in the member states of the European Union.

Implementation of the environmental risk management system in all spheres of the national economy will contribute to the prevention of man-made and environmental disasters.

The results. At the current stage of the "reboot" and development of the aviation industry, there is a question of abandoning traditional approaches both in the production sphere and in supporting modern trends of environmentalization of logistics processes. All these factors should not harm the further search for partners in other countries, because entering new markets has a certain set of uncertainties and risks. The study of modern ways of forming the strategy of the export potential of the aviation complex, which has a strong platform for development, singles out the main reasons for the slowdown in the pace of development - the reduction of technological developments and intellectual resources, as well as the lack of active international cooperation with strategic partner countries. As a result, today

the Ukrainian aviation market is not yet fully ready to work in the conditions of "open skies", and the regulations adapted to European standards do not take into account the state of the aviation services market in Ukraine. All these are integral components of the industry's export potential, and their consideration should be comprehensive and promote development in all areas of cooperation. The age structure of the personnel potential of the industry is deteriorating, which threatens its prospects. In addition, it is necessary to take into account such a large market for aviation enterprises as the EU countries, where there are very strict environmental requirements. Currently, every EU institution (European Commission, European Parliament, European Council, European Environment Agency) deals with environmental issues to one degree or another. Numerous EU directives on environmental protection (currently more than 90 of them) relate to the Union's general policy in the field of water and air quality control, waste disposal, as well as reduction of industrial emissions, biotechnological safety, noise reduction [3]. The member states of the EU accept these directives for mandatory implementation, and therefore, all environmental requirements and norms must be taken into account by aviation companies entering the European sales markets. At the session of the Economic European Commission (within the framework of the strategy for changes in transport in the EU, the reduction of dependence on oil and the fight against climate change by accelerating the transition of transport to alternative types of energy with a low level of emissions, such as advanced types of biofuels [2] are stated among the goals. Directive of the Commission 63/EC supplements Directive 98/70/EC of the European Parliament and of the Council on the quality of petrol and diesel fuel in order to harmonize with technical progress and makes additions concerning the requirements for bioethanol to bring them into line with the Directive. In the long term, companies must reduce emissions Directive No. 101/EU

provides a system of fines for airlines that refuse to comply with its provisions [2].

**Conclusions.** The current trends in world development are the wide implementation of the achievements of advanced scientific and technological developments, which gives impetus to structural shifts in the economy, stimulating the production of new science-intensive high-tech products. The conditions of the global market environment and integration into the world economic space dictate the need to intensify Ukraine's international cooperation, in particular with the European Union, as one of the effective ways of increasing the country's competitiveness and its further development on an intensive basis. The realization of export, as a result of achieving the competitiveness of the product on the foreign

market, simultaneously testifies to the efficient operation of the enterprise both from the point of view of its counterparties and from the point of view of the external environment. This is the duality of export from the standpoint of its participation in ensuring the effective operation of the enterprise: it simultaneously acts as a factor and as a result of the effective work and management of the enterprise. Export, as a result of the company's effective foreign economic activity, becomes possible only if the company's products are competitive on world markets, provided that all modern trends are taken into account. In Ukraine, it is necessary to implement the tools of reaching the modern level of the production and technological base and implement the mechanisms of encouraging innovative activity.

## References

1. J.D. Harrington, K. Barnstorff, F. Dambowsky, NASA study confirms biofuels reduce jet engine pollution / URL: <http://www.nasa.gov/aero>. (in English)
2. The project "Strategies for the development of high-tech industries until 2025". Department of Innovation Development and Intellectual Property. URL: <http://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=c3081991-45fb-47dfabc659822e854a99&title=ProektstrategiiRozvitkuVisokotekhnologichnikhGaluzeiDo2025-Roku>
3. Honcharuk S. R. Ecological trends in the development of production management / Sofia Romanivna Honcharuk; of science manager Oksana Ivanivna Prodius // Modern information. technologies and telecommunication networks: theses add. of the 58th Science. conf. young researchers of master's students of "Odesa Polytechnic". - Odesa, 2023. - P. 102-104.
4. International Energy Agency. Summary 2022. URL: <https://www.iea.org>. (in English)
5. O. Sytnyk. Greening of transport logistics as a factor of aviation enterprise competitiveness, Economic Bulletin of the Zaporizhzhya State Engineering Academy, Issue 1 (13) / 2018.
6. Gurina G.S., Podrieza S.M. (2023) "Globalization challenges of strategic management of the export potential of aviation complex enterprises". – Intellectualization of logistics and Supply Chain Management. [Online], vol.19, pp.19-23, available at: <https://smart-scm.org/en/journal-19-2023/globalization-challenges-of-strategic-management-of-the-export-potential-of-aviation-complex-enterprises/>. DOI: <https://doi.org/10.46783/smart-scm/2023-19-23>
7. Kyrylenko O.M., Novak V.O., Podrieza M.S. (2023) "The place of organizational culture in the management system of aviation enterprises". – Intellectualization of logistics and Supply Chain Management. [Online], vol.19, pp.45-50, available at: <https://smart-scm.org/en/journal-19-2023/organizational-culture-in-the-management-system-of-aviation-enterprises/>

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