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Abstract. In the current conditions of world market globalization, in particular transport services, Ukraine is becoming open to the expansion of foreign transportation and forwarding companies. In these circumstances, the issue of management of competitiveness of cargo airlines is of practical importance. The purpose of the study is to develop recommendations for improving the competitiveness of Ukrainian cargo airlines. The methodological basis of the study is a dialectical method that revealed the nature, factors and conditions of cargo airlines' competitiveness; systemic and synergetic approaches, according to which competitiveness management of cargo airlines is considered in close connection with government regulation. The main results of research: for the most effective use of possibilities of cargo transportation on a network of airlines it is necessary to apply forecasting and planning of such transportations; the information basis for planning should be the airline's own experience, the experience of other airlines, research of air transportation markets, study of supply and demand in the air transportation market; not only factors but also conditions of competitiveness should be considered as an element of increasing competitiveness; in influencing the factors of competitiveness, the leading role in Ukrainian conditions should be given to the government; in Ukraine, aviation clusters can be successfully formed in the regions where promising international air cargo centers are located.

Keywords: competitiveness, management of competitiveness, air cargo transportation, airport, transport infrastructure, aviation cluster.

Introduction.

Air transport is one of the earliest means of communication. With the help of air transport system, society is able to meet its needs in the transportation of passengers, cargo, and mail. All this is regulated by international legislation, intergovernmental agreements, which in turn increase the efficiency of air transportation and aviation safety.

At present, it is difficult to determine the role of Ukraine in the world air transport system. On the one hand, Ukraine has a very attractive geographical location and a high level of population, which gives it a huge potential for the development of the aviation industry. In Ukraine, almost all major cities have airports that are served by 32 domestic airlines. However, on the other hand, the imperfection of the use of available aviation capacity nullifies the potential of domestic civil aviation. The infrastructure of the air transportation market is not developed. Although in recent years there have been positive trends in most performance indicators, but the share of air traffic in the domestic

transport system is small. This is primarily due to economic and political instability in the country, the monopolization of the air transportation market of Ukraine, the insolvency of the population, outdated infrastructure and a small fleet of domestic airlines. Since 2014, the number of flights to and through Ukraine has significantly decreased, and the airspace over the eastern part of the country has been closed. The organization of freight transportation by air remains problematic.

Therefore, the government regulation of domestic aviation industry requires careful attention and concentration on optimizing its operation and management. After all, it is the conceptual changes in the activities of each airline and whole air transport management system of Ukraine can bring the country to the world level in providing transportation services, including cargo transportation.

2. Literature Review and Problem Statement

In the current conditions of world market globalization, in particular transport services, Ukraine is becoming open to the expansion

of foreign transportation and forwarding companies. This situation requires the development of an effective mechanism for implementing state policy to ensure the competitiveness of domestic carriers. However, its implementation is hampered by a number of negative circumstances. In particular, it is the general technical and economic backwardness of the transport network as a whole, the aging of fixed assets in air transportation industry and a significant reduction in the efficiency of industry.

The works of Bordunov V., Mikhailova G., Kholina I., Khoromanskaya O., Sheremetyeva E. are devoted to the issues of public administration and regulatory support of the aviation industry [1]. At the same time, a fundamental study of the features and main directions of state policy in the air transportation in Ukraine has not been conducted. In particular, the scientific works do not disclose approaches to solving problematic issues of state regulation related to increasing the competitiveness of domestic air cargo enterprises. The issues of ensuring the competitiveness of airlines and managing their profitability have been studied in the works of Jacobs T., Garrow L., Lohatepanont M., Koppelman F., Coldren G. and Purnomo H. [2], Kozub A. [3], Lyfyts Y. [4], Lytvynenko L. [5], Lytvynenko S. [6] and Voitsehovskiy V. [7, 8].

3. The Aim and Objectives of Research

The aim of the study is to develop recommendations for improving the competitiveness of Ukrainian cargo airlines. The objectives of research are: to analyze the system of state regulation of aviation industry; to develop the measures of state regulation for the development of competitiveness factors of cargo airlines.

4. Materials and methodics of research

The methodological basis of the study is a dialectical method that has revealed the nature, factors and conditions of cargo airlines' competitiveness; systemic and synergetic approaches, according to which the competitiveness management of cargo airlines has been considered in close connection with government regulation.

5. Research results

5.1. The system of state regulation of the aviation industry

Conditions for the competitiveness of national enterprises are determined by the system of state regulation of the economy. The activity of the government on the formation of the economic and administrative environment is strategic, long-term, but is not a direct impact on competitiveness factors. At the same time, the government can directly influence the factors of competitiveness, in particular by providing financial assistance for enterprises that are experiencing temporary systemic difficulties, public investment, the establishment of protectionist customs duties, the creation of specialized factors of production. Such measures are carried out promptly. They depend on the current economic situation and do not affect the formation of the administrative and economic environment. Thus even within the limits of regulation of one sphere of national economy the government can use the methods aimed at both the formation of conditions for competitiveness, and on factors of competitiveness. In particular, within the framework of customs and tariff regulation, the government can influence the competitiveness of domestic enterprises by increasing or decreasing tariffs on imported goods (reducing or thereby increasing the intensity of competition in the industry), or create competitive conditions by determining the order and time frame for customs operations, establishing the procedure for approval of imports or exports. As part of currency regulation, the government influences the factors of competitiveness by increasing or decreasing the exchange rate of the national currency through foreign exchange interventions. Impact on competitiveness occurs when the government imposes or removes restrictions on various foreign exchange transactions.

Accordingly, it is necessary to distinguish between the methods of government regulation of the economy, aimed at directly influencing the factors of competitiveness, and the methods aimed at forming the administrative and economic environment (Fig. 1) [8, p. 125].

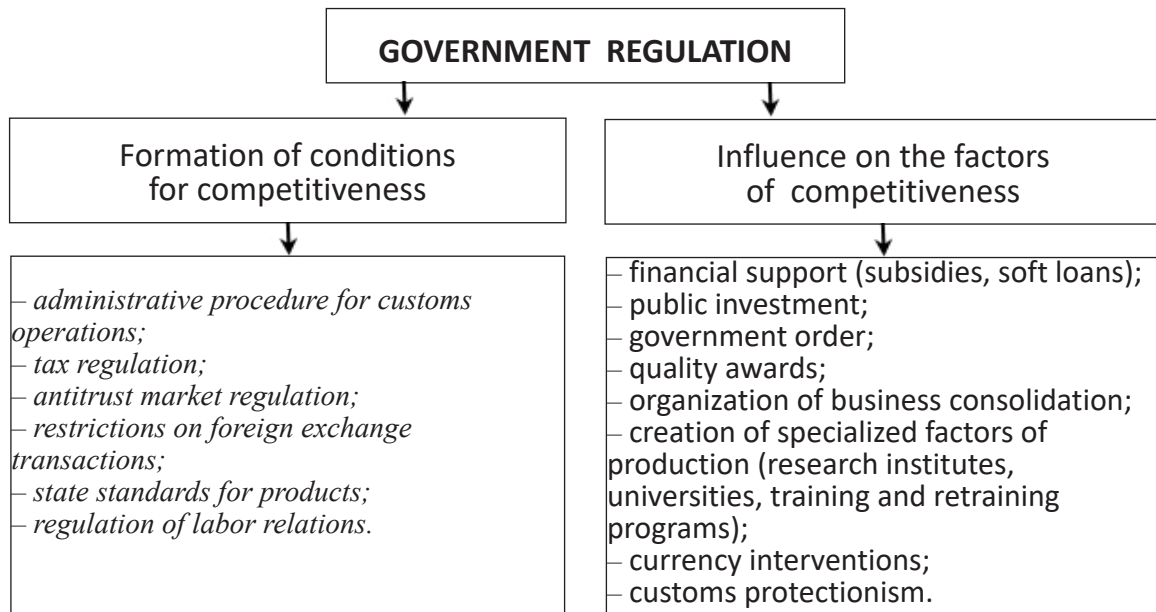


Fig. 1. Role of government regulation in providing competitiveness of domestic aviation industry

The economic and administrative environment is formed by: administrative regulations for conducting business operations; restriction of economic activity of economic entities; speed and quality of government control implementation over economic activity of the organizations.

The economic and administrative environment can both stimulate and hinder the development of factors of competitiveness. Economic and administrative environment plays a primary role in ensuring the competitiveness of economic agents, as it creates the preconditions for the development of factors of competitiveness. This necessitates the separation of conditions from the factors of competitiveness.

Increasing the competitiveness of Ukrainian airlines involves a set of measures to influence the factors and conditions of competitiveness. Therefore, the development of guidelines for improving the competitiveness of domestic airlines in the global air cargo market must be carried out from the standpoint of separating the conditions and factors of competitiveness. This requires the implementation of the following measures:

(1) identification of determinants of airline competitiveness conditions, in particular identification of areas for government regulation of the economy in which administrative regulations have formed, and restrictions that mostly relate to the activities of airlines in international cargo

market by analyzing the features of international air cargo, as well as existing research and expert opinions;

(2) formulation the hypothesis about negative impact of the selected determinants on the competitiveness of airlines;

(3) identification of airlines' competitiveness factors based on the application of M. Porter's competitive advantage theory to determine the key factors of competitiveness;

(4) analysis of the selected determinants of the conditions for competitiveness, confirmation or refutation of the hypothesis. If the hypothesis is refuted, the recommendations for increasing the level of competitiveness are given only on the basis of the analysis of factors of competitiveness or the correctness of the key determinants of competitiveness conditions;

(5) analysis of selected factors of competitiveness;

(6) development of guidelines for improving the conditions of competitiveness and stimulating the competitiveness of airlines.

An integral part of the process of international air cargo transportation is the need to cross state borders. The process of crossing borders is inextricably linked with the need to comply with established customs regulations. Thus, in the case of transport activities, customs regulations must be observed not only for cargo but also for vehicles. It is also important that the obligation to

comply with customs regulations is imposed on all participants in the process of international air cargo transportation. The consignor must place cargo under one of the customs regimes. The freight forwarder must arrange cargo delivery from the consigner to the

airport of departure and from the airport of destination to the consignee in compliance with the established rules of customs transit. Airports and handling agents store and process cargo under customs control. Airlines also face a large number of customs formalities associated with the cross-border movement of vehicles and cargo at each crossing of the customs border by aircraft. In addition, the international nature of the activities of air carriers also necessitates the rapid customs clearance of spare parts for aircraft.

From the above we can conclude that the inefficient system of customs regulation of air carriers creates a negative environment, poor conditions for the development of competitiveness and ensuring competitive advantages in the global air cargo market by Ukrainian airlines.

It is clear that the customs regulation system largely determines the conditions of competitiveness of airlines and can be a significant deterrent to the development of air cargo transportation. This leads to the conclusion that Ukrainian airlines need to conduct a detailed study of the domestic system of customs regulation in order to confirm its negative impact on the competitiveness of airlines and in case of confirmation of this assumption, identify measures to improve this system.

At the same time, the analysis of other spheres of government activity, in which conditions of competitiveness for cargo air carriers are created, showed that they cannot have a comparable negative impact on the analyzed type of activity. In particular, in the tax regulation, a high level of taxation of airlines' property is theoretically a problem, as a significant part of airlines' capital is directed to fixed assets with high value. However, the development of leasing schemes with the participation of foreign legal entities allows airlines to significantly reduce the level of taxation. In addition, the problems of other areas of government regulation of the economy are mainly systemic in nature (corruption, bureaucratization) and apply to all economic activities, not just air cargo transportation. Thus,

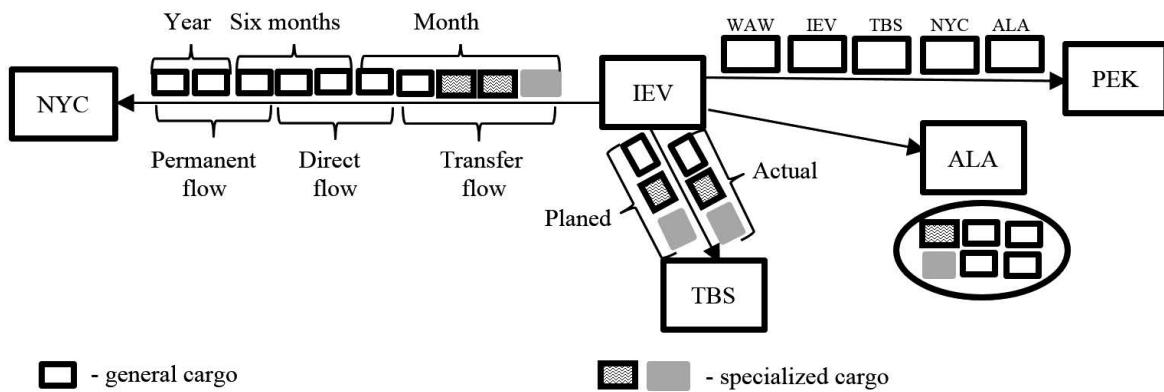
the negative conditions of competitiveness in the field of air cargo transportation may be due primarily to inefficient customs regulation system. Reforming this system is a key condition for Ukrainian airlines to achieve competitiveness in the global air cargo market.

5.2. Measures of state regulation for the competitiveness factors' development of cargo airlines

Cargo transportation is an important component of the airline's successful operation in a competitive environment. For the most effective use of cargo transportation opportunities in airline network, it is necessary to forecast and plan such transportation. The information basis for planning is the airline's own experience, the experience of other airlines, research of air transportation markets, study of supply and demand in the air transportation market. At the same time, forecasts of changes and trends in the air transportation market as a whole and in individual fields should be taken into account.

The importance of forecasting and planning is due to the fact that the possibility of transportation is sold in advance, that is, for 1 month, 3 months, 6 months and even a year before the transportation. This term is the depth of the sale. The duration of the client's need for transportation may also differ – from one-time transportation to regular transportation during the year. Therefore, the airline must carry out forecasting and planning to a depth of up to two years. Of course, these considerations are abstract and for each individual airline, the depth of forecasting and planning differs depending on the conditions in which the airline operates, the network of its airlines, and the information available to it. While forecasting is based mainly on the collection and processing of statistical information, planning can be carried out using economic and mathematical models that should use already processed statistical information and assumptions about forecasts [9, p. 54]. It should be borne in mind that the deeper the forecast, the less clear and definite the data, so planning should take into account the uncertainty and risks that the expected volume of demand for transportation and/or transportation prices will be lower than planned.

Fig. 2 shows the diagram of cargo distribution flows on a part of an airline's network [9, p. 54].



Airports: NYC - New York, IEV - Kyiv, WAW - Warsaw, TBS - Tbilisi, ALA - Almaty, PEK - Beijing

Fig. 2. Distribution of cargo flows on the part of the airline network

The meaning of risk-based planning is that in the event of risks, the airline’s losses will be less than in the case of using plans built without taking into account the possible risks. Cargo flow can be divided into types: (1) by time frames: for the one that arrives in a year, in six months, in a month; (2) by structure: permanent, direct, transfer; (3) by cargo category: special and general.

The proposed model can be used when planning the transportation of goods on the carrier’s airline network, taking into account the uncertainty of information and the risks of reducing demand for carrier services. A functioning airline that has a network of airlines and performs passenger transportation is considered. The frequency of flights varies depending on the season and other factors, the occupancy of flights also varies throughout a year. Cargo transportation is a service that brings additional profits to the airline.

Since the airline is operating, thus for the next period, for example, one month, the volume of traffic is almost determined and the tonnage is sold, and planning is carried out in advance for a period of, for example, one year. It is believed that certain agreements have already been signed in the coming months. In this case, the longer from the time of planning, the more unsold tonnage and more uncertainty. The situation with the sale of passenger traffic is not considered here. The volume of passenger traffic is considered to be determined during the cargo transportation planning. Thus, the task of planning can be set and solved at any time of the year. Moreover, the airline is advisable to regularly update plans for solving the problem that concerns because information is constantly updated, clarified and

specified.

Considering the issue of identifying the factors of competitiveness of Ukrainian airlines, the need to intensify the competitiveness of Ukraine in the global air cargo market, it is necessary to determine the impact on the factors of competitiveness. Applying the concept of «competitiveness diamond» by M. Porter and the concept of value chain, it is necessary to identify the following main factors of competitiveness for Ukraine, which has the greatest impact on air cargo transportation [8, p. 124]:

- (1) the level of development of related and supporting industries (production of competitive cargo aircraft; availability of ground infrastructure for international air cargo transportation);
- (2) the level of development of specialized factors of competitiveness (availability of educational programs in cargo transportation and logistics, including air transport, aircraft construction, operation and repair of aircraft; availability of research programs in air transportation; availability of specialized funds financing of projects in air cargo transportation);
- (3) the effectiveness of airlines’ strategies to achieve competitiveness, taking into account current challenges and trends in the global air freight industry.

At the same time, as noted earlier, the factor of «domestic demand» identified by M. Porter does not play a significant role in Ukrainian conditions. A feature of Ukrainian air carriers is their focus almost exclusively on the international market. This is due, firstly, to the extreme narrowness of the domestic Ukrainian freight market. Secondly, world freight turnover is based primarily on

trade between the three centers of economic development, which are represented by the countries of the Asia-Pacific region, Western Europe and North America. Therefore, airlines seek to focus their business on servicing the cargo flows of these centers. For the above reasons, the factor of «domestic demand» was excluded from consideration.

It should be noted that the effect of increasing the competitiveness of airlines from the influence of related and supporting industries, as well as specialized factors of production depends not only on the presence of these factors of competitiveness as such, but also on the intensity of communication with them. This connection and interaction will be stronger as these factors of competitiveness geographically closer to airlines. These are the best conditions for increasing competitiveness to be created in aviation clusters.

Thus, government measures to develop factors of competitiveness should be concentrated in areas of maximum activity of cargo airlines. Measures should also be taken to stimulate the localization and concentration of competitiveness factors. This task can be solved by creating special preferential conditions for the participants of the aviation cluster in the respective region, for example, a special economic zone (SEZ) of the port type. In our opinion, port-type SEZs can become a serious tool for state incentives to increase the competitiveness of air transport if the locations of these zones are correctly identified, and a simple and clear procedure for doing business in these zones is established.

6. Discussion

The analysis of scientific works on the problems of increasing the competitiveness of various economic agents showed that researchers, as a rule, proceed from the position of determining the factors of increasing competitiveness. However, in our opinion, considering only the factors of competitiveness is insufficient to study the possibilities of increasing the competitiveness of domestic air cargo enterprises. In particular, within the framework of the «Porter's diamond», none of the four determinants of competitiveness will have a real effect if an enterprise is forced to operate in an inadequate legal environment, under significant state administrative pressure.

If the activities of domestic air cargo enterprises are regulated in such a way that they are in worse conditions than foreign competitors (for example, in Ukraine the terms of customs clearance of transit cargo are several times higher than in European countries), it will restrain the business of Ukrainian airlines even in the presence of developed factors of competitiveness.

Thus, not only factors but also conditions of competitiveness should be considered as an element of increasing competitiveness. The conditions of competitiveness are: the economic and administrative environment, the circumstances in which the studied economic agent is located, and the factors of ensuring competitiveness. It is proved the leading role of Ukrainian government in forming the factors of competitiveness. In Ukraine, aviation clusters can be successfully formed in the regions where promising international air cargo centres are located.

Moreover, for the most effective use of possibilities of cargo transportation on a network of airlines it is necessary to apply forecasting and planning of such transportations. And the information basis for planning should be the airline's own experience, the experience of other airlines, research of air transportation markets, study of supply and demand in the air transportation market.

7. Conclusions

As a result of the conducted research it was established that for the most effective use of possibilities of cargo transportation on a network of airlines it is necessary to apply forecasting and planning of such transportations. The information basis for planning should be the airline's own experience, the experience of other airlines, research of air transportation markets, study of supply and demand in the air transportation market. Thus, the task of planning can be set and solved at any time during the year. Moreover, it is advisable for airlines to regularly update their plans, solving the task at hand, as the information is constantly updated, clarified and specified. The objective function of the task is to maximize the total revenues from cargo traffic on the airline network for the entire planned period.

In influencing the factors of competitiveness, the leading role in Ukrainian conditions should

be given to the government, as the participants of the air cargo market at this stage of development cannot significantly influence the development of related and supporting industries, as well as specialized factors of production. In Ukraine, aviation clusters can be successfully formed in the regions where promising international air cargo centers are located. The airports of Kyiv and Kharkiv have the greatest chances to become such centers. Accordingly, it is advisable

to organize port-type zones in these cities. In addition, these cities have universities, on the basis of which specialized research organizations on air cargo transportation could appear in the future. In addition, the agents of air cargo transportation market should take into account the development trends of the global air cargo industry by forming an appropriate development strategy aimed at eliminating market threats.

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Управління конкурентоспроможністю авіаційних вантажних перевезень

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В сучасних умовах глобалізації світового ринку, зокрема транспортних послуг, Україна стає відкритою для експансії іноземних транспортно-експедиторських компаній. У цих умовах питання управління конкурентоспроможністю вантажних авіакомпаній набуває практичного значення. Метою дослідження є розробка рекомендацій щодо підвищення конкурентоспроможності українських вантажних авіакомпаній. Основні результати дослідження: для найбільш ефективного використання можливостей вантажоперевезень по мережі авіакомпаній необхідно застосовувати прогнозування та планування таких перевезень; інформаційною основою планування має бути власний досвід авіакомпанії, досвід інших авіакомпаній, дослідження ринків авіаперевезень, вивчення попиту та пропозиції на ринку авіаперевезень; як елемент підвищення конкурентоспроможності слід розглядати не лише фактори, а й умови конкурентоспроможності; держава має відігравати провідну роль у впливі на фактори конкурентоспроможності у вітчизняних умовах; в Україні можна успішно формувати авіаційні кластери в регіонах, де розташовані перспективні міжнародні авіавантажні центри.

Ключові слова: конкурентоспроможність, управління конкурентоспроможністю, авіаперевезення вантажів, аеропорт, транспортна інфраструктура, авіаційний кластер.

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В нынешних условиях глобализации мирового рынка, в частности, транспортных услуг, Украина становится открытой для экспансии иностранных транспортных и экспедиторских компаний. В этих условиях вопрос управления конкурентоспособностью грузовых авиаккомпаний приобретает практическое значение. Цель исследования - разработать рекомендации по повышению конкурентоспособности грузовых авиаккомпаний Украины. Основные результаты исследования: для наиболее эффективного использования возможностей грузоперевозок по сети авиаккомпаний необходимо применять прогнозирование и планирование таких перевозок; информационной основой для планирования должен быть собственный опыт авиаккомпани, опыт других авиаккомпаний, исследование рынков авиаперевозок, изучение спроса и предложения на рынке авиаперевозок; не только факторы, но и условия конкурентоспособности следует рассматривать как элемент повышения конкурентоспособности; во влиянии на факторы конкурентоспособности ведущая роль в украинских условиях должна быть отведена государству; в Украине авиационные кластеры могут успешно формироваться в регионах, где расположены перспективные центры международных грузовых авиаперевозок.

Ключевые слова: конкурентоспособность, управление конкурентоспособностью, грузовые авиаперевозки, аэропорт, транспортная инфраструктура, авиационный кластер.

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Онтологічно-семантичний взаємозв'язок між поняттями, пов'язаними з науковою категорією «екологічна безпека» в сучасних наукових дослідженнях

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***Анотація:** У статті пропонується державно-управлінський підхід до феномену екологічної безпеки як одного з найважливіших питань сьогодення, що обумовлюється критичним наростанням антропогенного впливу на ноосферу, в результаті якого загострилося принципове протиріччя існування людської цивілізації – протиріччя між зростаючими потребами у споживанні природних благ і самозбереження людських спільнот та спроможністю природного комплексу Землі забезпечити бажаний рівень споживання. Це протиріччя поставило на порядок денний цивілізації питання її подальшого виживання, що обрало характер проблеми глобальної екологічної безпеки.*

Сучасний науковий дискурс характеризується інтенсивною увагою до проблематики феномену екологічної безпеки, що призводить до розходжень у тлумаченні й розумінні окремих наукових категорій та дефініцій логічного ланцюжка понять, пов'язаних з корневим поняттям, в якості якого в даному випадку й виступає екологічна безпека. В ході дослідження розкрито взаємозв'язок основних дефініцій категоріально-понятійного апарату публічного управління та екологічної безпеки з фокусуванням наукової уваги на двох взаємозалежних й водночас відносно самостійних гілках-сімействах понять, де перша розглядає безпеку людини та її життєдіяльності, а друга – безпеку в державному вимірі.

Ключові слова: екологічна безпека, екологічна політика, сталий розвиток, державне управління.

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Онтологическо-семантическая взаимосвязь между понятиями, связанными с научной категорией «экологическая безопасность» в современных исследованиях

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***Аннотация:** В статье предлагается государственно-управленческий подход к феномену экологической безопасности как одному из важнейших вопросов сегодняшней действительности, что обуславливается критическим нарастанием антропогенного воздействия на ноосферу, в результате которого обострилось принципиальное противоречие существования человеческой цивилизации – противоречие между возрастающими потребностями в потреблении природных благ и самосохранения человечества со способностью природного комплекса Земли обеспечить желаемый уровень потребления. Это противоречие поставило на повестку дня цивилизации вопрос ее дальнейшего выживания, что обрело характер проблемы глобальной экологической безопасности.*

Современный научный дискурс характеризуется интенсивным вниманием к проблематике феномена экологической безопасности, что приводит к различиям в толковании и понимании отдельных научных категорий и дефиниций логической цепочки понятий, связанных с корневым понятием, в качестве которого в данном случае выступает экологическая безопасность. В ходе исследования раскрыта взаимосвязь основных дефиниций категориально-понятийного аппарата публичного управления и экологической безопасности с фокусировкой научного внимания на двух взаимосвязанных и одновременно относительно самостоятельных ветвях-семействах понятий, где первая рассматривает безопасность человека и его жизнедеятельности, а вторая – безопасность в государственном измерении.

Ключевые слова: экологическая безопасность, экологическая политика, устойчивое развитие, государственное управление.

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