# International experience in organizing international air service

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Abstract: The purpose of the article is to study the effectiveness of regulation and practice of organizing international air transport service, analysis of tendencies and prospects for the development of a regulatory framework on a global scale. The basic elements and acts of international legal regulation of air transportation at the international level are identified. The relevance and the need to include Ukraine in the international legal framework in the air service industry were proved. The levels of state regulation of air transport are outlined. A comparative analysis of the regulatory support of the air industry in Ukraine and in other countries is performed. The level of Ukraine's inclusion in the international legal scope of regulation of air transport space and the main achievements in this process are estimated. The applied value of the work is to develop priority areas for the implementation of Ukrainian legislation to international air service standards, an algorithm of actions for signing an agreement on collaborative airspace.

**Key Words:** international aviation, air transportation, international legal regulation, implementation of provisions

#### 1. INTRODUCTION

The rapid development of globalization and liberalization in the international air transportation industry has made adjustments to the issue of statutory regulation of air transport [1]. A considerable number of aviation states today already have national legislation concerning the

regulation of air service. The gradual transition from national to general principles, to the application of international provisions and laws was a logical continuation of the policy of an open air communication system. Evidence from international practice, at the present stage of development of international aviation, the issue of compliance of national legislation with international standards is important for regulation [2], the implementation of international standards in domestic law [3], the elimination of conflicts and contradictions of legal provisions.

Analysis of statistical data proves that Ukraine is actively involved in international air traffic. These aspects determine the relevance of the unification of the rules governing this industry, and the country's inclusion in the international legal space. During 2019, 29 Ukrainian companies on passenger and freight transportation performed 103.3 thousand commercial flights, during 2018 – 100.2 thousand flights (Table 1).

Table 1. - Dynamics of passenger and freight traffic of Ukrainian airlines, including international [4]

Indicators	Total			Including international		
	2018	2019	% 19/18	2018	2019	% 19/18
	Airli	ne activities			I	<u>I</u>
Passengers transported, thousand people	12,533.4	13,705.8	109.4	11,450.5	12,547.2	109.6
Including on regular lines, thousand people	7,867.5	8,252.4	104.9	6,796.1	7,107.2	104.6
Passenger-kilometres completed, billion pkm	25.9	30.2	116.6	25.4	29.7	116.9
Including on regular lines	15.6	17.4	111.5	15.1	16.9	111.9
Freight and mail transported, thousand tonnes	99.1	92.6	93.4	98.8	92.0	93.1
Including on regular lines	21.1	19.6	92.9	20.8	19.4	93.3
Completed tonne-kilometres (cargo + mail), million tkm	339.7	295.6	87.0	339.6	295.2	86.9
Including on regular flights	92.0	93.0	101.1	91.9	92.9	101.1
Commercial flights completed, thousand	100.2	103.3	103.1	84.0	86.7	103.2
Including regular	67.0	66.6	99.4	52.3	51.6	98.7
	Airp	ort activities	}		•	
PS sent and arrived, thousand units	182.8	201.2	110.1	145.6	162.7	111.7
Including on regular flights	140.3	153.6	109.5	111.5	124.9	112.0
Passenger flows, thousand people	20,545.4	24,334.5	118.4	18,357.5	21,994.1	119.8
Including on regular flights	15,811.1	18,833.0	119.1	13,658.7	16,530.2	121.0
Postal freight traffic, thousand tonnes	56.4	60.2	106.7	55.2	58.4	105.8
Including on regular flights	51.3	54.1	105.5	50.1	53.0	105.8

Leading organizations in the civil aviation industry, in particular, such as the International Civil Aviation Organization (ICAO) and the International Air Transportation Association (IATA), etc. Soviet scientists raised these questions: M. K. Alexandrov-Dolnik [5], V. D. Bordunov [6], A.A. Velizhaev [7], A. N. Vereshchagin [8], A. N. Movchan [9]. Scientists all over the world consider various issues of providing states with the possibility of cooperation and coordination with the European Union, ICAO, Eurocontrol, airspace users, and other international institutions: N. Buissing, T. Bürgenthal [10], K. Goektash [11], T. Casacdeval, P. Lechner, T. Marian [12], P. Mendes [13]. Among Ukrainian authors, the works of Y. O. Bagan [14], D. O. Bugayko [15], [16], V. Yu. Kostyuk [17], L.G. Kuzmenko [18], K. V. Marintseva [19], K. M. Mikhaylichenko [20], O.P. Radchuk [21], and others.

Nevertheless, numerous international standards do not meet the current situation in the international legal regulation of airspace; national standards are not effective for regulating various types of activities in international air service. Existing studies do not address this issue comprehensively, most have a bias in the economic field, the changed priorities of cooperation between countries require a review of the regulatory framework of airspace regulation.

### 2. MATERIALS AND METHODS

The purpose of the study was achieved through the use of theoretical research methods, both general scientific and special. The analysis methodology lies in the study of the main provisions of the legislative framework which governs issues of international air service and the system of national law in this branch. The main research method is comparative, which allows to compare the regulation of the object of study in the legal system of Ukraine, other countries and at the international level. Furthermore, methods of analysis, synthesis, analogy, analytical, statistical, systemic, structural, and classification were used. Structural and functional analysis allowed to single out the levels of regulation of international transportation. The descriptive method allowed to present the results of the study in a logical and interlinked form. Historical analysis allowed to consider the process of establishing a national and international legislative framework in the sector of air services.

The integrative method allowed for analysis at two levels – concerning the degree of integration of the aviation law of Ukraine into the international legal space and implementation into the national legal system. The totality of the used methodological base allowed to ultimately ensuring the reliability and validity of the findings, to propose the main directions for improving the legislative framework for the development of international air law and the regulatory aspects of its implementation in Ukraine.

# 3. RESULTS AND DISCUSSIONS

Ukraine, like most other countries of the former Soviet Union, started building its relations in the sector of international air transportation based on bilateral agreements, thus trying to protect the interests of its national air carriers, which are unable to compete with the leaders of the international air transportation market from the United States and the European Union which implement the principles of "open skies". In 2007, an "Open Skies Agreement" was signed regarding air traffic between EU Member States and the United States. The transition to this system was carried out through deregulation of the air transportation market – removal of functional restrictions on the activities of national airlines. In the United States, in 1978, the Federal Law on the abolition of state regulation of airlines was adopted to eliminate the negative consequences of the high monopolization of the air transportation market, which

removed control of prices and routes, limiting the access of new participants to the air transportation market. By mid-1980s, U.S. air traffic deregulation reform ended. Currently, about 70% of the civilian aircraft fleet in the world is owned by American airlines, which control most of the global air transportation market. The main competitor and at the same time partner in the global aviation market is the European Union, which also underwent airspace liberalization through the phased introduction of three "liberalization packages" [22]. As a result, the EU member states received full liberalization by establishing an "open skies" regime and built a system of legal regulation of international air service that protects the interests of EU member states, airlines, and users of air transport services.

The first stage (December 1987) – restriction of the right of governments to regulate the level of tariffs for air transportation. The second stage (1990) – the removal of restrictions on the number of passengers carried between countries. The third stage (1993-1997) – free flights between the member countries of the "open skies" program.

At the same time, the negative aspects of liberalization processes should be noted:

- the process did not take place in all countries;
- even in countries where state control has decreased, the airline industry remains regulated both at the national and international levels;
- at the international level, cross-border rights to air transportation depend on bilateral agreements on air transportation, which follows from the Chicago Convention [23], which regulates flights of civil aircraft in international and national air spaces to ensure their efficiency and safety;
  - liberalization processes are inherent only in certain national and regional markets;
  - liberalization processes are inherent on individual bilateral relations.

More than half of all passenger traffic of domestic airlines in 2019 (52%) was international scheduled flights (Fig. 1). They were carried out by ten domestic airlines in 46 countries of the world. With that, the average percentage of passenger load on international scheduled flights increased by 2.1% (up to 80.9%). The development of the network of routes of domestic airlines continued, which started operating 17 regular international airlines on a regular basis.

At the same time, there was an expansion of activities in the Ukrainian market of foreign airlines, the services of which were used by 9,422.5 thousand passengers, which is 37.4% higher than in 2018 and makes up 57% of the total regular passenger traffic between Ukraine and the countries of the world. In general, 40 foreign airlines from 37 countries of the world carried out regular passenger transportation to Ukraine. During 2019, 29 new routes were opened by foreign carriers.

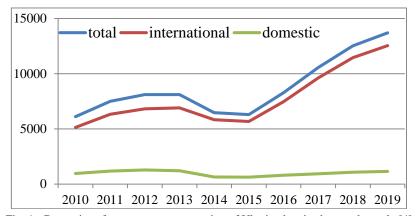


Fig. 1 - Dynamics of passenger transportation of Ukraine by air, thousand people [4]

According to the recommendations of the ICAO, state regulation of air transport should be carried out at three levels: national, bilateral, and multilateral [24], the contents of which are presented in Table 2.

Level	Areas of regulation	Regulatory process	Regulatory
			framework
Multilateral	<ul> <li>Search for a new</li> </ul>	<ul> <li>Official multilateral</li> </ul>	<ul> <li>Documents of the</li> </ul>
	principle of	meetings;	Chicago conference;
	multilateralism;	<ul> <li>processes in official</li> </ul>	<ul> <li>Warsaw system and</li> </ul>
	- structural elements of a	international	the Montreal
	new multilateral	organizations;	Convention of 1999;
	agreement on air	<ul> <li>processes for concluding</li> </ul>	– regional
	transport;	multilateral treaties	multilateral
	– general agreement on		agreements
	trade in services and		
	additions on air transport		
Bilateral	– Balancing benefits in the	- Initialization and	– Bilateral air
	context of liberalization;	preparation of official	services agreements,
	<ul><li>application of</li></ul>	bilateral consultation;	irregular air services
	competition law to air	<ul> <li>consultations and</li> </ul>	agreements
	transport;	negotiations;	
	<ul> <li>state aid and subsidies</li> </ul>	– conclusion,	
		implementation,	
		regulation of agreements	
		on air traffic	
National	– Relations between the	– Legislative component:	<ul> <li>National industry</li> </ul>
	bodies regulating air	development of laws,	development
	transport and the subjects	policies, rules, and	programs; air codes;
	of the air services market	regulations;	<ul> <li>accession protocols;</li> </ul>
		<ul><li>licensing component:</li></ul>	– laws in the industry;
		granting permits,	– air services
		imposing restrictions,	regulations
		refusal to issue or	
		revocation of permits for	
		air transportation on a	
		permanent or long-term	
		1 *	

Table 2. - Levels of government regulation of air transport

Compiled and systematized by the author according to [19]

International air services organizations are created with the purpose of coordinating the resolution of issues of international air services, the development of international cooperation in this field, the protection of the rights and interests of their members [25]. The ICAO was created in 1944 to ensure the safety and development of international civil aviation [26]. Nowadays, this organization is the main developer, coordinator, and controller of legal provisions governing relations in the field of international air transport.

In December 1999, Ukraine became a member of the European Civil Aviation Conference (ECAC) – the largest aviation forum in Europe, which brings together 42 European countries and for the past five decades has played a leading role in shaping regional aviation policy, acting as a guarantor of the effective development of regional cooperation in the civil aviation industry. The entry of Ukraine into the International Civil Aviation Organization in 1992 was

the first step towards the entry of national civil aviation into the international market for air transportation and work. The provisions of the Convention are binding on all treaty states and, although they do not prohibit them from delegating certain functions for which they are responsible to private entities, with the responsibility for ensuring the provisions of the Convention and Supplements fully respected [27].

On June 3, 2014, the Airports of Ukraine Association of Civil Aviation became a member of the Airports Council International (ACI Europe). Ukraine is a member of international aviation organizations such as the European Civil Aviation Conference (ECAC), the European Organization for the Safety of Air Navigation "Eurocontrol" [28] and the International Civil Aviation Organization [29]. Furthermore, the State Aviation Administration of Ukraine is working on the entry into force of the Protocol on the Accession of the European Union to the International Convention on Cooperation in the Air Navigation Safety Industry "Eurocontrol" [30]: a draft Law of Ukraine "On Ratification of Protocols Relating to Amendments to the Convention on International Civil Aviation" has been developed, submitted in accordance with the rule-making procedure for their ratification. The Annual National Program was approved under the auspices of the Ukraine-NATO Commission for 2019, which stipulates cooperation in the field of air traffic management and airspace safety (paragraph 131 of the Main Event under the Program) [31].

Furthermore, during 2019, the State Aviation Administration of Ukraine developed draft regulations in the field of unmanned aircraft operation: the draft Law of Ukraine "On amendments to the Air Code of Ukraine to improve the legislative regulation in the sector of unmanned aircraft of civil aviation", the draft Aviation Rules of Ukraine "Unmanned Aircraft Operating Rules" (harmonized with European industry standards), fulfilling the requirements of the Commission Implementing Regulation (EU) 2019/947 of 14 May 24, 2019 and Commission Delegated Regulation (EU) 2019/945 dated March 12, 2019. In March 2019, the State Aviation Administration of Ukraine and a consortium led by the UK Civil Aviation Authority (UK CAA) launched the EU project "SAFER-U: Strengthening the Aviation Framework and European Regulation for 9 Ukraine" ("Development of the air legislative framework of Ukraine by approximating EU legislation") which will continue until 2022. The main legal issues addressed by this project are as follows:

- improvement of flight safety rules in the areas of flight operation of civil aircraft [32] (OPS) and flight crew licence (FCL) operating in Ukraine;
- increase of legislatively fixed powers of the State Aviation Administration of Ukraine for the supervision of subjects of aviation;
- preparation for the implementation of the relevant provisions of the initialled Agreement on the Common Aviation Area between the EU and Ukraine and the working arrangements between the State Aviation Service of Ukraine and the European Aviation Safety Agency (EASA).

In 2019, the State Aviation Service of Ukraine became a full member of JARUS (Joint Authorities for Rulemaking on Unmanned Systems), which allows to take part in thematic working groups, establish contacts with organizations and leading world companies that are directly involved in the development of a global concept for regulating unmanned aircrafts [33], influence the development and resolution of industry problems, establish individual regulatory framework consistent with international standards. In autumn of 2019, the ICAO EUR/NAT technical assistance project "Strengthening the State Safety Oversight System of Ukraine" was implemented.

The Integrated Validation Mission (IVM) conducted by ISAO in the first half of 2019 showed an increase in the level of ensuring the implementation of ISAO Standards and

Recommended Practices (SARPs) and compliance with the obligations undertaken by Ukraine in the ISAO in the field of accident investigation section (AIG) and Air Navigation Services (ANS). Thus, the level of implementation of ICAO SARPs in Ukraine in the ANS sector increased from 68.24% to 78.24%, in the AIG sector – from 50% to 60%. For the implementation of ISAO SARPs, work continues concerning amendments and their implementation in the regulatory framework of Ukraine. By the end of 2019, a second witness audit was conducted in accordance with the requirements of the international standard ISO 9001: 2015 with a positive result, which extended the validity of the certificate of compliance for 2020 (dated January 18, 2018 No TIC 15 100 1810134). This is an 11th certificate confirming compliance with the requirements of the international standard ISO 9001: 2015. To date, there are no restrictions on the number of designated airlines, flights, as well as points during regular air traffic between Ukraine and the following EU Member States: Austria, Bulgaria, Greece, Estonia, Ireland, Spain, the Republic of Lithuania, Luxembourg, the Republic of Poland, Romania, Slovenia, and the Slovak Republic. The State Aviation Service of Ukraine further liberalizes the air services market with other EU member states [34].

However, some EU member states are not ready to remove all existing restrictions on the implementation of regular air traffic at the bilateral level until the signing of the Collaborative Airspace Agreement. In this regard, it should be noted that based on the results of the meeting between the President of Ukraine and the European Commissioner for Neighbourhood and Enlargement on February 12, 2020, one of the priorities for cooperation for the current year was the signing of the Collaborative Airspace Agreement [35]. The globalization of the world economy and the liberalization of markets, including aviation, has led to the formation of a single European aviation market in the European Union in accordance with the European Single Act [36]. The Collaborative European Airspace (EAP) is a bilateral agreement between the EU and third countries to establish common safety standards and liberalize market relations in the air service industry. Common airspace allows the use of airspace more efficiently and safely; air traffic control is the responsibility of the international organization Eurocontrol, which coordinates and plans air traffic control for the entire Europe.

Thus, collaborative airspace is a free trade zone for subjects of aviation activities that does not have restrictions on flight safety, passenger protection, air carrier liability, environmental protection, competition, and state assistance. The European Commission has developed a model agreement on the organization of air traffic – the so-called "horizontal agreement" [37]. First such agreements were concluded with the countries of the Western Balkans and Morocco in 2006. Generally signed with Albania, Bosnia and Herzegovina, Republic of Macedonia, Montenegro, Serbia, Kosovo, Norway, Iceland, Liechtenstein, Switzerland, Morocco, Georgia, Israel, Jordan, and Moldova.

According to the collaborative airspace agreement, air carriers have the right to carry out transportation within the EU, guided by the general rules of law on the issuance of licenses and access to the market, competition, non-discrimination, safety, state assistance [38]. The signing of such an agreement requires third countries to incorporate EU air transport regulations into their national legislation [39].

The agreement with Ukraine was initially planned as "horizontal", but subsequently expanded through the presence of a large-scale aviation industry in Ukraine. The negotiation process regarding the signing of the Agreement began in 2007 and has not yet been completed. At the Ukraine-EU summit in February 2013 and at the disposal of the Cabinet of Ministers, a deadline was set for the completion of negotiations by the end of 2013. The text of the Agreement was agreed in October 2013 and initialled on November 28, 2013 at the Ukraine-EU Vilnius Summit.

Article 137 "Air Transport" and paragraph (3) Air Transport of Appendix XXXII to the Association Agreement between Ukraine and the EU to Chapter 7 "Transport" Section V "Economic and Industrial Cooperation" stipulates the conclusion of the Collaborative Airspace Agreement, which was finally agreed by the parties on November 28, 2013. However, the Agreement with Ukraine has not yet been signed due to the resumption of the territorial dispute between Spain and the UK. The Agreement on the Common Aviation Space between Ukraine and the EU provides for the incorporation of 64 EU regulations and directives in the field of air service into the Ukrainian legislation. As a result, Ukrainian air carriers will receive the right to use unlimited commercial rights when transporting from Ukraine to the EU and between any EU member states (except for domestic air transportation within any particular EU country). In turn, EU carriers will have unlimited commercial rights regarding flights to and within Ukraine [40].

Following the measures taken, the problems of implementing collaborative airspace are the lack of a comprehensive plan for incorporating technical regulations of the EU and some other acts of air law, the lack of a negotiation program with the EU countries regarding the "open skies", the inconsistency of the state regulation system for airport taxes, air transportation rules, and distribution activities systems, rules for access to the market for ground handling services at airports, etc.

In April 2017, the Ministry of Infrastructure began unilateral implementation of collaborative airspace, not waiting for a solution to the Gibraltar issue. In 2017, an action plan was approved on the preparation for the introduction of a common airspace with the European Union and its member states [41], [42], [43].

Within the framework of preparation for its conclusion, the Ministry of Infrastructure of Ukraine has developed an appropriate package of documents on the authority of the Minister of Infrastructure to sign the Agreement, and sheets No 2615/13/14-16 and No 2616/13/14-16 dated 26.05.2016 were sent for approval to the relevant central executive bodies authorities that agreed on everything except the Ministry of Foreign Affairs, which considered that the absence on the part of the EU of an agreed version of clause 31 "Territory" of Article 2 of the "Definition" on the territorial application of this Agreement is the basis for disapproval of such a draft until this issue is addressed. In turn, the Representation of Ukraine to the EU in a letter No 311/311-300-475 dated 04.03.2019 reported on the results of the meeting with representatives of the Directorate for Mobility and Transport of the European Commission, during which the issue of prospects of signing the Collaborative Airspace Agreement after Britain's exit from the EU.

It is worth noting that the European Commission is set to sign the Collaborative Airspace Agreement as soon as possible after the UK withdraws from the EU.

The preparation of the Collaborative Airspace Agreement for signing by the European party will be coordinated by the representation of the EU presidency at that time. After signing, the Collaborative Airspace Agreement will not be temporarily applicable in the understanding of the Vienna Convention on the Law of Treaties until its ratification by EU Member States.

A further algorithm of actions in this direction can be represented as follows:

- approval of acceptable solution regarding the Gibraltar airport with Spain by the European Commission;
- transfer of the draft collaborative airspace agreement for approval by the Ukrainian party;
  - coordination and translation of the project by the Ukrainian party;
- the European Commission's authorization of the approval procedure for the Collaborative Airspace Agreement by the EU Council;

- the signing of the Collaborative Airspace Agreement at the same time by representatives of all 27 EU Member States and Ukraine (for example, during the Eastern Partnership Summit scheduled for June 2020);
- ratification of the Collaborative Airspace Agreement by all EU Member States and Ukraine.

Thus, in recent years, considerable work has been carried out in Ukraine to implement domestic procedures for the entry into force of international treaties in the civil aviation industry, and to accede to the conventions for the implementation of international standards. According to available estimates, this has significantly increased the level of implementation of Ukrainian legislation to international legal practice. Priority areas for the implementation of Ukrainian legislation to international air service standards:

- 1. International cooperation with international air service organizations (performance of obligations arising from Ukraine's membership in international organizations, in particular participation in events under the auspices of ICAO, CAC, Eurocontrol, EASA; implementation of the project "Support to the State Aviation Administration of Ukraine in Reinforcing its Competencies in Air Operations and Flight Crew Licensing" and the NOMOS project).
- 2. Liberalization of air traffic (legal consolidation of the results of bilateral negotiations at the level of aviation administration's of other states on issues of international air traffic; removal of restrictions on the number of designated carriers, departure/destination points, the number of flights with partner countries).
- 3. Harmonization of the legislation of Ukraine with the legislation of the European Union (development and adoption of regulations of national legislation with the purpose of introducing provisions of EU regulations and directives 1.2; implementation of agreements on approximation of certification systems between the State Aviation Administration and the European Commission; implementation of EU standards in the certification procedures for aerodromes and subjects of aviation activities; implementation of unmanned aircraft operating rules).
- 4. Strengthening responsibility for non-compliance with the Rules for air transportation of passengers and baggage in terms of the quality of passenger service in air transport and monitoring the status of compliance with legislation during the transport of dangerous goods by air carriers and clearance of dangerous goods by freight agencies.
- 5. Improvement of the level of air safety (implementation of the State Flight Safety Program; legislative regulation of a unified national policy in the field of air security, protecting civil aviation from acts of unlawful interference, monitoring and supervision of compliance with safety requirements in accordance with international requirements).

# 4. CONCLUSIONS

Based on the results of the study, the following measures were identified as promising directions of Ukraine's inclusion in the international legal framework in the field of air regulation in the world: harmonization of legislation with the basic acquis Communautaire in the following areas: general European rules of civil aviation (procedures, licenses in the field of civil aviation); traffic management (licenses of air traffic controllers, development of a new generation of European air traffic control system (SESAR), regulatory framework for creating a single European sky); air safety; safety and operating standards; environmental requirements; signing the Collaborative Airspace Agreement; establishing cooperation with international air service organizations; air traffic liberalization. Further research should most

appropriately be conducted concerning the analysis of the implementation of these activities. The issue of ICAO legal standards deserves a separate study.

#### REFERENCES

- [1] R. Abeyratne, Rulemaking in air transport: a deconstructive analysis, Springer International Publishing, 2016.
- [2] D. O. Teplova, Constitutional and legal foundations of the interaction of domestic and international law, *Eurasian Bar*, vol. 1, no. 32, pp. 92-97, 2000.
- [3] R. A. Kurbanov, Analysis of legal issues of the ratio of international and national legal provisions in the system of integration of states. Gaps in Russian legislation, *Law Journal*, no. 1, pp. 167-170, 2016.
- [4] \* \* \* The official website of the State Aviation Service of Ukraine, Available at: https://avia.gov.ua/pro-nas/statistika
- [5] M. K. Alexandrov-Dolnik, Contracts of the Soviet transport law, USSR Academy of Sciences. Institute of State and Law. 1963.
- [6] V. D. Bordunov, The legal mechanism of the activities of international aviation organizations, Nauka, 1989.
- [7] A. A. Velizhaev, The aircraft industry under imperialism. History of aviation, Yanus, 1934.
- [8] A. N. Vereshchagin, International legal regulation of air services, Nauka, 1964.
- [9] A. N. Movchan, International air law, Nauka, 1980.
- [10] T. Buergenthal, Law-making in the international civil aviation organization, Syracuse University Press, 1969.
- [11] \* \* \* Report: "Legal framework for state regulation of civil aviation", Available at: www.pabsec.org
- [12] P. Lechner, A. Tupper, M. Guffanti, S. Loughlin and T. Casadevall, *Volcanic ash and aviation the challenges of real-time, global communication of a natural hazard*, Springer, 2017.
- [13] P. Mendes and N. Buissing, Behind and beyond the Chicago Convention: The evolution of aerial sovereignty kindle edition, Kluwer Law International, 2019.
- [14] Ya. O. Bahan, Administrative and legal support of air transport functioning in Ukraine, Dnipropetrovsk State University of Internal Affairs, 2018.
- [15] D. O. Bugayko, Analysis of trends and prospects for the development of world civil aviation, *Problems of System Approach in Economics National Aviation University*, no 2, 2007, Available at: http://www.nbuv.gov.ua/e!journals/PSPE/2007!2/Bugayko\_207.htm
- [16] D. O. Buhaiko and A. V. Chepurna, Liberalization of transportation regulation is an economic and legal tool for the development of international air services, in *Economics and Management. Vol. 3: Materials of the* VIII International Science and Technology Conference "Avia. – 2007" (pp. 22-25), NAU, 2007.
- [17] V. Yu. Kostiuk, Legal aspects of activity of international organizations of civil aviation, *Problems of Increase of Efficiency of Infrastructure*, no. 31, pp. 120-125, 2011.
- [18] L. G. Kuzmenko, Influence of the international system of legal relations in civil aviation on improvement of state regulation in this branch in Ukraine, in A. B. Kondrashikhin (Ed.), Reforming the Economy of Ukraine: Efficient Production, Competitive Regions, Macroeconomic Equilibrium: Materials of the International Scientific-Practical Conference (pp. 136-139), NMU, 2014.
- [19] K. V. Marintseva, Classification of methods of state regulation of international air transportation, Collection of Scientific Works DETUT. Series "Economics and Management", vol. 17, pp. 37-44, 2011.
- [20] K. M. Mykhailychenko, Improving the efficiency of state regulation of the air transportation market of Ukraine in the conditions of intensification of integration processes with the EU, *Development Strategy of Ukraine*, no. 1, 125-132, 2014.
- [21] O. P. Radchuk, Individual issues of legal regulation of international air transportation, *Scientific Bulletin of Uzhhorod National University*, vol. **53**, no. 1, pp. 116-120, 2018.
- [22] T. Subidey, The liberalization of transportation services in the EU and Turkey, Oxford University Press, 2016.
- [23] \* \* \* Convention on International Civil Aviation, Available at: http://docs.cntd.ru/document/1902240
- [24] L. Weber, International Civil Aviation Organization (ICAO). 3rd ed., Kluwer Law International, 2017.
- [25] D. Gillen, R. Harris and T. Oum, Measuring the economic effects of bilateral liberalization air transport, Transportation Research Part E: Logistics and Transportation Review, vol. 38, no. 3/4, pp. 155-174, 2002.
- [26] M. Milde, International Air Law and ICAO, AEROHELP Institute, 2017.
- [27] R. Abeyratne, Convention on International Civil Aviation, Springer International Publishing, 2014.
- [28] \* \* \* European Organization for the Safety of Air Navigation "Eurocontrol", Available at: http://www.eurocontrol.int
- [29] \* \* \* International Civil Aviation Organization (ICAO), Available at: https://www.icao.int/about-icao

- [30] \* \* \* The Eurocontrol International Convention on Cooperation in the Air Navigation Safety Industry of December 13, 1960, as amended and consolidated by the Protocol of June 27, 1997, Available at: http://search.ligazakon.ua/l\_doc2.nsf/link1/R055\_04.html
- [31] \*\*\* Decree of the President of Ukraine "On the Annual National Program under the auspices of the Ukraine-NATO Commission for 2019" dated April 10, 2019 No 117, Available at: https://www.president.gov.ua/documents/1172019-26450
- [32] M. Ratajczyk, Regional aviation safety organizations. Enhancing air transport safety through regional cooperation, Kluwer Law International, 2015.
- [33] D. Gamper, Airport preparedness drone related disruption to aircraft operations 25.01.2019, Available at: https://aci.aero/wp-content/uploads/2019/01/Drones-Advisory-Bulletin\_FINAL-.pdf
- [34] O. M. Matsenko, I. O. Heiets, Yu. V. Myronova and Ye. A. Skrypka, Strategic directions of airspace liberalization between Ukraine and the EU, *Mechanism of Economic Regulation*, no. 3, pp. 66-78, 2018.
- [35] \* \* \* Letter of the Ministry of Foreign Affairs of Ukraine No 311/13-300-259 dated 02.17.2020, Available at: https://www.profiwins.com.ua/ru/letters-and-orders/ministry-of-labor-and-social-policy/3340-311.html
- [36] S. Zuvin and J. List, Simge Senturk European single sky program. Herdem Attorneysat Law, 2016, Available at: https://www.hg.org/article.asp?id=19691
- [37] I. O. Heiets, Creation of a common aviation space between Ukraine and the EU, NAU, 2016.
- [38] J. F. Arvis and B. Shepherd, The air connectivity index: measuring integration in the global air transport network, *The World Bank*, 2011, Available at: http://documents.worldbank.org/curated/en/859151468161649899/The-air-connectivity-index-measuring-integration-in-the-global-air-transport-network
- [39] I. H. Mikhailychenko, Assessment of the level of air transport liberalization between Ukraine and the member states of the European Union, *Economy and Society*, no. 8, pp. 65-71, 2017.
- [40] T. Oleshko and I. Heiets, Perspectives of the air transportation market in Ukraine, *Aviation*, no. 22, pp. 1-5, 2018.
- [41] \* \* \* The order of the Cabinet of Ministers of Ukraine No 88-p "On approval of the action plan for the preparation for the introduction of the common aviation space of Ukraine with the European Union and its member states" dated February 8, 2017, Available at: https://zakon.rada.gov.ua/laws/show/1106-2017-%D0%BF
- [42] M. Kuprikov and L. N. Rabinskiy, Vertical take-off and landing aircrafts: Myth or reality of modern aviation, *Journal of Mechanical Engineering Research and Developments*, vol. **41**, no. 4, pp. 46-52, 2018.
- [43] S. E. Tsybulevsky, I. M. Murakaev, P. E. Studnikov and A. V. Ryapukhin, Approaches to the clustering methodology in the rocket and space industry as a factor in the formation of a universal production model for the economic development in the space industry, *INCAS Bulletin*, vol. 11, Special Issue, pp. 213-220, https://doi.org/10.13111/2066-8201.2019.11.S.21, 2019.