DOI: https://doi.org/10.32782/2524-0072/2023-49-15

UDC 338.462

USING THE INTERNATIONAL EXPERIENCE OF OVERCOME THE CONSEQUENCES OF THE COVID 19 FOR AFTERWAR RENOVATION OF THE UKRAINIAN AVIAITION BRANCH

ВИКОРИСТАННЯ МІЖНАРОДНОГО ДОСВІДУ ПОДОЛАННЯ НАСЛІДКІВ COVID-19 ДЛЯ ПОВОЄННОГО ВІДНОВЛЕННЯ АВІАЦІЙНОЇ ГАЛУЗІ УКРАЇНИ.

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The article discusses the international experience of the overcome the consequences of the COVID-19 and systemizes the state mechanisms of the financial, regulatory and legal support of the aviation branch. The article considers the practical measures, which were accepted by the countries authorities in order to maintain, stabilize and renovate the aviation enterprises (airports and air companies). The article proves that in order to survive of the Ukrainian aviation branch, it's necessary to research and determine the measures of afterwar renovation in accordance with the international experience. One of the interesting example for research is the international experience of the overcome the consequences of the COVID-19 by the state authorities of different countries.

Keywords: aviation branch, airport infrastructure, aviation companies, state maintains measures, modernization.

У статті розглянуто міжнародний досвід подолання наслідків пандемії COVID-19 та систематизовані державні механізми фінансової та нормативно-правової підтримки авіаційної галузі. Досліджені практичні заходи, що приймалися урядами країн з метою підтримки, стабілізації та відновлення місцевих авіапідприємств. Складна світова епідемічна ситуація призвела до спаду показників авіаційних перевезень починаючи з кінця першого кварталу 2020 року, у зв'язку з чим авіакомпанії були змушені призупинити та відмінити виконання більшості авіарейсів. Різке скорочення авіаперевезень викликало гострий дефіцит ліквідності у авіаційній галузі. Авіакомпанії та аеропорти, постачальники аеронавігаційного обслуговування та виробники авіаційної продукції в усьому світі стикнулися із проблемами забезпечення своєї діяльності та свого існування. Проте, заходи прийняті урядами різних країн дозволили вистояти авіаційній галузі та подолати наслідки пандемії COVID-19. Встановлено, що через повномасштабне військове вторгнення РФ, Україна ввела військовий стан та закрила свій повітряний простір для цивільних авіаперевезень. Повністю припинилися будь-які міжнародні та внутрішні авіаперевезення, зупинилася робота аеропортів, авіакомпаній та інших підприємств авіаційного ринку. В таких умовах авіаційна галузь України щоденно зазнає збитків, які перевищують втрати понесені під час пандемії COVID-19 та складають мільярди доларів США. На відміну від наслідків пандемії COVID-19, авіакомпанії України згодом змогли частково пристосуватися до роботи в умовах військового часу, здійснюючи авіаперевезення пасажирів та вантажів за межами України, перевозячи гуманітарні вантажі, співпрацюючи з іноземними авіакомпаніями на умовах мокрого лізингу (надаючи літаки та екіпажі для виконання рейсів інших компаній). Проте аеропорти України, повністю зупинили свою роботу та не в змозі здійснювати будь-яку господарську діяльність. У статті доведено, що з метою виживання авіаційної галузі України, додатково необхідно розглянути та розробити, з урахуванням міжнародного досвіду, заходи для повоєнного відновлення галузі. Одним із цікавим прикладів для дослідження є використання міжнародного досвіду подолання наслідків пандемії COVID-19 урядами різних країн. В умовах військового стану в Україні, національна політика підтримки української авіаційної галузі буде впливати на розвиток авіації, фінансову стабільність та стійкість галузі, її спроможність вистояти та відновитися у майбутньому і яке місце вона посяде на світовому ринку. Вкрай важливо, використовуючи міжнародний досвід, не тільки стабілізувати та відновити авіаційну галузь, але й зробити її більш конкурентоспроможною та фінансово стійкою у довгостроковій перспективі. Саме тому, державна підтримка має бути збалансованою та спрямованою на стимулювання відновлення та розвитку авіаційної галузі, що забезпечить розвиток повітряного сполучення, стимулювання національної економіки, створення нових робочих місць та сприятиме загальному росту економіки України. Інтеграція України у Європейський Союз надає нові перспективи залучення інвестицій, розвитку державно-приватного партнерства та залучення міжнародних компаній, тому використання світового досвіду подолання наслідків пандемії СОVID-19 для відновлення авіаційної галузі України є вкрай необхідним та доцільним. Відновлювати авіаційну галузь та відбудовувати аеропортову інфраструктури необхідно розпочинати вже зараз, не чекаючи на завершення війни. Якщо розпочати розробляти проекти та опрацьовувати необхідні заходи заздалегідь, то повоєнне відновлення авіаційної галузі України буде швидким та ефективним.

Ключові слова: авіаційна галузь, інфраструктура аеропорту, авіаційні компанії, державні заходи, модернізація.

Problem formulation. From the end of first quarter 2020, the difficult world pandemic situation had impacted to decrease of the aviation transfers. Air companies had stopped or even cancelled the most of air flights. A sharp reduction in air transportation had caused an acute shortage of liquidity in the aviation industry. Airports and air companies, air navigations suppliers and aviation productions all over the world had problems with their activity and even with their existing at all.

However, the measures which were carried out by the different countries authorities, had helped to stabilize the aviation branch and to overcome the consequences of the COVID-19. The 2022 should become the year of Ukrainian branch renovation and achieving pre-pandemic indicators, but 24th of February due to full-scale military invasion of Russia, the President of Ukraine declared martial law The Ukrainian state aviation administration closed the air space for all civil airplanes. Any international and domestic air flights were canceled, all airports, air companies and other aviation enterprises were closed.

Under such conditions, the Ukrainian aviation branch has been having everyday losses more than during the pandemic of COVID-19 and they are the billions USD. Before the war, Ukraine had generated 3,3% of the total Europe passengers' traffic and 0,8% of the world passengers' traffic. In order to return such indicators, it's necessary to make many measures.

Thus, in order to renovate the Ukrainian aviation branch after war, it's necessary to research and work out measures in accordance with the international experience. One of the interesting example for research is the international experience of the overcome the consequences of the COVID-19 by the state authorities of different countries which is specify the relevance of research.

Analysis of recent research and publications. The questions and problems of airports infrastructure development, as well as reasons and consequences of the COVID-19 were studied by lot of Ukrainian and international scientists, in that number such as Liscovych N. Y. [1], Orlovska Y. V. [2], Sydorenko K. V., Ismailzade F. N. [3] and others. However, despite of the presence of the deep and thorough scientific works, the problem of the afterwar Ukrainian aviation branch development and renovation according with the international experience of the overcome the consequences of the COVID-19 by the state authorities of the different countries is insufficiently disclosed and needs further study.

Formulation of research objectives. The aim of the article is to research the international experience of the overcome the consequences of the COVID-19 and to make practical recommendation for renovation of the Ukrainian aviation branch.

Presentation of the main research material. The aviation branch provides economic growth, creates the workplaces and promotes the development of the international trading and tourism. In 2019, before the COVID-19 pandemic, the international aviation branch was generating 2,7 billion USD of the international gross product and was providing 65,5 MM workplaces.

The COVID-19 pandemic was result of the infection of coronavirus SARS-CoV-2 and caused not only world health care crisis, but also economic, social and human crises. On the 31 of January 2023, were registered more than 670 MM cases of disease and were confirmed more than 6,8 MM deaths because of the infection [4].

The COVID-19 pandemic had become the most difficult trouble for the international economy. Because of the anti covid restrictions, decline and recession had made a negative influence to all international economic branches.

In order to stop the pandemic and to provide the people health care, the state authorities all over the world were carrying in the regimes of partial or full isolation, closing the borders, maintaining the strict restriction of the traveling and moving. Because of these sanctions the aviation transfers all over the world were decreased and even stopped. The aviation became one of the most affected branch of the international economy.

From the end of first quarter 2020, the difficult world pandemic situation had impacted to decrease of the aviation transfers. Air companies had stopped or even cancelled the most of air flights. A sharp reduction in air transportation had caused an acute shortage of liquidity in the aviation industry. Airports and air companies, air navigations suppliers and aviation productions all over the world had problems with their activity and even with their existing at all.

The analysis of the COVID-19 pandemic economic effect to civil aviation in 2020, which was carried out by ICAO, had demonstrated that world passengers' turnover had been decreasing at 2,7 billion passengers (- 60% compared with the 2019). The sharp reduction of the passengers' turnover in 2020 was the reason of the total operational aircompanies income (372 B USD) and airports income (115 B USD) decreasing.

In 2021, the negative influence of the COVID-19 pandemic to the world passenger's turnover was the reason of the total reduction to the 2,201 billion passengers (-49% compared with the 2019). The decrease of the total aircompanies incomes was 324 B USD.

Indicators of the world aviation branch activity in 2022 (even if don't pay attention to the growth), less than the same one in 2019. The reduction of the total passengers' turnover in 2022 was 1,281 billion passengers (-29% compared with 2019) and the losses of air companies' losses were 175,0 B USD [5].

Nevertheless, the measures which were implemented by the different state authorities had allowed the aviation industry to survive and to overcome the consequences of the COVID-19 pandemic.

Of course, the negative influence of the COVID-19 pandemic, had been had a negative

effect to the Ukrainian aviation branch during 202-2021.

In order to fight with the COVID-19 pandemic, the Government of Ukraine had stopped the international aviation flights (from 17.03.2020 till 15.06.2020) and domestic flights (from 24.03.2020 till 05.06.2020). Also the restriction of the Ukrainian border for foreign passengers were again had been conducted from 28.08.2020 till 28.09.2020.

These restriction, had have a negative influence to the Ukrainian aviation companies. During the 2020 the total volume of passengers who used the Ukraine air companies were 4,797 MM (- 65% compared with 2019) and who used the international air companies were 3,323 MM (- 64,7% compare with 2019).

During 2020 the Ukrainian airports served 94 K air crafts. It was only the 47% compared with 2019, when were served 201,2 K. Total passengers' turnover of the Ukrainian airports were 8,664 MM (64,4% compared with 2019), cargo turnover were 52,2 K tones (- 13,3% compared with 2019).

During the 2020 the passengers' turnover of the International airport Borispol had reduced on 66,2%, the airport Kiev – on 73,1%, the airport Lviv – on 60,4%, the airport Odessa – on 58,8%, the airport Kharkov – on 50,8%, the airport Zaporizhzhia – on 24,9% [6].

In 2021, after stabilization of the COVID-19 consequences, there were a gradual recovering of the Ukrainian aviation branch indicators. The total amount of the Ukrainian air companies' passengers on the international flights increased twice compared to 2020 and were 2,608 MM passengers. At the same time, the percentage of passenger loading increased by 6.2% and amounted to 75.2%.

The passengers' turnover at the Ukrainian airports in 2021 were 16,221 MM (increased by 87,2% the 2020 and had become above 70% compared with 2019). The cargo turnovers throat the Ukrainian airports were increased by 21,1% and were 63,2K tones [7].

The 2022 should become the year of Ukrainian branch renovation and achieving pre-pandemic indicators, but 24th of February due to full-scale military invasion of Russia, the President of Ukraine declared martial law. The Ukrainian state aviation administration closed the air space for all civil airplanes. Any international and domestic air flights were canceled, all airports, air companies and other aviation enterprises were closed.

Under such conditions, the Ukrainian aviation branch has been having everyday losses more

than during the pandemic of COVID-19 and they are the billions USD. Before the war, Ukraine had generated 3,3% of the total Europe passengers' traffic and 0,8% of the world passengers' traffic. In order to return such indicators, it's necessary to make many measures.

Unlike consequences of COVID-19 pandemic, the Ukrainian airlines were later able to partially adapt to work in wartime conditions. They have been operating outside Ukraine, carrying out air transportation of passengers, cargo and humanitarian, cooperating with the international airlines on the basis of wet leasing (the Ukrainian airlines have been providing aircrafts, crews, and maintenance to other airlines abroad). However, the Ukrainian civil airports fully had stopped its work and don't are doing any economic activity.

The additional big problem for Ukrainian airports had become the destruction of airports infrastructure as a result of shelling which even before war, for regional Ukrainian airports were in the nonsufficient condition and its needed to revival and modernization [8].

Also very important problem for the Ukrainian aviation branch is the preservation of technical and personnel potential, maintaining qualifications and compliance with certification requirements.

The Cabinet Ministers of Ukraine has stopped the State target program for the development of airports for the period until 2023 because its nonactual during the military law. Partial revival of the Ukrainian destruction airports is planning by the Ukraine Recovery Conference.

However, in order to renovate the Ukrainian aviation branch after war, it's necessary to research and work out measures in accordance with the international experience. One of the interesting example for research is the international experience of the overcome the consequences of the COVID-19 by the state authorities of different countries.

The most common state mechanisms of the aviation branch support are financial, regulatory and legal supports.

The state finance support is a main measure to assist as well as enterprises separately as the aviation branch at all. There are several mechanisms of the state financial support.

To provide additional investment through a direct subsidy.

The direct providing of the state capital through the subsidy is helping to stabilize the financial position the separate enterprises and branch, compensating losses and maintaining its activity. An example of the direct grant by the European Commission was the subsidy of 11,7MM Euro for the Croatia Airlines in order to compensate the losses which accrued under the COVID-19 pandemic [9].

Another successful example was the American government dotation of 10B USD for 3000 American airports. The amount was distributed under different formulas between airports serving the commercial aviation, central and regional airports. This financial dotation was used by airports for different aims [10].

- State loans and state loan guaranties.

The state loan assistance and the state loan guaranties provide more comfortable terms with less percentages for aviation enterprises. The Egyptian state loan guaranty for airports, Egyptair Airlines and navigation service was the example of such assistance. The Central Bank of Egypt in accordance with the state loan guaranty had made a credit with preference terms to the Egypair Airlines by 3B Egyptian pounds (about 91M euro) and 1B Egyptian pounds (about 30M euro) to the EHCAAN (the Egyptian holding company of airports and air navigation).

Another successful examples of the state loans and state loan guaranties were providing 7B euro to the French airline Air France and 3,4B euro to the Netherland airline KLM, which were approved by the European Commission. The both assistance portfolio had provided so necessary liquidity for the airlines. From other side, the airlines had a list of demands: to provide clear profit dividends, to maintain working places, to increase production, competitiveness and ecological security [11].

- The government take part in a stock share capital.

The government take part in a stock share capital or investment to a stock capital means the situation when the state authority purchases a part of a company ownership through buying the stocks. The government investment to the stock share capital of the aviation enterprises provides necessary assets for a commercial activity and to decrease risks of its bankruptcy. The example of the government take part in a stock share capital is the decision of the German Fund of Economic Stabilization (WSF) to provide the help to the airline Lufthansa. The total volume of investment was 9B euros. And the part of which – 5,7B euros was the investment to the stock share capital [12].

- Financing of restructuring.

The state authorities can to finance the restructuring the aviation companies which have a lot of debts or even begin to manage these

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companies. The national government can make the decisions to finance the restructuring in order to support the national aviation companies.

The successful example of such measure was on the October 2020, when the government of the South Africa in order to overcome the consequences of COVID-19 pandemic, invested 10,5B Southafrican rands (about 540MM euros) to support and restructure the state airline South African Airways. The plan of supporting also foreseen to pay debts, searching the strategical partner, maintain the working places, etc. [13].

- The salary grant.

The main aim of the salary grant is to protect the working places and personal of the aviation companies. Under this program, the government invests companies for paying salaries during some period of time. This investment is strictly for the employees' protection and the salaries payments and can't be used for any other expenses.

The example of such measure was the experience of the salary grant in Canada. In order to support employees, the government decided to begin the program of the emergency salary grant (CEWS). This program was lasting till the June 2021. The airline Air Canada was one of the biggest beneficiary by this program. And its helped to decrease the airline salary expenses more than by 40%. During the first nine months of the 2020, airline Air Canada under the CEWS program received 492MM Canadian dollars (about 335MM euros) [14].

The subsidy to routes exploitation.

The aim of this measure is to support determined air routes in order to maintain aviation. Usually these routes have socialeconomic importance at the areas where another alternative transport is absent or doesn't have enough development. These subsidies carried out as well as for airlines as for airports.

The interesting example of this mechanism was the Australian government program of supporting the regional airlines as the measure to overcome the consequences of COVID-19 pandemic. Under this program the dotation of 198MM Australian dollars (about 125MM euros) were foreseen for critically important aviation routes between more than 100 regional and faraway airports for delivering commodities, etc. medical goods, staffs, Under this program, the airlines should provide the determined quantity of the flights to the regional airports [15].

- The decreasing or deferment the taxes and fees payments.

This measure provides for the provision of tax benefits. The tax benefits are the special programs which decreasing tax payments and increasing the moving of enterprises cash flow because of tax rate reduction, tax exemption, terms of tax payments and refund of previously paid amounts. Decreasing or deferment of taxes, fees and duties payments for aviation enterprises provides decreasing of payments in the short term period. But it's necessary to pay attention to the balance of national budget and aviation branch interests.

The successful example of such measure was the experience of the Ministry of transport of Manila. On the March 2020, during the period of one year, was approved the decision for all airports to cancel the calculation of fees for take-off/landing and aircrafts parking for airlines which executed the both domestic and international routes. Also, all concessioners, who are operating at the airports terminals were exempted from rent payments till the end of 2020 [16].

Another direction of the state mechanisms to overcome the consequences of COVID-19 pandemic are the regulatory and legal support of the aviation branch. Decreasing the demands of the legal authorities provides the ability for aviation enterprises to use the exploitation flexibility, helps to support the commercial activity under strict terms and restrictions. The main aim of the regulatory and legal support is to increase the aviation branch efficiency, maintain the business development and attract future investments. However, by using these measures it's very important to pay attention to the enough level of aviation security and flight safety.

There are several most common measures of the regulatory and legal support of the aviation branch.

– Temporary cancellation of the rules of slots administration at the airports.

Under the negative influence of the pandemic and restrictions accepted by the international state authorities, the airlines were forced to decrease or cancel the majority of their routes and aircrafts flights. Because of this, the airlines couldn't comply with the current rules of the slots administrations at the airports (if you don't use your slot, you're losing your slot). Temporary stopping of the slots administration at the airports, maintains airlines, makes the possibility to save air routes and be flexible under changeable market and demand conditions. This measure also supports airlines to avoid the empty flights in order to have slots at the airports. Cancellation of the slots administration at the European airports was one of the example of such measure. On the March 2020 the European Council had approved the decision of the temporary cancellation of common airports practice about obligated using not less than 80% of the slots at the European airports, in order to avoid losing the rights for them next year. This temporary cancellation was acting from the March 2020 till the 27 of March 2021 [17].

– Temporary exemption of the competition regulation.

This measure provides opportunity to make a temporary exemption of the competition legislation and regulation in order to support airlines in their possibility to coordinate routes and flights timetable with other airlines under agreements of cooperation. This exemption should be a temporary and carried out for the national interests and the supporting for passengers and cargo transportation.

The example of the measure was the exemption of the Norwegian transport branch of the competition law. On the March 2020 the Norwegian government had been providing the exemption of ant competition law for transport branch during three months. The aims of the exemption were to provide access for population to commodities and services, as well as to achieve the national interests [18].

– Temporary reduction of the legal restriction to the cargo transportation.

In order to organize the important goods delivery, national authority can to support cargo transportation by the decreasing of legal restriction. The most common measures of such supporting are: the temporary stopping of the commandant time, the providing additional commercial slots for cargo flights, the possibility to use the passenger's aircrafts for cargo transportations as well as the additional attraction of the crews and technical staff for its. The example of the such measures was the Directive to maintain cargo flights during the COVID-19 pandemic which were accepted by European Commission on the March 2020 [19].

Reduction of the restriction to the domestic aviation market access.

This measure provides the maintaining of the necessary level of the aviation routes. Its consists of the entering into the new agreements of the international aviation traffic and adding the existing one in order to provide additional opportunities of using the aviation space and national airports infrastructure for foreign airlines on the both unilateral and multilateral basis.

The example of such measure was the Uzbekistan experience to involve the open sky policy on the regional airports. From August 2020 till 2022 the Uzbekistan government had accepted the open sky policy for the ten regional airports and agreed execution air flights for international airlines without any restriction [20].

So, there is a list of state financial, legal and regulation measures to support and renovate the aviation, which were accepted by the international state authorities to overcome the consequences the COVID-19 pandemic.

Under the war in Ukraine, the national policy of supporting the Ukrainian aviation would be impact to the aviation development and its financial stability as well as possibility to stabilize and renovate in future. It's also will demonstrate which place Ukrainian aviation will take on the global market after war. It's really important, by using the international experience, not only stabilize and renovate the Ukrainian aviation branch, but also to make it more competitive and financial stable. Because of these, the state supporting should be balanced and directed to the stimulation of the Ukrainian aviation renovation and development. The supporting should provide the development of the aviation transportation and the modernization of the airports infrastructure, stimulate and creation of the new working places, and will contribute the development of the national economy.

Conclusion. Because of the Ukrainian aviation hard situation under the full-scale military invasion of Russia, the aviation enterprises should make urgent steps to improve its financial situation, the reduction losses and decreasing the profit deficit. But to overcome the economic consequences and to renovate itself without state supporting the Ukrainian aviation enterprises are unable.

By researching the international experience of the overcome the consequences of the COVID-19 pandemic, the Ukrainian government together with the State aviation administration should study the different measures of the aviation branch supporting and should develop the optimal decision for Ukrainian aviation enterprises helping. It's necessary to research the advantages and disadvantages of each measure of supporting, to provide the effective resources applying, by using help as for the branch as well as for each aviation enterprise.

Because of the Ukrainian integration into the European Union, there are new perspectives of the investments attraction, the development of the state – private partnership and the international companies' attraction, so the international experience of overcome the consequences of the COVID-19 pandemic for the Ukrainian aviation renovation is really important and necessary.

It's necessary to begin renovate aviation and rebuilt the airports infrastructure just now, don't wait for the end of the war. If we will begin to develop working and investment projects and to research necessary measures of supporting before, thus the postwar renovation of the Ukrainian aviation will be quick and effective.

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