

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL AVIATION UNIVERSITY

Air Transportation Management Department

PERMISSION TO DEFEND GRANTED
Head of the Department

_____ D. O. Shevchuk
“ ” _____ 2021

BACHELOR THESIS

(EXPLANATORY NOTES)

Theme: «Organization of air passenger transportation in cooperation with travel agencies»

Done by: Chaika Mariia Mykolayivna

Supervisor: Vysotska Iryna Ivanivna, PhD in Economic, Associated Professor of Air Transport Department

Standards Inspector: Yuliia V. Shevchenko, PhD in Economic, Associate Professor

Kyiv 2021

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ АВІАЦІЙНИЙ УНІВЕРСИТЕТ

Кафедра організації авіаційних перевезень

ДОПУСТИТИ ДО ЗАХИСТУ

Завідувач кафедри

_____ Шевчук Д.О.
« _____ » _____ 2021 р.

ДИПЛОМНА РОБОТА
(ПОЯСНЮВАЛЬНА ЗАПИСКА)

ВИПУСКНИКА ОСВІТНЬОГО СТУПЕНЯ «БАКАЛАВР»

Тема: «Організація авіаційних пасажирських перевезень у співпраці із туристичними агентствами»

Виконавець: Чайка Марія Миколаївна

Керівник: к.е.н., доцент Висоцька Ірина Іванівна

Нормоконтролер: к.е.н., доц.. Шевченко Юлія Вікторівна

Київ 2021

NATIONAL AVIATION UNIVERSITY

Faculty of Transport Management and Logistics

Air Transportation Management Department

Major (specialty): 275 “Air Transportation Technology”

APPROVED BY

Head of the Department

_____D. O. Shevchuk

“ ” _____2021

TASK of completion the bachelor thesis Chaika Mariia

1. Theme of the bachelor thesis entitled «Organization of air passenger transportation in cooperation with travel agencies» was approved by a decree of the Rector order № 668/st. from 27.04.2021.
2. Term performance of thesis: from 04.05.2021 to 16.06.2021
3. Initial data required for writing the bachelor thesis: statistical data of production and business activity of aviation company "Sky Up" and tour operator "Join Up" for 2018-2020.
4. Content of the explanatory notes: General characteristics of the airline such as name of the enterprise, year of foundation, types of activity, organizational structure, geography of traffic. Statistical information on the production and financial activities of the airline, analysis of the main volume indicators of the enterprise. General characteristics of the travel agency Join Up and cooperation between the airline and the travel agency. Organization of charter flights during Covid-19. Project proposal for the organization of a passenger charter flight by Sky UP in cooperation with the travel agency Join Up. Calculation of a passenger charter flight and the efficiency of charter transportation Kyiv-Maputo-Kyiv.

5. List of mandatory graphic matters: Fleet classification in SkyUp; Comparison chart of performed flights for 2018-2019; Comparison chart of number of passengers transported by SkyUp for 2018-2019; SkyUp costs and profits for charter flights Kiev-Maputo –Kyiv; Sky Up costs, income and profit and number of passengers for 3 month for charter flight Kyiv-Maputo – Kyiv; Expenses and profits of the agency Join Up of a charter flight Kyiv-Maputo – Kyiv; Join Up costs, income and profit and number of passengers for 3 month for charter flight Kyiv-Maputo – Kyiv; Comparison of Join Ups and Sky Ups expenses, income and profit for 3 month of charter flight Kyiv-Maputo – Kyiv.

6. PLANNING CALENDAR

№	Assignment	Deadline for completion	Mark on completion
1.	Collection and processing of statistical data	04.05.2021	done
2.	Writing of the theoretical part	14.05.2021	done
3.	Writing of the analytical part	25.05.2021	done
4.	Writing of the design part	31.05.2021	done
5.	Writing of the introduction and summary	04.06.2021	done
6.	Execution of the explanatory note, graphic matters and the presentation	10.06.2021	done

7. Given date of the task: April 27, 2021.

Supervisor of the master thesis:

Yuliia V. Shevchenko

Task was accepted for completion:

Mariia Chaika

EXPLANATORY NOTE

Explanatory note to the bachelor thesis « Organization of air passenger transportation in cooperation with travel agencies »: 74 pages, 21 figures, 18 tables, 38 references.

KEYWORDS: AIRLINE, TRAVEL AGENCY; CHARTER FLIGHT, COOPERATION, EXPANSES AND PROFITS, EFFICIENCY.

Object of the bachelor thesis is activity of LLC «Sky Up Airline» with LLC «Join UP in the air transportation market»

Subject of the bachelor thesis is efficiency of organization of charter transportation

Main task of the bachelor thesis is to consider and calculate the possibility of organizing a passenger charter flight by Sky Up in cooperation with the tour operator Join UP, aimed at expanding tourist destinations in closed borders during quarantine.

Methods of analysis include the methods of system approach, analysis and synthesis of results, logical analysis, analysis of statistical information processing, as well as the methodology for calculating the performance of the flight and the cost of the passenger flight.

The sources of information were used economic literature of domestic and foreign authors, the results of economic activity of Sky Up and travel agency Join Up, statistical and accounting data, working and operational materials of state aviation authorities, statistical data of ICAO, IATA, DASU and the thesis "INTERACTION OF AVIATION AND TOURISM ENTERPRISES DURING THE COVID-19 PANDEMIC" by Chaika M.M at International scientific-practical conference «ПОЛІТ. СУЧАСНІ ПРОБЛЕМИ НАУКИ».

The relevance of the thesis is based on expanding the network of airline routes and creating a new tourist destination in closed borders to many countries.

ABBREVIATIONS

ICAO – International Civil Aviation Organization

IATA – International Air Transport Association

AOC -State Aviation Administration an Operator Certificate

EFTA -European Free Trade Association

FIATA- International Federation of Forwarders Associations

IAM-International Association of Movers

AMEU- Association of International Freight Forwarders of Ukraine

UNWTO -World Tourism Organization

MTOW- maximum take-off weight

RT- round trip

CONTENTS

INTRODUCTION.....	8
1.ANALYTICAL PART	11
1.1. General characteristics of the airline, statistical information on the production and financial activities and analysis of the main volume indicators of the Sky Up.....	12
1.2. General characteristics of the travel agency Join Up and cooperation between the airline and the travel agency	32
1.3. Organization of charter flights during Covid-19.....	35
2.DESIGN PART	40
2.1. Project proposal for the organization of a passenger charter flight by Sky UP in cooperation with the travel agency Join Up.....	41
2.2. Calculation of passenger charter flight Kyiv - Maputo-Kyiv.....	43
2.3. Calculation of the efficiency of charter transportation Kyiv (KBP) -Maputo (MPM) -Kyiv (KBP)	58
SUMMARY	66
LIST OF REFERENCES	71

INTRODUCTION

Air Transportation Management Department				NAU.21.20.90 001EN			
Done by:	<i>Mariia Chaika</i>			<i>INTRODUCTION</i>	Letter	Sheet	Sheets
Supervisor:	<i>Iryna I. Vysotska</i>					D 8	3
Standards Inspector	<i>Yuliia V. Shevchenko</i>				<i>FTML 275 OII- 403Ba</i>		
Head of the Department	<i>Shevchuk D. O.</i>						

Air transport is developing rapidly and dynamically and every year occupies a stronger position in the global transport system. The high growth rate of popularity is due to the constant expansion of the geography of travel and the steady trend of reducing travel time in favor of their frequency.

Air transportation has become an integral part of the tourism product, which leads to close cooperation between airlines and travel agencies, which involves booking seats and buying tickets through booking systems, concluding an agreement between the travel company and the airline on a quota of seats on scheduled airlines, agency agreement, organization of charter. Such cooperation is now necessary for both parties, as it allows travel companies to obtain favorable rates for the transportation of their tourists, and airlines - to increase sales of their tickets.

However, the COVID-19 pandemic has been a test of activity and, in the worst cases, a threat to the tourism and aviation business. Due to traffic restrictions and the complete cessation of passenger transport, these sectors of the economy, which are directly related to transportation, have suffered the most. With the introduction of strict quarantine measures from March to May 2020, aviation and tourism companies suffered significant losses.

Therefore, today, after a significant reduction in the number of scheduled flights, there are many charter flights for tourism, which improve the overall situation of air and travel companies. Due to the increasing demand for short-term tours, which include air transportation, one of the ways to reduce the cost of tourism products is effective commercial interaction with airlines, in which travel companies get the opportunity to transport their tourists at reduced rates. As for airlines, the organization of tourist transportation is one of the main areas of development of their activities. The volume of tourist traffic plays an important role in developing the airline's strategy for the formation of an aircraft fleet. Therefore, it can be argued that the issue of the effectiveness of interaction between travel companies and airlines is the basis for the development of air travel and requires detailed consideration.

Determining the effect and economic efficiency is important both scientifically and practically. With its help you can not only assess the efficiency of the enterprise, analyze the total effect of its various structural units and activities, but also determine the development strategy, develop a forecast and action plan for the future, establish the results of resources: means of production, labor, information. The object of the thesis is Sky Up, which is a subsidiary of tour operator Join Up. Intensive development of charter flights led to the formation of "independent" charter airlines. Therefore, a "subsidiary" Sky Up was created, which initially specialized in charter flights and later switched to scheduled flights.

An important place in the transportation of tourists is the organization and implementation of charter transportation. Charter tourist transportation is a strategic direction for the formation of the fleet of aircraft, which leads to strong competition between airlines for the right to carry out charter transportation, which is a source of significant revenue.

Features of charter transportation leave a certain imprint on commercial work on the organization of charters. First, the airline's policy in the field of charter transportation should be defined, which should be reduced to the fact that charter transportation helps to strengthen the airline's position in this market. Charter flights should complement regular flights on routes that allow regular flights of the airline and provide an opportunity to expand the geography of flights to destinations in which there are no regular flights.

The major advantage of charter flights is the opening of new tourist markets, which allow airlines to start regular passenger traffic.

In this paper is calculated and economically substantiates the choice of the Boeing 737-700 NG aircraft for implementing the charter passenger RT flight Kyiv-Maputo-Kyiv by Sky Up Airlines and the travel company Join Up. To determine correctly whether this type of work is effective and whether it is economically workable, we calculate the cost of work, enterprise income, productivity and efficiency.

1. ANALYTICAL PART

Air Transportation Management Department				NAU.21.20.90 002EN			
Done by:	<i>Mariia Chaika</i>			ANALYTICAL PART	Letter	Sheet	Sheets
Supervisor:	<i>Iryna I.Vysotska</i>					D 11	29
Standards Inspector	<i>Yuliia V. Shevchenko</i>				<i>FTML 275 OII- 403Ba</i>		
Head of the Department	<i>Shevchuk D. O.</i>						

1.1 General characteristics of the airline, statistical information on the production and financial activities and analysis of the main volume indicators of the Sky Up

IATA code is: **PQ**; ICAO code is: **SQP**.

Limited liability Company SkyUp is a private Ukrainian airline, which works on a hybrid model - performs charter flights and regular low-cost flights. An airline operates with a low-cost business model but has a standard of service that is similar to standard and legacy carriers that offer a better standard of service.

Airline performs passenger and cargo transportation in Ukraine and abroad, as well as provides logistics services for customs clearance and warehousing services.

SkyUp Airlines is owned by ACS-UKRAINE, which sells tickets and is the founder of the travel operator JoinUp. SkyUp Airlines LLC was registered in Kyiv on June 16, 2017. Airline is not state-owned property. Dmytro Syerouhov became chief executive officer in 2020.

In 2018, the airline received from the State Aviation Administration an Operator Certificate (AOC) and a TCO certificate from the European Aviation Safety Agency (EASA), which entitles the airline to fly to EASA member states - 27 EU countries and four countries that are members of the European Free Trade Association (EFTA) - Switzerland, Norway, Iceland and Liechtenstein.

The airline is an active member of international and Ukrainian associations, including FIATA (International Federation of Forwarders Associations), IAM (International Association of Movers), AMEU (Association of International Freight Forwarders of Ukraine), and has all certificates and licenses.

SkyUp Airline became a member of the U.S.-Ukraine Business Council (USUBC).

Sky UP activities are carried out based on the Certificate of the State Aviation Administration of Ukraine, which grants the right to sell air transportation, the

license of the State Agency of Ukraine for Tourism and Resorts for tour operators, accreditation of the agency in the international organization IATA. An Certificate allows airlines to sell transportation on the territory of Ukraine, issued to airlines and certifies that this the company meets all current requirements of the Ministry of Infrastructure of Ukraine. This certificate is a guarantee of reliability and creditworthiness of the airline. Accreditation in IATA allows airlines to work with any airports in the world, the hotel industry, car rental companies. If the accreditation is positive, the business entity is assigned an IATA code.

The company's head office is located in Kyiv, and the airline itself is based at Boryspil Airport (KBP), the hubs are located at Kharkiv International Airport (HRK), Lviv International Airport (LWO). The hub in Boryspil and the base in Kharkiv, opened in the first year of operation, later 2 more hubs were added with bases in Lviv and Zaporizhzhia (fig.1.1).

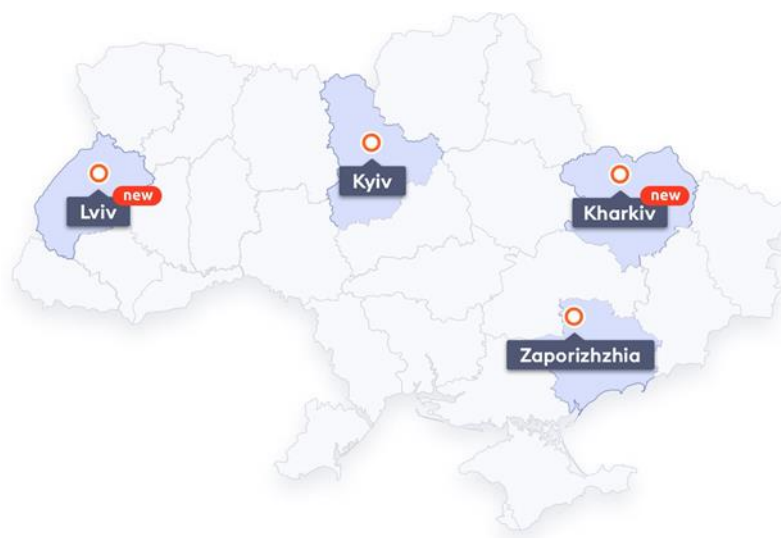


Figure 1.1 SkyUp hubs situated in Ukraine

The airline's fleet consists only of Boeing 737 aircraft. Today it has 11 aircraft, although the airline started with 2 aircraft. Starting in 2018, the airline purchased 9 more aircraft and also signed a contract with Boeing to purchase five Boeing 737 MAX worth a total of \$ 624 million. According to the terms of the contract, the

aircraft must be delivered by 2023. According to the plan, by the end of 2023 the airline will have 18 vessels.

In 2019, the low-cost airline’s fleet increased in size by 5 planes. There were then 10 medium-range Boeing aircraft in the airline’s fleet. Of these, 6 are Boeing 737-800 NG with 189 seats, 2 Boeing 737-700 NG with 149 seats, and 2 Boeing 737-900 ER with 215 seats[1].

On February 2020, a new aircraft, the Boeing 737-900ER, was received at the SkyUp Airlines hub in Boryspil with a seating capacity of 215 passengers[1].

Table 1.1

Fleet classification in SkyUp Airlines

Aircraft Type	Current	Future	Number of seats	Average Age	Total
Boeing 737	11	1		13.3	12
Boeing 737-700	2		149	18.5	2
Boeing 737-800	6		189	11.6	6
Boeing 737-900ER	3	1	215	13.1	4
Total	11	1		13.3	12



Figure 1.2 Existent fleet in SkyUp Airlines

The average age of the airline's fleet is 13.3 years. Compared to 2018, when the airline had a fleet with an average age of 8.7 years, and 2019, with an indicator of 11.5, SkyUp worsened the indicator by 2020(table 1.2).

Table 1.2

Dynamics of the age of the airline's fleet

Year	2018	2019	2020	Dynamic
Average age	8.7	11.5	13.3	+4.6

As mentioned earlier, Sky Up operates flights as well as charter flights as regular flights to major destinations of the Middle East, North Africa, Eastern and Southern Europe.

On May 21, 2018, the carrier made the first charter flight from Kyiv to Sharm el-Sheikh, and on December 27 of the same year - the first regular flight from Kyiv to Tbilisi. In 2018, SkyUp operated on 25 international and three domestic. In November 2018, tickets for regular flights on the routes: Kyiv - Odesa, and Kharkiv - Odesa went on sale. SkyUp has applied to the State Aviation Service of Ukraine for rights to several routes, including domestic from Lviv to Odesa. In 2019, SkyUp began operating domestic flights between Kyiv, Zaporizhzhia, Odesa, Kharkiv, and Lviv. In 2019, company significantly expanded its regional and international flight programme. SkyUp planes began to run between Kyiv, Zaporizhzhia, Odesa, Kharkiv, and Lviv. Almost 40 destinations were opened from Kyiv and the regions — the map of destinations expanded and included with new countries in Europe (Italy, France, Spain, Greece, Portugal, Croatia, Montenegro, Czech Republic, Austria, Albania), the Caucasus (Georgia, Armenia), the Middle East (Egypt, Israel), and South Asia (Sri Lanka)[2].

SkyUp Airlines serves 7 domestic destinations and 64 international destinations in 29 countries, as of May 2021.

Table 1.3

Systematization of flight directions by SkyUp Airlines

Airport	Country	City
Kharkiv,Lviv,Zaporizhia, Kyiv	Albania	Tirana TIA

Continuing of table 1.3

Odessa, Kyiv	Armenia	Yerevan EVN
Kharkiv,Lviv,Zaporizhia, Kyiv	Bulgaria	Burgas BOJ Varna VAR
Kyiv	Croatia	Dubrovnik DBV Pula PUY Split SPU
Kharkiv,Lviv,Zaporizhia, Kyiv	Cyprus	Larnaca LCA
Kyiv Kyiv Kyiv, Kharkiv	Czech Republic	Brno BRQ Pardubice PED Prague PRG
	Egypt	Hurghada HRG Marsa Alam RMF Sharm el-Sheikh SSH
Kyiv	Finland	Helsinki HEL Turku TKU
Kyiv	France	Lyon LYS Marseille MRS Nice NCE Paris (Beauvais)BVA
Kharkiv,Lviv,Zaporizhia, Kyiv,Odesa Kharkiv,Lviv, Kyiv,Odesa	Georgia	Batumi BUS Tbilisi TBS
	Germany	Berlin BER
Kyiv Kharkiv,Lviv,Zaporizhia, Kyiv Kyiv, Kharkiv,Lviv Kyiv	Greece	Corfu (Kerkyra) CFU Heraklion HER Rhodes RHO Zakynthos Island ZTH
Lviv	Israel	Tel Aviv TLV
Kyiv Kyiv Kyiv Kyiv Kyiv Kyiv, Lviv Kyiv, Kharkiv Kyiv	Italy	Bari BRI Bologna BLQ Catania CTA Lamezia Terme Milan (Bergamo) BGY Naples NAP Rimini RMI Rome (Fiumicino) FCO

Continuing of table 1.3

	Jordan	Amman AMM
Kyiv	Kazakhstan	Almaty ALA
Kyiv	Malta	Malta MLA
Kharkiv,Lviv,Zaporizhia, Kyiv,Odesa	Montenegro	Tivat TIV
Kyiv	Poland	Gdańsk GDN Katowice KTW Lodz LC
Kyiv	Portugal	Lisbon LIS
Kyiv	Serbia	Belgrade BEG
Kharkiv,Lviv, Kyiv	Slovakia	BratislavaBTS
Kyiv Kharkiv,Lviv,Zaporizhia, Kyiv Kyiv Kyiv	Spain	Alicante ALC Barcelona BCN Málaga AGP Palma de Mallorca Tenerife TFS
	Tanzania	Zanzibar ZNZ
Kyiv Kharkiv,Lviv,Zaporizhia, Kyiv,Odesa Kyiv	Turkey	Antalya AYT Bodrum BJV Dalaman DLM Istanbul ST Izmir ADB
	Ukraine	Kharkiv HRK Kherson KHE Kyiv KBP Lviv LWO Mykolaiv NLV Odessa ODS ZaporizhzhiaOZH
Kharkiv,Lviv, Kyiv	UAE	Dubai DXB
Kyiv	United Kingdom	London Luton
Kyiv	Uzbekistan	Tashkent TAS

Besides the already familiar SkyUp destinations such as France, Italy, Greece, Czech Republic, Georgia, Spain, Bulgaria, Cyprus, Armenia, Albania, Israel, Portugal, Slovakia, and Turkey, the airline is preparing to fly from Kyiv and regions to Poland, Germany, Denmark, Jordan, Sweden, Serbia, and the Netherlands[3].

The airline also received the right to operate charter flights to twenty-five destinations from Kiev, Lviv, Odessa, Zaporozhye and Kharkiv during the summer navigation from March 28 to October 30, 2021:

- | | |
|----------------------------------|-------------------------------------|
| Kyiv - Hurghada - Kyiv | Lviv - Sharm el-Sheikh - Lviv |
| Kyiv - Sharm el-Sheikh - Kyiv | Lviv - Antalya - Lviv |
| Kyiv - Zanzibar - Kyiv | Lviv - Bodrum - Lviv |
| Kyiv - Dubrovnik- Kyiv | Lviv - Tivat (Montenegro) - Lviv |
| Kyiv - Pula- Kyiv | Zaporozhye-Antalya- Zaporozhye |
| Kyiv - Split- Kyiv | Zaporizhia - Tivat - Zaporizhia |
| Kyiv - Monastery - Kyiv | Odessa - Sharm el- - Odessa |
| Kyiv - Bodrum - Kyiv | Odessa - Antalya - Odessa |
| Kyiv - Dalaman - Kyiv | Odessa - Tivat - Odessa |
| Kyiv - Tivat (Montenegro) - Kyiv | Kharkiv - Sharm el-Sheikh - Kharkiv |
| Kyiv - Antalya - Kyiv | Kharkiv - Antalya - Kharkiv |
| Lviv - Hurghada - Lviv | Kharkiv - Tivat - Kharkiv |



Figure 1.3 New destination during summer 2021 by SkyUp Airline

According to the constituent documents, the company's primary activity is - 51.10 Passenger air transport. Additional activities include:

- Other reservation service and related activities

- Freight air transport
- Service activities incidental to air transportation
- Other transportation support activities
- Other retail sale not in stores, stalls, or markets
- Activities of insurance agents and brokers
- Business and other management consultancy activities
- Advertising agencies

SkyUp Airlines provides air transportation of the following types of cargo:

- general;
- valuable;
- perishable products;
- dangerous;
- cargoes with large dimensions or weight;
- goods that require instant delivery in a short period of time;

In 2020, online check-in for SkyUp flights was launched. Therefore, in the cities of departure Ukraine and abroad, where the service is already working, check-in at the airport has become paid. Boryspil has its own service, which allows you to control the quality of passenger service from ticket purchase to boarding.

For greater convenience of using the services, the airline has launched a passenger balance. With its help in the personal account on the site, passengers can not only receive a promo code for discounts, gifts and promotional bonuses, but also conveniently manage the money returned for canceled flights.

To encourage travel with pets, the weight is increased, it is allowed to transport a container from 8 to 10 kg in the cabin.

Consider Branded Fares, which offers several packages from the cheapest, which includes only a transportation service and small hand luggage and an "all-inclusive" fare. Sky Up Airlines offers the purchase of economy class tickets at three rates:

1. Basic fare - not subject to return or cancellation. It has a low cost. The set includes hand luggage up to 9 kg, dimensions 55x40x20 (sum of parameters 115 cm).

2. Standard fare - includes hand luggage up to 9 kg and luggage up to 23 kg. It is possible to change the departure date with surcharge regardless of the change date (before / after departure 50USD / 80USD).

3. Flex fare - provides for cancellation of a ticket reservation for two price options, depending on the time of cancellation: before (50USD) or after departure (80USD). You can also change it to another date - before the flight this service is free, after (in case you are late for the flight) - paid (80 USD). The ticket includes hand luggage 9 kg and luggage 23 kg.

SkyUp has set the following baggage rates:

- hand luggage - free of charge for one person;
- luggage - free of charge per person in the Standart and Flex fare;
- sports equipment - 25 EUR (at the rate of the National Bank of Ukraine on the day of payment);
- small musical instruments - free of charge as hand luggage or luggage;
- large tools - 25 EUR;

The allowed number of additional seats per passenger is 4 pcs. 23 kg or 2 pcs. 32 kg each. The second luggage space for 23 kg costs 25 EUR, for 32 kg - 40 EUR.

Additionally, another piece of hand luggage with parameters of 55x40x20 cm and weighing up to 9 kg can be carried on board for \$ 30 USA.

The airline offers pets in the cabin for an additional fee. You pay online in less than 24 hours, the cost will be 40 EUR, and when paying at the airport - 50 EUR.

One of the "classic" services of most carriers, not only budget, there is a choice of seats in the cabin. The passenger is offered the opportunity to choose a seat in the cabin for a certain price, which best suits their preferences. A pre-flight catering service is also available.

Another service inherent in all low-cost is paid check-in at the airport. The preliminary self-registration of passengers on the site is free. Instead, if a passenger

forgets or does not want to check-in at the airport, an additional fee of 21 EUR is imposed. This fee is aimed at encouraging passengers to self-check-in on the site and reduce the cost of the airline to attract additional staff of handling companies and speed up boarding.

Like all other budget companies, SkyUp sells basic economy fares on a non-refundable basis, without the possibility of changing the flight date or making changes to the ticket. For changes or clarifications in the ticket (if necessary, change a few letters, not the name in full or in case of more than 3 mistakes in the passport number, its validity, date of birth) is also charged an additional fee of 45 10 EUR.

Another additional service is "Escorting of a minor". According to the law, children from 5 to 14 years old can travel to Ukraine on their own, from 5 to 16 years old in international destinations. In order for a child to travel independently, it is necessary to register the service "Accompaniment of a minor child". Its cost is 50 EUR (the cost is the same for registration online or directly at the airport).

Among the commission services provided by Sky Up, there is an offer from HighPass, which offers passengers the following services: VIP service at airports is a separate terminal where a personal assistant will take care of pre-flight / post-flight procedures and organize a comfortable stay: draw up documents, register luggage , as well as offer delicious food and drinks. VIP service also means separate security control and passport control without queues, personal transfer between the terminal and the aircraft, as well as dedicated parking.

Fast track / Meet & greet. This service allows passengers not to waste extra time and avoid queues during mandatory procedures, baggage clearance and check-in. With this service, you will easily go through all the necessary procedures, and if you send a child or parent on a trip, you will be calm for them. The assistant will help to pass pre-flight or post-flight procedures as quickly and smoothly as possible.

Business lounge. Some premium areas are located in the departure halls of airports. The perfect place to relax, have a variety of drinks, enjoy gourmet food, or work in a comfortable atmosphere.

Table 1.4

Service provided by SkyUp

Service name	Service description	The cost of the service	
		Online	At the airport
Transportation of animals in the cabin	Only cats or dogs Maximum weight - 10 kg (together with container) Parameter parameters - 50x40x20 cm Maximum 4 containers per aircraft	40 EUR	50 EUR
Transportation animals in luggage compartment	Maximum weight - 23 kg (together with container)	80 EUR	100 EUR
Escorting of a minor child	Age from 5 to 16 years on international flights Age from 5 to 14 years on domestic flights	50 EUR	50 EUR
Additional unit of checked baggage, up to 32 kg	Maximum weight - 32 kg Parameters - no more than 158 cm in the sum of three measurements	40 EUR	-
Oversized luggage	The sum of three parameters from 159 to 330 cm	40 EUR	60 EUR
Sport equipment	Maximum weight - 23 kg Parameters - no more than 330 cm in the sum of three dimensions	25 EUR	50 EUR
Excess of checked baggage, 1 kg	If checked baggage exceeds 23 kg for every extra kilogram The maximum weight for one piece - 32 kg	-	5 EUR
Extra hand baggage	1 pcs – 5 kg Maximum size 55x40x20 cm		25 EUR

Continuing of table 1.4

Hand luggage delivery on board (DAA, delivery at aircraft)	1 piece up to 10 kg, the sum of the parameters up to 158 cm The passenger delivers luggage to the ladder and receives it upon arrival near the plane	25 EUR	50 EUR
Seats zone A	The 1st row Emergency row	15 EUR	15 EUR
Seats zone B	Rows 2 – 4	10 EUR	10 EUR
Seats zone C	Rows 5 – 12	7 EUR	-
Seats zone D	Other rows	5 EUR	-
Extra passenger seat	A spare seat near the passenger (when buying 2 seats next to each other when booking tickets) With a minimum of 5 spare seats on the flight (the condition concerns the purchase of the service at the airport)	ticket price	100 EUR
Extra seat for cabin baggage	Maximum dimensions - 40x55x115 cm Maximum weight - 75 kg	ticket price	GoShow tariff
Passenger check-in at airport	Free of charge at airports, on departure from which there is no online check-in available Paid at airports, on departure from which online check-in is possible	free	21 EUR

The Sky Up provides basic services as in most airlines in Ukraine like Wind Rose and UIA.

Statistical information on the production and financial activities of the airline

One of the important indicators of the airline's activity is the financial, the first of which is the income, which is divided into aviation and non-aviation.

The concept of "economic efficiency of the airline" implies an economically independent and stable state of the company, which constantly interacts with other actors in the air transport process, carrying out certain volumes of commercial and technical operations, guided by a system of economic indicators that determine this effective state.

There are several important aspects to consider when examining the results of the table. The first is that the airline is quite young, operating for just over three years. Moreover, the fact that in the second year of operation in 2019 the carrier managed to complete the year with a positive result is evidence of effective management and a successful start time. Unfortunately, the success of 2019 could not continue due to the Covid-19 pandemic.

All major financial and economic indicators show an extraordinary growth dynamics in 2019. The reason is the active development of the company, a significant increase in the number of aircraft, the opening of a significant number of new routes in the regular and charter program. The airline tries to follow its mission "To make Ukraine a traveling nation" and actively develops its presence not only in the capital, but also by opening new destinations from the regions of Ukraine (Lviv, Kharkiv, Zaporizhia, Odesa and others), and even trying to develop the culture of domestic transportation.

Incomes and expenses from the main activity of the LLC "SkyUp Airlines" are presented in the table 1.1.5 for 2018-2020.

Table 1.5

Incomes and expenses from the main activity of the LLC "SkyUp Airlines" for 2018-2020, thousand UAH

Indicator	2018	2019	2020	2020/2018%	2020/2019%
Income	111 071 040	156 888 000	133 979 520	+17.1%	-17.1%
Expenses	98 042 220	138 887 000	236 929 220	-58.62%	-41.38%

From this table it is clear that revenues in 2019 increased significantly, because of the expansion of the aircraft fleet and active low-cost activities. The increase in costs is because of an increase in fuel prices, aircraft maintenance prices, payroll, insurance premiums, and there is an increase in costs for modernization and maintenance of the infrastructure of Sky UP.

In 2020, we see a significant decline in revenues due to the number of traffic in the first half of the year, thanks to charter flights, the airline could stay afloat and keep maximum staff. Therefore, the expenses rise due to an increase in the payroll, insurance premium rates.

In comparison with the first year in 2020, the company increased its profit by 17.1%, and compared to 2019, which became the most profitable, it lost 17.1%.

You can also see that in 2020 the costs exceeded the profits by almost 2 times due to the inability to fly. During the quarantine, crews worked only on non-scheduled commercial special flights and cargo flights. Therefore, less crew was involved in the flights. The airline's staff grew from about 450 in May 2019 to more than 800 professionals in May 2020. The use of employees was one of the key tasks, although the inability to work at full strength forced the company to reduce staff in May. However, the airline was eventually able not only to return all employees, but also to increase the number of jobs. As of January 1, 2021, the airline had 856 employees.

SkyUp's loss at the end of August was \$ 30 million, of which \$ 18 million was lost by June. This amount clearly includes the cost and maintenance of aircraft. Renting one plane costs \$ 300,000.

Analysis of the main volume indicators of the enterprise

Another important indicator of the airline's activity is the volume indicators of the enterprise, which includes the number of flights performed with the division into domestic and international, passenger and cargo; the volume of passenger, structure of performed flights and volume of transportations by regions and directions.

In 2018, SkyUp performed 5,203 flights and carried 870,000 passengers: 696,000 charter and regular 174,000. In 2018, SkyUp operated on 25 international routes: charter - 4058, regular - 941 and three domestic routes: 204.

In 2019, traffic volumes doubled compared to the previous year. There were 10,940 flights: charter-8752, scheduled and carried 1,721,221 passengers.

In 2020, SkyUp operated 8 745(2845 evacuation and special during first half of 2020) flights and carried 1,250,792 passengers.

At the beginning of 2020, the fleet was doubled compared to 2019, however, due to the pandemic, the company did not reach even half of the passenger traffic planned for 2020.

Table 1.6

Number of performed flights for 2018-2020 by SkyUp Airlines

	2018	2019	2020
Flights(total)	5 203	10 940	8 745
charter	4058	8752	4 123
regular	941	2 188	1 748

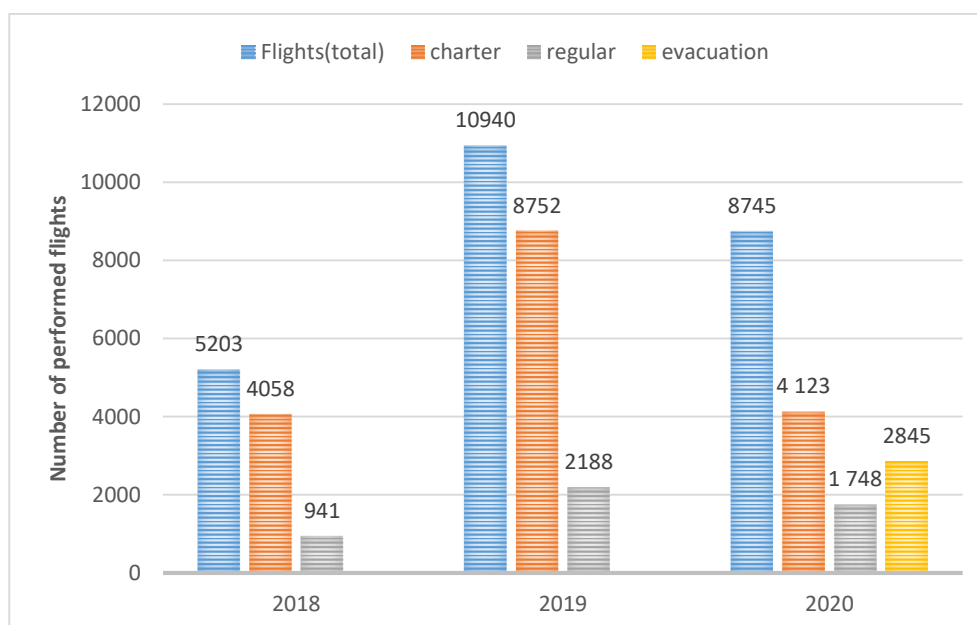


Fig. 1.4 Comparison chart of performed flights for 2018-2019

In 2018, the airline carried about 442,000 passengers, which is four times less than in 2019. Due to the fact that in 2019 it served 1,709 million passengers. Also on regular domestic flights, 71,147 passengers were transported on 607 flights within Ukraine with an average seat occupancy rate of 63 percent. About 1.638

million passengers - made 11,591 international flights, where the load rate reached 89 percent.

In 2020, the figure dropped to 1,250,792 passengers. In the first six months of 2020, SkyUp carried 551,623 passengers, including 368,000 passengers on charter flights. However, in the second half, the figures began to improve due to charter traffic 699,169.

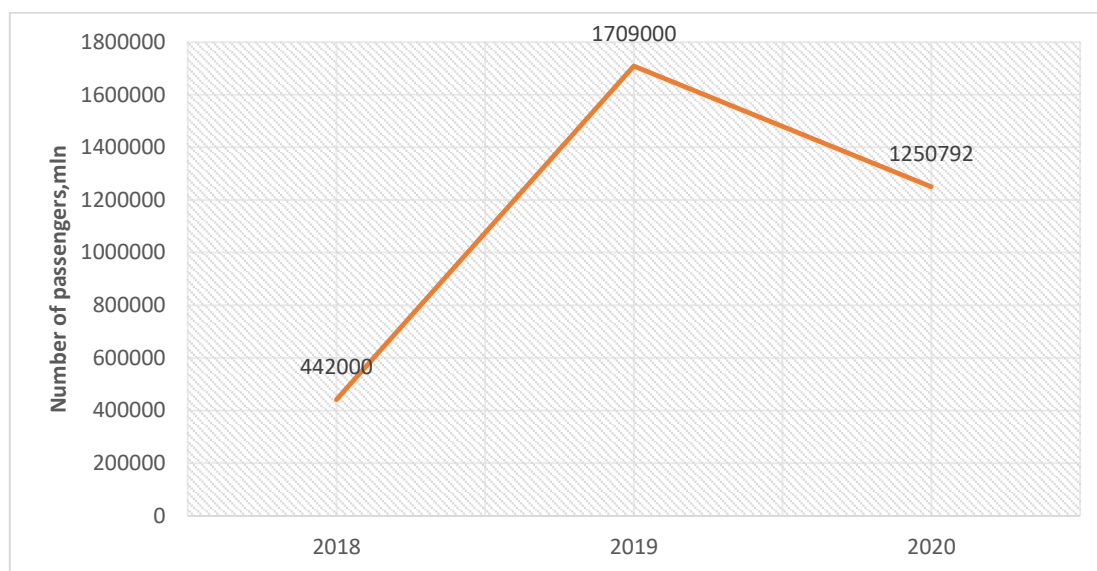


Fig. 1.5 Comparison chart of number of passengers(mln) transported by SkyUp for 2018-2019

And now let's look at the statistics by 10 airlines by the number of flights performed in the airspace of Ukraine in 2020: Turk Hava Mollari A.O. (Turkey) - 14,623 flights, Ukraine International Airlines (Ukraine) - 14,406 flights, Aviakompaniya Belavia (Belarus) - 10,644 flights, Wizz Air Hungary Ltd (Hungary) - 9,151 flights, Wind Rose Aviation Company (Ukraine) - 8,511 flights, Skyup Airlines LLC (Ukraine) - 8,434 flights, LOT Polish Airlines (Poland) - 6,260 flights, Ryanair LTD (Ireland) - 5,965 flights, Azur Air Ukraine Airlines LLC (Ukraine) - 4,663 flights, Pegasus Hava Tasimaciligi AS (Turkey) - 3,446 flights[4].

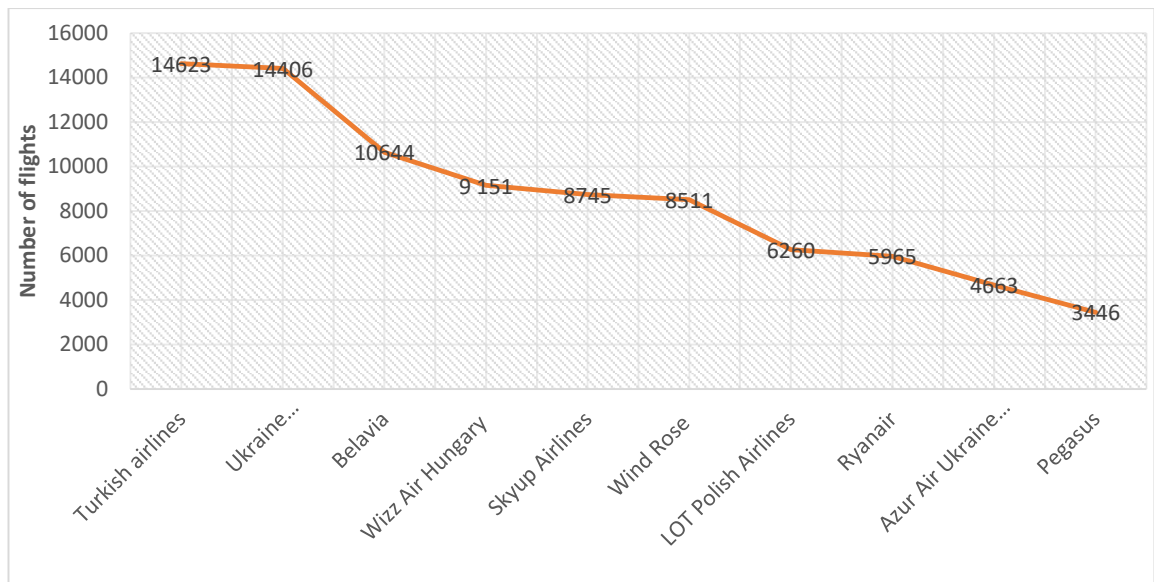


Fig. 1.6 Number of flights performed in 2020 by 10 airlines in Ukraine

We can see that the Sky Up does not occupy a leading position in the number of flights and is among such companies as Wind Rose and Wizz Air.

The most popular cities in 2018 included Sharm el-Sheikh (Egypt), Antalya (Turkey), Hurghada (Egypt), Batumi (Georgia), and Tirana (Albania). The most popular destinations for 2019 regular flights were Barcelona, Tbilisi, and Batumi. And charters most often flew to Sharm el-Sheikh, Hurghada, Antalya.

Tbilisi, Barcelona, Batumi, Larnaca, and Alicante are among the five most popular destinations for 2020 scheduled flights. Charters most often flew to Sharm el-Sheikh, Hurghada, Monastir, Antalya, and Tivat.

Therefore, for three years of work the most popular directions are (table 1.7):

Table 1.7

The most popular directions for 2018-2019 in division for charter and regular flights by SkyUp

Charter flights	Regular flights
Sharm el-Sheikh	Barcelona
Hurghada	Batumi (Georgia)
Antalya	Tbilisi

Charter flights for the airline are much cheaper than regular ones, because the airline operates a regular flight even with minimal ticket sales, and with a charter the tour operator fully buys seats on the plane. Although regular flights to international

destinations are 100 percent full, regular domestic flights are only about 60 percent. In addition, a problem of rather high prices on domestic flights is 20% VAT, excise duty on fuel.

In March, SkyUp Airlines developed a new type of transportation- freight. The airline was preparing to perform freight before introducing quarantine restrictions. SkyUp has received a permit for the carriage of goods and a license for the carriage of dangerous goods, as well as the re-equipment of passenger aircraft under the recommendations and instructions of the manufacturer and the competent authorities.

During peak hours, the number of reconfigured aircraft reached nine. As of June 2020, 5 of them returned to the "passenger" configuration. However, the airline does not plan to abandon freight transportation as one of its activities.

In April and May, the airline carried 1,096 tons of cargo on 11 flights. The major cities of departure were the cities of China, and the key transit points were the airports of Almaty and Boryspil. It was mainly medical cargo from China for customers from Ukraine and European countries.

To properly assess the airline, it will be advisable to consider the business's strengths and weaknesses, opportunities, and threats in the market. To do this, use SWOT analysis.

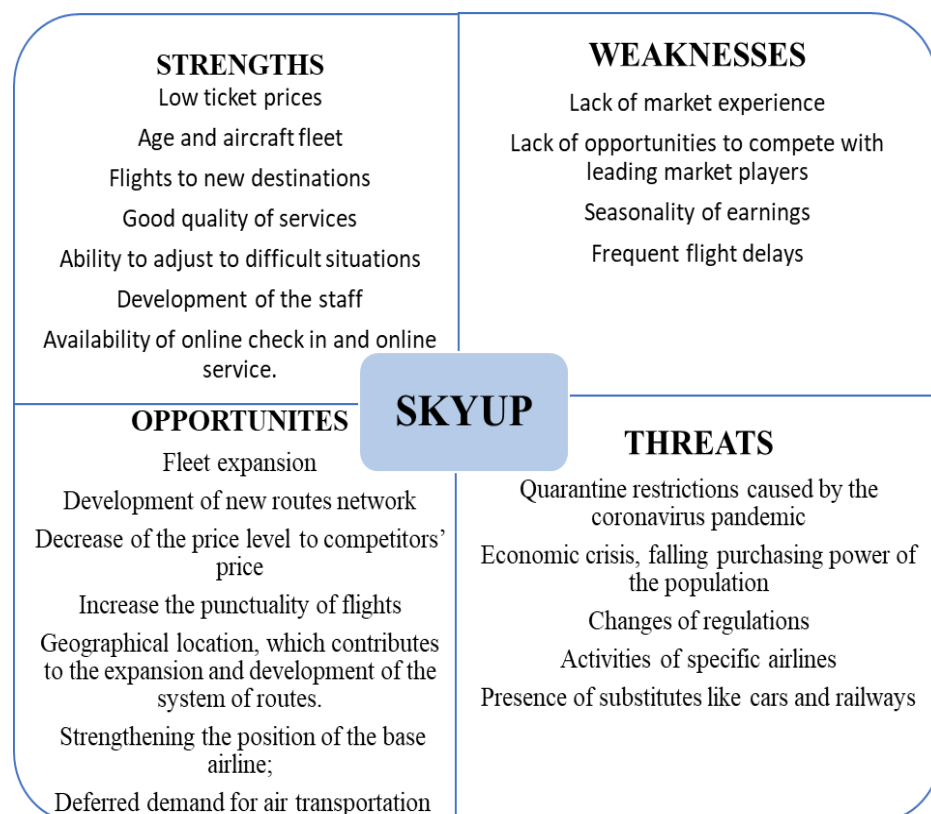


Fig. 1.7 SWOT analysis of the Sky Up Airlines

STRENGTHS

Low ticket prices. After analyzing the prices among the best players in this market segment, we found that SkyUp Airlines is a very competitive ticket price, which drops to 1.3 UAH per km, which leads to travelers.

The age of aircraft and fleet. The company is new, fast developing a player in the market, it has a wide fleet of new aircraft. More importantly, it has a "fleet family", which means that more aircraft are of the same type, which can reduce the cost of training and retraining workers and the additional cost of other maintenance.

Involving people in domestic and international tourism. Inexpensive company SkyUp opens many new international directions for travelers from Ukraine and creating many domestic routes, expanding hubs mapping in Ukrainian airports.

Good quality of services. The quality of services at the airline is determined by comfort and safety with help. Proof of the level of comfort can be thin seats of the British brand Acro and the distance between the rows on board aircraft (SkyUp Airlines has a larger gap between the rows than competitors). The airline also equipped all its aircraft with bifurcated wing extensions - Split Scimitar winglets. This innovative modification improves aircraft aerodynamics and saves fuel. In a year, an aircraft with such winglets saves 225,000 liters of fuel and reduces carbon emissions by 586 tons. Other indicators, such as safety and regularity of flights of the Ukrainian low-cost carrier (SkyUp), are at the level of leading airlines.

Ability to adjust to difficult situations. In the start of Covid-19 SkyUp Airline developed a freight transportation. SkyUp has received a permit for the carriage of goods and a license for the carriage of dangerous goods, as well as the re-equipment of passenger aircraft under the recommendations and instructions of the manufacturer and the competent authorities.

Development of the staff. The goal of the airline is to expand the team. It is also planned to invest in staff, to invite high-class specialists who have experience in the world's leading companies to develop SkyUp and Ukrainian tourism.

Availability of online check in and online service.

WEAKNESSES

Lack of market experience. SkyUp is a relatively young company, compared to other airlines, and it certainly has less experience in dealing with day-to-day operational problems, so it sometimes loses due to lack of operational experience and knowledge of the business environment.

Lack of opportunities to compete with leading market players. In addition, the company is only in the early stages of its development, therefore, it is difficult to compete with experienced and much larger companies.

Seasonality of earnings. Passengers of SkyUp prefer charter flights.

Frequent flight delays.

OPPORTUNITIES

Development of new routes network. As stated earlier, SkyUp airline needs to extend the list of routes to cover more and more destinations around the globe to offer customers new flights.

Fleet expansion. The expansion of the existing fleet can achieve the extension of travel destinations. A greater number of aircrafts will allow broadening business operations. In addition, the company may consider the purchase of wide-body aircraft to perform charter flights for long-distance trips.

Decrease of the price level to competitors' price. Ukrainian low-cost carrier should seek to achieve even more competitive price levels than it already establishes.

Increase the punctuality of flights. Geographical location, which contributes to the expansion and development of the system of routes.

Strengthening the position of the base airline (increasing the volume of traffic and connecting flights);

Deferred demand for air transportation, which will be satisfied after the improvement of the situation in the country.

THREATS

Changes of regulations. The airline industry is among the most volatile industries in terms of the frequency of changes in the regulatory framework that establishes and enables conditions of the business environment for many specialized companies, including airlines. Such changes may include reconsideration of common tariffs and fees, charged by airports, limitation of certain routes to fly through or even the development of new standards or requirements necessary to conduct business.

Presence of substitutes like cars and railways. Although SkyUp is an international carrier, it operates on the domestic market as well. In this subsegment of its operations, competition with another mode of transportation—trains—exists. Prices for domestic flights should be at least somehow comparable to those set by travel-by-train providers.

Activities of specific airlines (MAY, WIZZAIR, RYANAIR).

Economic crisis, falling purchasing power of the population.

Quarantine restrictions caused by the coronavirus pandemic.

1.2. General characteristics of the travel agency Join Up and cooperation between the airline and the travel agency

Join UP is a limited liability company founded in Ukraine as a travel agency in 2001. Company has IATA accreditation since 2002. The travel company was founded in 2009 as a core operator in the UAE, Thailand and the Dominican Republic.

Head office Join UP! located in Kiev. Also, the company has branches in Zaporizhia, Kharkiv, Odessa, Dnipro and Lviv.

The founders of the company are Global Travel Holding LTD (UK) - 48% and ACS-Ukraine LLC (Ukraine) - 52%. Final beneficial owners: Tatiana Alba, Yuriy Alba, Alexander Alba. The general director of the company is Dmitry Seroukhov. Join UP has a subsidiary airline Sky Up.

In 2014, the company entered the markets of Moldova and Azerbaijan and opened its representative offices in Chisinau and Baku.

The team has more than 600 people, and the partner network in Ukraine has 19 own agencies, 121 franchise agencies and almost 7,300 partner agencies.

The tour operator is multidisciplinary, can organize any type of recreation on individual or corporate request. The company focuses on: Welcome to Europe (Mediterranean and classical Europe), Exotic Mood (exotic countries from Mexico to Bali), Arabian world (Arab world).

In total, the company can offer more than 60 destinations for travel to different parts of the world. It is the founder and organizer of the annual tourist event INSIDE TRAVEL INDUSTRY, aimed at developing the tourism industry of Ukraine.

The company's share in the outbound tourism market among tour operators is about 30%, according to the Ministry of Economic Development.

Statistics Join UP! for 2019 shows that the majority of adult travelers are women. Of the 1,015,475 tourists who used the services of a tour operator, their number was about 45%. The share of adult male travelers is over 33%, and travelers under the age of 18 of both sexes are 22%. Most travelers Join UP! in 2019 - middle-aged people (30-55 years). 51% of such tourists. The number of travelers aged 18-30 was 20%, and older 55 - 7%. The most popular countries for traveling with children are Egypt, Turkey and Spain.

Among tour operators, JoinUp ranks first (35.76%). Affordable prices and an extensive flight program - these two points helped him become a sales leader. Anex

Tour (22.96%), the main advantages of which are available Egypt and the UAE and charter programs follow it to exotic countries. In addition, the bronze goes to TUI, which showed excellent results in the summer season. Compass (formerly GTO), which has just entered the market, takes the fourth place - an excellent figure for the first year of operation. Golden middle of the rating: Coral, TPG, TezTour, Pegas. Tour operators Alf (1.43%) and Mouzenidis (0.55%) are specialists in summer destinations, namely the Adriatic and Greece.

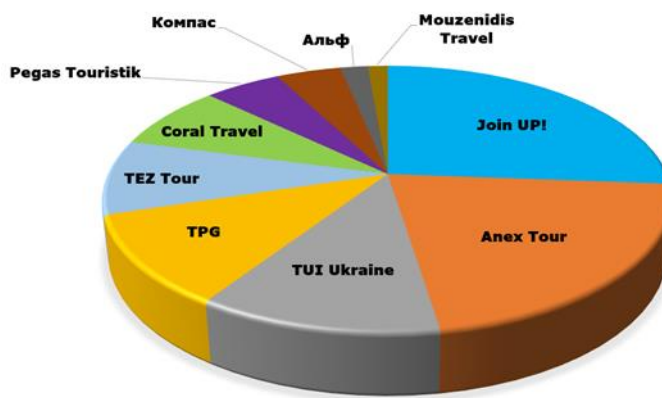


Figure 1.8 Comparison of Join Up with other operators in number of flights for 2018-2020[5]

The UATA Association investigated the factors that are important in the transportation of passengers by travel agencies. Tour operators were evaluated on seven criteria in terms of convenience for the tourist. Join UP! has not the best figure of 3.59 and took 8th place.

Table 1.8

Estimation of the factors in the transportation of passengers by Join UP

Indicator	Adherence to the stated charter program	Transfer and delay of flights	Confirmation of orders	Guarantee of the best price for early booking	Loyalty in resolving disputes	The average result
Score	3.59	3.15	3.99	3.50	3.54	3.59

Tour operators were also evaluated for the convenience of cooperation for the agent. Join Up took 1st place in terms of performance among 11 operators and received an overall score of 4.09. The best indicator for invoicing-4.55, non-use of promotional prices 4.51, and convenience and quality of the tour operator's website-

4.49. Tour operators received the worst marks for the work of the hotline and loyalty in resolving controversial issues, which were much higher than usual this season.

Table 1.9

Factors for the convenience of cooperation for the agent with Join UP

The commission program	Site	Relevance of prices	Not use promo price	Hidden payments (flight supplement, fuel fee)	Confirmation of orders	Evaluation of the work of the hotline	Loyalty in resolving controversial issues	Terms of payment for early booking	Invoking	Overall assessment
4.02	4.49	4.13	4.51	3.87	3.99	3.82	3.54	3.97	4.55	4.09

The impact of coronavirus on tourism activities in the context of partnerships has played an important role. Therefore, consider the evaluation of the work of tour operators in the period of COVID-19, namely the clarity of action, loyalty.

Table 1.10

Evaluation of the work of tour operators in the period of COVID-19

Tour operator	Assessment the work during COVID-19
Pegas Touristik	4.01
TEZ Tour	3.99
Феєрія Мандрів	3.84
Compas	3.83
Anex tour	3.82
Join Up	3.80
ALF	3.73
Coral Travel	3.60

Join Up received not the best figure of 3.80 and took 6th place among others. Based on the above, we can conclude that the survey on the best tour operator without analysis of specific parameters is unrepresentative. The presence of such parameters improves the quality of the results but is not a 100% guarantee of the objectivity of the results.

The main carrier for Join Up is SkyUp, which, in addition to performing regular flights, performs 70-80% of the required flight program for the tour operator, since the airline must initially provide services for the tour operator. The efficiency of its own airline for Join Up has become one hundred percent successful. Join UP! occupies a leading position in the most popular destinations.

Join Up with Sky Up flew 4,058 flights in 2018, 8,752 flights in 2019, and only 4,123 in 2020 on major destinations such as Egypt, Spain, Italy, Montenegro, Bulgaria, Cyprus, Tunisia, Georgia, Sri Lanka and ranks third in popularity - Turkey.

In 2019, 1,015,475 tourists entrusted their vacation to the Ukrainian tour operator Join UP!. This is 11% more than in 2018. Then 903,060 people used the services of a tour operator.

According to Join UP!, the top five most popular destinations in 2019 included Egypt, Turkey, Spain, the UAE and Cyprus. A year earlier, Bulgaria was third and Ukraine was fourth. Spain has closed the top five destinations for leisure. In 2019, Ukraine moved to seventh place, losing two positions to Cyprus and the UAE. This indicates a decrease in interest in domestic tourism among Ukrainian citizens in favor of recreation abroad.

1.3. Organization of charter flights during Covid-19

Global tourism suffered its worst year on record in 2020, with international arrivals dropping by 74% according to the latest data from the World Tourism Organization (UNWTO). Destinations worldwide welcomed 1 billion fewer international arrivals in 2020 than in the previous year, due to an unprecedented fall in demand and widespread travel restrictions[7]. This compares with the 4% decline recorded during the 2009 global economic crisis.

From March 20 to May 2020, SkyUp Airlines suspended all flights due to the decision of the Cabinet of Ministers of Ukraine to restrict passenger traffic in Ukraine to prevent the spread of coronavirus infection. But the airline carried out evacuation flights to allow Ukrainians and foreigners to return home.

During 9 days, from March 19 to 27, 2020, SkyUp Airlines made about 100 flights to 30 countries and involved all the airline's aircraft. In total, during this time, the airline carried about 20.8 thousand passengers, including more than 18.5 thousand - these are those who returned to Ukraine, the number of foreign nationals who returned home from Ukraine 2.1 thousand people. Organizing the current flights

was also a difficult task. Part of society saw the threat of Ukrainians returning home because of the high risk of the infection spreading quickly and blamed the airline. The airline organized special flights for the export of Ukrainian citizens from abroad with its own resources. The cost of tickets was set at the lowest fare that the airline could apply to at least reimburse the cost of flights.

SkyUP based prices for special flights for the return of Ukrainians from abroad on the following principle: all special flights can be divided according to performed flights time: up to 2 hours; up to 3 hours; up to 4 hours; over 4 hours. The average cost of the company for one round trip (round trip) - starts from 20,000 euros. More about how the value was formed:

Airport fees and taxes - they vary depending on the destination. For example, in Frankfurt it is 60.6 US dollars, in Munich - 49 dollars, in Tbilisi - 30.9 US dollars; The cost of fuel required for a round trip. Passenger service at airports and ground handling aircraft by the company.

If to take a certain cost of the ticket, subtract the amount of airport tax, taxes, and handling services, multiply this figure by the number of passengers on the flight, then we come to the net cost of a round trip. SkyUp does not perform them at its own expense but does not make money on it.

The geography of expanded: more flights were to European countries: Poland, Austria, the Czech Republic, Italy, Spain, France, Great Britain, Lithuania, Germany, Switzerland, Croatia, Estonia, to the Middle East and the Caucasus, as well as several long-haul flights to Kazakhstan, India, Sri Lanka and the Maldives. [8]

The resumption of air traffic - and rapid and very active - should be expected due to the delayed demand for tourist destinations. The main salvation was charter transportation with tour operators. Both full-fledged vacation trips and short-term weekend trips will be in demand.

Sky Up has introduced a new model of City Break transportation in Ukraine. CityBreak is a format of travel for 2-3 days. Flight and hotel at a special package price - this is an opportunity to escape for a few days to another city. This is a flash vacation 50 minutes away. Weekend tours in Europe extend to the following areas:

Kyiv - Istanbul

Kyiv - Dubai

Kyiv - Batumi

Kyiv - Tbilisi

Kyiv - Belgrade

City Breaks are also sold on the Turkish market for flights from Istanbul to Kiev or Odessa. No one had previously tried to bring Turkish tourists on a city break to Ukraine.

In 2020, Ukrainians traveled to Turkey even more than before the pandemic. However, in general, as expected, this year ended in a significant decline: the services of tour operator Join UP! 449.35 thousand travelers (including 427.9 thousand tourists from Ukraine) took advantage, which is almost twice less than a year earlier (1.015 million in 2019). The number of proposals also decreased: If in 2019, Ukrainians could choose among 50 areas, in 2020 only among 13. The first two months of the year were the most active - before the introduction of quarantine restrictions. Thus, in January, 82.8 thousand Ukrainians traveled, and in February - 73.9 thousand. We managed to get closer to these figures only in August - then 71.3 thousand tourists went on vacation. If to compare with the pre-quarantine period, then in July on charter flights SkyUp reached 50% of the load. Not by aircraft occupancy, but by the number of flights performed per month. If to look at the first days of August, the number of flights per day is very close to that which was before the quarantine.

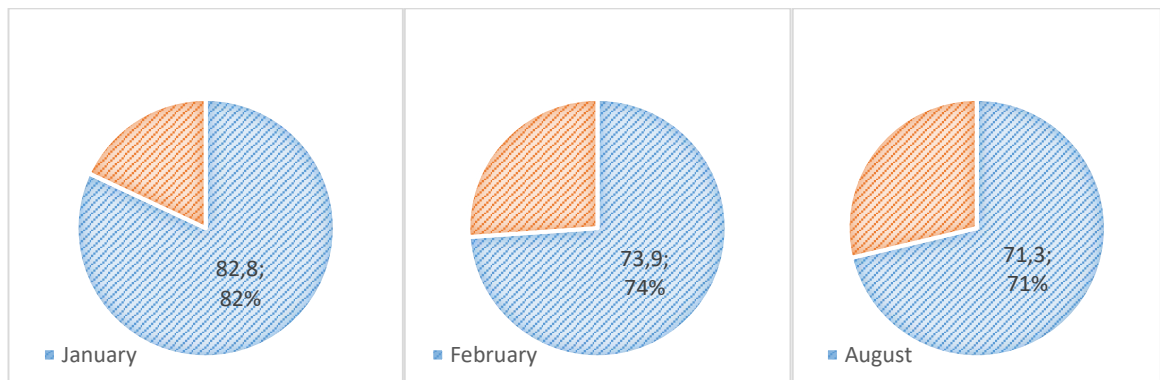


Figure 1.9 Top 3 months by number of flights in 2020

Strict travel restrictions to many countries have affected the popularity of destinations. Thus, in 2020, the list of TOP-5 countries where Ukrainians went to rest looks like this:

- Egypt - 272.9 thousand tourists
- Turkey - 93 thousand tourists
- UAE - 11.2 thousand tourists
- Montenegro - 8.03 thousand tourists
- Ukraine - 6.9 thousand tourists

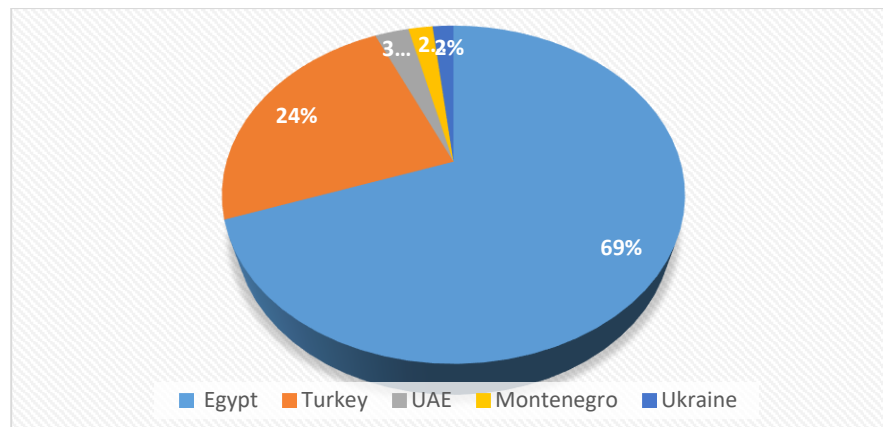


Figure 1.10 Top 5 countries in 2020 by number of tourists travelled by SkyUp and Join Up

Interestingly, the first two positions remained unchanged, and the number of trips to Turkey even increased: 93 thousand tourists in 2020 against 88 thousand in 2019. Travel to Egypt (272.9 thousand in 2020 against 665, 9 thousand in 2019), although they fell, but still remain a top priority for Ukrainian tourists.

Due to the closed borders, the demand for travel within the country has grown significantly again. Yes, Ukraine has returned to the TOP-5 most popular countries, although a year earlier it occupied only the seventh place.

Because the rules for crossing the border of a country changed quite often, the tourists had to decide more quickly whether to go on tour or not. If in 2019 travel was most often booked in 27 days, in 2020 the decision-making process was reduced to 13 days.

The process of early bookings for 2021 is already underway, which testifies to the cautious but positive mood of Ukrainians. Most tours are currently planned to Egypt, Turkey and Tanzania. A flight to Zanzibar is more of a tour operator's product than an airline's. For the airline, this is an opportunity to fly at least somewhere open.[9]

Thus, according to the flight programs published at the end of February-beginning of March, tour operators plan to operate 326 flights to Turkey from 9 cities of Ukraine. For comparison, in 2019 in the same period only 201 flights were announced in the same period, we record a growth of 62%.

Four airlines shared all charter programs:

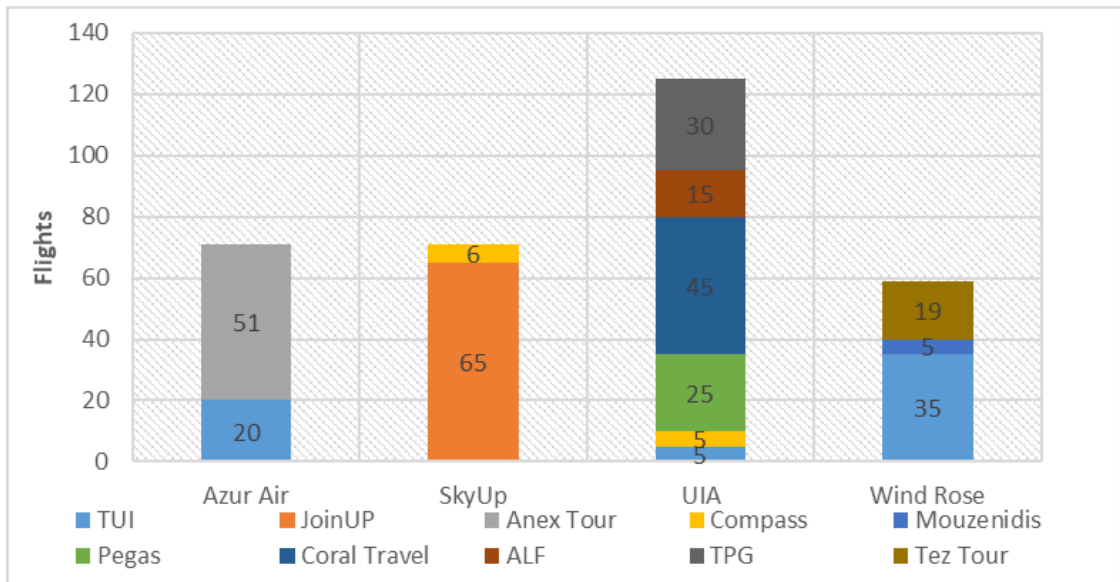


Figure 1.11 Distribution of airlines with tour operators by charter destinations for 2021

Most flights were announced on board UIA - 125 flights, the second place was shared by Azur Air and SkyUp! (71 flights each). The Wind Rose has the remaining 59 flights. As we can see, tour operators expect a significant increase in demand because of fewer destinations open to Ukrainians[10]

2. DESIGN PART

Air Transportation Management Department				NAU.21.20.90 003EN			
Done by:	<i>Mariia Chaika</i>			<i>DESIGN PART</i>	Letter	Sheet	Sheets
Supervisor:	<i>Iryna I.Vysotska</i>					D 40	26
Standards Inspector	<i>Yuliia V. Shevchenko</i>				<i>FTML 275 OII- 403Ba</i>		
Head of the Department	<i>Shevchuk D. O.</i>						

2.1. Project proposal for the organization of a passenger charter flight by Sky UP in cooperation with the travel agency Join Up

The realities of today dictate their rules for transportation. Gradually, the state of air traffic returns to normal, but charter flights have become a lifeline for airlines. Due to the closed borders, charter programs to Turkey and Egypt saved the situation. These are very popular destinations among Ukrainians during the pandemic. Despite the crisis year, neither Egypt nor Turkey closed or reduced the number of flights or canceled them. These countries have chosen tourism, learned to live, and conduct tourism business during the pandemic. Ukrainians also did not refuse to rest by the sea in these countries.

The most attractive thing about charter flights is the price. This explains the popularity of holidays in Turkey, Egypt - charter flights make these tourist destinations available to all groups of tourists. On short routes, the price may be lower than the cost of a regular flight. Tour operators reduce ticket prices a few days before the flight date.

Buying tickets for a charter flight is a rare and the only chance to fly where regular flights do not fly. No transplants will save extra money; it is possible to re-register for another person on another flight with no problems if the passenger's plans have changed.

After analyzing the current volume of passenger and freight services provided by the airline, we can conclude that it is fairly high. The key factor that shows a high quality of the airline in modern conditions is the growing share of its activities in the Ukrainian and international passenger market, increasing the number of flights and, as a result, increasing the level of income and profits of the airline.

Currently, the charter market in Ukraine is in demand because of the pandemic situation and the cancellation of most scheduled flights, so thanks to tour operators, airlines can increase traffic. Realizing this, Sky Up, together with its subsidiary

travel company Join Up, is actively developing this area of its business, adding new directions and developing a network of routes.

There is a significant increase in passenger traffic to countries such as Turkey, Egypt, and new destinations to Tunisia and Zanzibar.

Join Up LLC has adapted to the quarantine restrictions of popular tourist countries and closed borders, and in 2020 opened new flights to Zanzibar. Zanzibar is currently opening borders for Ukrainians and minimizing border crossing requirements, namely the flight from SkyUp on the route Kyiv - Luxor (technical landing) - Zanzibar does not require PCR testing to enter. However, upon arrival in the country, the airport will need to get a visa. It costs \$ 50 per person. The visa is valid for 90 days.

Focusing on such flights, the demand for charter flights to the African continent has increased due to a few quarantine restrictions. Join Up LLC plans to organize flights to another African country - Mozambique. The flight does not require PCR testing for entry, but only a visa and insurance. Currently, no tour operator offers tours to Mozambique, so Join Up will have no competitors. Also, no airline operates direct flights to the country, but only with transfers. Flights with 2 or more transfers from Kyiv can offer UIA, Turkish Airlines, Lufthansa. Therefore, Join Up plans to conduct a contract with Sky Up for a charter flight to Zanzibar.

A holiday in Mozambique is an immersion in the East African culture, which reflects the traditions and life of the local population. Mozambique is one of the oldest nations on the planet, existing for over 2,000,000 years. It combines Portuguese traditions, African flavor, famous sights, and beautiful nature. The capital of Mozambique is a city of contrasts, national parks, and magnificent beaches, which particularly interests tourists from around the world.

Therefore, in the second part of the diploma project, we will consider opening a new flight Kyiv-Maputo-Kyiv, calculating how effective this flight will be for the airline, and forecasting the dynamics of the airline's financial and economic indicators in 2021.

Such a flight will expand the airline's activities in the new conditions of airlines in the world.

As mentioned earlier, Sky UP's fleet consists entirely of Boeing aircraft, most of which belong to the Next Generation series, namely Boeing 737-700, Boeing 737-800, and Boeing 737-900ER900ER, and is expected to supply aircraft. Even more, upgraded for the Next Generation are the Boeing 737 MAX 8 and Boeing 737 MAX 10.

2.2. Calculation of passenger charter flight Kyiv - Maputo-Kyiv

A significant role is played by the planned profit of the airline, which averages 15-20% (and in general can range from 5 to 50%). First, the airline determines the price of a charter flight, then it agrees with the customer, and after reaching a consensus, the price is included in the contract. Typically, upon signing the contract, the customer must pay a deposit of a certain percentage of the gross payment amount. With charter chains, the last flight is usually paid first as a condition to guarantee the return of tourists, and then, as the charter agreement is fulfilled, the consolidator regularly transfers money for each upcoming flight.

There are a number of factors that affect the price of a charter flight:

- the type of aircraft (more modern, modernized aircraft with a greater range and flight speed, providing greater comfort to their passengers, of course, are much more expensive than outdated and less comfortable ones);

- aircraft loading - passenger capacity and carrying capacity. Aircraft vary in seating capacity, it is obvious that the freight of the more well-known liners with a large commercial load will be more expensive;

- the range of the route for the flight along which the vessel is chartered;

- flight time (first of all, the factor of the seasonality of the tourist market is assessed), since by purchasing a charter in the high season, the operator risks less seat downtime, and therefore will not receive high discounts from the air carrier;

- departure days (charter flights on Friday and Saturday will be more expensive, since these are the most popular departure days for tourists, giving the opportunity to rest and acclimatize after returning from tours before going to work. On the other hand, the cost of charter programs flying during the week will be somewhat lower);

- departure time (more expensive will be charter flights organized in the morning or lunch hours, since this gives tour operators the opportunity to adjust the arrival time to the checkout hours of the host hotels. On the other hand, charters departing in the evening and at night will be somewhat cheaper);

- additional services on board (usually the cost of a charter air ticket includes only the flight and a light breakfast, however, for longer flights, the customer may additionally pay for re-meals on board the liner, communication services onboard, etc.);

- the size of the charter order - the number of seats simultaneously declared by the tour operator (the average cost of a seat depends on the size of the block of seats of the tour operator, the number of years that provide more comfort to their passengers, of course, are much more expensive than outdated and less comfortable ones).

The major factors that determine the cost of the charter are:

- crew salaries;
- cost of a flight hour of this type of aircraft;
- maintenance and ground handling costs;
- form of organization of a charter flight (charter chain).

The charter chain is a type of charter in which the aircraft at regular intervals makes charter flights to one (or more) destinations on a “round trip” shuttle scheme. Aircraft takes one group of tourists and takes another. Such charter flights are also called regular charter flights since they are close to regular flights.

So, consider the calculation of a charter flight on the route Kyiv - Maputo-Kyiv. In this case, it is needed to choose a technical stop for refueling because the aircraft was selected, which flies on medium-haul flights with a maximum range of 6230 km.

It is the time parameters of the flight, have a decisive influence on its efficiency. When choosing a technical stop, I relied on the shortest path method. Possible airports included: Cairo (CAI), Luxor (LXR), and Khartoum Airport (KRT) in Sudan.

Table 2.1

Flight time to technical stop in route Kyiv - Maputo

Route	Time,h
Kyiv (KBP) - Cairo (CAI)	4
Cairo (CAI) -Maputo(MPM)	8
Kyiv (KBP) - Khartoum (KRT)	5
Khartoum (KRT) -Maputo (MPM)	10
Kyiv (KBP) - Luxor(LXR)	3
Luxor(LXR)-Maputo(MPM)	8

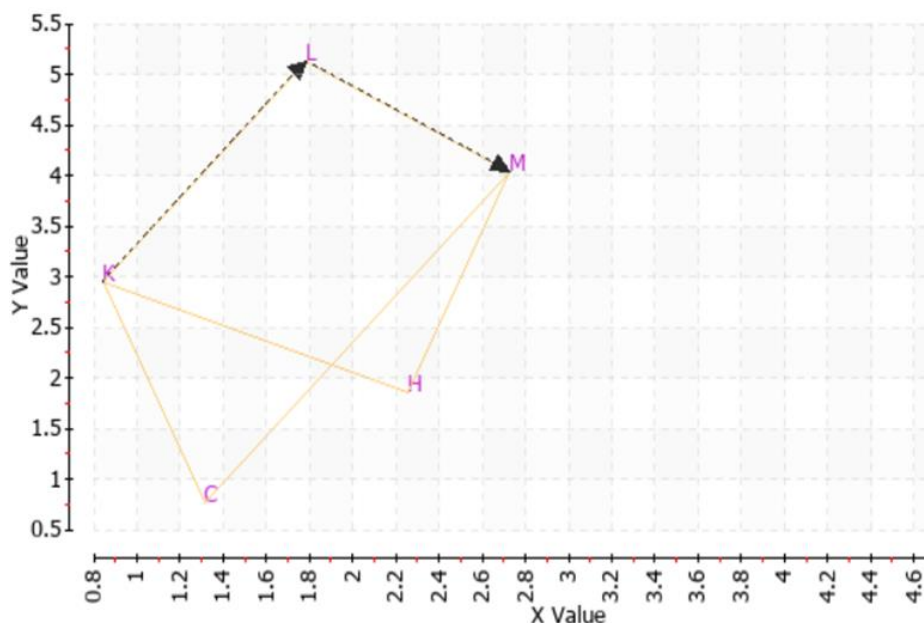


Figure 2.1 The shortest path method for planned route Kyiv - Maputo-Kyiv in 2021

(KBP) - (CAI) –(MPM) : $X_1=\{K;C;M\}=\{4;8\}=\{12\}$;

(KBP) - (KRT) - (MPM): $X_2=\{K;H;M\}=\{5;10\}=\{15\}$;

(KBP) – (LXR)- (MPM) : $X_3=\{K;L;M\}=\{3;8\}=\{11\}$.

Referring to the graph, we see that the best route Kyiv (KBP) – Luxor (LXR)- Maputo(MPM) is 11 hours, among Kyiv (KBP) - Cairo (CAI) -Maputo, Kyiv (KBP) - Khartoum (KRT) -Maputo (MPM). So, consider the calculation of a charter flight on the route Kyiv - Maputo-Kyiv with technical stop in Luxor.

The form of charter flight organization is a round trip.

The most optimal aircraft for this route is Boeing 737-700 NG, the technical characteristics of which are given in table 2.2.

Table 2.2

The technical characteristics of Boeing 737-700 NG

Technical characteristics	Value
Length(m)	33,6
Wing(m)	35,7
Exit Limit	149
The maximum takeoff weight (MTOW)(kg)	70 080
Engines	CFM 56-7B26
Cruise speed (km /h)	828
Maximal speed (km /h)	876
Range of flight(km)	6230
Fuel capacity (l)	26 020

When performing charter transportation, first, it is necessary to take into account the flight distance and flight time.

Table 2.3

The flight distance and flight time on route Kyiv-Maputo

Route	Distance,km	Flight time,hours
(KBP)Boryspil-(LXR) Luxor 2795	2809	03:45
(LXR)Luxor-(MPM)Maputo	5738	07:49
(KBP) Boryspil –(MPM) Maputo	8547	10:34

From Table we see that, under the existing version (with a technical stop in Luxor), passengers spend on flight 10 hours 34 minutes. (flight from Kyiv to Luxor is 3.45h, Luxor-Maputo is 7 hours 49 minutes).

If we consider the dependence of speed and altitude during the flight from Kyiv to Luxor, we can see that when climbing for 22 minutes of flight at a distance of 244 km, the altitude is 370 PL at a speed of 841 km / h. The Flight Level gains the greatest value during a cruise at 2 hours of flight and makes 390 fl at the same time the plane flies at a speed of 861 km / h. Only after 3 hours of flight altitude decreases to a speed of 556 km / h.

Table 2.4

Indicators of the flight Kyiv-Maputo

	Duration	Distance, km	Flight level, FL	Fuel,kg
taxi	00:05	0	0	100
climb	00:22	244	370	1875
cruise	01:25	1186	370	3380
shift	00:04	60	390	238
cruise	01:15	1050	390	2989
descent	00:29	269	0	330
taxi	00:05	0	0	100
Total				9011

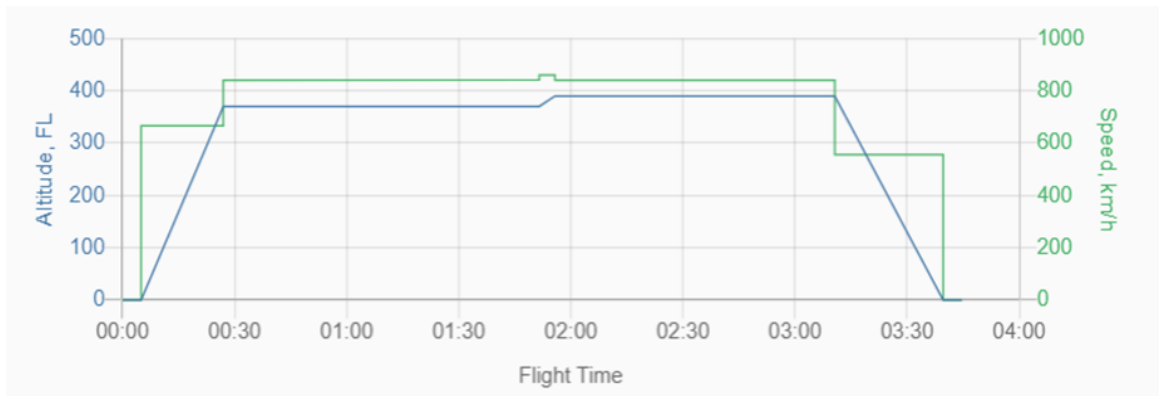


Figure 2.2 Speed dependence on altitude during flight Kyiv-Maputo

Investigating the use of fuel during the flight, the total amount of fuel used is 9011 kg. The first 100 kg plane spent on taxiing, 5593 kg was spent on entering the cruise speed, and 8581 kg on 3 hours of flight.

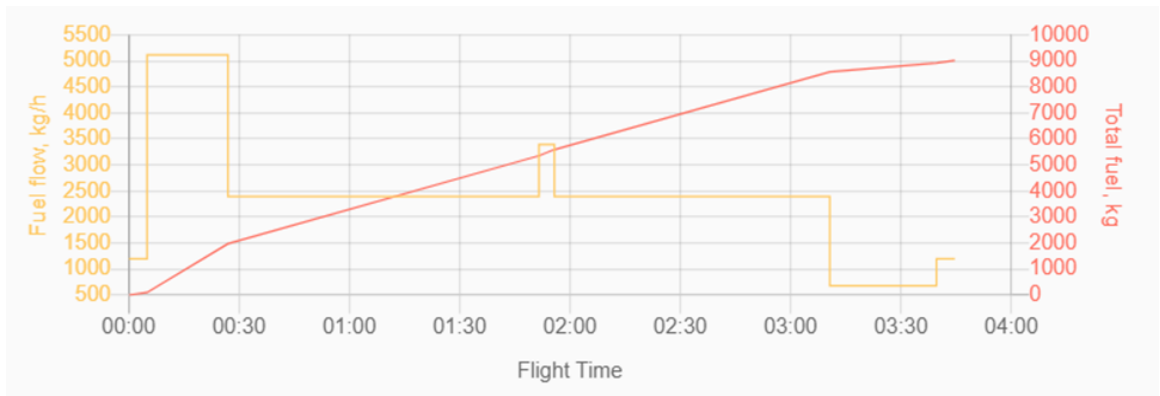


Figure 2.3 Fuel dependence on flight time during flight Kyiv-Maputo

So, taking into account the number of passengers given by tour operator is 149 passengers per flight, as well as the flight distance on the route Kyiv-Maputo - Kyiv the most suitable type of aircraft is a Boeing 737-700, the commercial load of which will be 100%.



Figure 2.4 Boeing 737-700 NG

Table 2.5

Initial data for the calculation of a charter flight

AIRCRAFT DATA:	Boeing 737-700
The cost of the aircraft, million USD	80,6
Maximum takeoff weight, t	70,08
Maximum cruising speed, km / h	828
Time to maneuver near the airport, h	0,3
Maximum number of passengers,	149
Time fuel consumption by all engines, t / h	2800 кг
Aeronautical fuel supply, t	0.90
INSURANCE CONTRIBUTIONS:	
Annual rate of insurance premium on the plane, %	8
Annual insurance premium for the aircraft, USD	39 130 000
The amount of insurance fees per month, USD	800 750
CREW SALARY	
Salary of the 1st pilot, USD / flight	500
Salary of the 2nd pilot, USD / flight	400
Salary of flight attendants, USD / flight	200,300

Calculating flight indicators

Aircraft productivity per flight:

a) at maximum (available) payload:

$$A_{\text{FTK/h}}^{\text{Max}} = G_p^{\text{Max}} * V_f \text{ (tkm/h)} \quad (2.1)$$

where G_p^{Max} – maximum payload, t;

v_f – flight speed, km/h.

$$v_f = \frac{L}{(t_{tl} + t_{cf})}, \text{ (km/h)} \quad (2.2)$$

where L – flight range without landing, km;

t_{tl} – time for take-off, climb, descending, landing and taxing in the airport in the airport zone, h,

t_{cf} – time of cruise flight, h.

$$t_{cf} = \frac{(L - L_{tl})}{V_{cr}}, \text{ (h)} \quad (2.3)$$

where L_{tl} – distance, passed for take-off, climb, descending, landing and taxing, km; v_{cr} – cruise speed, km/h.

V_{cr} – cruise speed, km/h.

$$t_{cf} = \frac{(2809 - 613)}{828} = 2,65(h);$$

$$V_{cr} = \frac{2809}{(0,7 + 2,65)} = 838,50 \text{ (km/h)};$$

$$A_{\text{FTK/h}}^{\text{Max}} = 16,5 * 838,50 = 13\,835,25 \text{ (tkm/h)}.$$

$$t_{cf} = \frac{(5738 - 738)}{828} = 6,04(h);$$

$$V_{cr} = \frac{5738}{(0,7 + 6,04)} = 851,3 \text{ (km/h)};$$

$$A_{FTK/h}^{\max} = 16,5 * 851,3 = 14\ 046,45 \text{ (tkm/h)}.$$

Aircraft productivity per flight Kyiv (KBP) – Luxor(LXR)-Maputo(MPM) is 27 881 tkm/h and for round trip flight is 55 762 tkm/h.

Calculation of the cost of the flight on the route Kyiv (KBP) – Luxor(LXR)-Maputo(MPM)- Kyiv (KBP).

The cost of the flight (E_f) is calculated by adding the direct material costs(E_d) and indirect costs (E_{in}):

$$E_f = E_d + E_{in} \quad (2.4)$$

Direct costs are calculated by the formula:

$$E_d = E_{fuel} + E_{cr} + E_m + E_l + E_{soc} + E_{oth} + E_{air.f} + E_{aer.f} \quad (2.5)$$

E_{fuel} - fuel costs, USD;

E_{cr} - costs for full restoration of the aircraft, USD;

E_m -maintenance and repair costs, USD;

E_l -labor costs of crew members, USD;

E_{soc} -deductions for social needs, USD;

E_{oth} – other flight expenses, USD;

$E_{air.f}$ - airport fees, USD;

$E_{aer.f}$ - air navigation fees, USD

Calculation of fuel costs (E_{fuel}):

$$E_{fuel} = (1 + E_{non.pr.f}) * g * C_{fuel} \quad (2.6)$$

$$E_{\text{fuel}} = (1 + 0,05) * 2.8 * 1235 = 3\ 630,9 \text{ USD}$$

where:

$E_{\text{non.pr.f}}$ - coefficient that takes into account the non-productive number of hours (0.05);

g - average hourly use of aviation fuel, t / h;

C_{fuel} - the cost of 1 ton of aviation fuel (take for 1235 USD)

Calculation of costs for complete restoration of the aircraft (E_{cr}):

$$E_{\text{cr}} = \frac{N_{\text{cr}} * C_{\text{ac}}}{T_{\text{y.pr}} * 100} \quad (2.7)$$

$$E_{\text{cr}} = \frac{0,1 * 806000000}{7392 * 100} = 87,2 \text{ USD}$$

where:

N_{cr} - depreciation rate for full restoration of the aircraft (the aircraft belongs to the 2nd group of OF - 10%);

C_{ac} - the cost of the aircraft - 80.6 million USD

$T_{\text{y.pr}}$ - annual production hours, year.,

Calculation of maintenance and repair costs (E_{rem}):

$$E_{\text{m}} = E_{\text{cr}} * C_{\text{m}} \quad (2.8)$$

$$E_{\text{m}} = 87,2 * 0,35 = 30,52 \text{ USD}$$

where:

E_{m} - the cost of complete restoration of the aircraft, USD

C_{m} - coefficient that takes into account the cost of maintenance and repair (0.35)

Labor costs of crew members:

- for the 1st pilot 500 USD per flight;
- for the 2nd pilot 400 USD per flight;

- for flight attendants 200 USD (600) per flight.

$$E_l = 500 + 400 + 600 = 1500 \text{ USD} \quad (2.9)$$

Calculation of deductions for social needs:

$$E_{soc} = E_{soc} * C_{soc} \quad (2.10)$$

$$E_{soc} = 1500 * 0,22 = 330 \text{ USD}$$

where:

C_{soc} - the coefficient of deductions for social needs (22%);

E_{soc} - labor costs of crew members, USD;

Calculation of other flight costs (E_{oth}):

$$E_{oth} = \frac{K_{oth} * C_a}{T_{y.pr}} \quad (2.11)$$

$$E_{oth} = \frac{0,03 * 80600000}{7392} = 327,1 \text{ USD}$$

where:

K_{oth} - coefficient that takes into account other summer expenses (0.03);

$T_{y.pr}$ - annual production of hours, years, hours.

Calculation of airport fees ($E_{air.f}$):

According to the order of the Ministry of Transport and Communications of Ukraine

of March 26, 2008, N 337 "On the establishment of airport fees for the maintenance of aircraft and passengers in the state enterprise" Boryspil International Airport ", for the airport service of aircraft and passengers, related to the provision of landing-take-off of aircraft, passenger service at the airport, over-parking of the aircraft, aviation security, airport fees are charged.

Rates of fees at airports

Airport tax, USD	Fee rates applicable at airports		
	Kyiv	Luxor	Maputo
Boarding fee (take-off / landing fee)	\$ 10.5 per 1 ton of aircraft weight	\$ 11.2 per 1 ton of aircraft weight	\$ 13.4 per 1 ton of aircraft weight
Commercial Passenger Handling Fee (CH)	\$ 17 for 1 pass.	\$ 13.6 per pass.	\$ 15.9 for 1 pass.
Aviation Security Fee (AS)	\$ 4 for 1 pass.	\$ 4.46 for 1 pass.	\$ 5.8 for 1 pass.

Flight landing fee:

The fee for landing and take-off of an aircraft (E_{land}) is set for each ton of the maximum take-off mass of the aircraft specified in the certificate of airworthiness and for international flights is 10.5 USD for one ton of MTOW aircraft.

$$E_{land} = 70,08 * 10,5 = 735,84 \text{ USD}$$

Fee for passenger handling at the airport:

The fee for passenger handling at the airport (E_{hand}) is set for one sent passenger and for international connections is \$ 17. US for each passenger sent.

$$E_{hand} = 149 * 17 = 2\,533 \text{ USD}$$

Aviation security fee:

The fee for aviation security of a passenger aircraft (E_{saf}) is set for each passenger sent for international connections is \$ 4. US for each passenger sent.

$$E_{saf} = 149 * 4 = 596 \text{ USD}$$

$$E_{air.f} = \frac{E_{land} + E_{hand} + E_{saf}}{T_{d.f}} * C \quad (2.12)$$

where:

$E_{air.f}$ - the total amount of airport fees;

E_{land} - fee for landing and takeoff of the aircraft;

E_{hand} - fee for passenger handling at the airport;

E_{saf} - fee for ensuring aviation safety of the passenger aircraft;

$T_{d.f}$ - non-stop flight time;

C - utilization rate of airport charges (for international traffic - 0.5).

Calculation of airport fees for Boryspil airport:

$$1) E_{air.f} = \frac{735,84 + 2\,533 + 596}{3,45} * 0,5 = 560,12 \text{ USD}$$

Calculation of airport fees for Luxor airport:

$$2) E_{air.f} = \frac{784,9 + 664,54}{3,45} * 0,5 = 210,06 \text{ USD}$$

$$E_{land} = 70,08 * 11,2 = 784,9 \text{ USD}$$

$$E_{saf} = 149 * 4,46 = 664,54 \text{ USD}$$

Calculation of airport fees for Luxor airport:

$$3) E_{air.f} = \frac{939,07 + 2\,369,1 + 864,2}{7,49} * 0,5 = 278,53 \text{ USD}$$

$$E_{land} = 70,08 * 13,4 = 939,07 \text{ USD}$$

$$E_{hand} = 149 * 15,9 = 2\,369,1 \text{ USD}$$

$$E_{saf} = 149 * 5,8 = 864,2 \text{ USD}$$

Aeronautical fees ($E_{aer.f}$) include fees for route maintenance (r) and for boarding fee (R):

$$E_{aer.f} = R + r \quad (2.12)$$

where:

r - fees for route maintenance, USD;

R - landing fee, USD.

The amount of the fee (r) for air navigation services in the airspace of Ukraine, related to the provision of ATS on the approach and in the aerodrome area, is determined depending on the MTOW of the aircraft specified in the operator's certificate and the unit fee rate (t) by the formula:

$$r = t * W \quad (2.13)$$

$$r = 7,56 * 70,8 = 535,25 \text{ USD}$$

where: r - the amount of payment for services with OrAW on the route;

t - unit rate of payment for services with where: r - the amount of payment for services with OrPR on the route;

t - unit rate of payment for services with OrPR on the route;

W - MTOW aircraft in metric tons.

Today, the following rates apply for international airlines in Ukraine:

$$T = 45.63 \text{ and } t = 7.56.$$

The amount of payment (hereinafter - R) for air navigation services in the airspace of Ukraine, related to the provision of ATS (air traffic management) on the route, is determined depending on the maximum allowable take-off mass (hereinafter - MTOW) , orthodontic distance and unit rate of payment (T) according to the following formula:

$$R = TD \sqrt{\frac{W}{50}} \quad (2.13)$$

$$R = 45,63 * 18,3 * \sqrt{\frac{70,8}{50}} = 1\ 002\ \text{USD}$$

where T is the unit rate of payment for ATS services on the route for the aircraft with a take-off mass of 50 metric tons and an orthodontic distance of 100 km;

D - orthodontic flight distance in kilometers, reduced by 100 with each take-off/landing on the territory of Ukraine; (18,3)

W - MTOW PS in metric tons. If when calculating the size of the MTOW board of this aircraft is unknown, it is determined by the weight of the heaviest aircraft of the same type.

$$E_{aer.f} = 1\ 002 + 535,25 = 1\ 537,25\ \text{USD}$$

Aircraft insurance:

$$E_{ins} = \frac{C_{ins} * T_{d.f}}{T_{y.pr}} \quad (2.13)$$

Kyiv (KBP) - Luxor(LXR):

$$E_{ins} = \frac{64\ 480\ 000 * 3,45}{7392} = 30,09\ \text{USD}$$

Luxor(LXR)- Maputo(MPM):

$$E_{ins} = \frac{64\ 480\ 000 * 7,49}{7392} = 65,33\ \text{USD}$$

$$E_{ins} = 30,09 + 65,33 = 95,42\ \text{USD}$$

where:

$T_{y.pr}$ - flying hours productivity, h;

C_{ins} - the amount of insurance, as the insurance company paid 2% of the cost of the aircraft.

Indirect costs are taken as 40% of direct costs.

$$E_d = 3630,9 + 87,2 + 30,52 + 1500 + 330 + 327,1 + 560,12 + 210 + 278,53 + 1537,25 = 8\,491,62 \text{ USD}$$

$$E_{in} = 5\,094,972 \text{ USD}$$

The cost of the flight (E_f) of Kyiv (KBP)-Maputo(MPM):

$$E_f = 8\,491,62 + 5\,094,972 + 95,42 = 13\,682,012 \text{ USD}$$

As the airline performs a round trip, so we calculate the cost of the flight Kyiv (KBP) -Maputo (MPM) -Kyiv (KBP).

$$E_f = 13\,682,012 + 13\,682,012 = 27\,364,024 \text{ USD}$$

Thus, the cost of the charter flight (KBP)-Maputo(MPM)-Kyiv (KBP) according to our calculations is 27 364 USD / flight

2.3. Calculation of the efficiency of charter transportation Kyiv (KBP) - Maputo (MPM) -Kyiv (KBP)

The primary condition for any charter flight should be to determine its cost-effectiveness.

It will be profitable for Sky Up to carry out charter transportation Kyiv (KBP) -Maputo (MPM) -Kyiv (KBP) with a profitability ratio of 20%, so we will calculate the airline's profit when performing charter transportation.

$$E_p = E_f * K_r \quad (2.14)$$

$$E_p = 27\,364,02 * 20 = 5\,473 \text{ USD}$$

where:

E_p - airline profit;

E_f - the cost of the flight Kyiv (KBP) -Maputo (MPM) -Kyiv (KBP), USD;

K_r - profitability ratio, we accept K_r - 20%

Sky Up 's income from this charter is calculated according to the following formula:

$$I = E_f + E_p \quad (2.19)$$

$$I = 27\,364,02 + 5\,473 = 32\,837 \text{ USD}$$

where:

I - income from ticket sales, USD;

E_f - the cost of the flight;

E_p -is the airline's profit.

So, based on the calculations, the income of charter transportation Kyiv (KBP) -Maputo (MPM) -Kyiv (KBP), which will be performed by Sky UP by order of travel agency Join Up, will be 32 837 USD / flight. Sky Up's profit will be 5 473 USD / flight.

Expanses of this round trip flight is 27 364 USD.

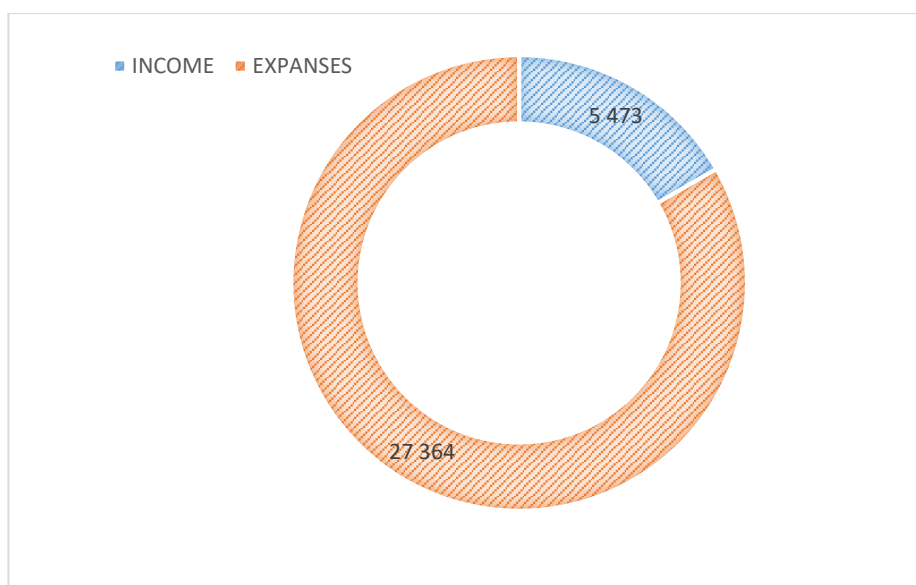


Fig. 2.5 SkyUp costs and profits for charter flights Kiev-Maputo –Kyiv

Join Up plans to sign an agreement with Sky Up for 32 charter flights Kiev-Maputo -Kyiv during October, November and December. Based on the calculations, the forecast of financial and economic activities of Sky Up in cooperation with the Join Up for 2021 was made (Table 2.3.).

Table 2.7

The forecast of financial and economic activities of Sky Up in cooperation with the Join Up for 2021

	October	November	December	Total
Number of charter flights	8	12	12	32
Number of transported passengers	1192	1788	1788	4768
Airline income, USD	262 696	394 044	394 044	1 050 784
Airline expenses, USD	218 912	197 020	197 020	612952
Airline profits, USD	43 784	65 676	65 676	175 136

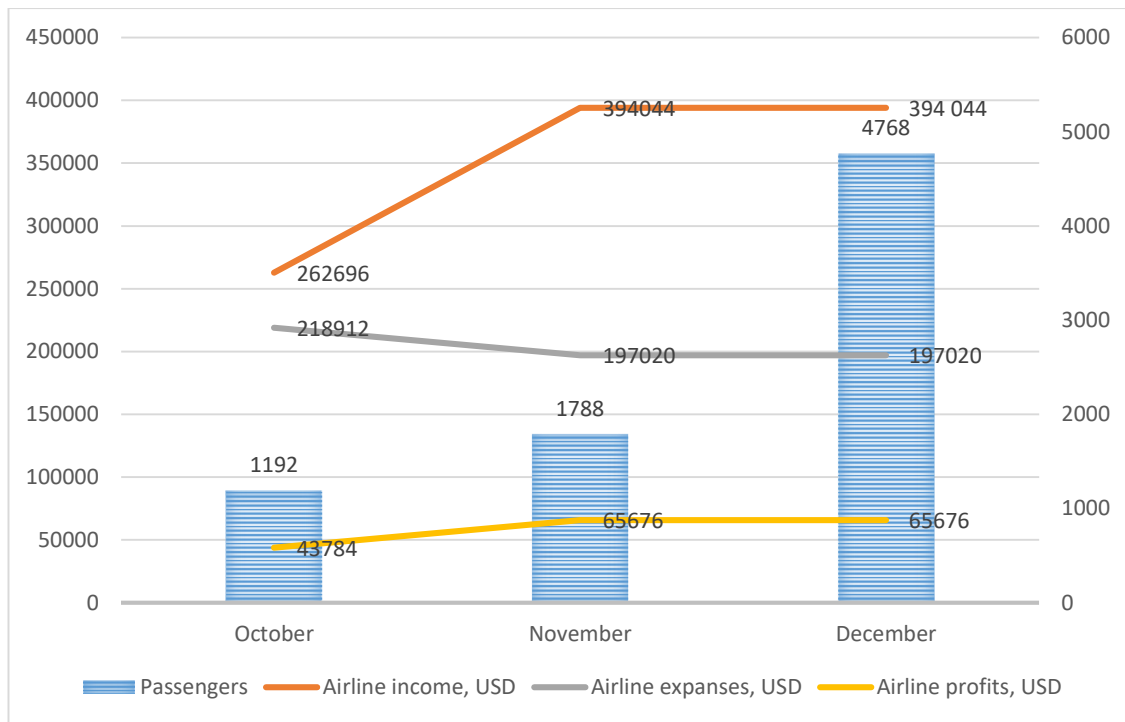


Fig. 2.6 Sky Up costs, income and profit and number of passengers for 3 months for charter flight Kyiv-Maputo – Kyiv

This graph shows that as the number of flights increases, profits and expenses increase accordingly. The organization of passenger charter flights by the airline Sky Up in cooperation with Join Up allows the airline to gain 175 136 USD of total profit with 612 952 USD of expenses during 3 months (Fig. 2.2).

In addition, with this cooperation, the airline can expect to receive 100% of the projected profit, as when ordering charter transportation buys all seats on the flight, ie for this charter flight the airline will have a constant demand and full commercial load of the flight.

The efficiency of charter transportation Kyiv-Maputo - Kyiv for tour operator Join Up.

The service fee of Join Up, when selling a charter flight Kyiv-Maputo - Kyiv to its customers, will be 10%, so we calculate the profit of Join Up:

$$E_{p.to} = E_{charter} * C_f \quad (2.20)$$

where:

$E_{p.to}$ - profit of the tour operator, USD;

$E_{charter}$ - the cost of the flight Kyiv-Maputo - Kyiv, USD;

C_f - service fee, we accept 10%

$$E_{p.to} = 32837 * 0,1 = 3\ 283,7$$

Join Up 's income from the sale of this charter transportation is calculated according to the following formula:

$$I_{ch} = E_{ch} + E_{in.to} \tag{2.21}$$

Where:

I_{ch} - income from the sale ticket, USD;

E_{ch} - the cost of the flight Kyiv-Maputo - Kyiv, USD;

$E_{p.to}$ - profit of the TO; USD.

$$P_{ch} = 32837 + 3\ 283,7 = 36\ 121$$

So, based on preliminary calculations, the final cost of the charter flight Kyiv-Maputo - Kyiv will be 36 121 USD. The profit of the tour operator Join Up will be 3 283 USD / flight (Fig. 2.3). So, the expenses will be 32 838 USD.

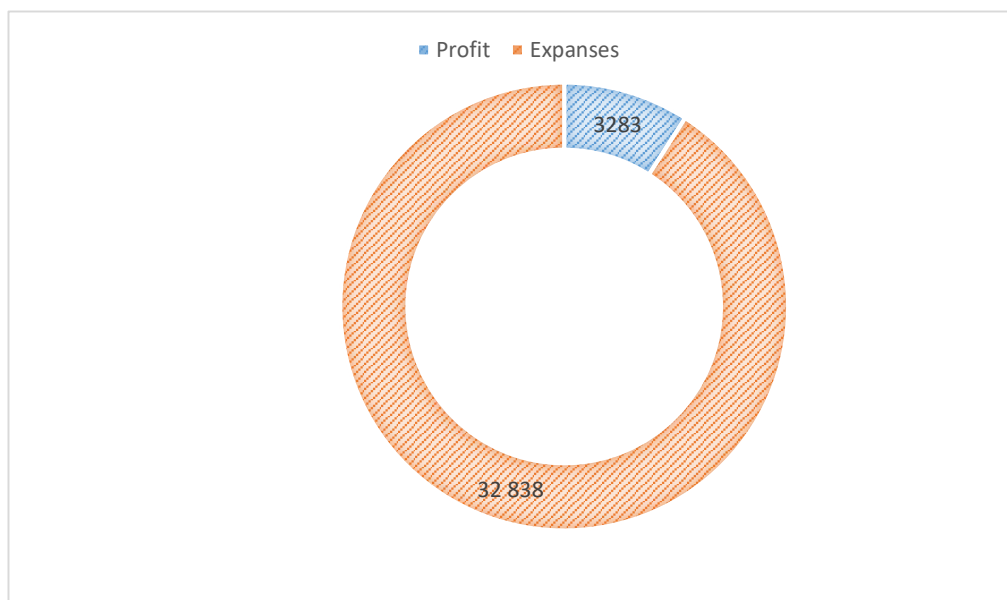


Fig. 2.7 Expenses and profits of the agency Join Up of a charter flight Kyiv-Maputo - Kyiv

As mentioned earlier, the travel agency Join Up plans to organize 32 charter flights Kyiv-Maputo – Kyiv during October, November, December.

Based on the calculations, a forecast of financial and economic activities of Join Up in cooperation with Sky Up for 2021 was made. (Table 2.3.2.)

Table 2.8

A forecast of financial and economic activities of Join Up in cooperation with Sky Up for 2021

	October	November	December	Total
Number of charter flights	8	12	12	32
Number of transported passengers	1192	1788	1788	4768
Tour operator income, USD	288 968	433 452	433 452	1 155 872
Tour operator expenses, USD	262 704	236 432	236 432	1 050 816
Tour operator profits, USD	26 264	39 396	39 396	105 056

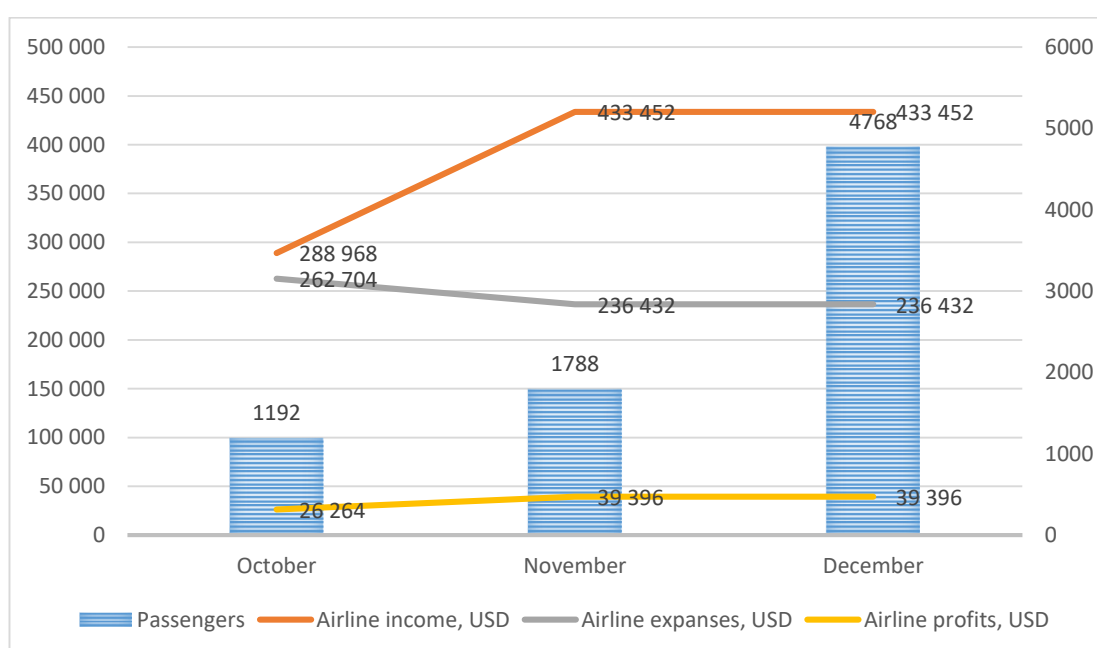


Fig. 2.8 Join Up costs, income and profit and number of passengers for 3 months for charter flight Kyiv-Maputo - Kyiv

Based on the preliminary forecast of financial and economic activities of tour operator (Fig. 2.3.5), we can conclude that the cooperation of Sky Up with Join Up will be beneficial for the agency.

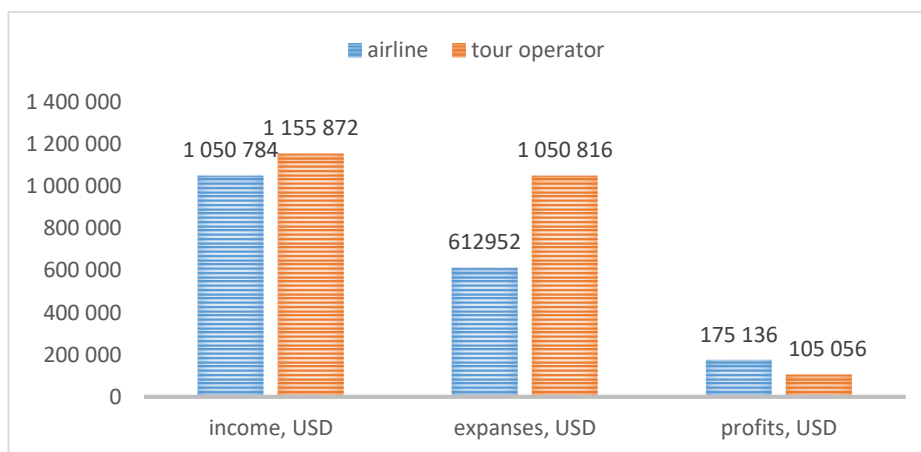


Fig. 2.9 Comparison of Join Ups and Sky Ups expenses, income and profit for 3 month of charter flight Kyiv-Maputo – Kyiv

After researching the Kyiv-Maputo-Kyiv route proposed by Join Up and calculating the economic efficiency of the flight, we can say that it is profitable for both Sky Up and the tour operator Join Up. Comparing the profits of Sky Up and travel company Join Up, the airline's profit is higher by 70,080 USD.

This is due to the fact that the tour operator is only an intermediary and only deals with the development of tourist products and the completion of tours; ensures their functioning, organizes advertising; sets under current regulations in the prescribed manner prices for tours on these routes; sell tours when the airline performs the transportation itself.

In order to understand the feasibility of creating this flight, we calculate the efficiency. Economic efficiency is assessed by the rate of return - the ratio of expected return to the total amount of capital investment required to implement the flight.

Efficiency for airline Sky Up:

$$E_a = \frac{P}{E_{ch}} * 100\% \quad (2.22)$$

$$E = \frac{175136}{61295} * 100\% = 28,6\%$$

Efficiency for the tour operator Join Up :

$$E_a = \frac{P}{E_{ch}} * 100\% \quad (2.23)$$

$$E = \frac{105056}{1050816} * 100\% = 10\%$$

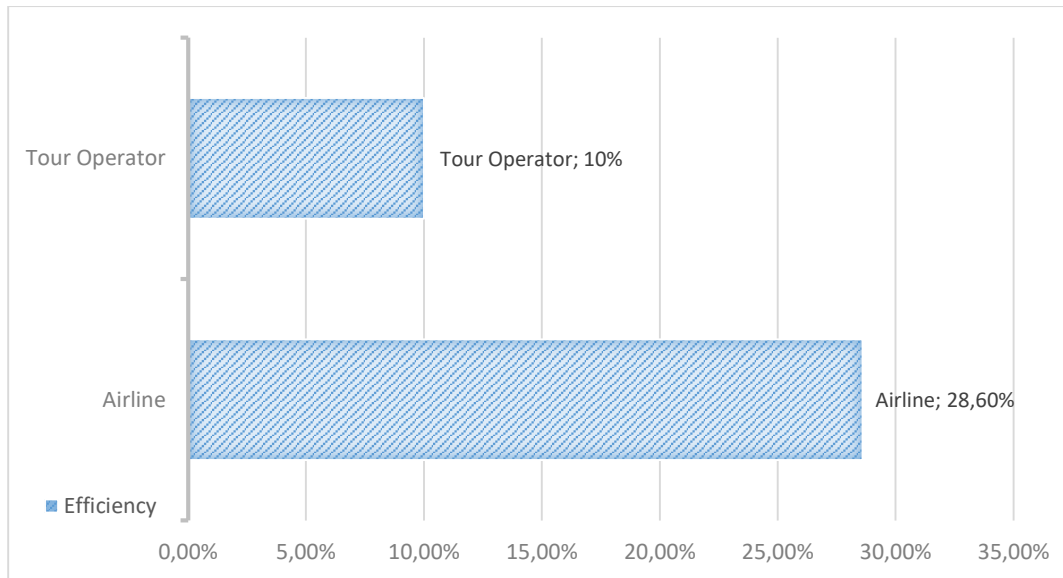


Fig. 2.10 Efficiency of route Kyiv-Maputo -Kyiv for Join Up and Sky Up

After calculating the efficiency of the the round flight Kyiv-Maputo – Kyiv for the airline is 28.6%, and for the tour operator 10%, so considered this direction is effective. Consider that such results will be obtained if the flight has a full load. To increase efficiency, you need to increase profits and reduce costs.

SUMMARY

Air Transportation Management Department				NAU.21.20.90 004EN			
Done by:	<i>Mariia Chaika</i>			SUMMARY	Letter	Sheet	Sheets
Supervisor:	<i>Iryna I. Vysotska</i>					D 66	5
Standards Inspector	<i>Yuliia V. Shevchenko</i>				FTML 275 OII- 403Ba		
Head of the Department	<i>Shevchuk D. O.</i>						

Air transportation has become an integral part of the tourism product, which leads to close cooperation between airlines and travel agencies. Such cooperation is now necessary for both parties, as it allows travel companies to get favorable rates for the transportation of their tourists, and airlines - to increase sales of their tickets. The effective commercial interaction of travel companies and airlines and the search for new effective approaches to the organization of air travel depend not only on the success of their enterprises but also on the development of the air travel market as a whole.

In this thesis, the organization of air passenger transportation in the cooperation of Sky Up and the travel company Join Up was studied. In the analytical part the general characteristics of the airline, statistical information on the production and financial activities and analysis of the main volume indicators of the Sky Up and general characteristics of the travel agency Join Up and cooperation between the airline and the travel agency were considered. The airline works on a hybrid model - perform charter flights and regular low-cost flights. The airline is performed passenger and cargo transportation in Ukraine and abroad, as well as provides logistics services for customs clearance and warehousing services.

It is easy to say that Sky UP is the leader among Ukrainian airlines. After analyzing the production activities, we can conclude that the revenues of Sky UP LLC were increased before introducing flight restrictions.

Analyzing the place of Sky UP in the market of Ukrainian and international air transportation, we can conclude that the company can be considered as a strong competitor to such Ukrainian airlines as Wind Rose and international as WizzAir. Sky Up does not occupy a leading position in the number of flights and is among such companies as Wind Rose and Wizz Air. After analyzing the current volume of passenger and freight services provided by the airline, we can conclude that it is fairly high. The key factor that shows a high quality of the airline in modern conditions is the growing share of its activities in the Ukrainian and international passenger market, increasing the number of flights and, as a result, increasing the level of income and profits of the airline. Thus, the number of flights at Sky UP LLC

in 2019 amounted to 10,940, which is about 50% more compared to the same period last year. And in 2020 the number of flights decreased to only 8,745. However, the number of charter flights increased. So, in 2020 4123 flights were performed.

In 2018, the airline carried about 442,000 passengers, which is four times less than in 2019. Due to the fact that in 2019 it served 1,709 million passengers. In 2020, the figure dropped to 1,250,792 passengers. In the first six months of 2020, SkyUp carried 551,623 passengers, including 368,000 passengers on charter flights. However, in the second half, the figures began to improve due to charter traffic 699,169.

From March 20 to May 2020, SkyUp Airlines did not perform flights, except for evacuation due to the decision of the Cabinet of Ministers of Ukraine to restrict passenger traffic in Ukraine to prevent the spread of coronavirus infection, transportation rates decreased. Therefore, the main salvation was charter transportation with tour operators.

Sky Up is a subsidiary company of a tour operator Join UP. The tour operator is multidisciplinary, can organize any type of recreation on individual or corporate request. In total, the company can offer more than 60 destinations for travel to different parts of the world.

Among tour operators, JoinUp ranks first (35.76%). Affordable prices and an extensive flight program - these two points helped him become a sales leader. Strict travel restrictions to many countries have affected the popularity of destinations. Thus, in 2020, the list of TOP-5 countries was: Egypt (272.9 thousand), Turkey (93 thousand), UAE (11.2 thousand) Montenegro (8.03 thousand), Ukraine (6.9 thousand).

The main task of the bachelor thesis was to consider and calculate the possibility of organizing a passenger charter flight by Sky Up in cooperation with the tour operator Join UP, aimed at expanding tourist destinations in closed borders during quarantine.

In the design part, the efficiency of the passenger charter flight Kyiv-Maputo - Kyiv was investigated. Based on the existing problems, the demand for charter

flights to the African continent has increased because of a few quarantine restrictions. Join Up LLC plans to organize flights to another African country - Mozambique.

When organizing charter air transportation, the customer together with the airline determines the route, stipulates the obligations of the parties, clarifies the compliance of the lease agreement with international rules, determines the cost of the flight. Then a special charter agreement is concluded.

The major factors that determine the cost of the charter are:

- crew salaries;
- cost of a flight hour of this type of aircraft;
- maintenance and ground handling costs;
- form of organization of a charter flight (charter chain).

The most optimal aircraft for this route was chosen Boeing 737-700 NG. The aircraft flies on medium-haul flights with a maximum range of 6230 km, so it was necessary to choose a technical stop for refueling in Luxor. It was calculated aircraft productivity per flight Kyiv (KBP) - Luxor (LXR) -Maputo (MPM) is 55 762 tkm / h.

Thus, the cost of the charter flight (KBP) -Maputo (MPM) -Kyiv (KBP) according to calculations is 27 364 USD / flight.

So, based on the calculations, the income of charter transportation Kyiv (KBP) -Maputo (MPM) -Kyiv (KBP), which will be performed by Sky UP by order of travel agency Join Up, will be 32 837 USD / flight. Sky Up's profit will be 5 473 USD / flight. The expenses of this round-trip flight are 27 364 USD.

Join Up plans to sign an agreement with Sky Up for 32 charter flights Kiev-Maputo -Kyiv during October, November and December. The airline's profit for this period will be 175,136 USD, costs 612,952 USD, and income 1050784 USD.

The profit of the tour operator Join Up will be 3 283 USD / flight (Fig. 2.3). So, the expenses will be 32 838 USD for one flight, and for 32 flights profit 105 056 USD, expenses 1050816, income 1155872.

After researching the Kyiv-Maputo-Kyiv route proposed by Join Up and calculating the economic efficiency of the flight, we can say that it is profitable for both Sky Up and the tour operator Join Up. Comparing the profits of Sky Up and travel company Join Up, the airline's profit is higher by 70,080 USD.

This is due to the fact that the tour operator is only an intermediary and only deals with the development of tourist products and the completion of tours; ensures their functioning, organizes advertising; sets under current regulations in the prescribed manner prices for tours on these routes; sell tours when the airline performs the transportation itself.

In order to understand the feasibility of creating this flight, was calculated the efficiency. After calculating the efficiency of the round flight Kyiv-Maputo - Kyiv for the airline is 28.6%, and for the tour operator 10%, so considered this direction is effective. Consider that such results will be obtained if the flight has a full load.

Therefore, it can be concluded that an important area for Sky Up is charter flights, which provide a guaranteed increase in the efficiency of airline passenger traffic.

The airline will have a constant demand and full commercial load of the flight as the travel company buys and is responsible for the redemption of all seats. In this cooperation, the airline can expect to receive 100% of the projected profit.

Charter tourist transportation is a strategic direction for the formation of the fleet of aircraft, which leads to strong competition between airlines for the right to carry out charter transportation. Therefore, in the case of Sky Up, it is advantageous to be a subsidiary of Join Up.

LIST OF REFERENCES

3. [1]Sky Up aircrafts [Электронный ресурс] – Режим доступа до ресурсу: https://skyup.aero/en/news/skyup-airlines-zustrichaye-svij-odinadcyatij-boeing-737_156.
4. [2]Summary of 2019 [Электронный ресурс] – Режим доступа до ресурсу: https://skyup.aero/en/news/over-12000-flights-almost-2-mln-passengers-retrofit-planes-and-new-international-and-regional-destinations-what-2019-was-like-at-skyup-airlines_150.
5. [3]statistics of 2020 with Sky Up [Электронный ресурс] – Режим доступа до ресурсу: https://skyup.aero/en/news/2020-unikalnyi-period-yakui-mu-prysviatyly-posylenniu-komandy-vdoskonalenniu-protsesiv-i-zapusku-novykh-produktiv_279.
6. [4]Rank of airlines by number of flights [Электронный ресурс] – Режим доступа до ресурсу: <http://uksatse.ua/index.php?act=Part&CODE=247&id=690&hl=skyup>.
7. [5]Figure [Электронный ресурс] – Режим доступа до ресурсу: <http://www.turprofi.com.ua/rejtingi/3088-top-30-samykh-krupnykh-turoperatorov-ukrainy>.
8. Tour operators [Электронный ресурс] – Режим доступа до ресурсу: <https://uata.com.ua/2020/11/af-summer-2020/>.
9. Global tourism suffered its worst year on record in 2020 [Электронный ресурс] – Режим доступа до ресурсу: <https://www.unwto.org/news/2020-worst-year-in-tourism-history-with-1-billion-fewer-international-arrivals>.
10. [8]Special flights [Электронный ресурс] – Режим доступа до ресурсу: https://skyup.aero/en/news/bilshe-100-rejsiv-i-ponad-20-tisyach-pasazhiriv-skyup-rozpovidaye-pro-rezultati-masshtabnoyi-operaciyi-povernennya-ukrayinciv-dodomu_175.

11. Top directions with Join Up [Електронний ресурс] – Режим доступу до ресурсу: <https://joinup.ua/uk/news/turoperator-join-up-pidbivaye-pidsumki-2020-roku-podorozhi-do-turechchini-zrostayut-na-foni-zagalnogo-padinnya/>.
12. Tourism [Електронний ресурс] – Режим доступу до ресурсу: https://uata.com.ua/2021/03/turkey_s2021/
13. Swarbrooke J. «Business travel and tourism» / J. Swarbrooke, S. Horner., 2001. – 377 с. p 86-122
14. Boeing Next-Generation 737 [Електронний ресурс] – Режим доступу до ресурсу: <http://www.boeing.com/commercial/737ng/>.
15. Державне підприємство обслуговування повітряного руху України [Електронний ресурс] – Режим доступу до ресурсу: <http://uksatse.ua/index.php>.
16. Міжнародний аеропорт Бориспіль. Офіційний сайт. [Електронний ресурс] – Режим доступу до ресурсу: <https://kbp.aero/ru/glavnaya/>.
17. Офіційний сайт Sky Up Airlines: вебсайт. [Електронний ресурс] – Режим доступу до ресурсу: <https://skyup.aero/ru/>
18. Про аеропортові збори за обслуговування повітряних суден і пасажирів в аеропортах України від 14.04.2008: Наказ Мінтрансв'язку України р. № 433/ Мінтрансв'язку [Електронний ресурс] – Режим доступу до ресурсу: <https://zakon.rada.gov.ua/laws/show/z0408-08>.
19. Как коронавирус и карантин изменили мировой воздушный трафик [Електронний ресурс] – Режим доступу до ресурсу: <https://www.bbc.com/russian/features-52462444>.
20. Статистика авіакомпаній за 2019 рік [Електронний ресурс] – Режим доступу до ресурсу: https://www.avianews.com/ukraine/2019/08/14/airports_airlines_statistics_7months2019/.
21. Airlines taxes, fees and charges in Africa. – С. <https://afraa.org/wp-content/uploads/2020/10/Airlines-taxes-fees-and-charges-in-Africa.pdf>.

22. TAXES AND CHARGES IN AFRICAN AVIATION. – С.
<https://www.afcac.org/legacy/en/documents/conferences/october2012/afra.pdf>.
23. Skyup fleet [Електронний ресурс] – Режим доступу до ресурсу:
<https://skyup.aero/uk/fleet>.
24. Середній вік літака [Електронний ресурс] – Режим доступу до ресурсу:
https://www.avianews.com/ukraine/2019/04/25/average_fleet_ukrainian_airlines2019/.
25. Additional servise [Електронний ресурс] – Режим доступу до ресурсу: <https://skyup.aero/en/faq/additional-services>.
26. Thesis "INTERACTION OF AVIATION AND TOURISM ENTERPRISES DURING THE COVID-19 PANDEMIC" by Chaika M.M. // International scientific-practical conference «ПОЛІТ. СУЧАСНІ ПРОБЛЕМИ НАУКИ». – 2021.
27. Evans N., Campbell D., Stonehouse G. Strategic Management for Travel and Tourism, 2013. – 440 с. – (2013).
28. Official site IATA. [Електронний ресурс] – Режим доступу до ресурсу: <https://www.iata.org/>.
29. Official site ICAO. – [Електронний ресурс] – Режим доступу до ресурсу: <https://www.icao.int>.
30. Official site Sky Up Airlines– [Електронний ресурс] – Режим доступу до ресурсу: <https://skyup.aero/ru/>.
31. График 20 спецрейсов для эвакуации украинцев– [Електронний ресурс] – Режим доступу до ресурсу:
<https://www.eurointegration.com.ua/rus/news/2020/04/28/7109268/>.
32. АРТАМОНОВ Б.В. Кон'юнктура світового ринку повітряних перевезень. Методологія вивчення, закономірності та проблеми розвитку. – М.: Міжнародні відносини, 1986. – 125с.
33. АФАНАСЬЄВ В.Г. Комерційна експлуатація міжнародних повітряних ліній. – М.: Транспорт, 1987 р. – 215с.

34. АФАНАСЬЕВ В.Г. Организация международных воздушных перевозок (Перевозки пассажиров и багажа) – М.: Воздушный транспорт, 1991г. – 256 с.
35. БАБАРИЦЬКА В.К., ЛЮБИЦЕВА О.О. Організація туризму. Навчальний посібник. Ч.1. – Київ: “Аванпост”, 1998. – 82 с.
36. БЕЛЯВСЬКИЙ І.К. Маркетингові дослідження: інформація, аналіз, прогноз. – М.: Фінанси і статистика, 2001. – 46с.
37. БОЛОТОВ Б.Н., ЯШИН А.Р. Комерційна експлуатація повітряного транспорту. Навч. посіб. – С.: ОЛАГА, 1991. – 91 с.
38. БУКІН Г.А. Міжнародні пасажирські авіа тарифи. Навчальний посібник. – Л.: ОЛАГА, 1985. – 78с.