

THE EFFECT OF COVID-19 ON THE AVIATION SECTOR

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ABSTRACT

COVID-19, which appeared in Wuhan, China in the last span of 2019, impacted the entire world in a short time. The Covid-19 epidemic has begun to endanger not just human health but also all sectors. The aviation industry is facing both regulations and bans and shrinkage of airline passenger demand and is having a rough time. Many airlines have begun to face financial problems, some airlines have declared bankruptcy, and some have had to part with a certain number of staff in order not to go bankrupt. In this research, the effects of the COVID-19 epidemic on the aviation industry are analyzed on a sectoral basis and its macroeconomic and socio-cultural consequences are discussed.

Keywords: COVID-19, Pandemic, Aviation Sector, Macroeconomic Effects.

INTRODUCTION

The world's people faced five global pandemics in the 21st century, in which we have lapsed for the first 20 years, to date. These are H1N1, seen in 2009, polio and Ebola in 2014, Zika in 2016, and finally, COVID-19, which was recorded by the World Health Organization (WHO) on January 30, 2020. These epidemics, which affect almost all countries in the world, have caused many deaths, diseases, and economic losses and are still happening.

The New Corona Virus Disease (COVID-19) is a virus that was first identified on January 13, 2020, as a result of research conducted in a group of patients who developed respiratory symptoms (fever, cough, shortness of breath) in Wuhan Province in late December. The outbreak was initially detected in those in the seafood and animal market in this region (Huang, Han, Luo, Ren & Zhou, 2020). Later, it spread from person to person and spread to other cities in Hubei province, especially Wuhan, and other provinces of the People's Republic of China and other world countries (Velavan & Meyer, 2020).

With the occurrence of the symptoms, effects and similar medical information of the disease, its contagiousness has been emphasized and the necessity of taking necessary precautions has emerged. Travel restriction, which started in Wuhan on January 23, 2020, is one of the main measures taken to prevent the spread of the disease. However, scientists have stated that until this ban was put, many infected people went out of Wuhan and spread the virus (Chinazzi et al., 2020). In particular, the large mass population mobility for

New Year celebrations in China has been shown as a reason for the epidemic to reach global dimensions (Chen, Yang, Yang, Wang & Bärnighausen, 2020).

According to Chinazzi et al. (2020), travel restrictions from Wuhan delayed the spread of the epidemic to China for 3-5 days. However, it has not been very effective on a global basis. Following the emergence of the infectious disease in China, global measures began to take place, countries have suspended their commercial relations with China, stopped mutual flights to China or tried to ensure that incoming passengers are taken to the countries by medical checks. However, the efforts of the countries did not yield any results, and the epidemic turned into a global epidemic (Columbus, Brust & Arroliga, 2020). With the start of the COVID-19 outbreak, eyes turned to the aviation industry. All countries that have to fight the virus, especially China, have started to take measures from the aviation sector. There are reasons such as the fact that aviation is the most effective mode of transportation in global travel, the high potential of international passengers at airports, and the control of entry and exit to the country pass through airports.

COVID-19 has been shown to be harm to both human and economic health and security from the Asia-Pacific regions in late 2019, expanding it to Europe, to the Middle East and to North America by 2020. The decrease in world trade with Asia, especially China, and the restriction (stopping) of the countries' flights with the region in order to prevent the spread of the epidemic had negative effects on passenger and cargo transportation activities (Mhalla, 2020). In this process, the rapid spread of the epidemic in Iran and Italy left the

Middle East Region and Europe with an irresistible threat and was effective in reaching a wide area of COVID-19, including our country (Bénassy-Quéré, Marimon, Pisani-Ferry, Reichlin, Schoenmaker & Weder, 2020; Remuzzi & Remuzzi, 2020; Zhuang et al., 2020).

The advantages of air transport activities in terms of speed, time, reliability, and safety play an important role in the preference of users by domestic and international lines. For this reason, factors such as the distribution of passenger mobility with China to world destinations with airline networks, the crowded areas of airports, the easier spread of infectious diseases by respiratory tract in aircraft have accelerated the emergence of the epidemic in wide geography with the effect of air transportation (Craig, Heywood & Hall, 2020).

1. COVID-19 ON AVIATION SECTOR

COVID-19, which was first detected in Wuhan, China in December 2019 and then spread rapidly all over the world, was seen in the Philippines on January 13 and in the USA on January 20. On 1 February 2020, WHO declared a Public Health Emergency of International Importance. To give an example in terms of understanding the propagation rate; at the end of February 2020, COVID-19 was detected on every continent except Antarctica (Nature, 2020). The number of cases detected on March 9, 2020, exceeded 100,000 and only 2 weeks later, on March 26, 2020, half a million. The reality of today's pandemic and the conditions it creates have negatively affected many areas such as the health system, economy, education, transportation and social life all over the world and still affect them (WHO, 2020).

COVID-19 virus has spread rapidly all over the world, creating an unprecedented crisis on individuals, societies, and industries. International movements, which gained momentum due to globalization and the development of air transport, played an important role in the spread of the virus (European Commission, 2020; Flight Safety Foundation, 2020). First, there were flights to Wuhan, China, from where the disease was observed and then to other countries from all over China. With the disease also seen in South Korea, Hong Kong, and Japan, travel restrictions have been imposed on these countries. Later, the increasing number of cases in Iran, Italy, and Spain brought aviation to a halt (Wilson & Chen, 2020).

Most of the countries that want to stop this spread have introduced travel restrictions by closing their airspaces. These bans have had a devastating effect on air transport, bringing the

industry to the brink of an unprecedented tragedy (Flight Safety Foundation, 2020). These restrictions, which started in January, have been applied almost all over the world (World Tourism Organization the United Nations, 2020). First of all, air traffic has decreased significantly with the cancellation of flights to and from China by airline companies and then stopping the flights of countries with symptoms of the disease.

A report titled "The Impact of COVID-19 on European Aviation and the Outlook for 2021" has been published by Eurocontrol, headquartered in Brussels, which controls European airspace traffic. In the report, it was stated that the European aviation sector experienced the "worst year" to date due to the COVID-19 epidemic last year, and in 2020 the number of flights in Europe decreased by 55 percent compared to the previous year to 6.1 million, recorded a billion decrease. In the report, which stated that the total financial loss of airlines, airports, and air navigation service providers in Europe was 56.2 billion Euros last year, it was reported that 190 thousand people lost their jobs in the aviation sector. The report, which stated that European traffic in 2021 will point to a recovery of close to 51 percent of the 2019 air transport volume with the impact of the implementation of the COVID-19 vaccine, called for financial support to the sector (ACI, 2020).

As stated in the Euro control data, the air traffic, which decreased in January, further decreased in February. With the pandemic center being Europe and the epidemic reaching significant dimensions in the USA, air traffic decreased significantly in March and significant increases were observed in the number of canceled flights. In this context, when Figure 1 is examined, the difference between March 2019 and March 2020 draws attention. This difference describes the worst period the aviation industry has experienced in declining from one year to the next (ACI, 2020).

Departure / Arrival traffic when the terms in October compared to last year 71% in Spain, 69% in Britain, 64% in Italy, 62% in Germany, 55% and 52% decline experienced in Turkey in France. According to the Euro control report, which stated that there was a serious decrease in flights in the last two weeks; There was a decrease of -188 flights in Air France, -162 flights in Easy Jet, -87 in Lufthansa and -32 in THY.

The decline in the number of flights caused economic problems and forced airline firms to lower their expenses during the pandemic era in the aviation industry. Airlines agreed first to split staff from their routes to reduce their expenses.

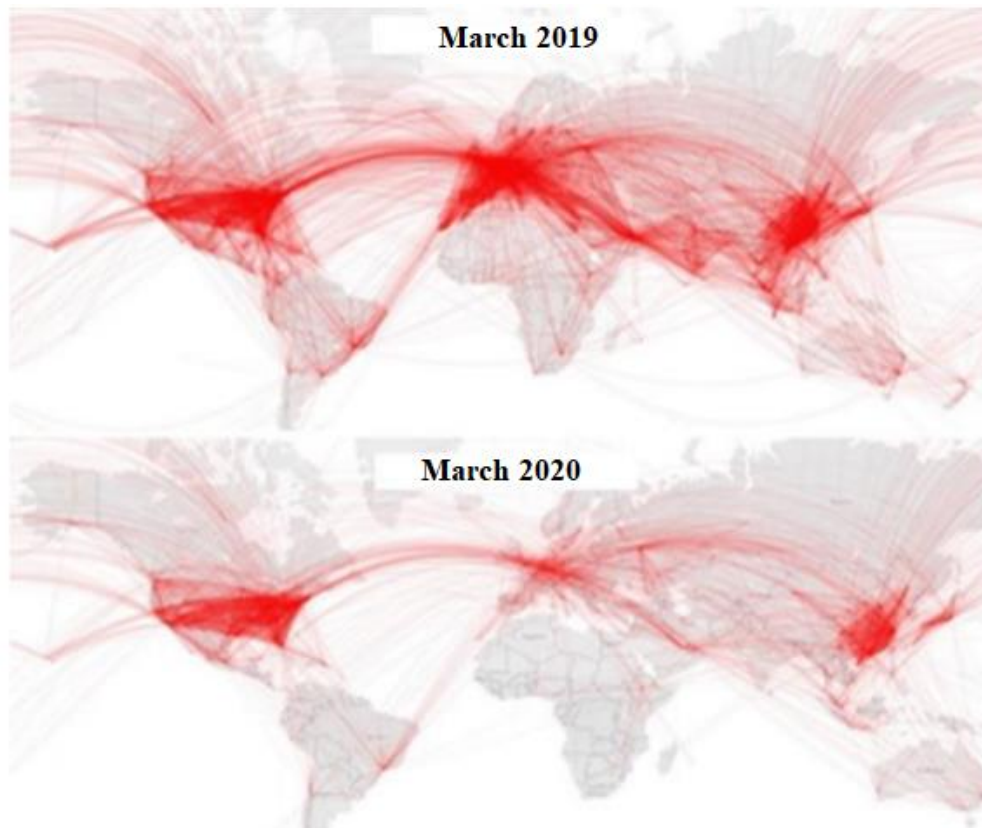


Figure 1. March World Traffic Comparison (2019-2020)

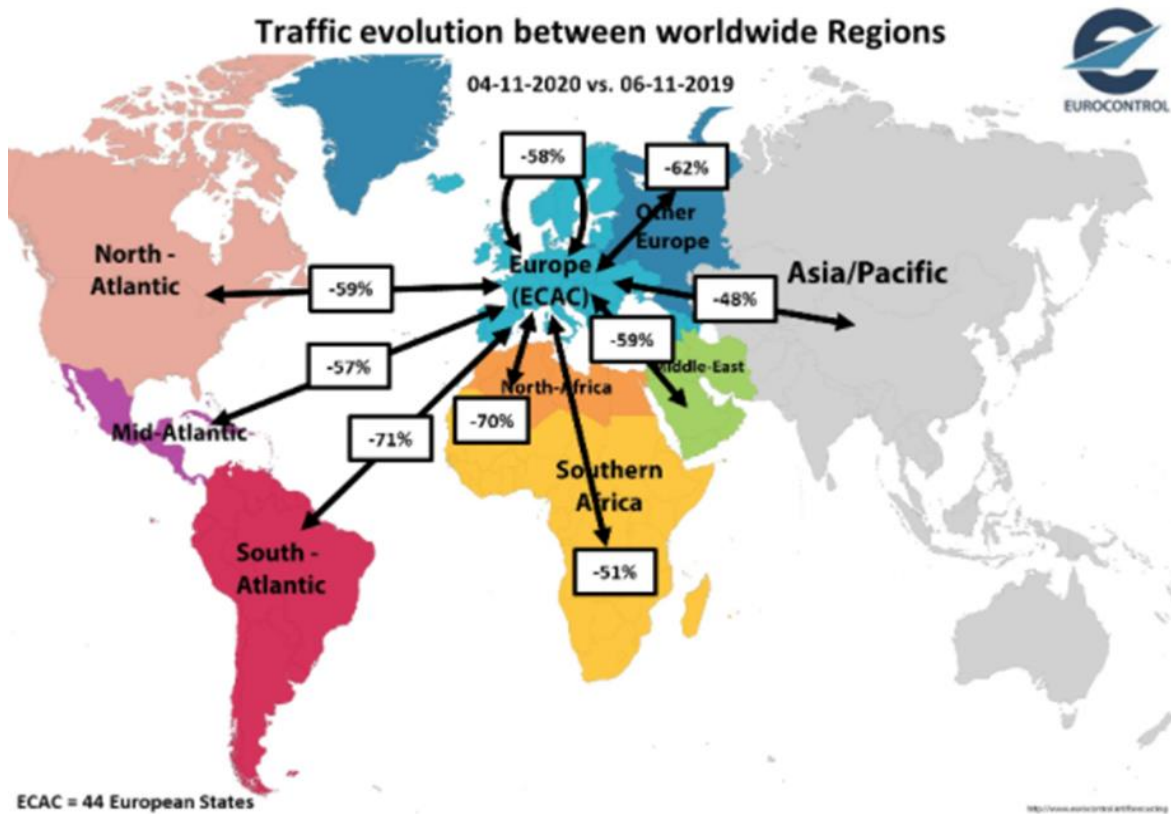


Figure 2. Departure-Arrival Traffic

It is determined that American Airlines, one of the largest airline companies in America, laid off approximately 2,500 pilots, and the pilots who continue to work have agreed with the airline company to get 23% less salary (Aratani, 2020). British Airways stated that there was a very serious crisis due to the virus epidemic and that they would have to lay off about 12,000 employees, while another British company Easy Jet stated that approximately 4,500 people were laid off only among cabin attendants (BBC, 2020). In his estimation, he announced that a loss of approximately 1.1 billion dollars will be incurred by the end of 2020 (Sardana, 2020). Emirates, one of the rising airline companies in the Middle East, was also affected by the virus outbreak and stated that they would cut their salaries by 25-50% (Emirates, 2020). German Lufthansa stated that they landed 700 planes and therefore applied for short-time work allowance for approximately 87,000 employees (Gönültaş, 2020). Avianca, the second largest airline in Latin America, stated that their planes have been on the ground since March, their revenues have dropped by more than 80% and they are trying to cope with high fixed costs due to COVID-19 and filed for bankruptcy protection to American courts in mid-May. (BBC, 2020). This situation can be considered as the beginning of a process that could cause approximately 17,000 people working in Avianca to become unemployed. Undoubtedly, it is possible to increase these examples. If the epidemic continues, it seems likely that even more airlines will fall into a similar situation.

2. AVIATION SECTOR AND COVID-19 MEASURES

The fact that air travel is swift and allows you the ability to pass through continents has expanded the dissemination of COVID-19, which is known as the latest form of corona virus, through its transportation from various points into broader geographies. Besides being a passenger transfer center between air and ground, the expansion of airports as living, shopping, and commercial centers increases mobility in the region (Akca, 2020). For this reason, one of the underlying factors for air transport to come to the fore in pandemic processes is the accelerating role of the number of domestic/foreign entering the country and the human mobility in the region for the contagiousness and spreading the power of the disease. In addition, the faster virus spread in aircraft, despite all the measures taken, is effective in increasing the anxiety and hesitation towards the aviation sector.

In this aspect, during the COVID-19 process, rules have been established to protect public health within the scope of air transport activities, procedures to be applied for passenger safety and flight crew safety have been determined and instructions have been prepared. Every stage, from aircraft cleaning to responding to the suspected passenger, has been described in detail. Everything from the provision of medical devices that can intervene to the sick patient or isolate the suspected patient in the aircraft, to the procurement and use planning of protective clothing and materials that will ensure the safety of the flight crew (CAAC, 2020). Airport operators also carry out disinfection activities necessary to protect the health of both flight crews, passengers, and other employees (CAAC, 2020). Measuring the body temperature of the passengers with thermal cameras, the use of protective masks and gloves by the personnel, the parking of the aircraft carrying patients or suspicious patients in private areas, the ventilation of the airport and terminal buildings, the cleaning of the airport and terminal, security officers and health personnel have been determined in detail. (EASA, 2020).

Airports are one of the most risky places during the outbreak due to the high number of travelers on airports. At the same time, it was thought that people traveling on the same plane would be highly likely to catch the respiratory tract COVID-19 virus. For this reason, a document has been published by WHO regarding the disinfection rules to be applied at airports.

According to the rules specified in this document, for all aviation personnel (WHO, 2020);

- Providing information about the symptoms of COVID-19,
- Reminding the crew and ground personnel about social distance, hand hygiene, respiratory etiquette, environmental cleaning, and waste disposal,
- When and how to use masks,
- Matters to be considered regarding patients with COVID-19 symptoms,
- It is recommended to give information about the use of protective equipment during first aid.

It was emphasized that in case of suspicious cases at airports, the process should be carried out within the scope of the airport emergency plan in coordination with the airport health authorities and public health authorities. He recommended that airport health services could work in coordination with airport support services such as aircraft cleaning and cargo-luggage loading, water loading,

and wastewater services to prevent further infection risks.

According to the ICAO standards in the aircraft cabin in the flights performed by WHO (WHO, 2020);

- Dry powder that can turn small liquid spills into a sterile granulated gel,
- Antiseptic disinfectant wipes for surface cleaning,
- Face-eye mask (separate glasses and medical mask or combined face shield),
- Gloves (single use),
- Protective apron,
- Full length long sleeve dress,
- It was stated that there should be a disposable waste bag.

RESULT

In the Wuhan Province of China, Hubei, in December 2019, the pandemic called COVID-19 struck the entire planet. Both industrialized and emerging economies, this situation have also had a negative effect on the global economy as a whole. While countries are struggling with the COVID-19 pandemic, they are also striving to reduce the costs of the profound effects on almost all sectors of the economy. Many measures such as curfew, social quarantine, closing schools, stopping sports competitions, closing workplaces, closing international border crossings are implemented in many countries in terms of combating the pandemic. All sectors of the economy, from tourism to education, agriculture to energy, civil aviation to financial institutions, are adversely affected by these measures. The COVID-19 process has seriously affected and continues to affect the air transport industry as it affects all sectors.

The first measures taken with the pandemic announced by WHO were the measures for the aviation sector. The measures, which started with the countries stopping all flights from Wuhan, then to and from China, became widespread with the appearance of the disease in various countries. The crisis in the aviation industry was tried to be managed by controlling the passengers coming from abroad with thermal cameras, the 14-day quarantine determined as the incubation period of the disease, and additional measures for the passengers who got sick on the plane.

The decline in air traffic has led to changes in the employment policies of airline companies. In this context, it may be possible to dismiss a large number of employees, as well as to take unpaid leave or to reduce certain wages. As a result of the

COVID-19 Pandemic, a loss of 13% is expected in the airline transportation sector, where 10.2 million people are directly employed worldwide (ATAG, 2020) (Sobieralski, 2020).

Winners among airline companies will be those who best respond to their customers' concerns regarding hygiene. During the flight, instead of serving the flight crew, good solutions are to offer food and drinks for customers previously prepared and placed in their seat pockets, or to allow customers to bring their own food with them. Similarly, distributing disinfectants or masks to passengers and new session plans to protect social distance are also important for companies to position themselves as hygiene-oriented companies in the eyes of passengers. Similarly, in this period, businesses that emphasize social distance and hygiene measures will differentiate in front of the eyes of consumers.

Creating a loyal customer base will build a solution approach for the airline industry by making the right presentation to the right customer, in other words, relying only on economies of scale and not economies of scale. The provision of customized passenger packages for prospective airlines would be the path to profitability. For example, a variety of alternative options for retaining social distance are open to passengers. It is possible to respond to passengers agreeing to pay additional expense for their seats next to them.

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