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**IMPACTS OF COVID-19 AND THE POLICY RESPONSES ON THE AVIATION**

**INDUSTRY**

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### **Abstract**

The objective of this paper is to explain the causal relationship between the impact of COVID-19 on the aviation sector and the policies initiated by the aviation authority such as the International Air Transport Authority (IATA), International Civil Aviation Organization (ICAO), the European Union Aviation Safety Agency (EASA) and the Federal Aviation Authority (FAA). COVID-19 affected every sector of the business world, and obviously, the aviation sector was not out of its effects. According to the Director General and CEO Alexandre de Juniac, “The aviation industry is in crisis. Our business connects people. But owing to efforts to control the spread of the novel coronavirus (COVID-19), we have seen the greatest de-connecting of the world since the Second World War.” (IATA, 2020). On 2020, the world faced a completely unwanted situation from top to bottom. After almost one hundred years, the earth faced a pandemic that brought catastrophic and bizarre global environments. Influenza was responsible for about 100 million deaths, most of them after the major epidemic of 1918-1919, known as the Spanish flu, as well as HIV, which caused around 30 million deaths. (Salman et al., 2020). This paper chronologically describes the effects of COVID-19, specifically on the aviation industry. In response, concerned regulatory bodies have taken the initiative to fight against those unexpected situations. Secondary data related to the topic were retrieved and have been used to fulfill the paper requirements. Therefore, due to time limitations and academic affairs, this topic deserves more analytical discussion.

**Keywords:** COVID-19, international air transport association (IATA), international civil aviation organization (ICAO), european union aviation safety agency (EASA), federal aviation authority (FAA)

## **HYPOTHESIS**

The main hypothesis of this paper is to explain the causal relationship between the impacts of COVID-19 and the policy responses in the aviation industry. When COVID-19 affected the whole of the world aviation industry could not get rid of its effect. In every corner of the world, domestic, regional, and international flights were canceled. In response, the International Civil Aviation Authority (ICAO), the International Air Transport Association (IATA), and the Federal Aviation Administration (FAA) provided different circulars, instructions, and Standard Operating Procedures (SOP) to the airport authorities and to the airlines authorities all over the world. The main objective of this paper is to discuss these initiatives in this paper.

## **RESEARCH METHODOLOGY**

This study is a descriptive analysis with a conclusive research design since there are cause and effect relations where the main purpose of better understanding COVID-19's effect on the aviation industry. This article consists of a qualitative approach regarding findings and the usage of secondary data derived from published journals, articles, and books.

## **THE COVID-19 STORM**

The first cases of the Novel Coronavirus (COVID-19) were identified for the first time in China, Wuhan, in the province of Hubei (Business Insider, 2020). It belongs to the family of coronaviruses, with diverse effects from a simple cold to fatal pneumonia. The (COVID-19) virus is like the severe acute respiratory syndrome from (SARS) family viruses, which caused an epidemic in China in 2002-2003. (Mhalla,2020). “Stay-at-home”, “work from home,” and different kinds of restrictions were imposed by the government around the world. According to World Bank, “China began to lock down Wuhan City on January 23, 2020, followed by the entire Hubei Province (Ren-fu et al.,2019).

On the other hand, the World Health Organization (WHO) declared a public health emergency of international concern to coordinate international responses to the disease (McKibbin & Fernando,2020).

### **THE IMPACT ON AIRLINES INDUSTRY**

Total contributions of 6.6% of total world exports and almost 30 % of total world exports of services are represented by the airline industry (UNWTO, 2020). However, the COVID-19 outbreak attacked this sector with its full thrust. When fear of COVID-19 was rising in the global atmosphere, airlines began significantly cutting flights to China and other Asian, European, and middle eastbound flights as COVID-19-related fears to avoid the fear of transforming the disease. When the epidemic extended all over the world, demand for travelers decreased worldwide. Despite the space given between each seat, people found it risky to fly (Business Insider, 2020). According to the IATA, “The impact on aviation has been catastrophic. At the peak of the crisis in April 2020, 90% of our business disappeared.” (IATA, 2020).

### **THE IMPACT ON AIRLINES COMPANY**

As per the declaration of the International Airlines Transport Association (IATA), the estimated global airline industry sales losses were predicted to hit around 250 billion US\$ in 2020. (Bureau, 2020). The UK Transportation Department announced that it would help Flybe (which runs 40% of UK’S domestic flights) workers "as soon as possible" look for new jobs, and Loganair, a Scottish airline, announced that it will take more than 16 flights routes and that over the next four months, flights would be launched in phases (Toh, 2020).

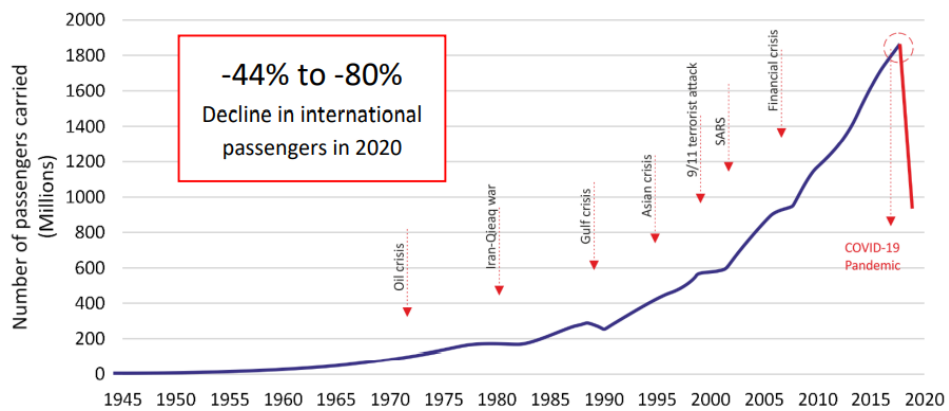


Figure 1: Historical decline of commercial flights (ICAO Air Transport, 2020).

(Source: Salman et al., 2020).

The above figure shows the decline in passengers traveling (per million) in the year 2020. In the decade of the '70s oil due to the oil crisis, commercial flights were reduced. In the recent past, the 9/11 terrorist attack reminds us of another disaster in aviation history. But all the experiences broke in the year 2020 due to the COVID-19 disaster. It was a -44 % to -88% decline of international passengers, according to the record of the ICAO report. Between the 20th of January and the 7th of March 2020, US airline stock prices decreased by 30%. Flight prices for domestic flights have also fallen. (Salman et al., 2020).

As per the report of business today, “The Middle East's largest airline, Emirates, announced on Tuesday a net loss of 5.5 billion over the past year as revenue fell by more than 66% due to global travel restrictions sparked by the coronavirus pandemic.” (Business Today,2020). Regarding one of the top airlines Qatar Airways, the report says, “Long-haul carrier Qatar Airways on Sunday reported revenue losses of \$1.9 billion for the past year, blaming the coronavirus pandemic on its liquidation of shares in Air Italy. (Business Today,2020).

The report says another destruction continues about American Airlines. According to the report, “American Airlines reported a staggering loss of \$2.24 billion for the first quarter when the coronavirus pandemic triggered a sharp drop in air travel. The Fort Worth-based carrier is looking at significant downsizing.” (Solis and Koeing,2020).

**IATA REPORT: AIRLINES ON LOSS**

Estimated loss as of 1 November

Airlines posted an industry net loss of \$ 118.5 billion	Revenue passenger kilometers (RPKs) ↓ 66.3% Available seat kilometers (ASK) globally ↓ 57.6%
1.8 billion Passenger journeys on a flight-segment basis	Passenger load factor (PLF) around 65.5%
Cargo tonne kilometers (CTKs) ↓11.5%	Return on invested capital (ROIC) -17.7%
EBIT margin & of revenues 31.3%	Variety of financial and regulatory government relief measures totaling \$ 173 billion
Number of flights in 2020 16.4 million	Number of flights in 2019 38.9 million

(Source IATA, 2020, page 18)

**COVID-19 IMPACTS ON: TOURISM, TRADE, AND ECONOMY**

Following are the probable predictions provided by the International Air Transport Authority against the impact of COVID-19-

1. International air passenger traffic might deal with an average decline in international passengers from 44% to 80% in 2020 compared with 2019 (ICAO, 2020).

2. Airports may experience an expected loss of two-fifths of passengers carried and 45% or more than \$76 billion of airport revenues in 2020 (ICAO, 2020).

3. Tourism may face a decrease in international tourism industry receipts between about \$300 billion and \$450 billion in 2020, nearly 1/3 of the \$1.5 trillion created in 2019, with travel restrictions of 96 percent of world destinations (ICAO, 2020).

4. Global economy may have to cope with a predicted 3 percent fall in the global GDP in 2020, much greater than in the financial crisis of 2008-2009 (IMF, 2020).

When COVID-19 started attacking the aviation industry, the concerned authorities took instant initiatives to fight against COVID-19. Now their measures, techniques, and instructions will be discussed here.

### **POLICY RESPONSES: IATA**

IATA brought together airline medical experts to make Medical Advisory Group (MAG) from around the globe. According to their advice, the Council Aviation Recovery Task Force (CARTF) was formed.

#### **COUNCIL AVIATION RECOVERY TASK FORCE (CARTF)**

The work of the ICAO Council's Aviation Recovery Task Force (CART) was aimed at providing practical, aligned guidance to governments and industry operators to restart the international air transport sector and recover from the impacts of COVID-19 on a coordinated global basis. (IATA, 2020).

At the same time, In the United States, the Department of Transportation (DOT) issued guidance that was similarly aligned with ICAO's Take-off guidelines. (IATA,2020, page 21).

IATA called for the implementation of the Take-off guidelines as the global standard for safe operations. In Europe, the European Union Aviation Safety Agency (EASA) and the European Centre for Disease Prevention and Control (ECDC) agreed to a protocol aligned with the international standards set by the June Take-off guidance. (IATA, 2020). Their guidelines were as follows-



### 1. Airport Guidelines

At the pick time of COVID-19, most commercial passenger airports were in Stage 0 or 1. Where stage 0 means a situation with travel restrictions and only minimal movement of passengers, and stage 4 begins when specific and effective pharmaceutical interventions are readily available in most countries.

### 2. Aircraft Guidelines

#### Passenger

Seat assignment processes. When needed, seats should be assigned for adequate physical distancing between passengers. Airlines should allow for separate seating arrangements when occupancy allows it. Passengers should also be encouraged to stay in the assigned seat as much as possible. Even the use of non-essential in-flight supplies, such as blankets and pillows, should be reduced to minimize the risk of cross-infection.

#### Crew

Crew protection measures. Sharing of safety equipment used for safety demonstrations should be prohibited. Crew members should be instructed to provide service only to specific sections of the cabin. Additional means of protection, for instance, plastic curtains or Plexiglas panels during the boarding process (to be removed once boarding is completed), should be explored.

#### Flight Deck

The flight deck should be cleaned and disinfected at an appropriate frequency to accommodate safe operations for the crew. The use of a 70% aqueous solution of Isopropyl Alcohol (IPA) as a disinfectant for the flight deck touch surfaces with specific care to be taken for application on leather and other porous surfaces.

#### Passenger Cabin

The cabin disinfection methods should be adopted in consultation with the aircraft manufacturer and based on an appropriate safety risk assessment. Any advice from the WHO should also be considered. The risk assessment should be informed by recommendations from airframe manufacturers and reference instructions from appropriate health organizations on applications to be effective against viruses.

#### Cargo Compartments

The cargo compartment disinfection methods should be adopted in consultation with the aircraft manufacturer and based on an appropriate safety risk assessment. Any advice from the WHO should also be considered. Airlines may wish to review their operating procedures to minimize the number of personnel who need to contact high-touch surfaces such as access panels, door handles, switches, etc.

### Maintenance

Airlines should establish maintenance procedures to be applied after disinfection procedures to check the Flight Deck, Passenger Cabin, and Cargo Compartment for the correct positioning of the control handle, circuit breakers, and control panels' switches and knobs. Access panels and doors closure should also be checked.

### 3. Crew guidelines

Crew members should-

- a) participate in their national vaccination programs recognizing that vaccination offers personal protection from infection and can assist in recovering the very of global connectivity.
- b) monitor themselves for fever or chills, cough, shortness of breath or difficulty breathing, loss of taste, or other symptoms of COVID-19, according to WHO guidance. the WHO cut-off point for fever is 380C or higher;
- c) take their temperature at least twice per day during duty period and at any time they feel unwell; and
- d) take their temperature at least twice per day during duty periods and at any time they feel unwell; and
- e) stay at home or in their hotel room, notify their employers' occupational health program, and not report for work if they develop a fever, shortness of breath, or other symptoms of COVID-19. They should not return to work until cleared to do so by the employers' occupational health program and public health officials.

**During Flight**

1. If a crew member develops symptoms during flight, the crew member should stop working as soon as practical, put on a medical mask, notify the pilot in charge, and maintain the recommended physical distance from others, when possible, to do so.
2. Upon landing, individuals should follow up with airline medical and public health officials.

Not only this, IATA supplied the following instruments related to COVID-19 response and to fight against COVID-19:

<b>1.5 million metric tons of PPE and medical Supplies</b>	<b>5 million people carried home on</b>
<b>46,000 special cargo flights</b>	40,000 dedicated repatriation flights
<b>250,000 free tickets to medical staff</b>	

(IATA,2020, page- 28)

**POLICY RESPONSES: FAA**

The federal aviation administration (FAA) was proactively taking steps to help address the widespread economic and health effects that the COVID-19 pandemic was having on the aviation industry. (FAA, n.d.) The FAA continues to evaluate many requests from across all aviation industry sectors to help address COVID-19-related effects. The FAA has taken the following actions and provided the following guidance:

**VACCINE TRANSPORT**

The COVID-19 Vaccine Air Transport Team addresses potential aviation issues and outcomes within the FAA's scope of responsibility in the following key areas: risk management, airworthiness, flight operations, aeromedical, air traffic control/ airspace management, airport

operations, carriage of dangerous goods/hazardous materials, communication/collaboration global leadership. (FAA, n.d.)

## REGULATORY UPDATES

Following are the regulatory updates of the FAA:

Extension of minimum outbreak, FAA amends cargo exemptions, extended air carrier training exemptions, clarifying information for airmen, using medical certificate duration relief, the second amendment to special federal aviation regulation (SFAR) 118, amendment of air carrier training exemptions , FAA extends flight attendant exemption, FAA amends exemption for certain air ambulance personnel, new cargo exemption, an amendment to existing cargo exemption, updated CARES Act FAQs, the exemption for transporting cargo on airplane seats, the exemption for certain air ambulance personnel, relief for certain persons and operations during the COVID-19 outbreak ,temporary control tower hour adjustments, FAA extends AIP application deadlines, drone use for response efforts , flight attendant exemption, Coronavirus Aid, Relief, and Economic Security Act (CARES) airport program, additional pilot medical certificate exemptions, air carrier training exemptions, pilot medical certificates, airport slot-use waivers, temporary parking of overflow aircraft, airport certification safety inspections. (FAA, n.d.).

## GUIDANCE AND RESOURCES

Following are the guidance and resources initiated by the FAA:

Use of COVID-19 vaccines by pilots and air traffic controllers, transporting dry ice, flyhealthy.gov, enforcement discretion for random drug and alcohol testing, updated health guidance for air carriers and crews, FAA issues guidance about flexibly managing scheduled maintenance

requirements due to COVID-19, FAA issues, guidance on operations in terminal Airspace, runway to recovery: government publishes national strategy for air transportation system recovery, FAA issues guidance on operations in oceanic airspace, updated guidance for airport sponsors considering COVID-19 restrictions or accommodations, cargo guidance for safety inspectors, cargo transportation guidance, flexible air traffic control schedule, information for airport sponsors, guidance to FAA inspectors, FAA construction projects, airport construction projects, airport improvement program, aviation maintenance technician schools, COVID-19 information, sharing health safety messages, pilot oxygen mask requirements, expanded drone operations, Puerto Rico flight restriction request, Drug and Alcohol Testing, guidance for states, localities, and territories considering air transportation restrictions. (FAA, n.d.)

## **2020 CARES ACT**

The Coronavirus Aid, Relief, and Economic Security (CARES) Act (H.R. 748, Public Law 116-136), signed into law on March 27, 2020, includes \$10 billion in funds to be awarded as economic relief to eligible U.S. airports affected by the prevention of, preparation for, and response to the COVID-19 pandemic. This Act provides funds to increase the federal share to 100 percent for Airport Improvement Program (AIP) and supplemental discretionary grants already planned for the fiscal year 2020.

Additionally, the CARES Act provides new funds distributed by various formulas for all airports that are part of the national airport system. This includes all commercial service airports, all reliever airports, and some public-owned general aviation airports. (FAA, n.d.)

## **POLICY RESPONSES: EASA**

Based on the reports published by World Health Organization (WHO), to tackle the outbreak of novel coronavirus disease (COVID-19) caused by SARS-CoV-2, the European Union Aviation Safety Agency (EASA), the International Civil Aviation Organization (ICAO), and the European Centre for Disease Prevention (ECDC), EASA issued Safety Information Bulletin (SIB) 2020-02 (later revised, now at Revision 5), provided recommendations to the NCAs and Aircraft and Aerodrome operators to reduce the risk of spreading of the SARS-CoV-2. (EASA,n.d.).

## **FINDINGS**

The aviation industry always faces various kinds of risks, human-generated obstacles, natural disasters, etc. On the other hand, around the globe, people love to move via flights because it saves time and energy. The revolution in the airline industry has been going on for the last few decades. Airlines are competing to capture customers' attention. Different kinds of sales, offers, increasing connectivity, short haul-long haul flights, etc., are inspirational initiatives taken by the airlines in the aviation industry. But, in 2020, COVID-19 destroyed almost every single sector of the business area. Essentially, the aviation sector was not out of its negative effects. Cancellation of flights, closing of destinations, sacking of employees, sending employees on leave without payment, starting of cargo flights in passenger's aircraft, etc., were the everyday shocking news for the aviation workers. The purpose of this paper is to clarify the effects of COVID-19 in the aviation sector specifically and its responses inaugurated by the regulatory authorities. The initiatives taken by the IATA, ICAO, FAA, and EASA were discussed before explaining the policies of these authorities. Supplying PPE and hand sanitizer, providing health circulars, changing Standard Operating Procedures (SOPs) to the airline authorities, and continuous supervision of these matters were discussed in this paper. Though this assistance was not enough to cover the disaster but still

showed the path to getting rid of the darkness. This is not high time to justify whether the aviation sector has recovered fully from the negative effects of COVID-19 or not. Therefore, it can be predicted that by following the directives and instructions distributed by the concerned authorities, the aviation sector will get its previous stamina to run at a smooth pace. The aviation industry has learned important techniques on how to deal with an isolated situation like COVID-19. Certainly, we will be more focused on ensuring different rules and regulations so that we can be able to face the next challenges that the industry has been facing from the beginning.

### References

Business line. (2020, March 24). Global airline losses may hit \$250 b in 2020: IATA. *The Hindu BusinessLine*. Retrieved December 8, 2022, from

<https://www.thehindubusinessline.com/economy/logistics/global-airline-losses-may-hit-250-b-in-2020-iata/article31155911.ece>

Business Insider. (n.d.). *The coronavirus pandemic in 28 charts, maps, and graphics*. Google.

Retrieved December 10, 2022, from <https://www.businessinsider.com/coronavirus-in-charts-covid-19-symptoms-spread-deaths-warnings-2020-2>

Business Today. (2020, September 28). COVID-19 effect: Qatar Airways' losses mount to \$1.9 billion. *Google*. Retrieved December 8, 2022, from

<https://www.businesstoday.in/industry/aviation/story/covid-19-effect-qatar-airways-losses-mount-to-19-billion-274167-2020-09-28>

Business Today. (2021, June 15). COVID-19 impact: Emirates posts \$5.5 billion loss on global travel restrictions. *Google*. Retrieved December 8, 2022, from

<https://www.businesstoday.in/industry/aviation/story/covid-19-impact-emirates-posts-55-billion-loss-on-global-travel-restrictions-298698-2021-06-15>

European Union Aviation Safety Agency (EASA). (n.d.). EASA COVID-19 Resources

. *Google*. Retrieved December 9, 2022, from <https://www.easa.europa.eu/en/easa-covid-19-resources>.

Federal Aviation Administration. (n.d.). *Coronavirus (COVID-19) Information from FAA*.

*Google*. Retrieved December 9, 2022, from <https://www.faa.gov/coronavirus>



<https://www.iata.org/contentassets/c81222d96c9a4e0bb4ff6ced0ced0126f0bb/iata-annual-review-2020.pdf>

International Air Transport Association. (2020). Crises are not new — resilience is in our DNA. Annual Review

<https://www.iata.org/contentassets/c81222d96c9a4e0bb4ff6ced0ced0126f0bb/iata-annual-review-2020.pdf>

International Air Transport Authority. (n.d.). *IATA Health and Safety Checklist for Air Operators (IHSC)*. Google. Retrieved December 10, 2022, from <https://www.iata.org/en/publications/store/health-safety-checklist/#:~:text=The%20IATA%20Health%20Safety%20Checklist%20for%20Airline%20Operators,of%20Public%20Health%20Events%20in%20Civil%20Aviation%20%28CAPSCA%29.>

Journal of Integrative Agriculture, 19 (12) (2946-2964)

McKibbin, W., & Fernando, R. (2020). The Global Macroeconomic Impacts of COVID-19:

Mhalla, M. (2020). THE IMPACT OF NOVEL CORONAVIRUS (COVID-19) ON THE GLOBAL OIL AND AVIATION MARKETS. *Journal of Asian Scientific Research*, 10, No.2.

Ren-fu, Cheng-fang, L., Jing-jing, G., Tian-yi, W., Hua-yong, Z., Peng-fei, S., & Ji-kun, H. (2019). Impacts of the COVID-19 pandemic on rural poverty and policy responses in China.

Salman, D., Seiam, D. S., & Fayaz, E. (2020). HOW CAN THE AVIATION SECTOR SURVIVE AFTER COVID-19? *Virtual Economics*, 3.

- Solis, N., & KOENIG, D. (2020, April 30). American Airlines posts \$2.2 billion loss during COVID-19 pandemic. *Google*. Retrieved December 8, 2022, from <https://www.fox4news.com/news/american-airlines-posts-2-2-billion-loss-during-covid-19-pandemic>
- Toh, M. (2020, March 5). UK airline Flybe collapses as coronavirus crisis deals the final blow. *Google*. Retrieved December 8, 2022, from <https://edition.cnn.com/2020/03/04/business/flybe-collapse-2020/index.html>
- UNWTO. (n.d.). *IMPACT ASSESSMENT OF THE COVID-19 OUTBREAK ON INTERNATIONAL TOURISM*. *Google*. Retrieved December 10, 2022, from <https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism>
- WHO. Coronavirus. (2020). Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>