IMPACTS OF THE COVID-19 OUTBREAK ON THE AVIATION INDUSTRY: THE CASE OF QATAR AIRWAYS DURING THE COVID-19 PANDEMIC

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Abstract

Before the World War II, the aviation has a niche place in the transportation industry. Today, air transportation is recognized as the most effective and preferred mode of transportation for the nation. Different countries and communities from various parts of the world are connected with passenger and cargo flights despite the distance. The rapid development of the aviation industry is relying on the technological improvements (National Research Council, 2002. p. 5).

The aviation industry has been challenged and has been followed by ups and downs. The historical growth of the aviation industry is marked from the mid-1990s to the beginning of the new millennium. The growth of airlines was sustained based on several happenings such as globalization that increased the demand for air travel, a new economy, and increasing GDP worldwide. However, this rapid progress of the industry has not been continuous. At the beginning of 2000, this growth phase slowed down, and several happenings had negative impacts on the aviation industry. The economic stagnation, terrorist attacks of September 11, 2001, and the SARS virus in 2003 aggravated the situation. Probably, the airline industry has faced the most challenging period in 2004. The whole industry was through uncertainty and even the major airlines were not able to predict anything further (Cento, 2009. p. 3).

Air travel is a large and growing industry. It is common knowledge that aviation has been one of the key contributors to economic growth. Air travel is expected to grow further due to increased population and more reliable aircraft in the air. Air travel is now becoming more affordable, and many people are eager to travel which was a dream for them previously. An introduction of the middle class in many countries has supported the airline industry in terms of leisure and business travel. Low-cost airlines are the main source of international travel, and many people are now able to travel by air (Sikander, 2019. p. 1).

In the past, one of the biggest challenges for the aviation industry has been safety and security concerns of the people towards air transportation. By time, more reliable aircrafts, engines, and aircraft components appeared that changed the safety perception of the aircrafts dramatically. Many accidents have been avoided as a result of improved safety and security systems. The fatality rate has been considerably reduced making air travel safer for passengers. 2017 has been the safest year for air travel, therefore, fatalities fell to 79 deaths compared to 1000 deaths in 2005 (Sikander, 2019. p. 2).

The main aim of this paper is to examine the influence of the COVID-19 outbreak on the aviation industry during the last two years and the strategies implemented to minimize the effects of this outbreak. Within the study, the impacts of some global crises on the aviation industry have been analyzed based on the secondary data and sectorial reports, and afterwards, relevant case study and SWOT analysis have been used to understand the strategies applied by Qatar Airways and might be useful towards the COVID-19 outbreak. Outcomes of this research propose significant hints for other entities within the aviation industry to diminish the influence of the pandemic.

1. Introduction

The aviation industry plays a crucial role in the economy of every country in the world and at the same time, contributes to the global economy as well. Being the huge industry itself, the airline industry has a direct impact on the growth of other industries such as aircraft manufacturing and tourism.

If we take a close look at the development of the airline industry, major developments were triggered by technological innovations that include the introduction of jet aircraft for commercial use in the 1950s, which was followed by the introduction of wide-body “jumbo jets” in the 1970s. (Belobaba et al., 2009, p. 1).

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The aviation industry is a major industry, especially, in our modern world, it has become an irreplaceable part of the supply chain. International tourism would not grow that much and even would not exist without air travel. From the perspective of trading, there is no better mode of transportation rather than air transport, especially, for perishable goods such as fresh food or cut flowers.

Civil aviation covers all air transport systems including airlines, service providers on the ground and in the air, and all the authorities on the ground that are correlated. There are many crucial players in the formulation of air transport systems and the below figure outlines the different actors of the industry.

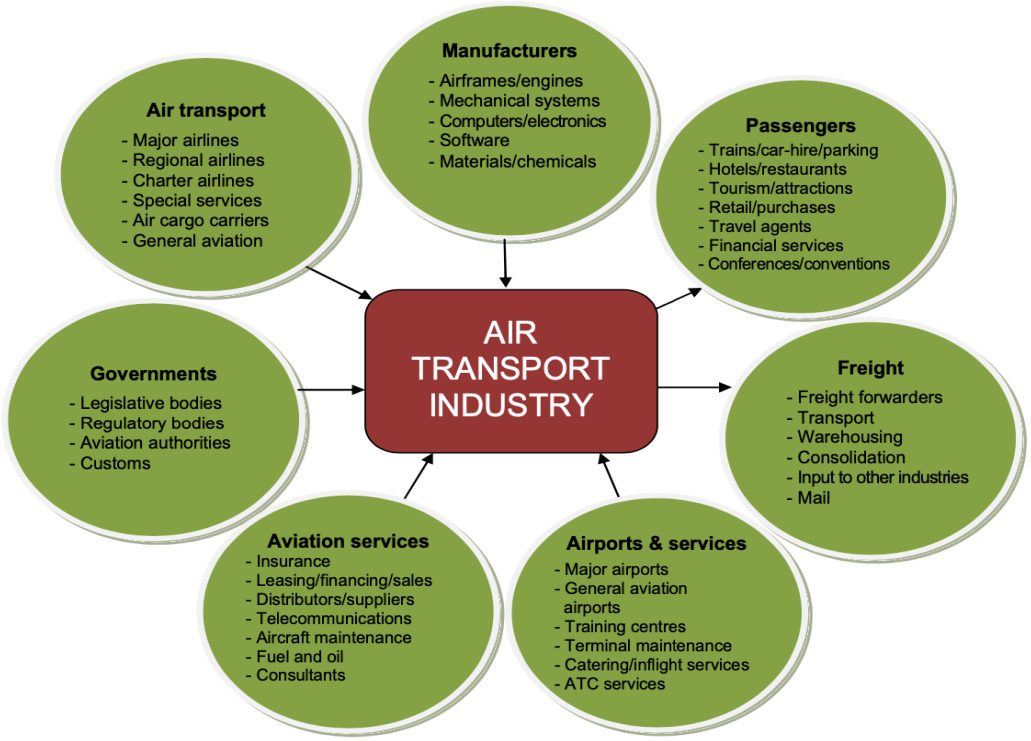

Figure 2.1. Air Transportation Industry

Source: ILO, 2013

Civil aviation can be identified by its distinctive features such as being a transnational industry which is underlined at the first stage. However, the industry is truly international, and, at the same time, it is attached to the country. Secondly, the industry is regulated on both international and national levels in terms of safety and security and also for political and economic factors. Another feature that can be counted as the deregulation of the industry in the late 1970s which has introduced different airline categories. Finally, the job market in the

aviation industry is widely segmented containing different job descriptions and profiles (ILO, 2013).

Even though there is a huge demand for aviation, in general, this demand factor is very changeable following the fluctuations, seasonality, directional flow, and perishability, and other features of the industry. The business of airlines is highly dependent on factors such as GDP, growth of population, political stability, leisure time, and market access. Since the product is perishable meaning the inventory of the airline is consisting of the seats that are available on each flight respectively, the airlines are very vulnerable to external crisis. Business travel is the main revenue generator for the airlines and in its turn, business travel is very sensitive towards fluctuations (ILO, 2013).

While KLM is known as the oldest airline company in the world, British Airways is the first airline company that initiated the earliest international flight which started London to Paris service in August 1919. Although initially, European airlines were settled as private companies, most of them could not continue to run the business independently and became reliant on government support. Afterward, state control and in many cases direct ownership became common and dominant for European airlines. All these changes and happenings emerged the understanding of national carrier in each country (Billig et al., 2017, p. 5).

Talking about the positive effects of the aviation industry on the economy of a country, it is worth mentioning that aviation makes trade easier, is a key factor in the development of tourism, and creates work opportunities for millions of people locally. In this sense, airlines have traditionally been recognized as national symbols. Another era of growth of the aviation industry is commenced in the year of 1978 when The Airline Deregulation Act was implemented in the United States. This deregulation has brought several innovations alongside the extensive development of the aviation industry by introducing low-budget carriers that made travel possible for millions of people by air.

Besides, the positive effects of the industry, we can list several external impacts of airlines that are negative such as air pollution, noise pollution, and congestion. Overcrowded airports and air traffic delays are common for airlines that are characterized as external negative effects of airlines. Increasing demand in air traffic shows that the control of congestion will be a major issue within the scope of airline management. Generally, it is accepted that offering higher prices during high seasons would be useful to manage the congestion at airports. It is calculated to create a balance between peak and off-peak periods so airlines would have a demand during low seasons and could offer their services on a fair share basis during both

periods. Air and noise pollution is also a major negative impact of airlines on the environment however as a result of the latest developments in technology airplanes have become much eco-friendly (Bilotkach, 2017. p. 5-6).

Even though the airline industry is one of the main contributors to the global economy, at the same time, the industry is quite vulnerable to changes in the economy. Thus, the airline industry is very dependent on the changes of the economy so that it is difficult to predict the demand for air transportation and the control is out of reach in many cases. Since the airline business is very competitive, therefore, competitor companies are applying different strategies to grab their share from the market that leads to low price offers. Happenings such as political upheavals, wars, terrorist activities, outbreaks of disease that are hard to predict can bring to the recession of the industry at any time (Clark, 2010. p. 6).

By its nature in terms of operations, the airline industry can be classified the most international among other industries, however, in terms of ownership and management, probably, it is the most national industry. The characteristics of the airline industry demonstrate a paradox. Therefore, several factors are recognized as key impacts on the industry and how it is shaped as follows:

- Globalization effect – a convergence of global economies as one giant economy whereas the borders become less of importance that creates a suitable environment for cross-border trade, investment flows, and rapid growth of global brands.
- Gross domestic product (GDP) growth
- Passenger load factors – these figures have been increased by 80 per cent and the main increase is observed within the markets like North America, Europe
- High fuel costs – to save the cost and benefit from the advantages of fuel-efficient aircrafts most airlines used to try replacing their fleets much earlier (Samunderu, 2019. p. 8-10).

While talking about the external impacts that influence the airline industry, the factor of demand is the first to be stressed. The demand factor is correlated with the growth rate of the population and is ascertained by the rate of GDP. To qualify the demand factor makes it possible for the airlines to identify the business need and supply accordingly. Further on, there are other exogenous factors such as politics and fuel prices. Business operations of airlines are highly affected by a dynamic phase of politics and other happenings. Terrorism is one of these occurrences and during the period which covers from the end of 2015 to the beginning of 2016 quite a few terrorist attacks were observed. Apparently, such terrorist attacks cause a decrease in the number of passengers who travel by air. Even the International Air Transportation

Association (IATA) prepared a report that highlighted the impact of terrorist attacks in the region of Western Europe (Samunderu, 2019. p. 12-13). However, happenings like these cannot be foreseen to forecast, but it can give insights to business owners on how to respond quickly and manage the crisis. Jet fuel prices that might fluctuate unpredictably from time to time are among the external factors that influence the operation of airlines. Since fuel is a large part of the operating cost of airlines and increased fuel rates are affecting the industry heavily (Dafir and Gajjala, 2016).

The prominent feature of air transportation is being international by the nature of the business and operations. So that aircraft has the speed advantage over other modes of transportation, especially, to the farther destinations. Various airlines around the world serve millions of people and carry them from one destination to another one fastest. Commercial airlines are not the only international players in the aviation industry, therefore, there are many suppliers to the airline industry, for instance, aircraft and engine manufacturers (Vasigh, 2010. p. 12).

2. Aviation Industry During Global Crises

2.1.Major Global Crisis in the History

As mentioned above the year 1995 was characterized as a new industry or economy for the airline industry and many airlines took these advantages of computer technology development that introduced new terms such as network management, yield management, e-commerce, and e-services. The below figure illustrates the positive return on investments of airlines during this period. Unfortunately, this progress was hit hard, first, during the 9/11 attacks and it was followed by the SARS epidemic in East Asia which occurred in February 2003. These two events are known as the most dramatic crises during that period. As it is shown from the below graph, the recovery of the airline industry has been observed only in 2007 after two major crises that happened back-to-back (Cento, 2008. p. 4).

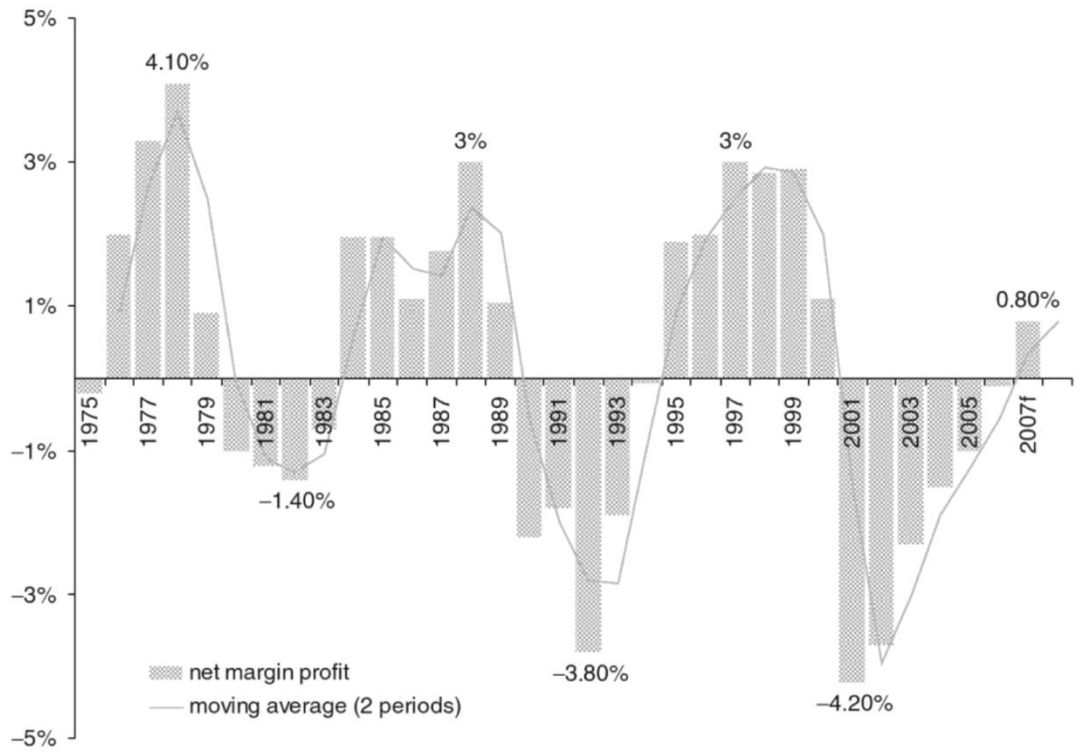

Figure 2.1. Net Margin Profits of The Worldwide Airline Industry

Source: ICAO and IATA forecasts 2006-2007

While the impacts of the September 11 attacks were continuing, the new wave of crisis which was known as the SARS epidemic, or severe acute respiratory syndrome started in late 2002 and early 2003 in East Asia. That was another challenge that humankind faced and, surely, the economy was influenced by its circumstances. The most affected countries from the SARS epidemic were China, Hong Kong, Taiwan, Singapore, and Vietnam, as well as Canada. This disease was leading to morbidity and mortality, and there was neither an exact treatment for the disease nor was there a vaccine found to avoid the spread of the virus (Lee and Warner, 2008).

Although, SARS was a health crisis, it had negative impacts on the economy and later on, financial impacts appeared since this disease was not very well known. At its initial phase, airline, tourism, and retailing were the first sectors that were influenced by this epidemic. With the immediate impacts of SARS shopping malls, restaurants, hotels, and transportation hubs were left empty. In general, the effects of SARS were analyzed in the short and long term (Koh et al., p. 165). Being an international hub, Hong Kong was one of the cities that was affected by SARS, especially, tourism, catering, entertainment and retails sectors. Hong Kong's busiest airline, Cathay Pacific was operated with daily 4000 flights in April and May whereas 33,000

daily flights were served by this airline before the pandemic. During the same period, the occupancy of the hotels in the city dropped to 20 percent. Within only a few months, from February until May the rate of unemployment jumped to 8.3 percent from 7.8 percent. SARS virus lasted only a few months and gradual development of the economy was already observed in June. Therefore, hotel occupancy rates rose to 40 percent while the number of daily flights was increased to 11,000 (Koh et al., p. 150-151).

The year 2008 was marked in history as the start of the global financial crisis and the world economy was under pressure again. Initially, the US was not affected that much even though the crisis started there. Instead, the crisis had more of effect on European countries, and the list was led by the United Kingdom. However, in the last quarter of 2008, the bankruptcy of Lehman Brothers and the failure of American International Group which was the largest insurance company in the US emerged the appearance of GFC in the States. These two major happenings were an important influence on other sectors, and therefore, the first real global financial crisis started (Tienhaara, 2018).

The world economy was in commotion as a result of the global financial crisis and international trade and foreign exchange markets were the most affected areas. The growth of the US economy in the early 2000s was always accompanied by high risks at the same time. Before the crisis, the global economy was characterized by a high level of economic development, low inflation, and minimal interest rates. While financial institutions were relying on profit maximation during a short period of time, and long-standing banking executions were demolished. After a while, almost all financial markets were suffering from the mortgage in the states, and the range of this turmoil was already felt all over the world (Hacioglu and Dincer, 2017. p. 21).

Recently, the COVID-19 pandemic which was originated in Wuhan, China, and spread worldwide, infected millions of people in a short amount of time and resulted in death. World Health Organization (WHO) started looking for ways to stop the virus and announced it a worldwide pandemic. Today, the virus has reached almost every country around the globe and has brought death and debility along. Shortly, many precautions were applied by the governments from many countries to stop the spread of the COVID-19. The cities were put under lockdown; authorities asked people to stay at home; the borders were closed; the travel was banned locally, nationally, and internationally; markets, schools, universities, and shopping complexes were closed until further notice to avoid gatherings and crowd. Quarantine and self-isolation were the main requirements to avoid the virus (Koley and Dhole, 2020. p. 4-5).

At its early stages, as a response to the spread of coronavirus, several non-pharmaceutical precautions were applied. First, it was advised to wash hands regularly and properly, cough etiquette, and not to touch your face. The next round of precautions included avoiding social gatherings, maintaining social distance, stop shaking hands, hugging, and kissing non-family members. Finally, lockdown – almost every country announced complete closure of many entities such as schools, universities, restaurants, museums, theatres, libraries, churches. Weddings and other big events and as well as many international sports and cultural events were canceled or postponed. Only the retail businesses that provide essential necessities were allowed to remain open and people were allowed to leave their place of residence on special occasions (Horton, 2020. p. 14).

Since the spread of the coronavirus was fast and reaching many countries faster, the WHO declared this disease as a pandemic on the 30th of January and an outbreak on the 11th of March. According to the statistics of the 28th of May, 2020 less than six million people were infected with the COVID-19 in more than 188 countries which resulted in the death of more than 355,000 people. At the same, time more than 2.40 million patients who were infected with the virus recovered (Benedict, 2020. p. 6).

2.2.The COVID-19 Outbreak

From the beginning of March 2020, the COVID-19 virus started to appear in most countries around the globe and disseminate into more nations and markets. With its negative effects on the world economy, the COVID-19 outbreak became an economic crisis from a health crisis. Since international borders were closed and many domestic and international flights were suspended until further notice, the was a high uncertainty about the behavior of the consumers and international trade partners. On the other hand, social distancing which was one of the precautions implemented by the WHO led to the shutdown of corporate offices, financial markets, events, and businesses. These two implications of the COVID-19 mentioned above were the basic techniques for how the virus hit the economy. Further extension of lockdown and travel restrictions were dragging down the economy and had negative effects on stock prices (Benedict 2020. p. 6).

Closure of international borders and the ban implemented on international travel as a part of measures avoiding the coverage of the COVID-19 put air travel in a surviving situation. Since global airlines were obliged to call most of their flights off, an approximate loss of 134 billion dollars was reported for the year 2020 meaning a 55% decrease in the revenue compared

to 2019. Different areas of the aviation industry were under pressure because of the COVID-19 outbreak both on an international and domestic level. The development of the virus was not promising positive outcomes for 2020. Furthermore, travel demand was decreased from 35% to 65% in 2020 compared to the previous year; airports projected a 97 billion dollars drop in the revenue; another 48% decrease was forecasted in international and domestic travel; the loss for travel agencies was set at the range of 910 to 1170 billion dollars in the same year. As a result, world GDP was expected to fall by -3% in 2020, which is way worse than during the economic crisis in 2008-2009 (Gupta and Goyal, 2020. p. 291).

In general, the travel and tourism industry, and more specifically, airlines are the ones that are affected by the COVID-19 pandemic. The business environment has been changed for the airlines because of the restrictions imposed and many global airlines have been operating with the minimum number of flights. Lower oil rates might be beneficial for the airlines in terms of fuel costs however, sanitation costs are occurring out of line. The major risks for the airline companies are grounding some of their aircraft that is leading to reduced flight operations and furlough of the staff (Maller, 2021. p. 4.9). As the coronavirus is very contagious, international travel is a major threat to spread the virus, and it is obvious that international travel is carried out via air transportation, mostly. The structure of the seating in airplanes increases the risk of being infected on board as the passengers are using the same washroom during the flight and can touch the same surfaces in case there is at least one infected person in the same plane (Kugbe, 2020. p. 115).

As of December 2019, China was the third-largest aviation market following the United States and the United Kingdom. However, this ranking has been changed big time and China was positioned in 25th place within only four weeks after the spread of coronavirus in January 2020. In early February 2020, 59 airlines have applied several limitations or totally, stopped the flights to China. Meanwhile, some countries including the United States, Australia, Russia, and Italy have put travel restrictions as per government regulations. Clearly, the coronavirus has a major influence on the aviation industry, more precisely, airlines and their operations that resulted in massive cancellations of the flights either by airlines themselves or in the event of airport closure by the government (Mallya and D'Silva, 2020. p. 245).

The below chart derived from the latest report on the economic impacts of COVID-19 on civil aviation by the International Civil Aviation Organization (ICAO), shows the fluctuations in the passenger traffic starting from 1945 to 2021 during the major crisis that ever happened. The chart covers both international and domestic travels in comparison to the total of both. As it is shown from the chart the hardest hit on passenger traffic has been recorded

with the start of the COVID-19 outbreak and it is still going on. As a severe impact of the COVID-19, actual numbers of passenger traffic in 2020 were way far from the budgeted volume compared to the levels in 2019. Overall, there was a drop of 50 percent of the seats offered by air carriers and another 60 percent reduction in the number of passengers that counts for 2699 million passengers. As a result, airlines faced a loss of 371 billion dollars from the revenue expected from passenger operation. If we look at international and domestic passenger traffic separately, 66 percent of the seats for international flights and 38 percent of the seats offered for domestic flights were reduced accordingly. If we turn the same to the numbers, international passenger traffic was dropped by 1376 million passengers, while domestic passenger traffic was calculated at 1323 million passengers. Relatively, 250 billion dollars of loss was issued for international, and 120 billion dollars of loss was reported for the domestic passenger travels (ICAO, 2021).

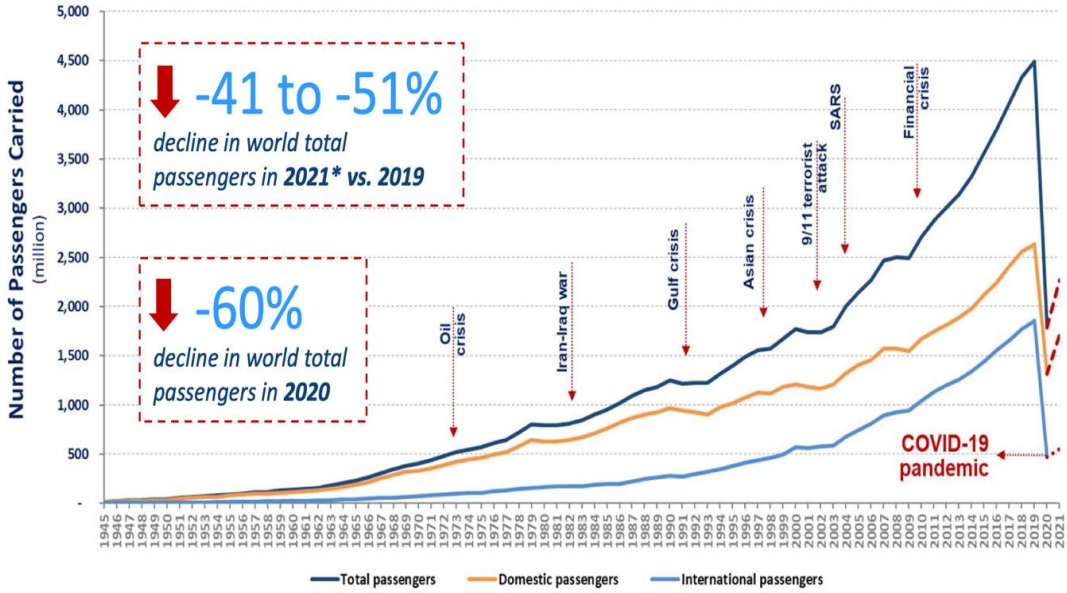

Figure 2.2. World Passenger Traffic Evolution 1945-2021

Source: ICAO Air Transport Reporting Form A and A-S plus ICAO estimates. Accessed on 07.04.20221

https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf

Since the virus was spread all over the world, the pace of the aviation industry and as well as other industries has been changed dramatically. Therefore, global airlines have seen a 60 percent decrease in the number of both international and domestic passengers in 2020 compared to 2019. Also, airlines have witnessed a 65.9 percent decrease in revenue passenger kilometers (RPKs) on an international and domestic level compared to the previous year. Since

the aviation industry is not limited to airlines only, another component of the industry, airports have suffered during the outbreak. Therefore, the traffic of passengers at airports declined around 64.2 percent, and the revenue loss of the airports was counted almost at 65 percent or more than 111 billion dollars in 2020 compared to 2019 (ICAO, 2021).

During this period, almost all the countries around the globe have imposed restrictions on international travel and as a result tourism industry suffered. Based on the statistics of UNWTO, the estimated loss of the tourism industry is ranging between 910 and 1170 billion dollars whereas tourism hit 1.5 trillion dollars of revenue in 2019. The trade is highly dependent on international flights and the volume of the trade declined by 9.2 percent as reported by World Trade Organization (WTO). In general, the world economy is affected by the spread of COVID-19, and the GDP is affected by -3.5 to -4.3 percent in 2020 that surpassed the GFC 2008-09 as per IMF and World Bank (ICAO, 2021).

Since the COVID-19 is still going on and the aviation industry will continue losing revenue compared to passenger traffic levels in 2019. The outlook for 2021 based on the same report of ICAO states an overall reduction of 31 percent to 38 percent of the seat offered that is equaling to the range of 1823 to 2304 million passengers both internationally and domestic. In terms of revenue, the loss of 266 to 332 billion dollars is forecasted. The below graph shows the estimated outlook of the travel for the year 2021. Supposedly, closer to the end of the year some visible improvements should be noticed. However, the actual results will be dependent on several factors, primarily on the duration and extent of the outbreak. On the other hand, the restrictions imposed and surely, the confidence of the consumers to travel. As well as the economic conditions will define the purchasing power apart from all issues mentioned earlier (ICAO, 2021).

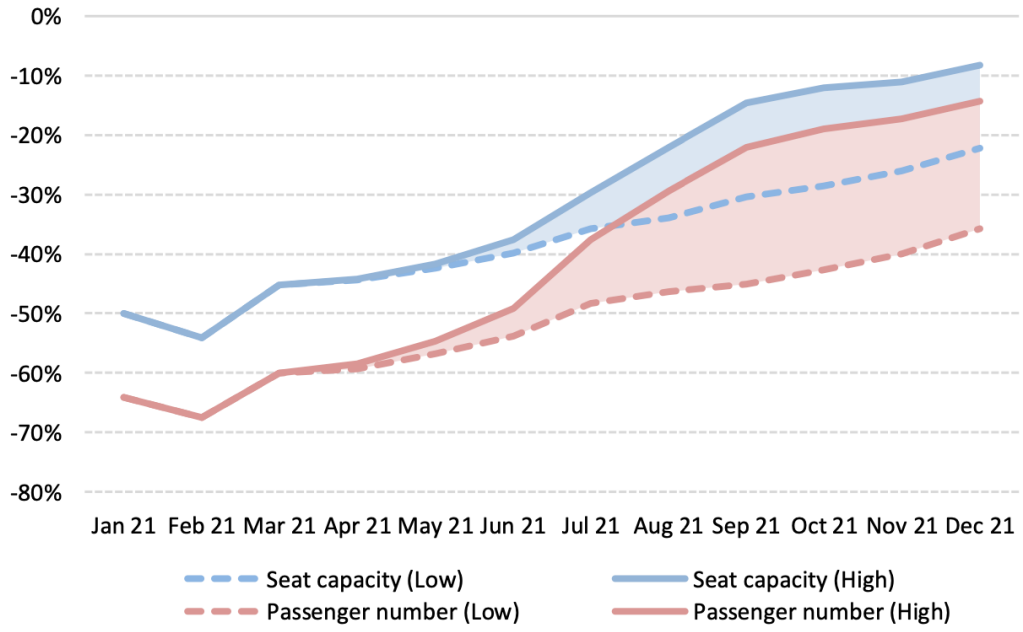

Figure 2.3. Outlook 2021 Compared to 2019 Levels

Source: ICAO Air Transport Reporting Form A and A-S plus ICAO estimates. Accessed on 07.04.20221 https://www.icao.int/sustainability/Documents/COVID-19/ICAO_Coronavirus_Econ_Impact.pdf

The below chart provides an overview of the revenue loss of airports around the world due to the COVID-19 outbreak covering the full year 2020. The statistics are prepared by Statista and show that Europe is the most suffering region with a big difference from other regions. The total revenue loss of airports in Europe is accounting for 40.8 billion dollars. The origin of the coronavirus, the Asia-Pacific region has made the highest level of revenue loss during the first quarter and in total has reported 29.6 billion dollars of loss during the whole year of 2020. The next region, North America has lost 22.1 billion dollars of revenue loss by airports. The Middle East airports have lost 9.7 billion dollars and as it is seen from the chart, the fourth quarter the loss is lesser than the previous ones, therefore, partial recovery has been noticed in the Middle East. Latin America-Caribbean and Africa regions are the least affected regions with loss amounts being 6.6 billion and 2.97 billion dollars respectively.

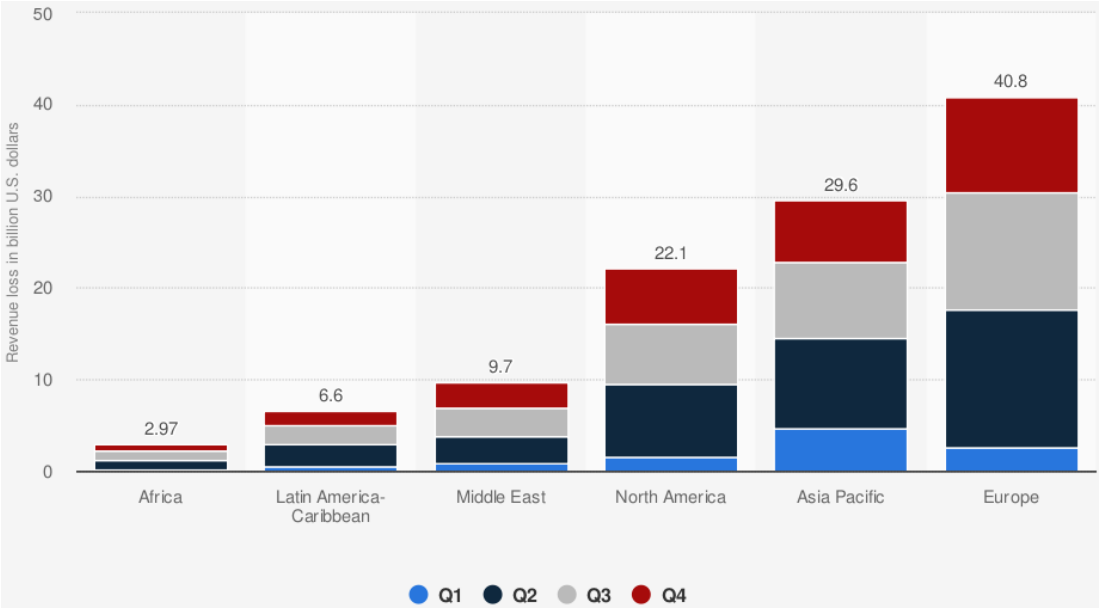

Figure 2.4. Quarterly Revenue Loss of Airports Worldwide by Region Due to the COVID-19 Outbreak

Source: Statista 2021

3. Methodology

The methodology of the research paper is mainly based on the exploratory research. Exploratory research is chosen as a primary method in this project as it is this research design helps to explore the phenomenon more deeply. In this research design, the necessary information is collected based on the secondary or primary data. As exploratory research suggests, data collection methods used during the research are literature search and case studies. The biggest part of the project, mainly, based on the secondary data. Secondary data are data that have been collected for other purposes rather than the actual problem at hand. The books, academic journals, reports, internet portals and relative websites are used to collects the data and use them, accordingly. At the same time, examples are derived from the chosen company strategies as case studies in this area.

The SWOT analysis has been conducted based on the data collected. SWOT is a strategic analytical tool for examining the strengths and weaknesses of a company or a business, analyzing opportunities available for this company or business and, at the same time, threats that might affect the company or business. Strengths and weaknesses are internal, opportunities and threats are external factors.

3.1. The Objective of the Study

The objective of this study is to analyze and understand the impacts of the COVID-19 pandemic on the aviation industry and the strategies implemented to minimize the influence of the outbreak. At the same time, to look at the impacts of other major crises that have happened up to the present. It is obvious that the COVID-19 outbreak has had the most severe influence on the world economy and aviation industry which is one of the key contributors to the world economy. First, the study aims to understand how airlines are well prepared for happenings such as terrorist attacks, diseases, pandemics, and other natural events. In such instances, how is the airline industry and more specifically, airlines affected. Secondly, different practices are looked at and the response of Qatar Airways to the COVID-19 outbreak is discussed and analyzed as a case study.

3.2.Scope of the Study

The research paper aims to discover the impacts of the COVID-19 outbreak on the aviation industry. Meanwhile, the impacts of other global crises are also illustrated within the paper. The current study started by learning about the airline industry and its history, and at the same time, the development phases of the industry. The airline industry is characterized from a managerial perspective and economic characteristics have been described. Another important nuance while talking about the airline industry is its impact on labor and employment.

At times, the airline industry has been challenged and negatively influenced by many world events. The major global crises that the world economy has faced can be listed as the terrorist attacks of September 11, 2001, the Global Financial Crisis 2007-2008, the SARS pandemic in 2003, and recently, the COVID-19 recession. These global crises and their impacts on the world economy and the airline industry have been highlighted within the study.

Qatar Airways has been chosen as an example for this study and the strategy of the airline carrier during the COVID-19 outbreak has been discussed. Despite the losses suffered by the company, Qatar Airways might be considered as a success story while many carriers have grounded all planes and suspended almost all activities.

3.3. Importance of the Subject

The importance of the subject is to add knowledge by understanding the topic thoroughly and through deriving examples from the best practices. The world economy has always faced challenges and crises throughout history and even today, the coronavirus outbreak has changed normal life all over the world. The aviation industry is one of the industries that was hit harder during crises and the coverage of the damage increases with the spread of the situation. Not all companies can pass through such happenings with minimum damage and that is why Qatar Airways has been chosen as an example. In this sense, it is important to learn the impacts of such events, and the ways airlines are trying to cope with crises.

4. Discussion

4.1.The COVID-19 Outbreak and Qatar Airways

Since 2020 has been the most challenging year for global aviation, the same was applicable for Qatar Airways as well. Despite the challenges and financial losses, Qatar Airways has achieved successful operation of the air carrier during the peak times of the pandemic. The national carrier of the State of Qatar never stopped flying throughout the pandemic and carried stranded people to their homes on scheduled and charter flights. The diverse fleet size of the airline, fuel-efficient aircraft, and qualified staff of the company allow responding to the market changes in a quick manner. During the pick period of the pandemic, May 2020, Qatar Airways was flying to 33 destinations and as of December 2020 tit was able to reinstate the flights to over 110 destinations. Even during this period, Qatar Airways has launched seven new destinations based on customer needs. At the same time, the company initiated new partnerships with several global airlines such as American Airlines, Air Canada, and Air Alaska. Even though the company was not doing well financially, it continued its investments to advance customer experience both on the board and at the airport. On the report of IATA, Qatar Airways was the largest international carrier between April-July, therefore, 17.8 percent of the global passenger traffic was fulfilled by the company. More than 3.1 million passengers have been carried their homes safely, and more than 470 charter flights and other sector flights have been realized through the partnership with different governments and companies.

Qatar Airways has become a pioneer company in the industry for the implementation of safety measures during flights. Most advanced safety and hygiene measures have been applied during the flights and provided Personal Protective Equipment (PPE) for cabin crew.

Also, a protective kit and disposable face shields were provided to passengers free of charge. Qatar Airways was the first airline to use Ultraviolet Cabin System acquired from Honeywell.

During this uncertain period, Qatar Airways encouraged people to travel and book tickets with flexible booking conditions. Flexible booking features included two-year ticket validity, unlimited date amendment, the exchange of the ticket for a future travel voucher, and unlimited destination change. Qatar Airways did not obstacle making refunds for the canceled flights and trips and paid out refund amount which is more than 1.65 billion dollars. Recently, Qatar Airways applied unlimited date amendments and free cancellation with a full refund to be applicable for the tickets purchased from Qatar Airways directly until 30 April 2021 with the travel date until 31 December 2021. Also, there were some changes made to Privilege Club, the loyalty program of Qatar Airways. Therefore, the validity of the miles was extended to 36vmonths while earning or redeeming the miles, and booking fees were removed for award flights. In this sense, the required number of miles to book a ticket was dropped by almost 49 percent, and a new program, Student Club was launched which is tailored for students giving them several benefits.

To maintain the service standards at the same level as its service is recognized as the best customer service in the world Qatar Airways continued product development and upgrading its services during the pandemic. in August, a new updated version of the mobile application was introduced and in September, Qatar Airways marked the 100th aircraft in its fleet supplied with “Super Wi-Fi”. The full dining experience, comfort amenities, and award-winning service were provided like before on board with all precautionary measures in place.

The State of Qatar remains positive for the recovery of the industry and did not pause the preparations for FIFA World Cup Qatar 2022^{TM} and in November, they celebrate two years to go until FIFA World Cup Qatar 2022^{TM} tournament. On this occasion, a branded Boeing 777 aircraft with FIFA World Cup Qatar 2022^{TM} livery was in the sky being an official partner of FIFA. The main focus of the airline has been COVID-19 and therefore Qatar Airways has helped the communities and counties that were in need. To support China during its struggle with coronavirus, around 300 tonnes of medical supplies have been sent to China. Qatar Airways Cargo sent five freighters to deliver the aid to China. As a sign of gratitude to first-liners that are working under difficult and risky circumstances during the pandemic, Qatar Airways gave away 100,000 tickets to the healthcare workers and 21,000 tickets to the teachers around the world.

Qatar Airways Cargo has been recognized as the number one cargo carrier in 2019 and despite the challenges of 2020, the cargo carrier has increased its market share during the

pandemic. At the beginning of 2020, Qatar Airways Cargo has launched new cargo routes including Campinas, Brazil; Santiago; Bogota, Colombia; and Osaka, Japan. The freight department has continued its agile and innovative approach during the pandemic as well and increased daily cargo flights from 60 to 180-200 supporting global supply chains. Since the pandemic started, Qatar Airways has been collaborating with different NGOs and governments and carried more than 250,000 tonnes of medical and aid supplies on scheduled and charter flights. At the same time, more than 500 charter cargo flights have been served to impacted regions. In the course of the year, new destinations such as Melbourne, Perth, and Harstad-Narvik to cargo routes operated by Boeing 777.

In terms of volume of freight, Doha has entered into the list of 15 top airports worldwide. The below figure illustrates the data for February 2020. In general, these 15 airports have reported a growth rate of +0.1 percent year-on-year as of February 2020. Since some regions were already impacted by the COVID-19 virus, some airports reported a decrease in their volume as it is shown in the below chart by that time. Hong Kong has registered the most significant drop being -8.7 percent but still has occupied second place in the list according to the fright volume. Doha recorded a rise of +12.4 percent year-on-year and was one of the three airports that reported higher rates of increase among 15 airports in the list. Doha was outstripped by the airports of Incheon and Taipei that recorded higher growth rates than Doha being +21.2 percent and +16.6 percent respectively. Significant growth of these airports has been related to the lower volumes reported during the previous year (ICAO, 2020).

Airports (ranking by tonnes of freight)	Freight**	YoY
Memphis TN, US (MEM)	331,265	-2.4%
Hong Kong, CN (HKG)	246,000	-8.7%
Incheon, KR (ICN)	213,746	21.2%
Dubai, AE (DXB)	190,768	-2.4%
Shanghai, CN (PVG)	179,029	-7.1%
Louisville KY, US (SDF)	177,944	1.5%
Doha, QA (DOH)	173,248	12.4%
Miami FL, US (MIA)	158,953	-1.4%
Tokyo, JP (NRT)	152,123	7.3%
Anchorage AK, US (ANC)	147,770	-6.7%
Singapore, SG (SIN)	146,800	7.6%
Taipei, CN (TPE)	145,592	16.6%
Frankfurt, DE (FRA)	140,516	-7.6%
Paris, FR (CDG)	135,153	-7.8%
Los Angeles CA, US (LAX)	124,619	-8.3%

Figure 4.1. Top 15 Airports Ranked by Volume of Freight, February 2020

Source: ICAO

Besides its cargo operations and flights, Qatar Airways has been placed in the top 15 airline groups based on Revenue Passenger-Kilometers (RPK). According to the data for February 2020 reported by ICAO, in February 2020, 50 percent of the total RPK of the world has been generated by the top 15 airline groups and reported +1.7 percent growth year-on-year including Qatar Airways. The below graph illustrates the list and relative data of 15 top airlines for the mentioned period ad it is possible to notice the initial effects of the COVID-19 on airlines in the Asia-Pacific region. Qatar Airways is leading the list with the highest growth rate of +8.7 percent among 15 airline groups and carried its position two steps upper to ninth.

Many Asia-Pacific airlines and especially, Chinese airlines have left the top 15 ranking list due to the COVID-19 outbreak and Singapore Airlines Group was placed as 15th in the list with a drop of -17 percent (ICAO, 2020).

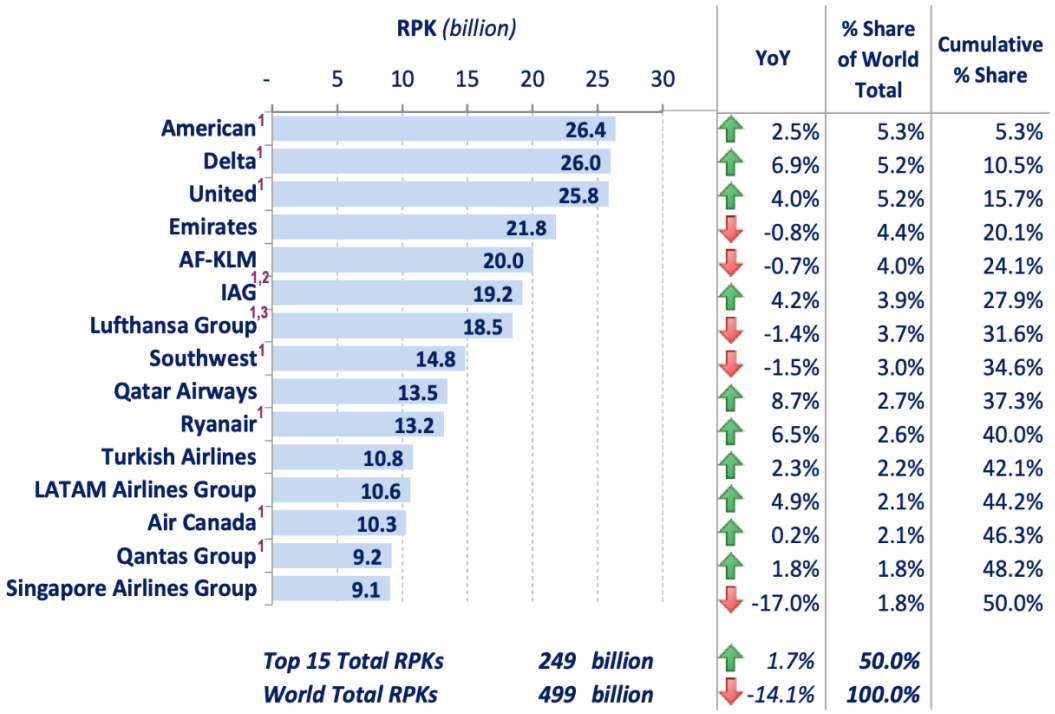

Figure 4.2. Top 15 Airline Groups Ranked by RPK, February 2020

Source: ICAO

The ranking of the top airports based on freight volume and airlines based on RPK for the month of February 2020 while the COVID-19 outbreak was not spread all over the world yet. However, March 2020 was one of the peak periods of the virus since almost every country on the earth has been suffering from a pandemic. The next two figures represent the data that has been discussed previously but this time for the month of March 2020 which is just following February with huge differences. Almost all airports in the list of the top 15 airports with the highest freight volume have declined due to the massive spread of the COVID-19 outbreak. While Dubai is leading the list with the highest drop rate of -32 percent which is followed by Singapore that is declined by -19.2 percent. However, Doha had the highest growth margins in February, just one month later was placed in the list as the ninth airport with a modest decline of -5.6 percent compared to other airports. Again, Hong Kong remained as a leader airport in the list even though volume was decline even more compared to February of the same year. According to March 2020 statistics, Doha could secure only ninth place in the list while it was ranked as the seventh airport in February 2020 (ICAO, 2020).

Airports (ranking by tonnes of freight)	Freight**	YoY
Hong Kong, CN (HKG)	375,000	-11.2%
Memphis TN, US (MEM)	358,450	-7.0%
Shanghai, CN (PVG)	293,769	-4.8%
Anchorage AK, US (ANC)	253,920	5.0%
Incheon, KR (ICN)	233,025	-2.7%
Louisville KY, US (SDF)	205,725	1.0%
Tokyo, JP (NRT)	190,527	2.6%
Taipei, CN (TPE)	183,028	-2.4%
Doha, QA (DOH)	179,909	-5.9%
Los Angeles CA, US (LAX)	160,193	-10.5%
Frankfurt, DE (FRA)	160,112	-16.1%
Dubai, AE (DXB)	158,258	-32.2%
Singapore, SG (SIN)	149,400	-19.2%
Miami FL, US (MIA)	149,381	-15.0%
Chicago IL, US (ORD)	149,228	-2.2%

Figure 4.3. Top 15 Airports Ranked by Volume of Freight, March 2020

Source: ICAO

The ranking data of the top 15 airline groups according to RPK in February 2020 has been compared to the figures of March of the same year with heavier impacts of the COVID-19 outbreak. The below chart shows that differing from the previous month, in March all airlines have been declined. The below listed top 15 airline groups consisted of 47.4 percent of the total world RPK in March 2020 and declined by -51.7 percent year-on-year. Due to the impacts of the COVID-19 pandemic, the ranking of the top 15 airlines has been changed dramatically. Two representatives of the GCC were able to maintain their positions in upper levels despite the challenges of that time. Qatar Airways made it to eighth in the ranking lifting one level up albeit with a decline of -37 percent while Emirates reported a total drop of -48 percent within the same period. Anyway, Emirates maintained the same position in the ranking as in February 2020. Compared to February 2020, Qantas and Singapore Airlines left the top 15 airlines list in March and China Southern came back with a drop of -72 percent and ranked 13th. China Southern was the most affected airline by that time and lost over two-thirds of its

traffic. Russian carrier, Aeroflot entered the list from the tenth position with a drop of -37.4 percent.

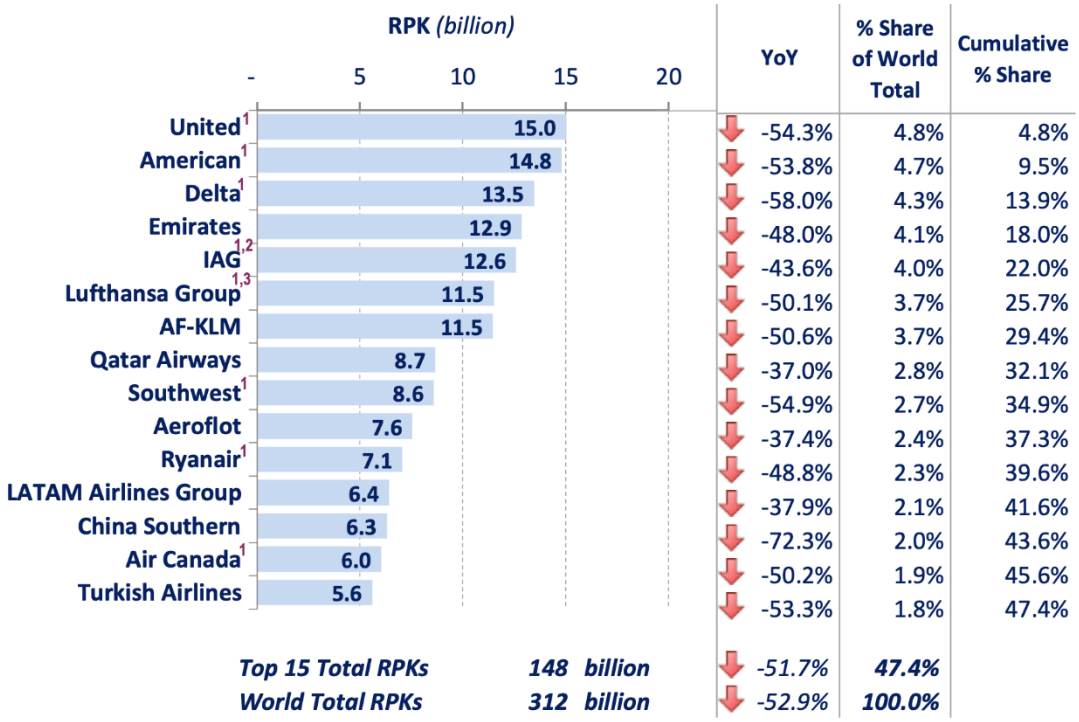

Figure 4.4. Top 15 Airline Groups Ranked by RPK, March 2020

Source: ICAO

4.2.The SWOT Analysis of Qatar Airways

At the end of this research, the author has developed the SWOT analysis of Qatar Airways to demonstrate its advantages and disadvantages. Qatar Airways has been one of few operating airlines during the coronavirus outbreak and has demonstrated successful crisis management during other global crises. Based on the data collected from different sources and interpreted, the author has designed the SWOT analysis of Qatar Airways.

Table 4.1. The SWOT Analysis of Qatar Airways

SWOT - Qatar Airways	
Strengths	**Weaknesses**
○ Strong brand reputation and service quality ○ Geographical location ○ International hub ○ Government support ○ Passenger and cargo destination network	○ Low local population ○ Dependency on international markets ○ No availability of domestic flights
Opportunities	**Threats**
○ 2022 FIFA World Cup ○ Being a major international hub ○ Becoming a financial center	○ Regional conflicts ○ Global crises ○ Competition (Emirates, Etihad Airways)

This SWOT analysis has been created based on the findings that the author came at as a result of the research process and the above table is initiated by the author. We will take a close look at each section of the analysis.

Strengths. Qatar Airways has been recognized as the youngest fast-developing airline in the world. However, Qatar Airways started its operations in 1994, today has become and many times awarded as the best airlines. Therefore, brand reputation has been built over these years and the service quality of the company is distinguished. Another strong point is the geographical location of Qatar, therefore, it is close to Europe, Asia, and Africa that has created an opportunity to turn Qatar's airport into a hub. Many passengers are flying through Qatar to reach their final destination. The destination network of Qatar Airways in terms of passenger and cargo flights is one of the strongest features of the company including 160 passenger destinations and 60 cargo destinations.

Weaknesses. Despite the fact that Qatar Airways is quite successful, there are some disadvantages for this company. It is a fact that the State of Qatar is a small country in terms of geography and population, therefore, the company is highly dependent on international markets. As mentioned earlier, the air carrier and airport are mainly used for transit flights.

Only international flights are realized from the airport of Qatar since there are no internal flights.

Opportunities. Qatar is the richest country in the world in terms of GDP per capita and this country is full of opportunities. The main and upcoming event is FIFA World Cup 2022 that will take place in Qatar, and it will be the first in history that FIFA World Cup is happening in an Arabic country. This event creates many business opportunities in the country, and it is expected to experience a boom in the number of visitors to the country during this period. Such events directly affect the activities of the airline. It has already been mentioned that Qatar is an international hub and recently, it is becoming a financial center which creates more opportunities for the country and Qatar Airways, surely.

Threats. Several risk factors are of importance for Qatar Airways. Within this paper, negative impacts of global crises on the airline industry have been learned and, in this context, global crises around the world create risks for most air carriers and Qatar Airways. Conflicts that happen among GCC countries regionally are risky for the airline as well. For instance, during the blockade among Qatar and Bahrain, UAE, KSA, and Egypt, Qatar Airways has been suffering for some time. Also, there is severe competition within the region, and Qatar Airways is competing with other regional airlines such Emirates, Etihad Airways of UAE. Since UAE is also recognized as an international hub, the competition between Qatar and UAE is quite tough.

5. Conclusions

It has been illustrated throughout the paper that there are unpredicted threats such as terrorist attacks, economic catastrophes, diseases, and pandemics that affect not only the airline industry but also the whole world economy. The focus of this research has been on the airline industry. However, airline companies are always calculating the possibility of such events, and the difficulties they may have in coping with such situations. Since the product of the airlines is highly perishable, any catastrophe affects customer purchases with a direct influence on the profitability of the company.

Generally, the aviation industry is supposed to be one of the key contributors to the world economy. However, not all airline companies are making high volumes of profits. First of all, airlines are facing tough competition, especially with the existence of low-cost airlines. On the other hand, global crises are affecting the profitability of the airlines. Several, global crises such as September 11, 2001, GFC, the SARS pandemic, and the corona outbreak have

been highlighted since their impacts are worldwide. During the COVID-19 pandemic, some airlines have suspended their activities fully and grounded almost all planes. Such catastrophic situations of airlines affect the economy and certainly, employment since aviation creates many job opportunities directly and indirectly. Even full-service air carriers cannot show full resistance towards crises, and they are obliged to take necessary actions to decrease the impacts.

Most airlines fully or partially are supported by the government as a flag carrier. Such airlines are more likely to show more resistance rather than other companies. Qatar Airways is a governmental company and is supported financially by the State of Qatar. It has been learned that Qatar Airways has been one of the best air carriers around the globe to cope with the COVID-19 pandemic and has been able to operate even during the peak periods of the pandemic. Even, Qatar Airways has found new opportunities to expand its operations during the crisis such as cargo flights. it is obvious that the company has been standing still due to the government support since a huge amount of loss has been issued by the company during this period.

Study shows that investments the company makes to build a brand reputation and offer premium service, help the company survive the crisis better than other companies. Qatar Airways has been carrying a lot of people home via Hamad International Airport from one destination to another one during the pandemic. The company's strong presence and reputation in the market make it trustable for customers even during tough times. The strengths of Qatar Airways, outlined in the paper helped the company to survive during the crisis better than other competitors.

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