

**IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENTS OF AIR TRANSPORT MANAGEMENT**

MASTER THESIS

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

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THESIS SUPERVISOR

ASSIST. PROF. NİHAT GÜMÜŞ

ISTANBUL, 2021

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by

RAŞİT EMRE TUNALI

**A thesis submitted to the School of Graduate Studies in partial
fulfillment of the requirements for the degree of Master of Science in
Air Transport Management**

**THESIS SUPERVISOR
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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science in Air Transport Management.

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This is to confirm that this thesis complies with all the standards set by the School of Graduate Studies of Ibn Haldun University.

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name Surname:

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ÖZ

COVID-19 SALGINININ HAVACILIK SEKTÖRÜNE ETKİLERİ: COVID-19 SALGINI SIRASINDA QATAR AIRWAYS ÖRNEĞİ

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Dünya ekonomisi tarih boyunca, terör saldırıları, hastalıklar, ekonomik krizler gibi birçok olumsuz olayla karşılaşmış, bu olaylar dünya genelinde birçok sektörü etkilemiştir. Özellikle ikinci dünya savaşı sonrasında itibaren dünya ekonomisine yoğun katkı sağlayan havacılık sektörü de bu olumsuz gelişmelerden en çok etkilenen sektörlerin başında gelmektedir. Örneğin, 2000'li yıllardan sonra yaşanan 11 Eylül 2001 terör saldırıları, 2003 Irak savaşı, SARS salgını ve son zamanlardaki COVID-19 salgını gibi hadiseler tüm sektörlerde olduğu gibi havacılık sektöründe de uzun süreli sıkıntılara sebep olmuştur. Bu çalışmanın amacı, son iki yılda tüm dünyaya yayılan COVID-19 pandemisinin havacılık endüstrisindeki etkilerini ve sektörün pandeminin etkisini en aza indirmek için izlediği stratejileri incelemektir. Çalışmanın ilk bölümünde 2000 yılından sonra meydana gelmiş bazı krizleri sektör üzerindeki etkisi ikincil veriler ve sektör raporları kullanılarak analiz edilmiş sonrasında ise vaka çalışması ve SWOT analizi yoluyla Qatar Airways'in COVID-19 pandemisi karşısında izlediği ve izleyebileceği stratejiler ele alınmıştır. Çalışmanın sonuçları pandeminin sektör üzerindeki etkisini azaltmak için havacılık sektöründeki diğer şirketlerin izleyebilecekleri stratejilerle ilgili önemli ipuçları sağlamaktadır.

Anahtar Kelimeler: Havacılık; Kriz; COVID-19; Qatar Airways

ABSTRACT

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

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The world economy, historically, has been challenged by many negative happenings such as terrorist attacks, diseases, economic crises and these happenings have negatively affected many sectors across the globe. The aviation industry that has become one of the major contributors to the world economy, especially, after the second world war, has been dramatically affected by such happenings. For example, global crises that have happened after the 2000s such as September 11, 2001, terrorist attacks, the 2003 Iraq war, the SARS pandemic, and recently, the COVID-19 outbreak have had long-term effects on the aviation industry as well as other industries in the world. 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.

Keywords: Aviation; Crisis; COVID-19; Qatar Airways

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CHAPTER I

INTRODUCTION

Previously, aviation had a niche place in transportation before World War II, however, nowadays it has become a major mode of transportation for the nation. Aviation provides long-distance passenger and freight services that connect countries, communities around the globe. Also, the aviation industry has benefited from technological improvements and sometimes there was a revolutionary effect on the industry (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).

Another issue that has been suspicious for the travelers was the safety of air travel. Many people were fearful to travel in the past. More reliable aircrafts, engines, and aircraft components have improved the safety level and obliterated many accidents. 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).



CHAPTER II

AVIATION INDUSTRY AT A GLANCE

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).

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.

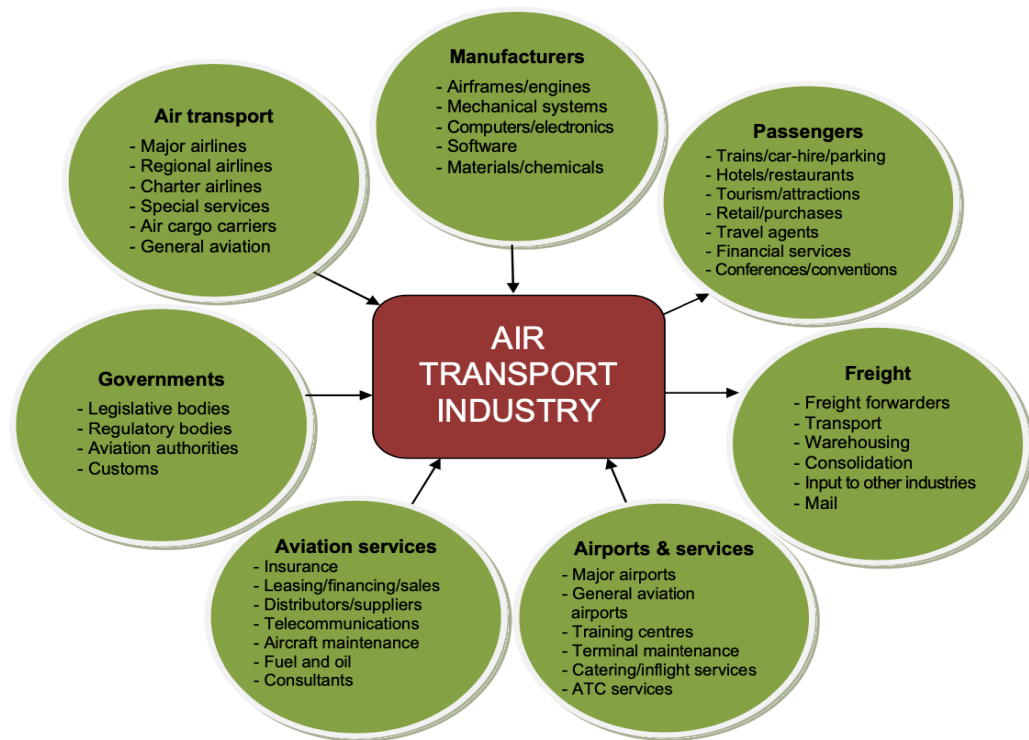


Figure 2.1. Air Transportation Industry

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).

2.1. Global Airlines

Airlines are always perceived as one of the major revenue generators among other industries, however, if we look at the reality, the profit margin of the airlines is minimal. After 1970, the profit margin of airlines has been calculated at only 0.1 percent. Airlines have always claimed that the low profitability of the industry depends on the factors such as high fuel prices, airport charges, terrorist attacks, and many other external impacts (ILO, 2013).

Four board categories of airlines have been categorized as follows:

- Full-service carriers (FSC). These airlines are mostly used types by passengers therefore, they provide transportation to 66% of passengers. Ten percent of their revenue is driven by cargo flights.
- Low-cost carriers. LCCs are dominating in Europe and they own 41% of the market share and provide service to 22% of all passengers. In the region of

Asia, major airlines have initiated their low-carrier brands to follow the trend and increase profitability.

- Regional airlines. Nine percent of all passengers are carried by regional airlines and these airlines are diverting the air traffic into hubs.
- Charter airlines. Only two percent of the passengers are serviced by these airlines. However, these flights are characterized by having high occupancy they are directly competing with LCCs (ILO, 2013).

Air transport is one of the key drivers in the travel and tourism industry which covers 11 percent of consumer expenditures. At the same time, air transport is a key industry in the global labor force so that one in every nine people is employed in this industry. Taking into consideration the contributions of air transport in the development of the economy, the importance of air transport should be stressed out, significantly (Hanlon, 2007. p. 1).

Airlines are very diversified in terms of their shapes and sizes. Different categories of airline board types are described above and even, within the same category, the airlines are different from one another. American Airlines and Delta Airlines are the two biggest airlines that are full-service airlines carrying millions of passengers annually (Hanlon, 2007. p. 15).

Airlines are relying on several resources to operate and further improve their quality in terms of company reputation both nationally and internationally. These resources are always known to be either tangible or intangible such as knowledge and experience. To identify the resources that are being implemented in the airline industry is to review the common characteristics of the resources. These resources are introduced as 10Ms. The 10Ms are machine, management, manpower, market, material, measurement, method, minutes, ministry, and money (Murugasu et al., 2018. p. 5).

- The most important sample of the machine for the airlines, certainly, is the aircraft. Aircraft is a kind of machine that airlines would not exist without these machines. For that reason, many airlines are investing in the expansion of their fleet portfolio. For example, Air New Zealand possesses a total of 110 aircraft that are grouped within nine types. Air New Zealand is planning to expand its

portfolio with 30 additional aircraft in upcoming years (Air New Zealand, 2018).

- Management is a set of activities that are applied by the company and fulfilled by managers to deliver the results and in most cases, these managers are involved in decision-making. For instance, station managers at Emirates are responsible for the coordination of all operational activities. The ground services consist of ticket handling, check-in, baggage handling, boarding passengers into the plane, and as well as deboarding from the flight (Emirates, 2018). Ensuring aircraft safety and security prior to the flight and servicing the aircraft while it is on the ground is one of the responsibilities of these managers.
- Manpower is crucial in every organization and industry, therefore, is important for the airlines as well and, even more, critical within this industry. The main role of the pilot is to operate the plane during the flight from one point to another within the certain time frame that is set specifically for each flight. The responsibilities of a pilot are not limited only to operating the flight in the air but also, they should keep control over the plane before, during, and after the flight. Pilots should make sure that the settings of the aircraft are adjusted accordingly before the flight such as weight limit and fuel supply. Proper flight planning should be done before the flight considering current air conditions and relevant air traffic controllers should be communicated with the flight intends over the aeroplane's radio framework (Federal Aviation Administration, 2018). At the same time, pilots should be responsive to challenging situations such as engine failure and bad weather and should take the necessary measures and actions to avoid accidents.
- The market is a place where airlines can find relevant customers to sell their products and services. Having proper market knowledge could help airlines to segregate customers into several target groups and address each group based on their needs. Premium services are catered for business class passengers and even better in-flight services are offered compared to the economy class. Nowadays, almost all airlines are getting digitalized and trying to sell tickets direct online and always encourage customers to share their feedback about the experience on social media. The online stream helps companies to be in touch with the customers and be present in the market without any intermediaries.

- Data, information, and knowledge that are used in the company are supposed the materials of this company. Such materials are usually documented for further usage and reference. For instance, a Standard Operating Procedure (SOP) is a document that is referred by aircraft engineers while doing the maintenance services. The SOP is drafted by expert engineers that give direction and help engineers while delivering the aircraft maintenance. SOPs are designed based on industry regulations and aimed to ensure proficiency and quality while delivering aircraft maintenance.
- Key success factors (KSF) are prepared as a means of measurement that airlines apply to evaluate their performance and these KSFs help airlines to maintain their competitive advantage. Attracting more customers, ensuring a smooth flight experience, managing people, and receiving a return on investments are the typical KSFs for the airlines. KSFs are set to ensure smooth measurement and evaluation and can be used for comparison and further evaluation as well.
- Productivity and profitability are the major targets to reach, and airlines implement various tactics and techniques to maintain the same. The methods cover the proper usage of the resources to perform a task. For instance, LCCs prefer to operate in less busy airports. This is a method that is being implemented by many LCCs.
- All airlines should run their business within the framework of certain rules and regulations that are proposed by the ministry.
- Minutes refer to the time that is consumed or spent to accomplish a certain task. A scheduling system of any airline can be a proper example.
- Money can be in the form of cash, cheque, or a credit card, the transaction is usually proceeded and accepted (Murugasu et al., 2018. p. 6-12).

Airlines are playing a crucial role in the formulation of the global economy because they connect regional economies that the global economy is consisting of. The profitability of the airlines is higher whenever the economy is doing well otherwise the profitability is going down during the economic crisis and the airline industry is usually the first one to be affected during economic fluctuations. Global and regional understanding of the industry draws a picture of the overall industry. Each region is different from one another because of its performance so that one region can be quite

successful while the other region is not doing well. However, there is a correlation among the regions as they are affecting each other both positively and negatively and this relationship is called the domino effect or chain reaction (Wensveen, 2018. p. 7). In the airline industry, the major share of the market is covered by the United States. In terms of fleet size and passenger capacity, almost half of the largest airlines are of US origin. Based on the many factors such as revenue, fleet size, labor force, or passenger capacity, the front lines in the list of top 100 largest airlines worldwide are always occupied by North America, Western Europe, and the Asia/ Pacific regions. The list of top 100 global airlines is followed by thousands of smaller airline companies. Basically, each country on the earth has its own air carrier that is known as a national flag carrier. Besides these, there are charter airlines and regional carriers that are operated within nearby regions to serve short-distance flights (Hanlon, 2011. p. 11-12).

International traffic is the main source of income for the national air carriers that they are relying on and of course, geographic and demographic factors are the main criteria to build such kinds of networks. Countries participating from their national flag carriers are bargaining with other countries to share and exchange air borders within certain traffic regulations. Air service agreements are signed that are as important as international treaties that help to strengthen bilateral relations and surely, politics is playing a crucial role in this process. Local airlines are securing their entrance into the industry by signing bilateral air service agreements which cover to and from the home country as a basic rule (Hanlon, 2011. p. 12).

The below statistics demonstrate the net profit of commercial airlines worldwide from 2006 to 2020 and a projection of 2021. The figures for 2020 have been divided into two parts being pre- and post-COVID. As it is seen from the chart pre-COVID figures for 2020 are positive. As a result of the coronavirus outbreak, commercial air carriers reported net profit losses of 126.4 billion US dollars (Salas, 2021).

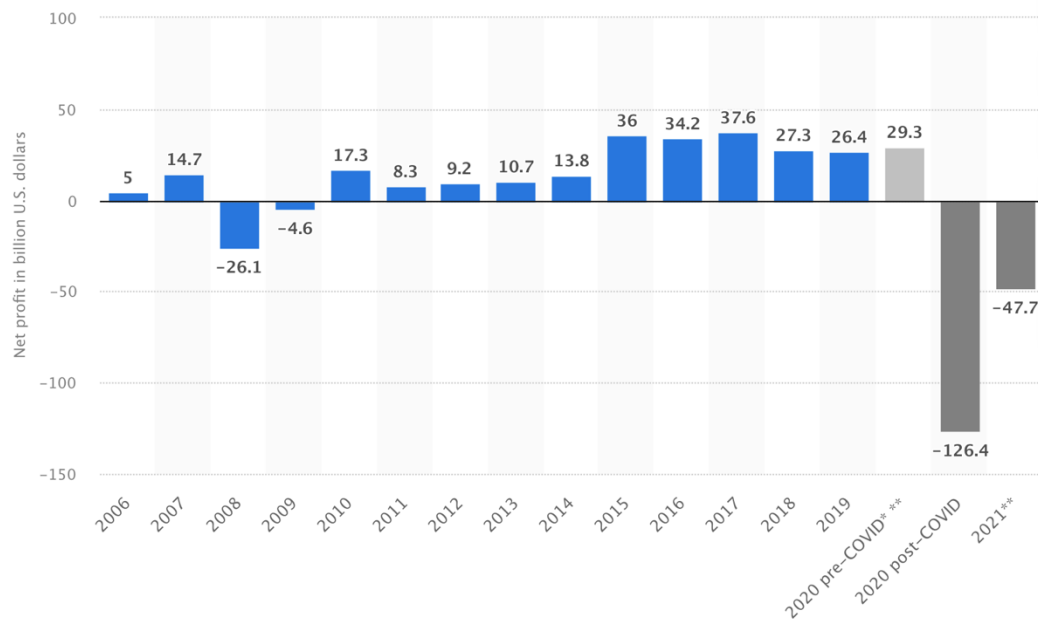


Figure 2.2. Net Profit of Commercial Airlines Worldwide from 2006-2021

Source: Statista, 2021

2.2. Airline Management

Like other industries, the management of the airline industry is showing a great deal of variety. At the early stages, more or less all airlines were similar and managed with the basic requirements of the aviation industry. However, the gradual development of the industry has created a highly competitive environment and initiated new opportunities for the companies so that the traditional flag carriers became more diverse than ever they were. These changes emerged the creation and introduction of new products in the market and the operation of the airlines has been improved with new managerial approaches (Wald et al., 2017. p. 149).

This progress made within the industry has brought new business models into existence to run the business in a different way rather than traditional methods. A business model is a strategy developed and implemented by the companies to serve the needs of their identified target audience accordingly. Besides covering the ways of structuring and running the trade, business models define the unique selling points that help to create the competitive advantage of the carrier (Wald et al., 2017. p. 150-151).

2.3. Economic Characteristics of the Airline Industry

Air transportation is aimed to deliver faster travel for people and commodities across the borders. The key element of air transportation is to build connectivity between countries, regions, and cities. Precisely, the modern development and globalization of large corporations and eventually, businesses have been possible by the global airline networks. Airlines are not supposed economically important for only carrying passengers but also air transportation plays a crucial role in trading in terms of cargo flights (Arblaster, 2018. p. 4-5).

Air traffic management (ATM) is about building a relevant infrastructure for airlines to be able to deliver proper air travel services. The growth of the air traffic, certainly, grants positive economic gain for the companies. Air traffic capacity, cost efficiency, service capability, safety, and environmental impact are the ingredients of the economic performance of the global airline industry (Arblaster, 2018. p. 119).

Demand is one of the most crucial factors for air carriers to understand properly and plan accordingly their activities. Every day, hundreds of flights are assigned to a certain pair of cities, and itineraries are designed accordingly. Various characteristics are taken into consideration while creating an itinerary for each flight such as price, the number of connections and the duration of each connection, departure times, arrival times, and the travel distance. To meet the expectations of travelers, the airlines need to understand based on which factors travelers chose the specific itinerary. A clear understanding of consumer behavior helps the airlines to make a proper projection of their market share in any city pair and in this way, they can create their competitive advantage against other airlines within the same market (Abdelghany and Abdelghany, 2016. p. 21).

While talking about the economic features and impacts, three impacts of the industry can be distinguished which are direct impacts, indirect impacts, and induced impacts. Direct economic impacts are the immediate influences of the economic activities of the airline industry, mostly, activities of airports. Direct impacts appear on a local level and airports are the main indicators of the direct economic impacts of the industry. Thus, airport activities in each city or country are closely related to the local economy.

Employment and fixed-based activities at the airports are the most common direct impacts that can be measured easily. Instant activities of the airport are the units to measure the direct impact of air transportation on the local communities. Airports are followed by aircraft manufacturers in terms of immediate economic impacts on the local community. So that such large aircraft manufacturers are contributing to a certain community by residing their center for production in a given city (Tacker et al., 2013. p. 15-16). For instance, in 2006 Boeing 787 Dreamliner project has been centralized in Washington, and as a result, 11,470 new job opportunities were created within the same projects and the economic value of the project has been calculated at 2,268 billion dollars (Deloitte, 2004). There are some service-providing entities affected by the economic fluctuations of the airline industry both positively and negatively accordingly such as travel agencies, hotels, restaurants car rental companies, and retail establishments. The main distinctive feature that differentiates direct and indirect economic impacts is the place they appear. To put it simply, indirect economic benefits are sustained by the people who come to this certain territory by air transportation. The hotel industry is the perfect example of indirect economic assets that are generated in regard to the airline industry. People who are traveling from one city to another city either for business or leisure by air require accommodation at the destination city. In this sense, new work opportunities are created for the locals, and more hotels might be needed to construct that is additional economic value to a given country. Induced impacts are referred to as multiplier effects that are determined with the improvement of employment and positive income figures as a consequence of direct and indirect impacts of air transportation. The entire value of direct, indirect, and induced economic impacts is a total economic impact of air transportation which is characterized by economic productivity, income, and employment (Tacker et al., 2013. p. 16-18).

GDP is the only method to evaluate the economic development of the airline industry and growth of GDP is very crucial within the sector so that it is affecting employment, income, and tendency to fly. It is important to note that GDP is the main factor that maintains the correlation between airline activity and regional economic activity. In this sense, the increased demand for air transportation is directly associated with the improvement of the economy whereas GDP has a direct influence on the destinations where airlines operate and serve. The financially successful airline is the main feeder

for the success of the airport, and both are independent variables of the economics (Vogel, 2019. p. 69-70).

In general, the need for transportation and in this section the need for air transportation particularly is reliant on the success of the economy and as an industry, air transportation has its return on investments on the economy of a given destination, and more broadly of the world. Historically, North America and Europe have been considered the center of the economy however during the last decades this trend has been shifted towards the Asia-Pacific region (Vogel, 2019. p. 71).

2.4. Labor and Employment in Airline Industry

In terms of employment, civil aviation creates direct and indirect jobs worldwide. 10.2 million people are employed directly by the civil aviation sector. These jobs include pilots and crew members, airport operation jobs, retail and service jobs at the airports, aircraft manufacturers, and air navigation service providers. At the same time, 65.5 million jobs are supported by the sector indirectly such as services and tourism. Table 2.1 below provides the global summary of the direct and indirect jobs sustained by the aviation sector (ILO, 2020. p. 2).

Table 2.1. Jobs Supported by the Aviation Sector: Global Summary

▶ Direct jobs					▶ Jobs supported by aviation
Airport operators	Other on-airport	Airlines	Civil aerospace	Air navigation	65.5 m
525,000	5.6 m	2.7 m	1.2 m	233,000	10.2 m: direct 10 m: indirect 7.8 m: induced 36.7 m: tourism catalytic
5%	55%	27%	11%	2%	

Source: Air Transport Action Group (2018). Aviation benefits beyond borders, op. cit.

Being one of the most contributing sectors to the world economy, the aviation industry employs around ten million employees, globally. Besides creating direct job opportunities within the industry, air transport supports other industries by creating

indirect jobs across other related industries, so that every single job in air transport creates six jobs in other industries. According to the statistics of the European Union in 2013, 1.4 million people were provided with the job in air transport within the same region. 0.4 million employees out of the total number are employed by airlines and the rest are positioned in related fields. A decrease was noticed in the employment during 2000-2013 despite the demand and the primary reason for the drop in numbers was the outsourcing of secondary services by many airlines, such as ground handling. Outsourced workers are not categorized as airline employees however they are providing services to air transportation. Talking about the European Union, 40 percent of the employees in air passenger and 23 percent of the employees in freight transport were consisting of women. Also, 26 percent of the jobs in airport operation and ground handling were occupied by women. In the United States, women employees were counted as around 43 percent of the total 635000 employees in the industry in 2008 (Seligson, 2019. p. 4).

According to the predictions of the ICAO, air traffic will witness a double increase by 2034 therefore, the aviation industry will be in need of more staff members in 2037. The below table shows the numbers forecasted and reassessed for 2037 compared to 2017 by the ICAO.

Table 2.2. ICAO Civil Aviation Personnel Forecasts

	2017 total	2037 total	2037 new *
Pilots	359 337	720 156	554 304
Air traffic controllers	85 829	161 647	106 800
Maintenance technicians	443 276	869 732	665 990
Cabin crew	565 163	1 185 548	923 179
TOTAL	1 453 605	2 937 083	2 250 273

Source: ICAO Aviation personnel forecasts.

The drop rate for the new numbers in 2037 is three percent for pilots, cabin crew, and maintenance technicians, and two percent for the air traffic controllers.

The European Cockpit Association (ECA) does not recognize the insufficiency of the pilots either in the current situation or in the future. According to the statistics of the ECA, 15 percent of the pilots are not employed in Europe, and on the other hand, a lot of pilots are willingly rejecting the opportunities with the industry and working in other sectors that have better conditions. It is believed that information about pilot shortage is spread by airlines and flight schools to keep the demand up for and generate business for the schools (Seligson, 2019. p. 5).

With the latest development of technology, there will be some changes in the labor market of the aviation industry in the upcoming 20 or 30 years. Therefore, automation and artificial intelligence are supposed to replace many job functions rather than doing them manually but in some areas such as accounting, legal work, and customer service a workforce will be needed together with the technology (Seligson, 2019. p. 5).

As it is mentioned above that the aviation industry creates millions of job opportunities both directly and indirectly. In this part, the benefits of aviation are discussed for each region separately. Africa has more potential to grow among other regions as an emerging market for tourism. The airline industry employs 6.2 million people and contributes 555.8 billion dollars to the GDP of the region. Another 14.8 jobs are supported with the contribution of each person involved in the aviation sector either directly or indirectly in the region of Africa. In 2016, the number of directly employed people was counted as 415,000 people. A total of 30.2 million jobs and 684 billion dollars of the GDP are supported by the airline industry in the Asia-Pacific region. Therefore, every person working in the aviation and tourism sectors contributes to the creation of nine more jobs within the region across other regions. The number of direct jobs supported by the industry counted for 3.3 million as of 2016 in the Asia-Pacific. In Europe, 12.2 million jobs and a GDP worth 823 billion dollars are sustained in favor of the airline industry. Average 4.7 new jobs within different sectors are supported by any employee working directly in the aviation and tourism fields. According to the figures of 2016, 2.6 million workers are involved in aviation directly in Europe. The airline industry corroborated 7.2 million workers and 156 billion dollars GDP to the economy in the region of Latin America and the Caribbean. Within the same year, direct jobs were calculated at 813,800 in Latin America and the Caribbean. Because of its strategic geographical location, the Middle East region has become a hub for the

trading and passenger traffic between east and west. Middle Eastern airlines have been growing significantly during the last four decades. The GDP of the region was contributed to the airline industry with the amount of 130 billion dollars and 2.4 million jobs are supported by the sector. Every representative of the aviation and tourism sectors supplied 4.3 other jobs in the region. 553,700 people were kept occupied directly by the aviation industry in the Middle East in 2016. North America is more reliant on domestic flights by the nature of the business. The airline industry supports 7.3 million jobs in total and contributes to the region's economy with a GDP rate of 844 billion dollars. Relatively, another three jobs were supported elsewhere in the region by any individual employed in air transport and tourism. The airline industry provided 2.4 million direct work opportunities in North America as of 2016 (IHLG, 2019. p. 54-64).

The long-term traffic forecasts of ICAO give indications for the growth of both passenger and freight traffic covering the period up to 2045. The below chart shows the growth predictions for each region in terms of passenger and cargo flights.

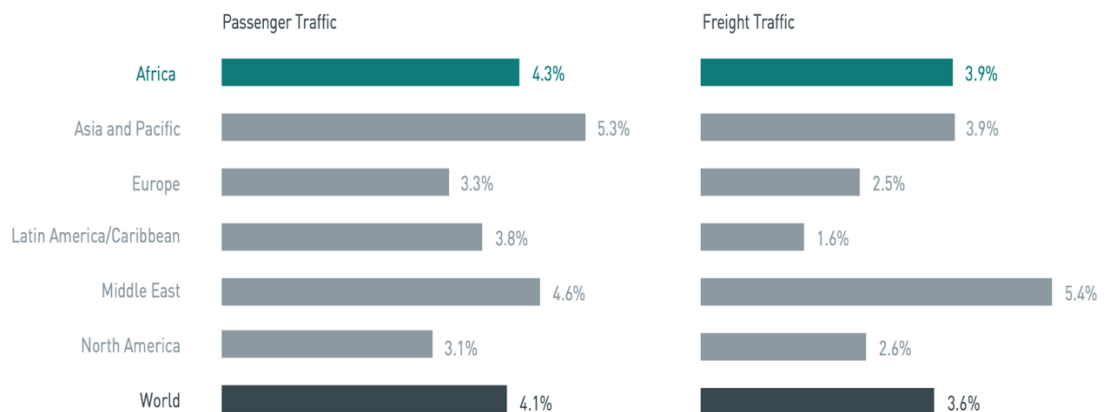


Figure 2.3. Projected Annual Growth of Total Passenger and Freight Traffic by Region up to 2045

With its large and increasing population, the African market has more potential for future growth among other regions. If this potential is managed properly, the air traffic of passenger flights is forecasted to grow 4.3 percent annually surpassing total world growth until 2045 whereas freight traffic growth is set at 3.9 percent which is faster

than the world average within the same duration. This growth certainly, will have a positive impact on the economy of the region and job opportunities within the region. If this forecast is translated into reality, there will be a 60 percent increase in the labor market of Africa supported by airlines and tourism which means 9.8 million employees until 2036.

The Asia-Pacific region is distinguished with the expectation of the highest growth rate of passenger traffic among other regions with a growth rate of 5.3 percent by 2045. Meanwhile, the freight traffic is expected to grow by 3.9 percent by 2045 which is the second-highest growth rate predicted among the regions. The flexibility of the economic and political systems in the region creates a suitable environment for the further development of the tourism industry, international trade, and air transportation. Another driving factor of the expansion in the regions is the increasing population. The influence of such growth of aviation and tourism in the region is forecasted to support 44 million jobs until 2036 which is 46 percent more compared to 2016.

Compared to other regions the development of the air traffic is much more slowly. East and West Europe are different from each other because of their growth patterns. While the maturity and limited airport capacity of Western Europe are slowing down the air traffic, the overall growth of the region is sustained by the emerging economies of Eastern Europe. Therefore, according to ICAO passenger and freight traffic will grow by 3.3 percent and 2.5 percent, respectively until 2045 with its reflection on the labor market of the region. So that aviation and tourism will provide 18 million jobs in Europe by 2036 with an increase of 49 percent compared to 2016.

Annual growth of 3.8 percent is forecasted in passenger traffic of Latin America and the Caribbean region within the same period as a result of economic development which is increasing demand for air travel. Projected growth for the freight traffic is set at 1.6 percent which is the slowest increase among other regions. Based on this forecast the labor market in the aviation and tourism sectors of the region is expected to grow by 54 percent compared to 2016 supporting 11 million work opportunities by 2036.

Long-term traffic forecasts of ICAO up until 2045 show that the Middle East will be the second-fastest-growing region following Asia-Pacific for passenger travel with the

annual growth of 4.6 percent. The main reason for the improvement of the region is the geographic position that attracts many airlines around the globe and gulf airports become new hubs for those airlines. As it is shown from the figure 2.3, Middles East will be the fastest-growing region in terms of cargo flights with an increase of 5.4 percent annually during the same period. Jobs supported by aviation and tourism will be increased by 78 percent by 2036 with 4.3 million jobs.

North America is the slowest region among others according to its development pace for passenger flights, therefore, air traffic is supposed to develop by 3.1 percent annually until 2045. In parallel with passenger traffic, the freight traffic is expected to grow by 2.6 percent only which is much slower than average growth worldwide for the same period. The reason for the slower development is that the region is a mature market and is used massively. By 2036, 10.2 million jobs will be supported by the aviation and tourism sectors in accordance with the growth of passenger and cargo flights (IHLG, 2019. p. 54-64).

CHAPTER III

AVIATION INDUSTRY DURING GLOBAL CRISES

The year 1995 could be viewed as a new era of the US and global economy that was being formulated based on the contributions of technological innovation, globalization, and the large scales of venture capitals. During this period of prosperity, the economic growth of the United States was marked as 4.4 percent while unemployment was decreased to four percent. While growth, productivity, and employment were improving at their best and predicting the better result in upcoming years, the happenings of September 11, 2001, and the Global Financial Crisis (GFC) proved the opposite. So that the airline industry has been booming and making high profits during prosperity but falling at the same speed while the market turns down (Rhoades, 2014. p. 2).

3.1. 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).

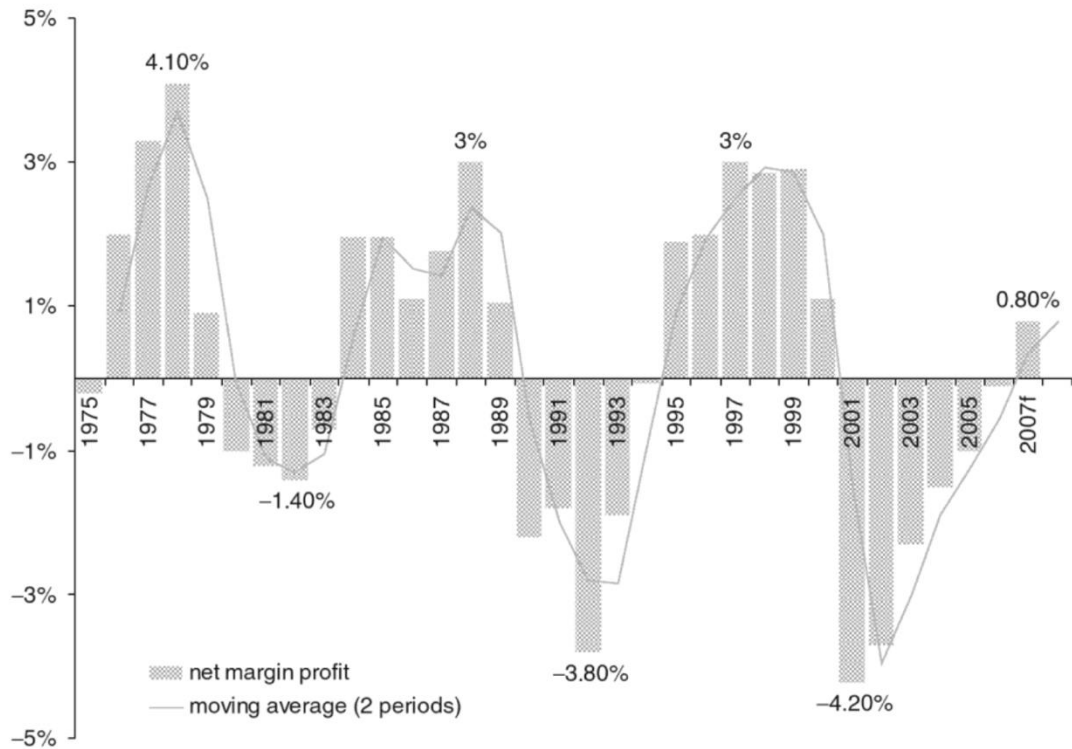


Figure 3.1. Net Margin Profits of The Worldwide Airline Industry

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).

3.1.1. September 11, 2001

Terrorist attacks that happened on September 11, 2001, in the United States against the World Trade Center and the Pentagon were one of the major events that affected not only the US but also the world economy negatively. The airline industry was the one that suffered a lot with its immediate and long-lasting effect since terrorists used commercial airliners to organize this terrorist attack. As a result, there was a 31.6%

decrease in the travel volume in September 2001 in comparison to the same period of 2000 (Clark et. al, 2009. p. 75).

The purpose of the terrorist attacks on September 11, 2001, was to knock the global security, and surely, the US economy which was highly reliant on aviation. While choosing the strategy to respond to terrorist attacks it is critical to avoid further worsening of the economy and stability of the society. Certainly, the main negative effect of terrorism is the loss of human life and then, property. Effects on the economy and other sectors are characterized as additional impacts and a financial loss of 190 billion dollars has been issued as a result of the 9/11 attacks which were followed by other indirect effects. Another drawback of the 9/11 terrorist attacks was the oil price which was increased during this period. Along with trading partners of the US, some other businesses such as financial institutions, insurance companies, commercial banks, pension funds, and stock exchanges were affected by the attacks (Jeffrey and Jeffrey, 2016. p. 4).

The most immediate action that was taken by The Bush Administration right after September 11 attacks was to ground all aircraft across the United States. This precaution has been continued for several days and airlines were allowed to resume the flights. However, general aviation aircraft were banned from flying for a much longer period, and this ban has been applied even for a longer period for the crop dusters since they were supposedly more reachable for the terrorists. These restrictions were eased by time however there was not a systematic map for lifting these limitations on general aviation aircraft. Airports that were in the vicinity of main cities within a radius of 25 miles, were not still allowed to accept any aircraft for landing or taking off. At some point, these precautions were not that much effective since there were not planned and systematic guidelines for lifting restrictions and that was the reason many government officials continued to apply restrictions on general aviation fleets. Another set of restrictions covered the grounding of small aircraft at the airports within a distance of ten miles from the nuclear facility (Rodney, 2010. p. 49-50).

The US domestic airline industry had more impacts because of the 9/11 terrorist attacks in the longer term. After this terrorist attack more sophisticated security measures were implemented that increased the time costs of the travel and many flights

become less economically beneficial for the companies. Studies show that a drop in domestic air travel in the US was calculated as 12% during the time frame that lasts until the end of 2002 in case these terrorist attacks would not happen (Clark et. al, 2009. p. 76).

A financial crisis is registered by many airlines in the United States and as well as in many more countries after September 11, 2001. The airlines such as United Airlines and US Airways announced bankruptcy while other airlines started applying their contingency plans to reduce the costs. Besides its immediate effect on the industry, there were after-effects of the September 11 happenings which is followed by reduced demand in air travel. However, the airline industry is not predictable by its nature, this time it was hit hard and low demand on air travel was observed for more than two years after the attacks happened (Clark et. al, 2009. p. 76).

Taking into consideration the scale of the US economy, it is obvious that America is a major market for many countries in terms of trading. Trading partners of the United States were affected negatively because of the consequences of terrorist attacks that happened in the country. Especially, Canada, Mexico, and Japan were dominating in this list since they were the major partners of the US in terms of trading. Trading was suspended for some time as a result and certainly, these measures were not beneficial for partner countries whereas 40% of the production of Canada was exported to the United States. The consequences of 9/11 have been noticeable across the borders of the US (Gail, 2002. p. 17).

The 9/11 terrorist attacks can be characterized as an attack on the economy as well, and especially, on the economy of New York City. Office space worth 13.4 billion dollars was collapsed totally, and damaged office space was calculated at 16.6 billion dollars. Many business units were shut down for several weeks with immediate action after the attack. The hospitality industry which was one of the main industries for New York City has faced big-time economic loss, and approximately 100,000 jobs were lost while around 13,000 jobs were transferred outside of New York as a result of the terrorist attacks. Gross city product (GCP), the most effective indicator of the economy and is widely used to measure economic activity was observed by the drop of 11.5 billion dollars right after the attack during the quarter. The same number has been

increased to 17.6 billion dollars by July 2002 and the total loss to GCP has been estimated as fifty billion dollars in 2004 (Howard, 2005. p. 2-3).

To minimize the effects of 9/11 there were some changes in the market as a result of responsive strategies implemented by airlines. Within new market conditions priority was given to international flights over domestic flights. While international travel was set to 12% of seats on carriers during May 2001, however, the same number was increased up to 15.2% as of May 2005. Since low-cost carriers started dominating the domestic market, major airlines started shifting towards international flights to reduce the costs over domestic operations. In the span of four years from 2000 to 2004, a 24% increase was observed within available seats which were fluctuated from 182 million to 226 million, accordingly. At the same time, another 27% increase was noted in the number of passengers from 124 million to 158 million (Ken, 2005).

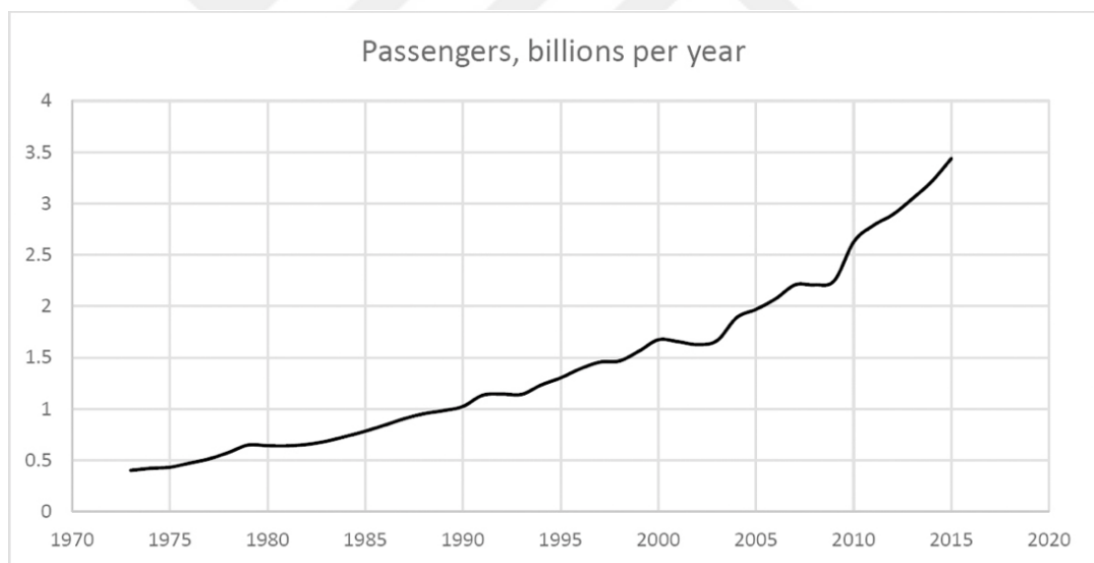


Figure 3.2. Global Passenger Air Travel, 1973-2015

Source: World Bank

The United States adopted an aviation security policy and strategy after the terrorist attacks happened in September 2001. The main purpose of this action plan that was designed by the Bush Administration and Congress would be to prevent and save the aviation industry from future terrorist attacks using aircraft to target certain facilities

and civilians. The objectives of these measures were to reinforce the security of the aviation industry and reestablish the confidence of the American people. There were many changes and at the same time, new implications to aviation security involving the expansion of the screening workforce, a full scan of checked items of baggage for explosives. Many individuals were returned from boarding or were asked for a more sophisticated security check, many more marshals were assigned on duty to ensure the safety of the flight. Also, a program was created to arm the cockpit crew and the hardening of the cockpit doors was part of this program (Bartholomew, 2009. p. 41).

During the next two days after September 11 attacks, Canadian airports became more crowded than usual because of the diverted trans-Atlantic flights. However, after two days people started to realize the real consequences of the event and became more conscious as a result of media coverage and economic drawbacks whereas accustomed freedom understanding of America was questioned. The effects of 9/11 were worldwide, and not only passenger flights, at the same time, but cargo carriers were also influenced negatively as a result of terrorist attacks (Robin, 2003. p. 354).

Besides their economic impacts, the 9/11 terrorist attacks had health impacts that are not less important than economic ones. While these organized attacks demolished two iconic buildings in lower Manhattan and resulted in severe damage and fires, around three thousand people lost their lives, and more than six thousand people were injured on that day. Two collapsed buildings trapped scores of people in the rubble and dense dust cloud that produced toxins infecting these people. Several illnesses such as the high risk of heart diseases, different kinds of cancer, and some other chronic and fatal illnesses among the people who worked on the site, people who lived, worked and attended the school in the proximity (Opotow et, al. 2018).

Certainly, the labor market was influenced by these terrorist attacks, therefore, right after the attacks, 5,692 pilots were laid off in the United States. This furlough of US pilots was consisting of six percent of the 94,571 active airline pilots however, many pilots were needed at the same time for alert and patrol services (Robin, 2003. p. 354).

3.1.2. Global Financial Crisis 2007-2008 (GFC)

Global Financial Crisis has been recognized as the most influential crisis of the 21st century both financially and economically. With its impacts and coverage, GFC has been characterized as the most amplitudinous crisis that happened after Great Depression in 1930. The implications of the GFC that started in 2007 were centralized on the banking and financial activities. Certainly, the GFC was not the first economic crisis that happened and would not be the last one however with its geographic coverage, influenced economic and social life negatively (Cowton et, al., 2019).

As a result of the financial crisis, the aviation industry experienced a highly challenging economic environment during the third and fourth quarters of 2008. Airlines were not able to forecast a stable revenue due to the dramatic shift in the demand for air services. Extremely increased fuel prices during the first half of 2008 surged the operating costs of the airlines. Both fuel prices and the financial crisis that were happening back-to-back had mutually affected the whole industry and resulted in several bankruptcies, service interruptions and tarnished the reputation of the airline industry. Until 2008 the labor force was counted as the largest proportion of the operating cost of the airlines however after fluctuations in the fuel rates during the first three quarters of the same year fuel costs increased dramatically and composed 37 percent of the overall cost of operation reported the Bureau of Transportation Statistics (BTA). BTA published these statistics based on the data reported by airlines for this period (Dobbs, 2009. p. 1).

As a result of the economic crisis that happened in 2008 and 2009, the aviation industry has issued a total loss of 11 billion dollars due to increased fuel costs and fewer earnings from passenger flights and cargo based on the statistics provided by IATA. It is common practice that the growing process after such negative events is going slowly and during this time, airlines started to decrease their capacity of bookings in terms of first and business class travel. While the economy suffers first thing to be done by global companies is to decrease the volume of business travel. Again, if we look at some statistics of IATA for this period it shows that the average fare per mile has been decreased by 12 percent, however, this drop initially was forecasted to be only seven percent. A 15 percent decrease has been observed in revenue of 2009 in comparison

with 2008 which is equal to 455 billion dollars. European airlines lost an amount of 3.8 billion dollars in 2009 as a result of the economic crisis since the volume of travel was decreased drastically. During the same period, the loss of North American carriers was estimated at 2.6 billion dollars. Airline companies of the Asia-Pacific region squandered 3.6 billion dollars while Latin American airlines could stand at the breakeven point most of the time. During this crisis, Middle Eastern air carriers lost 500 million dollars and the same trend was observed for African airlines (Wensveen, 2018. p. 7).

Many airlines started cost-cutting, eliminating flights, increasing airfares, and looking for ancillary sources of revenue as a part of their response strategies towards crisis and high fuel prices. Compared to November 2007, as a result of capacity cutbacks, 13 percent of the domestic flights were stopped by November 2008. Service interruptions were mainly applied in long-distance non-stop flights therefore, airlines were rerouting passengers through hub airports to save the operation costs (Dobbs, 2009. p. 4-5).

The financial crisis which came to a head has changed the whole picture of global economic development. After its pick, the consumer behavior and the flow of the business have been modified. Globally, the travel and tourism industry including airlines was experiencing a downturn, therefore, in 2009 international arrivals dropped by 4%, overnight stays by 7%, and expenditures by 9% that led to lower profitability among airlines, hotels, tour operators, and travel agencies. As it is illustrated in the below bar chart that there was an increase of 7% during the years of 2004 and 2007 that was projecting higher growth rates for the upcoming years. However, with the hit of financial and economic crisis, the year of 2009 was followed by a 4% drop in trips. The main reasons for this downturn in international travel were not the demand but purchasing power which was shadowed by low confidence in travel (Conrady and Buck, 2011. p. 4-5).

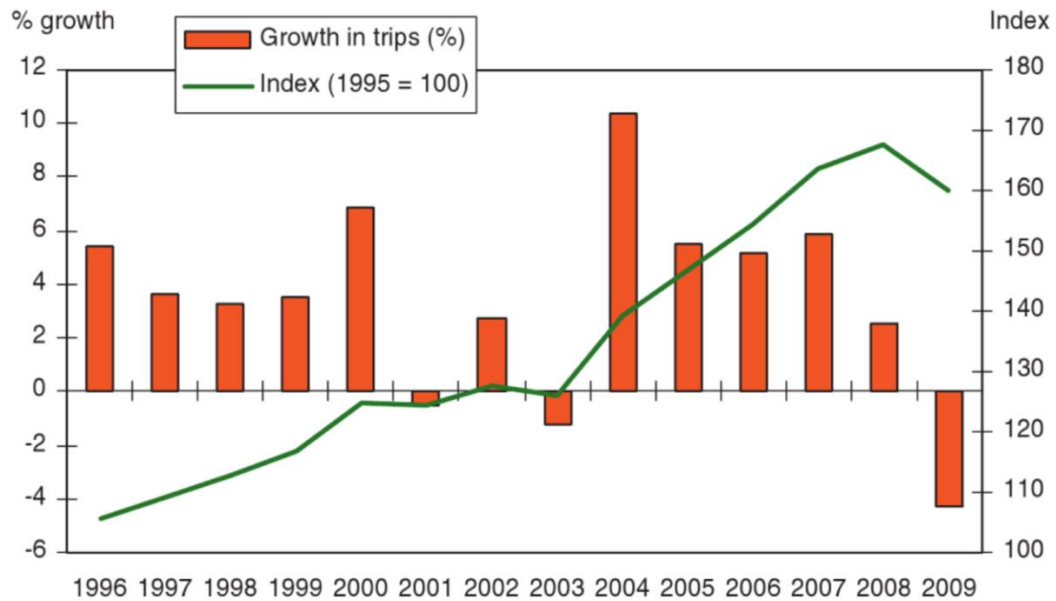


Figure 3.3. World Outbound Tourism Performance 1995-2009

Source: World Travel Monitor, IPK International

The crisis did not create this hectic situation, the situation was getting worse because of other factors and mainly because of the oil price, and the financial crisis just worsened the situation for the airlines and their vendors. Recovery of the airlines after the terrorist attacks of September 11 was just flourishing and some positive figures were observed in the profitability. However, the rise of fuel prices was challenging the industry again and fuel became a fundamental cost for most airlines. The rate for the one barrel of oil became 147\$ and the financial crisis expanded not only in the United States but also all around the world and the aviation industry was in turmoil again (Rhoades, 2014. p. 7).

Since the impacts of the financial and economic crisis were spread all over the world within certain time frequencies and so did the crisis and GDP recovery among different countries around the globe. The first signs of the recovery in the US were seen in mid-2010 as there was an increase between two and three percent in terms of GDP. On a contrary, the European states that are using the common currency being the euro had recovery symptoms in early 2010. These countries included 16 countries that are members of the Economic and Monetary Union (EMU) and the number of countries was extended to 17 when Estonia became a member on December 31, 2010. Countries

outside of EMU, such as Britain and some members of the European Union, for instance, Hungary and the Baltic states of Latvia and Estonia had a lower and slower process of recovery and growth of GDP in 2010. Countries outside of the eurozone, Denmark, Sweden, and Norway had a growth rate of GDP from one to three percent despite, these countries are highly dependent on exports (Desai, 2011. p. 81-82).

Passengers and cargo flights are the main sources of revenue of the airline industry. The revenue of the airline industry declined in 2009 despite the positive trend in 2007 due to the global financial crisis that started in 2008. The growth rate of the world economy has been decreased from 4% in 2007 to 1.5% in 2008 and the same number was marked as -2% in 2009. While comparing the growth rate of the airline industry to the general growth rate of the world economy, it is possible to mention that the growth of the airlines is higher. One of the main factors for faster development is cargo flights. Cargo flights are accompanied by the irregular rise and fall and experienced a major downturn during the economic crisis in 2008 however, the recovery of the cargo flights was much faster and already had a positive state after 2009. The emerging economies started to develop, and the growth rate was marked as 20% by 2013 in comparison to the level before the 2008 crisis. Trade developments have more influence on the expansion of the airline industry rather than GDP. Since trade relationships are handled with the participation of the cargo flights that account for the big portion of airline operations. Therefore, there is room for an increase for the airlines as long as trade volume is increasing (Heshmati and Kim, 2016. p. 53-58).

3.1.3. The COVID-19 Outbreak

Having experienced SARS, H1N1, Ebola and other viruses, the spread of the coronavirus should not be a surprise however it had a shock effect on the world economy. Drawbacks of pandemics have been highlighted over the years by public health experts and sooner or later the birth of the new virus was somehow expected. Despite these warnings, the world was not prepared for the coronavirus and could not react shortly to avoid the spread of the virus. Millions of people from all over the world have been infected with the virus and the spread is still not under control. The United States has been the most influenced region in terms of economy and the number of positive cases (Gavin and Brands, 2020. p. 1). Transmission of infectious diseases can

happen much faster by travel with any mode of transportation and air travel is spreading viruses as fast as it carries people from one point of the world to another one. In general, airplane structure and environment are very suitable for the spread of infections since the airplane environment is not very healthy with little oxygen, filled with the germs of hundreds of passengers within the same airplane (Gottdiener, 2001. p.129). SARS virus that started in China and spread to around twenty countries from late November to June 2003 infected more than 8000 people and killed approximately 800 people. This shows the role air transportation plays in the transmission of infectious diseases around the world. Compared to SARS, the spread of coronavirus has been much faster with more geographical coverage with regards to airlines and cruise ships turning a local epidemic into a global pandemic (Baer, 2021. p. 243).

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, there 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).

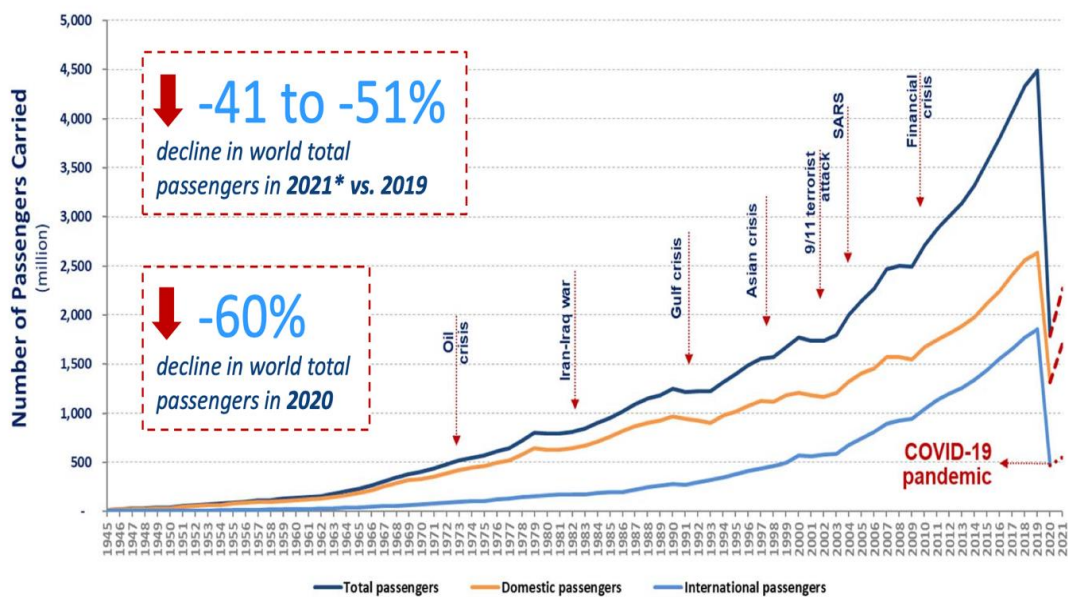


Figure 3.4. World Passenger Traffic Evolution 1945-2021

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).

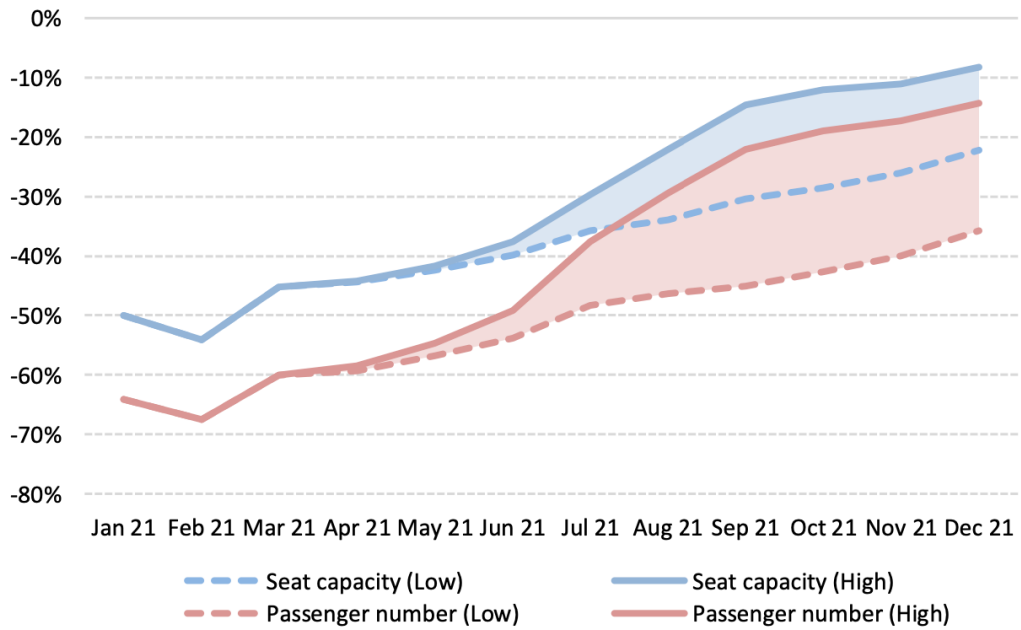


Figure 3.5. Outlook 2021 Compared to 2019 Levels

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.

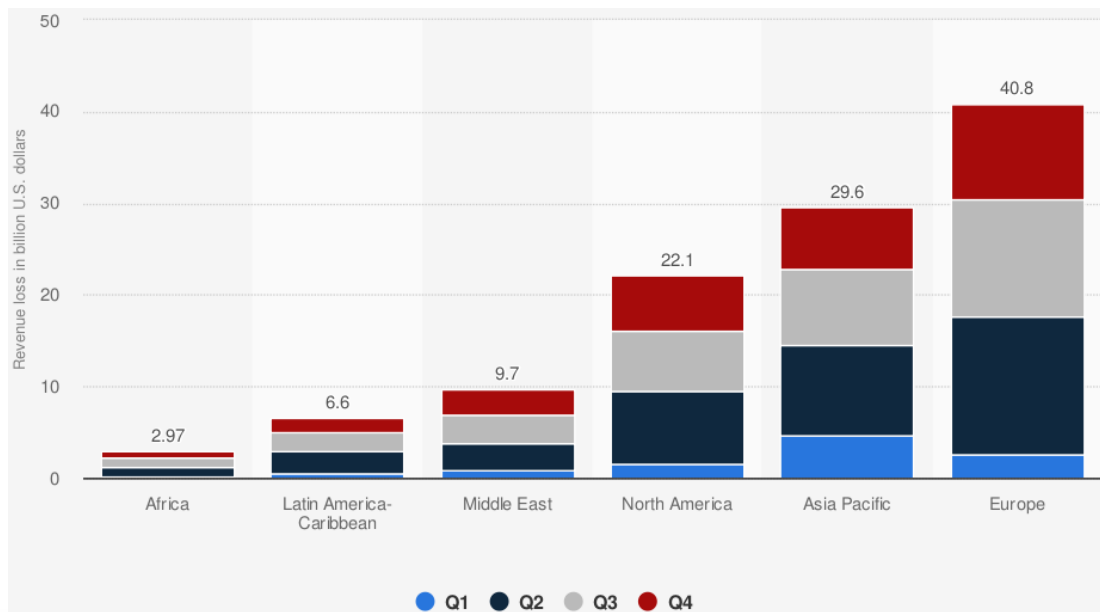


Figure 3.6. Quarterly Revenue Loss of Airports Worldwide by Region Due to the COVID-19 Outbreak

Source: Statista 2021

3.2. Impacts of Crises on Labor Force

The US airspace was closed for a week with its worldwide effects after the terrorist attacks of September 11, 2001. US airlines were not only worried about the liability but also were supposed to consider the future policies for the airlines. Certainly, the labor market had been affected negatively after these happenings (ILO, 2012). Therefore, European airlines decreased their workforce by ten percent that is equal to 30,000 job cuts. Within the same period, North American airlines announced 95,000 job representing 20 percent of their workforce. Furlough was not only implemented by airlines but also ground services and aircraft manufacturers started to job cuts, therefore, major manufacturers Boeing and Airbus cut 18,000 and 2000 jobs each, respectively. The damage of the crisis was extended to food and beverage outlets and car rental companies at the airports. Aircraft leasing companies were suffering at the same time and as a result, leading leasing companies, GECAS and ILFC were obliged to drop their rates whereas aircrafts were losing value at the same time. Despite there were more than 1803 aircraft orders in 2000, only 816 orders were realized after massive cancellations in aircraft orders (Morrell and Alamdari, 2002).

The effects of the GFC were much more severe on civil aviation than the ones of 9/11. After 9/11 revenues fell by seven percent; however, the expected loss in the revenue during 2009 was set by 15 percent as an outcome of the GFC, reported IATA in June 2009. The following decline was noticed in passenger demand after the economic crisis therefore, passenger demand dropped by eight percent, and additionally, freight demand decreased by 17 percent. Thirteen airlines announced their bankruptcies in the United States after the crisis in 2008. In 2009, thousands of jobs were redundant in the US after airlines ceased trading. With the experience of 9/11, airlines applied job reduction at the early stages of the crisis. US airlines were dealing with the reduction more smoothly than other regions since they had already started retiring older and less beneficial aircrafts as a response to the increased fuel prices in early 2008 (Harvey and Turnbull, 2009. p. 7).

The trading ceased in the region of Europe which led to thousands of job losses as well. For instance, XL Airways which was based in the UK with its 2800 staff, and Dalavia of Russia with 1700 staff members could not resist the economic crisis and both airlines suspended operations fully in 2008. A massive redundant in Europe was carried out by Scandinavian Air Services in which the company cut 9000 jobs equal to 40 percent of the employee workforce. Alternatively, Lufthansa developed different strategies instead of massive headcount reduction and reduced the working hours of 2600 employees at cargo operations. Meanwhile, British Airways, British Midland Airways, now part of BA, and Virgin implemented pay freezes to avoid redundancies. At the same time, the employees of BA were asked to work for one month without payment. Another European air carrier, Finnair could manage the crisis with only 120 redundancies however, 380 employees were temporarily laid off and the other 3000 staff members were sent to unpaid leave for one month (Harvey and Turnbull, 2009. p. 8).

Labor forces of the aviation industry were under pressure as a result of the economic crisis in the Asian Pacific region as well. The air carriers of the region applied job cuts and Oasis Hong Kong Airlines with its 700 employees went bust. Air New Zealand laid off 2000 positions, and following, Qantas cut 1750 jobs and Virgin Blue cut 400 jobs as a response to the crisis. Virgin Blue implemented a 30 percent reduction in salaries on top of the job cuts. Jet Airways of India had announced 800 redundancies

which were supposed to be 1900 as per the initial plans of the company however, with the intention of the government, the process was put on hold and other cost-saving measures were put in place instead. The company announced the salary cut from five to twenty-five percent and at the same time, temporary contracts were not prolonged, and hiring was stopped for time being. Other alternative principles of actions adopted by the regional airlines in the Asia Pacific to the furlough. For instance, Air India along with the layoffs, suggested its employees use unpaid leaves voluntarily from three to five years. Cathay Pacific urged its 17000 employees to use four weeks' leave without pay in the upcoming 12 months starting from April 2009. Singapore Airlines asked the employees to accumulate one day of annual or unpaid leave every month while salaries were not paid. Japan Airlines also applied for two months of unpaid holiday that was announced in January 2009 and the company put the trainings on hold during this period (Harvey and Turnbull, 2009. p. 8-9).

In general, 38 percent of the aviation labor force was laid off compulsorily during the global financial crisis. Besides furloughs, other alternatives were designed to minimize job reduction and the recruitment freeze was the most common strategy applied by almost all companies. Besides this, voluntary redundancy, non-renewal of temporary contracts, pay freeze, redundancy of probationary employees, voluntary retirement, and unpaid leave were among the other measures taken by the airlines as a response to the economic crisis in 2008-09 (Harvey and Turnbull, 2009. p. 9).

Over time airlines learned and developed policies to avoid or minimize redundancies. Air France-KLM indicated that through holding recruitment, not extending temporary contracts, and not replacing retired staff, the company would be able to save 3000 jobs from possible redundancy. In the UK, British Airways launched a partnership with the British Air Line Pilots Association (BALPA) in terms of cost reduction that would save 26 million pounds for the company. As a part of this deal, there was a cut of 2.61 percent in basic salary and another 20 percent drop in flying allowances. Another saving worth ten million pounds was made through increasing annual duty hours, reducing turnaround timings on short flights, and cutting some crew arrangements on long-distance flights (Harvey and Turnbull, 2009. p. 10).

Differing from other crises, the COVID-19 impacts were noticed immediately, and a significant influence was seen on employment. As a result of the huge numbers of cancellations and restrictions, the labor market was already affected since many airlines started furlough and cost-cutting as a response to the crisis. The below effects of COVID-19 can be listed; however, the list is not limited to the below points:

- Agreements on reduced hours of work
- Agreements on wage reductions
- Unilateral wage reductions
- Agreements on paid and unpaid leave
- Hiring freezes
- Furlough (ILO, 2020. p. 3).

Some airlines tried to continue the flights at the beginning, however, the deteriorating situation of the pandemic urged airlines to suspend most of the flights, entirely. Such action of airlines is creating a direct threat to the employment status of the airline staff. In the beginning, the occupations including pilots, air traffic controllers, safety officers, and other related jobs were supposed to be less threatened however, it was only a matter of time how long, these jobs could be safe in case there is no revenue. Some jobs such as flight attendants, airline staff, check-in staff, baggage handlers, airline catering, cleaning services, and many more are directly affected during the crisis. For instance, Qantas Airways-national carrier of Australia assigned leave to more than 20,000 employees as a first step taken towards the COVID-19 outbreak (Kugbe, 2020. p. 116).

CHAPTER IV

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 collect 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.

4.1. 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.

4.2. 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.

4.3. 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.



CHAPTER V

ANALYSIS OF QATAR AIRWAYS DURING PANDEMIC

The emergence of oil companies in the southern part of Qatar initiated civil aviation in the country in 1950. The first runway was built to provide transportation to these oil companies to ease the logistics of equipment and people, and the same runway received one plane per month by that time. Qatar's aviation market started to grow in accordance with the economic development of the country. Therefore, with the growth of commercial air transport, the first airport was built and the national carrier, Qatar Airways, was established in 1994 (Beyrouty and Tessler, 2015. P. 19).

Qatar Civil Aviation Authority (QCAA) was established in 2001 with the objective of promoting civil aviation and weather forecasts. Another important event in the civil aviation of Qatar was marked in 2014 with the opening of a new international airport, Hamad International Airport. This airport is built to handle increasing monthly passenger and cargo traffic. The airport was set to handle 30 million passengers per annum with a further planned extension to handle 50 million passengers annually (Beyrouty and Tessler, 2015. p. 19). Qatar's airport project, Hamad International Airport, is the highest of value in terms of government investment. A total investment of 16 billion dollars is allocated by the government being the highest among Gulf countries, followed by Dubai World Centre with an investment of eight billion dollars, Dubai International Airport worth 7.8 billion dollars, and Abu Dhabi International Airport with 6.8 billion dollars of investment (Alpen Capital, 2014).

Hamad International Airport started operations in April 2014 and 60 percent of the airport has been constructed on the land reclaimed from Arabian Gulf. Besides the project of HIA, is the project of Aerospace city, a business airport for general aviation

and helicopters operated by Gulf Helicopters. The Aerospace city also included a military area, education and research facilities containing a university campus, a business and residential district with several entertainment facilities. The project was led by Qatar Foundation and the same organization was the main contractor for the project, however, the Aerospace city project was put on hold until further notice (Petcu, 2017. p. 58).

Hamad International Airport is able to handle 8,700 passengers per hour with its current functions and infrastructure, therefore, it can handle 30 million passengers a year with the goal being to increase the capacity to 50 million passengers per annum. At the same time, HIA is handling the world's largest aircraft including the A380 with the sophisticated functionality of the airport. In 2017, along with the 35.27 million passengers that traveled through the airport, HIA recorded 222,321 aircraft movements. The strategic location of HIA makes it the international hub for Qatar, the Gulf, and the world. The airport is located in between East and West and around 80 percent of the population of the world is in the proximity of six hours flight from Qatar (HIA Company Profile, 2018).

The cargo facilities of HIA offer modern cargo transportation solutions and are growing. The infrastructure of HIA cargo is consisting of two stories and coverage of 55,000 square meters which is fully self-contained, 11 stands for wide-body aircraft, and 42 loading docks. Cargo facilities are tailored to store special categories of cargo such as live animals, perishable and dangerous goods, and temperature-sensitive pharmaceuticals. HIA can handle 5,700 shipments and approximately 1.4 million tonnes of freight annually (HIA Company Profile, 2018).

HIA is one of five airports in the world that are classified as a five-star airport by Skytrax. According to Skytrax World Airport Awards 2008, HIA has been announced as the fifth best airport in the world. Other than this, HIA has been selected as the "Best Airport in the Middle East" for four years and "Best Staff Service in the Middle East" for consecutive three years (HIA Company Profile, 2018).

Qatar is one of the fastest-developing countries and at the same time, the aviation market in the Middle East. The national carrier of the State of Qatar is Qatar Airways

which is distinguished by its rapid growth in the market. Qatar's air traffic has been increased significantly due to the economic development of the country, an increase in the population of expats because of increased work opportunities, and the positioning as a host country for several major sports events. During 2008 and 2012, passenger traffic carried by Qatar Airways has been increased with an annual growth rate of 18.7 percent while cargo traffic has grown by 27.3 percent which is handled by Qatar Airways as well. Since Qatar Airways has positioned itself as a five-star airline both regionally and internationally, the passenger volume has been increased in line with the company policy. Between 2008 and 2012, annual growth for the passenger and cargo traffic at Doha International Airport was marked as 14.6 percent and 19.2 percent accordingly. Riding on this growth, the construction of the new Hamad International Airport was already started and set to open in 2014 (Alpen Capital, 2014. P. 29-30).

While improving the country's position in civil aviation, Qatar is quite sensitive towards environmental issues caused by the activities of the aviation industry. In order to protect the environment and take necessary measures, the State of Qatar is aiming to strengthen partnerships with international organizations in this field. Thus, the State of Qatar, represented by QCAA has obtained membership of The Committee on Aviation Environmental Protection (CAEP), part of ICAO. CAEP is a technical committee of the ICAO Council and the main objective of the committee is to create new policies and at the same time, to bring new standards for further implementation within the industry related to the environmental impact of aviation, more precisely, related to aircraft emissions and noise. Also, Qatar has occupied a significant position in the area of aviation security and air safety in the last two years. A sophisticated development program for the operations of Qatari airspace has been initiated by the Civil Aviation Authority that is including the expansion of aircraft routes and advancing air navigation devices and systems. All these new improvements should be completed fully functional until FIFA World Cup 2022 to handle the expected high volume of air traffic, especially during the tournament (Qatar Sky, 2020. p. 5).

Qatar is cooperating with the European Aviation Safety Agency (EASA) to develop air safety regulations for the country. The EASA is the first organization in the world to implement civil aviation security standards. Air safety regulations of Qatar are

drafted in conjunction with the EASA regulations that would be applicable until 2030. Also, Qatar is the first country in the Middle East that is applying the Comprehensive Safety Program regulations of the EASA. The main objectives for the QCAA include the formulation of new systems for crew licenses and aviation operations according to the EASA regulations (Qatar Sky, 2020. p. 5).

5.1. GCC Aviation Sector

Today, major players in the global air networks are the Gulf airlines and the hubs of the Gulf. These airlines with their presence are the game changers in the global aviation market and competing with major airlines globally (Ulrichsen, 2016. p. 159). Full-service carriers have been developed in the region such as Emirates Airline, Qatar Airways, and Etihad Airways that are connecting different routes between Europe and East/ South Asia where a significant share of air traffic if these regions have been grabbed by those airlines. Besides this, the Gulf carriers are connecting the routes between the regions of Africa and East Asia, North America and South Asia, South America and East Asia (Lebel, 2019. p. 49).

The worldwide growth of the GCC aviation industry has shifted the trend of global aviation from traditional markets like the UK and the US. This improvement of the regions is associated with the characteristics of the regions including rising of the population with high levels of income, presence of huge numbers of expatriates who travel frequently to their homes, strategic location, emerging tourism industry, and less developed railway network. The Gulf airports have positioned themselves as new aviation hubs with their increased passenger traffic, especially, during 2008-2012. As it is shown from the below chart, the GCC air carriers surpassed major airlines from other continents with a noticeable difference. Besides its geographic location, the GCC countries have gained a competitive advantage over other global hubs by their state-of-the-art airport infrastructures. In this context, UAE and Qatar are stressed out with their comprehensive airports in the cities Dubai, Abu Dhabi, and Doha. Emirates Airline, Etihad Airways, and Qatar Airways have become the fastest-growing air carriers of the world with their excellent hospitality competitive ticket prices (Alpen Capital, 2014. p. 9).

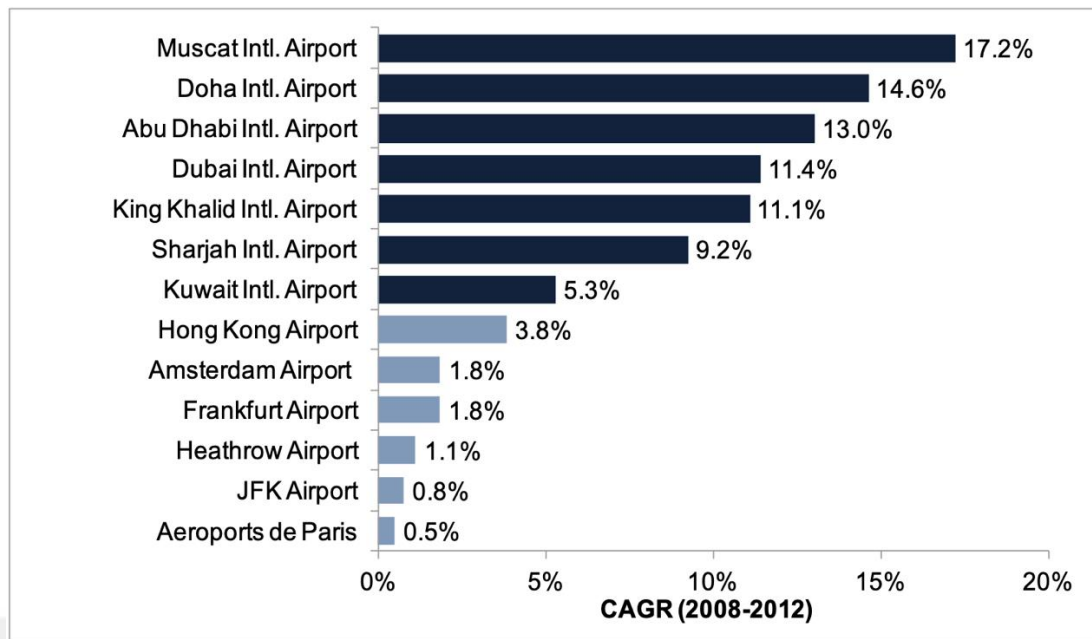


Figure 5.1. Passenger Traffic Growth at Key Airports (2008-2012)

The GCC governments are interested in turning the destination into a global aviation hub. The main reason behind this strategy of the governments is to reduce the economic dependency on the oil and gas sector and diversify. Besides their strategic location in the proximity to the Eastern and Western worlds, the GCC airlines are well supplied with fuel at a lower cost than their global competitors because of the existing reserves of each country in the region. A stable fuel supply is one of the crucial factors that the GCC can position itself as a central hub. Airline companies in GCC are fully controlled by their respective governments. Privatization is preferred by such governments that are short of funds to upgrade the fleet, equipment, and facilities. Privatization has been experienced by some companies in the region. For instance, Kuwait Airways has been attempting since 2008 to privatize the company however the company was not that successful. In 2013, the Kuwait government possessed only 20 percent of the company and the rest was open to investors and employees. Afterward, the government announced that the airline company would be fully owned by the government again. In general, the privatization and at the same time, acquisition and mergers are not typical for the GCC airlines since they are able to develop the companies by investing huge amounts of funds both in airlines and airports (Oman Arab Bank, 2016. p. 8).

Another strategy applied by GCC airlines that led to the success of the companies is that they offered direct flights to the secondary airports without any stopover in the main hub. For example, it is possible to fly from GCC to Hamburg and Dusseldorf without stopping in Frankfurt, and also to fly to Nice and Lyon without stopping in Charles de Gaulle Airport (Ulrichsen, 2016. p. 156-157). The rapid growth of GCC airlines is not welcomed by global competitors, therefore, American Airlines, Delta Air Lines, and United Continental have claimed that GCC airlines have received significant subsidies from their respective governments and interest-free loans that enable GCC carriers to offer more affordable flights via their hubs. The European Commission has shared its anxiety over the increasing flights between the GCC countries and the European Union operated by the GCC airlines. The number of seats from the scheduled flights between the GCC states and the EU was 12 million in 2005 and the same number has been increased to 39 million seats in 2015. In 2015, the Middle East region has been the fastest-growing region in terms of international traffic with a 10.5 percent air traffic growth rate. At this time, the Middle East holds the largest market share which is calculated at 14.2 percent (Stephenson and Al-Hamarneh, 2017. p. 84).

The worldwide trend of LCCs has been applied by some of the GCC states as well and there are four main players in the GCC market. Jazeera Airways, based in Kuwait and founded in 2004; Flydubai, founded in 2009 in Dubai; Air Arabia, founded in 2003 with its headquarters in Sharjah; and Flynas of Saudi Arabia founded in 2013. Flydubai is the most developed LCC among the GCC countries in terms of seat capacity, fleet size, and route network. LCCs in the region of GCC have gone an extra mile by introducing a new level of product and service development and have not limited their services to accustomed low-cost standards. For instance, even though Flydubai is a low-cost carrier, it has initiated a new market segment that was not typical for LCCs, therefore, Flydubai offered service for business-class travelers (Stephenson and Al-Hamarneh, 2017. p. 84).

Since the GCC countries are targeting to minimize their dependency on oil revenues, the aviation industry plays a crucial role to diversify the economy of the region. Factors such as increasing population, income per capita, government support, expatriate population, geographic location, tourism, and others.

Since GCC is a gateway between east and west, this region has become a trade and tourism hub at the same time. GCC offers tourism products such as desert safaris, skydiving, hot balloon tours, trekking, sporting events, shopping, music festival, medical tourism, and many more. GCC countries are making huge investments in tourism infrastructure aggressively, and until 2030, UAE is expected to hit 200 billion dollars of investment in terms of tourism facilities. The main areas that are focused on are cruise, medical, and sports travel by the GCC states. Ports are constructed throughout the region to attract and accommodate cruise tourists. Also, in Dubai alone, 22 hospitals are expected to be functional by 2020 to be able to receive 500,000 medical tourists. The region has become the center of the international meetings and convention industry, and over the last decade, the number of meetings held in the Middle East has tripled. In 2015, Abu Dhabi International Airport opened a US Customs Border Clearance Gate which was the first in the Middle East. This function was very attractive for the Asian passengers and that is the reason they are flying through Abu Dhabi to the United States. Mega events happening in the region are targeted to bring high volumes of tourists to the region. The World Expo 2020 was supposed to bring more than 25 million visitors to Dubai. FIFA World Cup 2022 in Qatar is expected to boost tourism in Qatar during 2022 (Oman Arab Bank, 2016. p. 9)

Another driver for the expansion of air travel within the GCC region is the increase of the population within the region. Therefore, GCC represents one of the highest and fastest growth rates in the world. The main reason for this growth is the massive arrivals of expatriates to the region and they are accounting for the bigger share of the population. Foreign nationals make up 25.8 million out of the total 51.5 million population; that is, foreign nationals comprise 50.2 percent of the total population. Qatar is the leader country in the GCC region with the number of expatriates, therefore, 87 percent of the population is consisting of foreign nationals that are residing in the area of Qatar. The list is followed by UAE and Kuwait, where 86 percent and 76.5 percent of the population are expatriates respectively. Less than half of the population of Oman is consisting of expatriates which is equal to 45 percent while the same percentage for Bahrain is standing at 56.5 percent. The lowest level of the expatriate population belongs to Saudi Arabia which is 30 percent only. That diverse population

increases the air traffic dramatically since these people are visiting their home countries frequently (Oman Arab Bank, 2016. p. 10).

Until the last quarter of 2014, the GCC region was relying on oil and gas resources and revenues from these sources respectively. GCC countries invested big amounts of funds to enhance other sectors and diversify the range of the economy in the region. Even, whenever the oil prices went down the projects were going on and necessary funds were allocated by the respective governments. Alike other sectors, the aviation sector has benefited from the same and around 300 billion dollars have been spent in the development of airports in almost every GCC country (Oman Arab Bank, 2016. p. 11).

Another feature of the GCC states is the possession of the highest rates of GDP per capita in the world. This is one of the main reasons for the massive growth of the aviation industry in the region compared to other markets such as the UK and the US. The lower population of the countries is the basic dimension for the higher GDP rates in the region. High per capita income has made travel more affordable for the residents. As it is seen from the below chart, Qatar is again a leader country in terms of per capita income compared to the other GCC countries (Oman Arab Bank, 2016. p. 11).

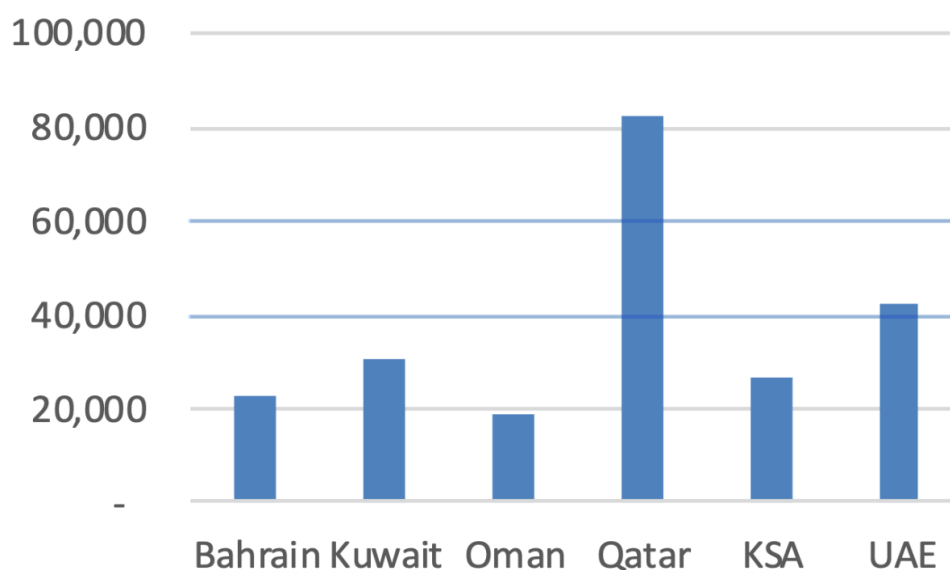


Figure 5.2. Per Capita Income (USD)

Source: IMF

The Gulf countries are interested in improving the aviation infrastructure in the region by investing in new airports that will enable the growth of tourist arrivals to the region. Between 2007 and 2013, an increase of 27 percent has been recorded on the overnight tourist arrivals across the region, and a 92 percent increase is forecasted from 2013 to 2024. Each Gulf country has been focusing on the creation and thereafter, promotion of its own airline. That is the reason that Qatar Airways withdrew its 24 percent share from Gulf Air of Bahrain to divert the full attention and funds on the improvement of Qatar Airways only. At the same time, each country in the region has founded an aviation authority to regulate airline operations and all activities related to civil aviation. Thus, Saudi Arabia's aviation authority is the General Authority of Civil Aviation; in Dubai, Dubai Civil Aviation; in Abu Dhabi, General Aviation Authority; in Qatar, Civil Aviation Authority; and in Oman, the Public Authority for Civil Aviation (Petcu, 2017. p. 39-40).

5.2. Qatar Airways

Qatar Airways is the national air carrier of the State of Qatar and is recognized as one of the most successful airline companies for its rapid development and current reputation. The company initiated its operations in 1994 with a clear vision statement to deliver a high level of service and excellence to make the company a leading international air carrier. Since 1997, Qatar Airways has been very aggressive and soon became one of the fastest-growing air carriers in the global aviation sector showing great results year on year (Qatar Airways Story, 2017).

The year of 1997 is marked as a re-launch date for Qatar Airways with the occasion of the appointment of Mr. Akbar Al Baker to the position of Chief Executive Officer. The new CEO, Mr. Akbar Al Baker prepared and applied a ten-year strategic plan for the airlines with the objectives of expanding the route network, build a modern fleet and make Doha an aviation hub in the region. This strategic plan was implemented aggressively and aimed to make the company a leader in airline standards. The plan was meant to cover the development of the new Doha International Airport at the same time. Qatar was honored to host Asian Games in 2006 and implementations were supposed to be delivered by that time (Craven, 2006. p. 25).

Qatar Airways Group is wholly owned by the government since 2013 and the headquarters of the company is based in Doha, Qatar. The group includes the below subsidiaries into its portfolio:

Qatar Airways – the national flag carrier of the State of Qatar and commercial airline of the group

Qatar Airways Cargo – the second-largest international cargo carrier in the world and the global coverage of the freight operations covers more than 170 international destinations.

Qatar Executive – corporate jet subsidiary of Qatar Airways Group and delivers luxury services for worldwide private charter.

Qatar Company for Airports Operation and Management (MATAR) – the company that is responsible for the operation of Hamad International Airport, the hub of Qatar Airways.

Qatar Aviation Services (QAS) – is based in Hamad International Airport (HIA) and provides ground handling for all airlines.

Qatar Aircraft Catering Company (QACC) – catering facilities company for airlines and is recognized as one of the largest airline catering companies in the world. QACC supplies catering for all the flights taking off from Doha and additionally, provides catering for the airport lounges and cafeterias, making approximately 175,000 meals every day.

Qatar Duty Free – operates retail experience at Hamad International Airport and Qatar Airways' in-flight duty-free program. Operation of retails includes luxury retails, travel essentials, and food and beverage.

Dhifatina Hotels – hotel and spa management subsidiary of Qatar Airways Group and owns world-class hotels in Doha, London, Edinburgh, Melbourne, and Switzerland.

Qatar Distribution Company (QDC) – the sole distributor of licensed retail products in Qatar.

Discover Qatar – destination management company of Qatar Airways and partner of Qatar National Tourism Council. Discover Qatar is established to promote Qatar as a tourist destination, globally.

Al Maha Services – Al Maha is launched to provide a tailored meet-and-greet experience to the customers at HIA and at the same time, provides security services.

Qatar Airways Internal Media Services – manages the advertising opportunities for the whole group, mainly, for Hamad International Airport, Qatar Airways, and Qatar Executive.

Oryx International School – is owned by Qatar Airways and creates opportunities for the children of the employees of Qatar Airways Group (Qatar Airways Group, 2020. p. 38-39).

In 1997, Qatar Airways had four fleets only and by 2005 the company was able to increase the fleet size and the passenger volume. The fleet size grew to 28 until the end of 2003 and the same was increased to 42 by September 2005. Also, the number of destinations that the airline served was increased to 56 cities at the beginning of 2005 covering the regions of Europe, the Middle East, Africa, and the Indian subcontinent. Qatar Airways was already serving 66 destinations by September 2005 with a further growth plan to 70 cities by the end of 2005 (Craven, 2006. p. 28). Qatar Airways continues to upgrade its fleet size and is aiming to bring the fleet size to a total of 228 aircraft adding 33 new aircraft during 2018-19, including 30 passenger aircraft and three cargo freighters (Qatar Airways Group Corporate Sustainability Report, 2019. p. 12).

Another milestone is made during 2018-19 so that Qatar Airways Cargo became the second-largest international cargo carrier flying to more than 60 destinations around the globe. Within the same period, Qatar Airways Cargo has carried over 1.4 million tonnes of freight with 25 freighter aircraft (Qatar Airways Group Corporate Sustainability Report, 2019. p. 12). Qatar Airways has been positioned in the list of 25 global air carriers in terms of passenger and cargo flight traffic. According to the statistics of 2018, Qatar Airways was ranked as the 11th largest airline in terms of passenger traffic while is leading the ranking by freight traffic at the third place after Emirates as illustrated in the below chart (Luomi, October 2020. p. 8).

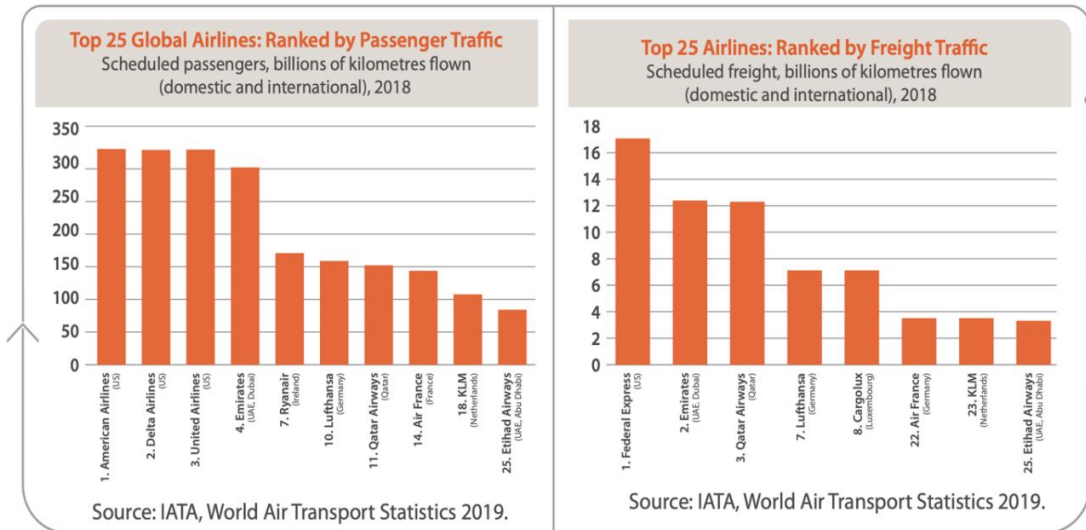


Figure 5.3. Top 25 Global Airlines Ranked by Passenger and Freight Traffic

As of March 2019, more than 46,000 people were employed by Qatar Airways Group including all subsidiaries of the group. Of these, 34,590 employees that are equal to 74 percent of the staff were employed by Qatar Airways, and the remaining 26 percent were employed by other companies of the group.

Qatar Airways' network includes 160 destinations worldwide and 29 million passengers were served from its hub in Doha, Hamad International Airport. During 2018 and 2019 11 new destinations were added into the network. To sum up the paragraph, the below figure illustrates the basic figures of the airline mentioned above according to the corporate sustainability report of Qatar Airways published in 2019 covering the fiscal years 2018 and 2019 (Qatar Airways Sustainability Report, 2019).

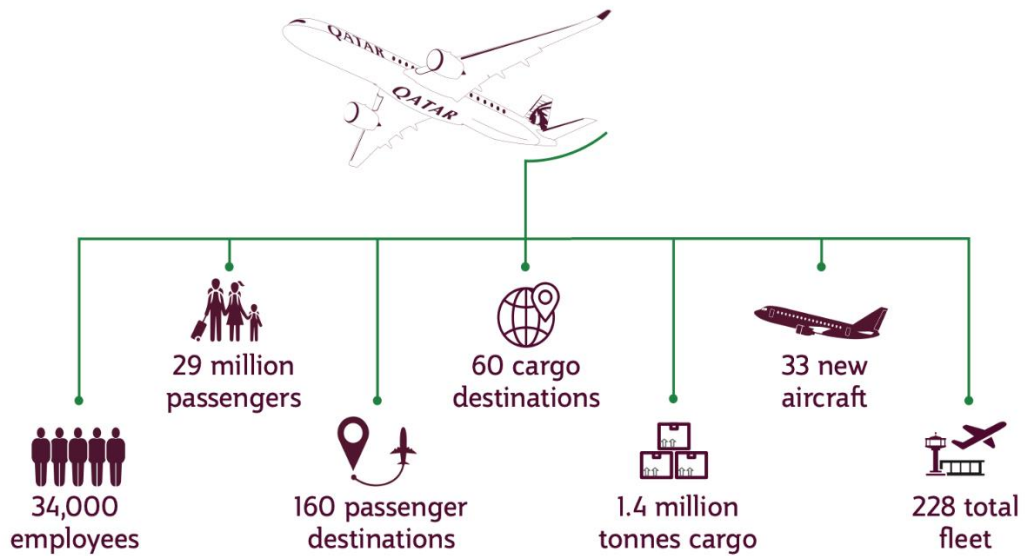


Figure 5.4. Qatar Airways Highlights of 2018-2019

Qatar Airways, as a brand is always associated with luxury service, comfort, and reliability. It is not a surprise that Qatar Airways has been honored with international awards and has received the “World’s Best Airline” accolade from Skytrax for the fifth time in 2019 and at the same time, the company has been awarded for the “Best Business Class Seat” for its well-known Qsuite. The core factors of the marketing and communications strategy are a data-centric organization, consumer focus, behavior, and lifestyle. Tailor-created content, a strategic media mix, and consumer insights have created the basis for the improvement of brand awareness, the brand perception that helps the company to reach greater audiences and engage with, them and hit the sales across its global network. One of the most successful advertising campaigns of Qatar Airways is the sponsorship of FIFA Women’s World Cup France 2019™ which was across TV and digital. Qatar Airways brand ambassador, Neymar Jr was featured in commercials and delivered the brand story in conjunction with football and travel with the slogan of “Like Never Before”. The campaign reached 4.5 billion people around the world and there was an immediate engagement from people in terms of flight searches and online bookings. During the financial year, 2019-20 several campaigns were launched, and the results of these campaigns were more than positive for the company. Recent campaigns were mainly digitally focused and covered the areas like brand, product, destination, sponsorship, and commercial sales. Despite the challenges of the pandemic, Qatar Airways was able to continue consistent flights and soon

positioned itself as an experienced, reliable, and largest air carrier taking people home during the pandemic and reaching large audiences through the campaign of “Taking You Home”. Another digital campaign “Travel with Confidence” is aimed to continue to fly people home safely and to offer a flexible commercial policy for the existing bookings. During this period, along with its commercial growth the brand perception has been changed as well. The brand is not recognized only as a premium luxury airline but shares passenger values besides a superior product offered. Results have shown positive word of mouth association and at the same time, increased willingness to travel with the airline (Qatar Airways Group, 2020. p. 56-60).

The national flag carrier of the State of Qatar flies to 160 destinations worldwide with expanding its route network. Further extension of the route network of the airline is one of the core factors of the rapid growth. The global route map of Qatar Airways has been extended with the addition of eight new destinations increasing its presence in Europe, as well as in Africa and Asia. In 2019 by starting flights to Gaborone, Botswana; Mogadishu, Somalia; and Rabat, Morocco, became the first airline in the Gulf region serving Somalia and Botswana that supports local industry and enlarges trade and tourism. New two non-stop routes were offered to Valletta, Malta, and Lisbon, Portugal in Europe starting from June 2019. Qatar Airways also initiated additional leisure destinations to its network including Davao, the third getaway in the Philippines; Langkawi, also the third destination in Malaysia; and Izmir, Turkey.

The COVID-19 outbreak had severe impacts on aviation towards the end of the 2019-20 financial year and as a result, many routes of Qatar Airways and at the same time, further expansion plans were suspended. New destinations evolving Almaty, Kazakhstan; Dubrovnik, Croatia; Lyon, France; Nur-Sultan, Kazakhstan; Osaka, Japan; Santorini, Greece; Siem Reap, Cambodia; and Trabzon, Turkey were postponed with the new launch dates in 2021 however new dates for the same are still under review (Qatar Airways Group, 2020. p. 40-43).

Qatar Airways Group reported a three billion Qatari Riyals operating profit for the fiscal year 2016. Compared to fiscal 2015 with a profit of 1.1 billion QAR, the profit in fiscal 2016 was tripled which is equal to an 8.6 percent operating profit margin that is improved by six percent compared to the previous year. A net profit of the company

for fiscal 2016 was calculated at 1.6 billion QAR with a net profit margin of 4.5 percent. The same numbers for fiscal 2015 were 374 million QAR and 1.1 percent, respectively. Followed by positive financial figures, Qatar Airways built much stronger relationships with the International Airlines Group (IAG). Therefore, Qatar Airways increased its shareholding to 20 percent in IAG in July 2016. IAG, the parent company of Qatar Airways and British Airways also announced a joint business agreement effective from October 2016. In the fiscal year 2017, the company reported 10.4 percent more revenue with an increase of 21.7 percent year-on-year net profit (Qatar Airways Story, 2017).

Table 5.1 below shows the consolidated income statement of Qatar Airways Group for the fiscal year 2020. According to the independent auditor's report to the shareholder of Qatar Airways Group fulfilled by Ernst & Young, the financial statements of the group have been illustrated in the below table. According to the report, it is obvious that the group has issued a loss of seven billion QAR for fiscal 2020. While aviation is being challenged by illegal airspace blockade against the State of Qatar, the year of 2019-20 has been the most challenging period for the global aviation industry with the widespread of the COVID-19 outbreak worldwide and reach to Qatar in early 2020.

Table 5.1. Consolidated Income Statement for The Year Ended 31 March 2020

	Notes	2020 QR'000	2019 QR'000 (Restated) (Note 36)
Revenue	3	50,957,443	47,927,109
Other operating income	4	164,050	136,387
Operating expenses	5	<u>(52,250,854)</u>	<u>(52,154,328)</u>
OPERATING LOSS		(1,129,361)	(4,090,832)
Other income	6	2,349,115	2,284,787
(Loss)/gain on disposal of property, plant and equipment		(68,754)	2,340,803
Share of loss from investment in joint ventures and an associate	13	(1,387,058)	(215,457)
General and administrative expenses	7	(4,666,801)	(3,916,610)
Finance costs	8	(1,838,903)	(489,257)
Loss on foreign currency exchange		(190,181)	(425,080)
Impairment loss on property, plant and equipment	10	<u>(25,462)</u>	<u>(152,302)</u>
LOSS BEFORE TAX		(6,957,405)	(4,663,948)
Income tax expense	9	<u>(50,347)</u>	<u>(87,534)</u>
LOSS FOR THE YEAR		<u>(7,007,752)</u>	<u>(4,751,482)</u>
<i>Attributable to:</i>			
Equity holders of the parent		(7,008,713)	(4,752,374)
Non-controlling interests		<u>961</u>	<u>892</u>
		<u>(7,007,752)</u>	<u>(4,751,482)</u>

Reasons behind the loss made during 2019-20 include continuations of illegal airspace blockade against the State of Qatar, the liquidation of Air Italy by the majority shareholder, amended policy of accounting and reporting standards, and the COVID-19 pandemic and all these factors led Qatar Airways group to issue seven billion QAR loss in 2019-20. According to the improving performance of the group, better financial results for fiscal 2020 were expected.

Despite all challenges, the group's revenue, and other operating income have been increased by 6.4 percent compared to 2019 fiscal during fiscal 2020 and the total number is calculated at 51.1 billion QAR. Qatar Airways carried 32.4 million passengers during the 2019-20 financial year with an increase of 9.8 percent compared to the previous financial year. An increase has been noticed in all areas not only in the revenue. Therefore, seat capacity increased by 3.2 percent, freight tonnes increased by 2.8 percent, and the passenger traffic at Hamad International Airport increased by 8.6 percent.

5.3. Gulf Crisis and Qatar Airways

Saudi Arabia, the United Arab Emirates, and Bahrain from GCC member countries, and Egypt have imposed a campaign against Qatar that was calculated to the enactment of the embargo on Qatar on the 5th of June 2017. Historically, these six member states of the GCC have always competed for superiority internally in the same region and therefore autonomy and security of the member states have been challenged. The GCC organization was founded in 1981 with the goal of common understanding and outlook on regional order among member states to achieve togetherness and pragmatic cooperation. The “Ramadan Blockade” of 2017 proves despite the reconciliation of the countries, the views have been different between Qatar and other countries blockaded on regional order. Known as the Ramadan Crisis or Gulf Crisis, which is led by Saudi Arabia, is aimed to change the regime towards Qatar against the international norms and standards. The main point of the Gulf Crisis was to challenge Qatar’s economy and to lessen the power of the country and put pressure on the political system. Three main goals were targeted after the Gulf Crisis by other member states, to interrupt Qatar’s trade, undermine the economy of the country, and destabilize the currency (Krieg, 2019. p. 145-148).

Historically, there always has been political tension among the GCC member countries and it has never reached the closure of borders. The blockading countries have blamed Qatar to support terrorism and propagating extremism in the region. The below figure illustrates the timeline of the problems that happened among Qatar and other member countries. However, the Gulf Crisis in June 2017 has been the hardest one, therefore, all borders with Qatar on air, land, and sea have been closed, and the imports of goods, medicine, and other supply has been suspended (Dehbi, 2018. p. 7).

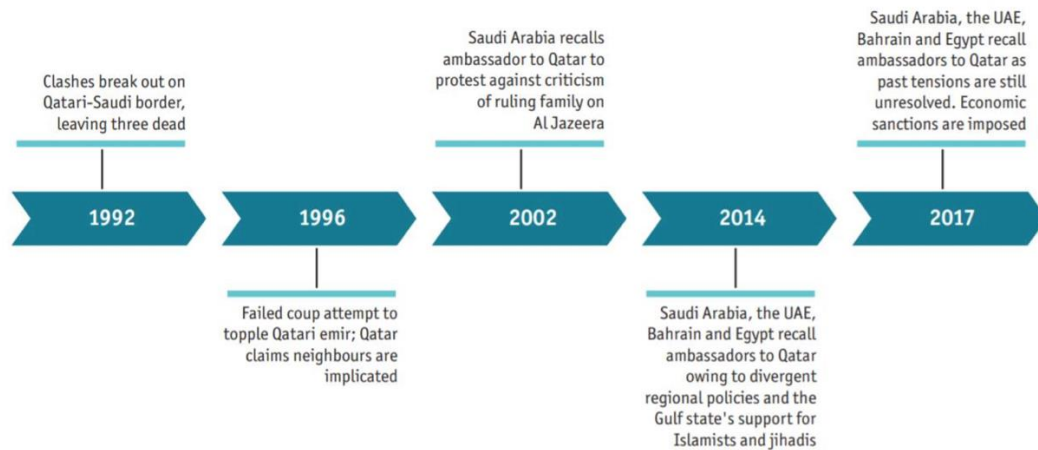


Figure 5.5. History of Tension, Proxy Wars, And Coups

Source: EIU, 2017

Since the Gulf economy is highly relying on air transport, Qatar Airways being one of the main contributors to the country's economy has been through a challenging period. The Arab Quartet – Saudi Arabia, the United Arab Emirates, Bahrain, and Egypt, as a part of the boycott imposed on Qatar, restricted Qatar Airways to use their airspace. Qatar Airways lost daily 50 flights, 18 destinations, and seating capacity accordingly on the same day the boycott was imposed. The airlines had to re-route the flights over Turkey and Iran increasing flight times. Since Qatar Airways made 30 percent of its revenue only from the GCC flights, the damage of this crisis to the company was serious. Before the embargo, the annual growth of Qatar Airways was 20 percent, and it was obvious that expansion of the company is not welcomed by other member countries of the region, especially, the UAE. Because Emirates Airlines of the UAE is the dominant air carrier in the Gulf and the prominent development of Qatar Airways in the region was a major threat to Emirates' market position (Zweiri et, al., 2020. p. 337).

As an immediate effect of the Gulf Crisis, Qatar lost access to four countries and all imports and flights from these countries were suspended on the same day. Trade volume in terms of importing decreased by 40 percent in June 2017 compared to the same period of the previous year. The interruption of 18 destinations from the global network of Qatar Airways has caused inconvenience to the suppliers of Qatar (Qatar

Sustainability Report, 2018). Also, Qatari residents of Saudi Arabia, the UAE, and Bahrain were expelled from their territories with immediate action. On the same day, the website of Qatar Airways was blocked, and people are directed to Facebook to book their flights. The offices of Qatar Airways in these four countries were shut down and as a result, 500 employees lost their jobs in one day (Zweiri et al., 2020. p. 338). Right after the announcement of the blockade towards Qatar, NOTAMS – notices to flight crew has been decided by all four blocking countries which emphasizes the immediate closure of their air space to Qatar Airways. As a result, Qatar lost two big markets of KSA and the UAE in terms of cargo and passenger flights. Also, Qatar lost access to the most strategic air corridors into and out of Doha. Qatar Airways had to reassess its business model because flight durations got longer to Europe, North America, and Africa along with the increased fuel consumption and cost (Ulrichsen, 2020. p. 155).

Saudi Arabia is the only country that Qatar has land borders and prior to the embargo, 40 percent of the imports was realized from Saudi Arabia through their land borders. As a response to the crisis and food shortage, Qatar Airways deployed 22 cargo planes to import food with the help of Turkey and Iran and the food shortage was solved within two days after the blockade. New Climate Center was established in May 2017 to store high volumes of imported food (Qatar Airways Sustainability Report, 2018). Qatar initiated the local production of fresh milk and dairy products and therefore the local farm of Qatar was established by Power International Holding. For the same purpose, 4000 cattle were imported from Australia, Hungary, and the US with the help of Qatar Airways Cargo on 60 flights (Zweiri et al., 2020. p. 338).

As a negative impact of the blockade, Qatar Airways lost 20 percent of the passenger traffic and increased the flight duration because the airlines re-routed the flights over Oman, Turkey, and Iran since Qatar Airways had two air corridors left out of 18 air corridors. Increased flight durations mean increased fuel consumption that leads to higher costs for the company. Because of all these constraints, Qatar Airways reported a loss of 69 million dollars for the fiscal year 2017-18 (Zweiri et al., 2020. p. 338).

Qatar Airways responded to this crisis by strengthening its position in international markets. In July 2017, Qatar Airways started building a much stronger partnership

with its Oneworld partner British Airways by wet-leasing planes that happened out of use unexpectedly. After the collapse of Monarch Airlines in October 2017, Qatar Airways sent aircraft to the Civil Aviation Agency of Britain to evacuate the people back home. Following this, Qatar Airways continued the same strategy and acquired a 9.61 percent share of Cathay Pacific and became the third-largest shareholder of Hong Kong carrier (Ulrichsen, 2020. p. 155). After the global financial crisis, most countries became interested in building investment partnerships with the GCC countries since they were less impacted by the crisis in the world. Qatar Airways has become the largest shareholder of British Airways since then and had a 12 percent stake until May 2016 (Hanieh, 2018. p. 47).

The Quartet and the main leader of the group, Saudi Arabia and the UAE had expectations to knock Qatar down and gain hegemony in the region and they were counting on the US to support them especially after Trump visited Saudi Arabia. The resolution was not real to this crisis, and the anti-Qatar Quartet released 13 demands to solve the issues however, Qatar did not agree. The plans of Saudi Arabia and the UAE to reign over the region failed and this boycott impacted Qatar only marginally and at some points, Qatar took advantage of the crisis and had different response strategies. While UAE asked the United States to call back their military base from Qatar, however, the US clearly stated that they are not interested in their offer and the US military base would not be moved from Qatar. Except, the Quartet no other country supported this action as expected from the UAE and KSA, and even Oman and Kuwait choose to stay neutral and played a mediating role in this conflict. On the other hand, Turkey supported Qatar and sent a military base to Qatar which was of high importance. Following Turkey, Iran chose to be closer to Qatar and strengthen relationships with Oman and Kuwait at the same time (Lynch, 2017. p. 14-15).

During four years of the crisis, some countries, especially Kuwait and the United States have put much effort to find a resolution to the conflict, but no progress has been made. Qatar paid visits to Saudi Arabia in 2019 to participate in Mecca summits and GCC summit in Riyadh that created expectations of positive outcomes however no further news was heard afterward. Saudi Arabia changed its approach to the crisis after November 2020, the US presidential elections. Since Saudi Arabia was enjoying strong relationships with Trump's Administration and after the victory of Democrat,

Joe Biden, Saudi Arabia decided to change its strategy. During the election campaign, Biden openly declared the reconsideration of some agreements and policies with Saudi Arabia. KSA started to compromise the crisis to demonstrate its independent foreign policy and not to end the US support under the new administration. Riyadh dropped 13 conditions imposed on Qatar earlier and suggested ending the blockade on Qatar, in return Qatar's response was positive and all member countries and Egypt came together in Al Ula GCC Summit where the blockade on Qatar was ended and relationships were restored. The GCC countries announced the togetherness of all member countries and confront any issue mutually within the region. The 41st Gulf summit, held in Al Ula in Saudi Arabia, was of high importance therefore it ended the most critical crisis ever happened to the GCC by lifting the blockade on Qatar (Arab Center for Research & Policy Studies, 2021. p. 3-4).

5.4. The COVID-19 Outbreak and Qatar Airways

The Covid-19 virus has spread all over the world, almost in every country. The virus has affected all industries, all sectors, and all aspects of human lives along with economic and financial losses. The below chart introduces the information according to industries gathered from respective organizations ("Impacts of COVID-19," 2021). The first case of COVID-19 in GCC was reported in UAE on the 27th of January 2020. Following UAE other countries in the region started reporting the first COVID-19 cases and since then the spread of the virus in the region has been even faster (Herbst et, al., 2020. p. 39).



Figure 5.6. Impacts of COVID-19 Across Industries

Source: ICAO

The numbers in the chart have been drafted based on the comparison to 2019 data and the figures with an asterisk are compared to the 2020 baseline (“Impacts of COVID-19,” 2021).

As with all other countries around the globe, the GCC countries have been affected by the widespread of the COVID-19 starting from early 2020. A decline in oil prices has been noticed as an immediate effect of the virus. The fast spread of the virus has challenged the countries, nations, and industries and it has been a major challenge in the GCC region as well. Global oil demand has been decreased due to the restrictions applied on international travel. With the start of the COVID-19 crisis, oil prices have been dropped by more than 50 percent (Gulf Health Council, 2020. p. 53-54).

All six countries in GCC have taken precautionary measures to lessen the spread of the virus and save economies as much as possible. Saudi Arabia announced that the full treatment of the COVID-19 virus will be covered by the government for both citizens and residents of the country. Plus, 2.4 billion dollars of funds have been allocated to the private sector to support the citizens who face financial difficulties.

UAE encouraged the companies in the private sector to apply paid and unpaid leaves or cut the salaries for the non-citizens. UAE also launched a rapid expansion of the testing program and many test centers have been created. Bahrain turned a close parking area to the intensive care center because of high levels of the reported cases. Oman also has implemented some limitations so that some of the services have been suspended to avoid the crowd and offices are asked to work with a maximum of 30 percent staffing. All countries of the GCC have imposed measures to avoid the spread of the virus but some activities never paused such as construction sites that increased the daily number of cases. Qatar also announced that testing and treatment would be totally free for the citizens and residents of the country. Also, Qatar allocated 824 million dollars financial support to the businesses to pay the salaries on time. Differing from other GCC countries Qatar's strategy was characterized as more worker-centric while restricting the spread of the virus (Rahman, April 2020. p. 3).

The spread of the COVID-19 has changed the game and growth projections that were characterized by increasing demand have not been realized. With COVID-19, air travel and tourism are experiencing the deepest crisis in history. The impacts of the pandemic will last longer, and recovery is not expected soon; however, passenger traffic should be back to the pre-pandemic level earliest by 2024. April and May 2020 were the peak months of the crisis and tourist destinations that were relying on international visitors were hit hard. The travel and tourism industry of the Middle East has already announced three-five million job losses. The only help for the aviation industry during this period was the financial support from the government as an immediate action. On the other hand, the recovery of the industry is out of reach of the industry, and depends on the progress of the pandemic (Luomi, October 2020. p. 6).

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 it 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 36 months 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™ and in November, they celebrate two years to go until FIFA World Cup Qatar 2022™ tournament. On this occasion, a branded Boeing 777 aircraft with FIFA World Cup Qatar 2022™ 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 countries 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 freight 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 5.7. 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 and 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).

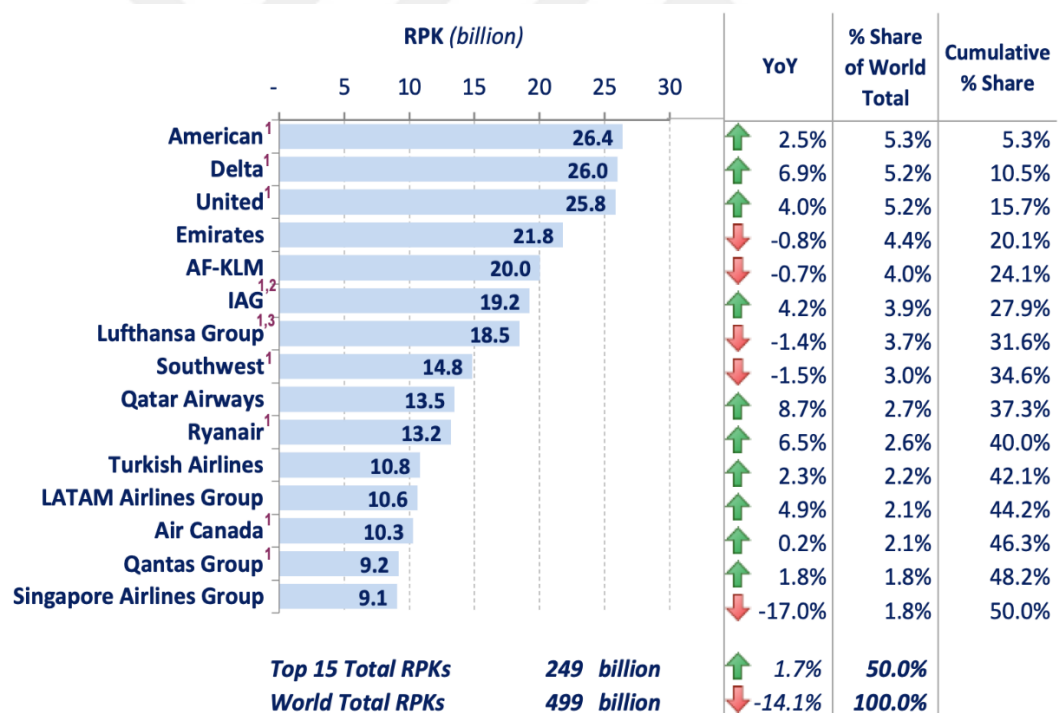


Figure 5.8. Top 15 Airline Groups Ranked by RPK, February 2020

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 5.9. 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.

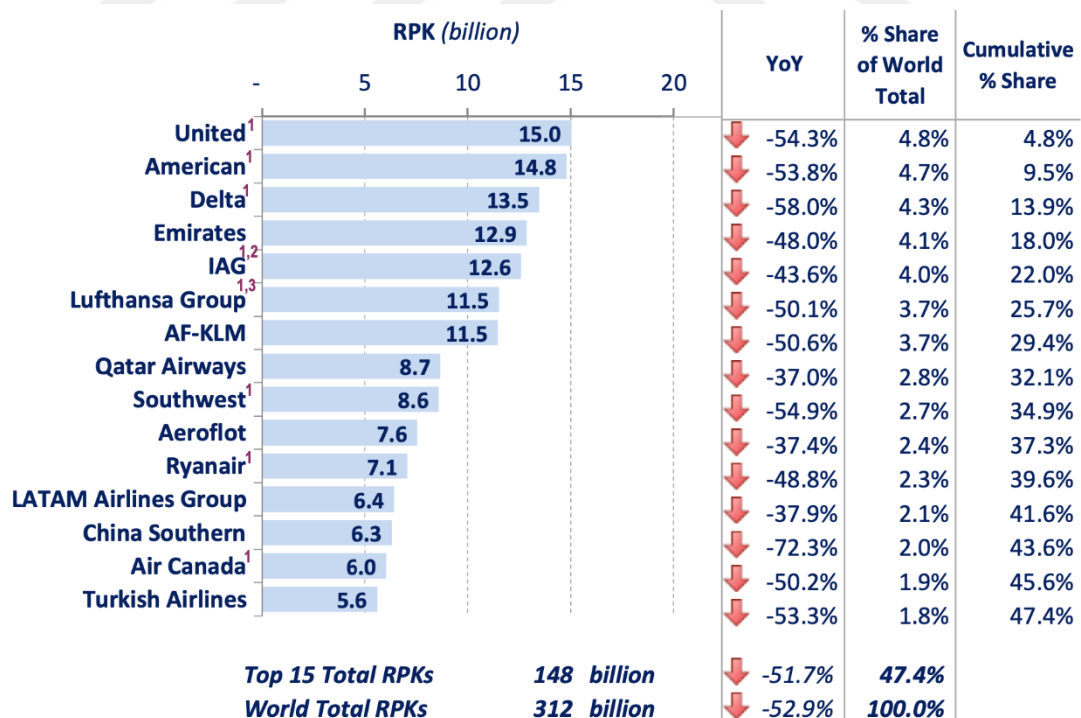


Figure 5.10. Top 15 Airline Groups Ranked by RPK, March 2020

Source: ICAO

5.5. 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 5.11. The SWOT Analysis of Qatar Airways

SWOT - Qatar Airways	
Strengths	Weaknesses
<ul style="list-style-type: none"> ○ Strong brand reputation and service quality ○ Geographical location ○ International hub ○ Government support ○ Passenger and cargo destination network 	<ul style="list-style-type: none"> ○ Low local population ○ Dependency on international markets ○ No availability of domestic flights
Opportunities	Threats
<ul style="list-style-type: none"> ○ 2022 FIFA World Cup ○ Being a major international hub ○ Becoming a financial center 	<ul style="list-style-type: none"> ○ 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 as Emirates, Etihad Airways of UAE. Since UAE is also recognized as an international hub, the competition between Qatar and UAE is quite tough.

CHAPTER VI

CONCLUSION

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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