Proceedings of ICFTBA 2024 Workshop: Human Capital Management in a Post-Covid World: Emerging Trends and Workplace Strategies
DOI: 10.54254/2754-1169/142/2024.LD18995

Research on the Strategies of Airlines During COVID-19

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Abstract: The epidemic has hit the global economy hard, and many industries have been hit hard during COVID-19, with the impact on the aviation industry being extremely severe. However, at the same time, the epidemic brought opportunities and challenges. This paper will combine aspects of the impact of the outbreak on the airline industry and the company's strategy, which elaborates on Southwest Airlines and Delta Air Lines's coping strategies. This paper utilizes previous scholars' discussions on the impact of the epidemic on the airline industry and the annual reports of the two companies. The paper discusses how these two great airlines could return to profitability after the devastating impact of the epidemic and what measures were implemented during this time. The main points include the following, improved health surveillance systems, maximized expenditure cuts, and incentivized customer spending strategies. The paper also explores mention the reasons for the decline in oil prices during the epidemic and Southwest's use of hedging strategies against oil price fluctuations.

Keywords: COVID-19, Fuel Price, Hedging, Aviation Industry.

1. Introduction

Airlines have seen their revenues plummet since the start of COVID-19. In 2020, the worldwide COVID-19 epidemic suddenly swept the world and had a serious impact on health. Consequently, at that time, to control the spread of the virus, countries around the world generally took measures to seal off countries, cities, and neighborhoods; thereby impeding the frequent commutation of people worldwide. As a result, the aviation industry was severely affected, especially civil aviation. Compared with other industries, the contribution of the civil aviation industry to the global economy is about 4.3 times more than that of other industries [1]. Not only that, it also builds bridges for cultural exchanges and trade among countries which shows the importance of the civil aviation industry to the global economy. Because the global economy is in a downward spiral, many airlines have taken action on layoffs and salary reductions, with others facing a closure. The management staff of each airline has implemented many programs to help their companies survive these tough times. Fortunately, the civil aviation industry has slowly recovered after COVID-19. Airline companies have adopted reasonable and effective measures to make up for the losses incurred during the epidemic. However, until now, global air passenger traffic has not yet recovered to the level before the epidemic.

COVID-19 has most directly affected the following aspects of the aviation industry, including reducing international aviation revenue, and passenger traffic, affecting ratings, reducing revenue,

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and booking, and affecting the overall market share of the aviation industry. The COVID-19 was a turning point for the aviation industry. 2020 is a year of opportunities and challenges for the aviation industry [1]. Melas and Melasova found among the various sectors, the aviation industry is one of the hardest hit by COVID-19. Specifically, a drop in the number of international travelers can lead to a sharp decrease in international tourism revenue. For example, airlines have seen passenger revenues drop by half in 2020 versus 2019 passenger revenues [2]. Furthermore, Garrow and Lurkin noticed that COVID-19 has led to a fundamental change in airline bookings, with a sharp drop in bookings and a decline in business travel [1]. At the same time, Melas and Melasova discovered that the pandemic has also affected airline revenues, which have plummeted by roughly $220 billion, and projected losses have increased substantially. In addition, the airport industry has also been affected, with total airport revenues decreasing by $77 billion by 2020 [2]. Dube et al. found that COVID-19 has had a significant negative impact on the average market share of airlines globally, mainly due to important factors such as the prolonged embargo controls. As a result, many airlines suffered severe losses, and they were trying to cut back on expenses to get through this period [3]. The above evidence proves that the impact of COVID-19 on the aviation industry is significant.

In response to this incredibly trying time for the aviation industry, airlines are downsizing, securing cash flow. For instance, the airlines have practiced the strategy of discounting to have an influx of cash, and also other strategies. COVID-19 has forced changes in routes, as well as considering aspects such as the profitability of these routes [4]. Management needs to keep a close eye on the cash position. The working group should have to focus on such things as the urgency and importance of each task, and efficient execution of the program to maintain liquidity. Moreover, cost control and reducing expenses also become the focus [4]. Wenzel et al. describe what airlines should be able to do during an outbreak to get through the period. Short-term austerity measures, such as cost-cutting, are essential for airlines. Additionally, the mid-term persistence in difficult situations is also what a company needs to be able to do. Furthermore, crisis creates conditions for innovation so continuous airline innovation is also essential in the long run [5]. Airlines have taken a more meticulous approach to ensuring hygiene and are also supported financially by the government, and they also focus on passenger satisfaction while maintaining hygiene standards [6,7].

As mentioned above, previous research focuses on the impact of COVID-19 on the aviation industry. However, the strategies of the airline company have been neglected. Therefore, this article will examine the impact of COVID-19 on the aviation industry and the strategies of airlines in the face of the epidemic.

2. Condition of Development During COVID-19 in 2020

2.1. Market Lost

The epidemic has dealt a huge blow to the aviation industry, the market size of the aviation industry has dropped drastically which includes global passenger traffic, revenue, number of flights, etc.

The aviation market size has shrunk dramatically. According to Statista, the market size dropped sharply from $939.5bn in 2019 to $452.2bn in 2020. It only slowly recovered since 2021; however, until 2023, the market size of the aviation industry will still not be able to go back to the size of the pre-COVID-19 size. Moreover, not only in passenger traffic on international routes but also in revenue for the entire aviation industry. The aviation industry became more indebted during COVID-19. According to a report by the International Civil Aviation Organization (ICAO), in 2020 international scheduled passenger traffic in all regions will decline by more than 50 percent, with an annual decline in passenger traffic of up to 65.5 percent. Policies implemented by Governments during the epidemic and a sense of self-protection led to a significant reduction in passenger traffic

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on both international and domestic flights. Particularly during the worst epidemic, many flights were grounded, and airlines reduced the number of routes and flights.

In addition, many countries have suffered serious economic losses due to the impact of COVID-19 on the aviation industry. Regarding the market structure of the aviation industry, geographically, the focus is on the birthplace of the epidemic, China. According to the ICAO, China's aviation industry is ranked fourth in the world with a loss of 7.27% comparing 2019 and 2020. In comparison to the other five states, aviation is one of the largest industries in Europe, and the total losses in Europe are the largest at a whopping $7,286.9 million. Manifestly, the aviation industry in Europe has been hit harshly. Not only do they have to pay for the maintenance of grounded airplanes, but they also must deal with personnel problems, such as many employees being forced to reduce their working hours or being laid off. In terms of the demand condition according to the global airline traffic.

Because of COVID-19, the global fuel industry's production fell, leading to a decrease in demand for fuel; thus, the price of oil fell during the epidemic, dropping to $41.96 a barrel. Fuel has an indispensable position as a particularly important part of the aviation industry. This is the lowest price since the oil crisis. During the epidemic, the decrease in passenger traffic due to the reduction in demand mentioned above also affected fuel prices. Because the airlines had fewer orders, this caused their demand for fuel to drop as well. However, some fuel suppliers did not anticipate this and their supply still increased. As demand fell and supply continued to increase, this ultimately led to a sudden plunge in fuel prices by 2020.

2.2. Flight Status

COVID-19 is certainly a huge challenge for airline companies, as shown in Table 1.

Table 1: Financial Performance of four airline companies [8-11]

Company	2019		2020	2021			2022	
(in million, dollars)	Operating Expenses	Operating Revenue	Operating Expenses	Operating Revenue	Operating Expenses	Operating Revenue	Operating Expenses	Operating Revenue
Southwest Airlines	19,471	22,428	12,864	9,048	14,069	15,790	22,797	23,814
Delta Air Lines	40,389	47,007	29,564	17,095	28,013	29,899	46,921	50,582
United Airlines	38,958	43,259	21,714	15,355	25,656	24,634	42,618	44,955
American Airlines	42,703	45,768	27,758	17,337	30,941	29,882	47,364	48,971

This article will detail the following companies, Southwest Airlines and Delta Air Lines. Southwest Airlines with its low prices and point-to-point direct flights business philosophy. It was consistently profitable from 1973 through 2019 but posted its first loss in 47 years at COVID-19, 2020. According to the Southwest Airlines 2020 annual report, Southwest Airlines has seen a drastic drop in both passenger and cargo traffic due to the outbreak, which has led to a significant drop in their revenue, down over fifty percent and over five percent, respectively regarding operating costs. The decrease in passenger traffic was much more severe than the decrease in cargo traffic due to strict government controls. Southwest Airlines' operating expenses decreased during the pandemic while bringing about inefficient operations due to the reduced number of flights. Moreover, fuel expenses decreased due to lower global fuel prices.

Delta Air Lines delivers customers directly everywhere, pursues innovation, and is a strong competitor in the airline market. When the market is good, Delta is arguably the most profitable

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airline in the United States. But it has also been hit hard by the outbreak, with Delta noting that COVID-19 has had a serious negative impact on the company's operating results and financial position. Delta's international passenger revenue declined by 76%, and domestic passenger volume revenue declined by 42%. Also, operating revenues were down 64 percent. All these declines were above Southwest's. Delta's operating expenses decreased by 27 percent, with a significant reduction in fuel expenses. Overall, the COVID-19 has hit the aviation industry hard. There have been huge changes in the company's revenues and expenses.

3. Strategies and Characteristics

3.1. Difficulties

Many U.S. airlines have been downgraded (IDR) by rating agencies, which is certainly a huge blow and threat to these airlines [3]. Southwest Airlines is concerned about further downgrades in the company's credit rating in the future, as this could result in higher financing costs for the company or restrictive covenants, which would limit the company's business operations to a greater extent. This has exacerbated the debt burden of some airlines. Because of COVID-19, Delta Air Lines has some new debt, but the lack of liquidity has had a significant negative impact on its financial situation. In response to this situation, governments have begun to reach out to help airlines, since the aviation industry contributes a great deal to the market and to the country's economy. Unfortunately, the government is short on aid and many airlines still have a lot of debt that must pay off. To solve this problem, airlines implemented strategies to incentivize people to travel. For example, ensuring the sanitary conditions of seats, small table boards, etc., and testing for abnormal temperatures [3]. Delta has taken to reducing its flight capacity to save money, as well as keeping its cabins as sanitary as possible, and has also lowered its fares. Despite this, Delta has experienced a large number of ticket refunds. Therefore, the airlines need to generate revenue to make up for the problem. Southwest's management is concerned with reducing costs, financing, and other liquidity offerings as COVID-19 leads to bookings and passenger demand, thus significantly impacting the company's operating income and cash flow. Delta Air Lines notes that COVID-19 has had a serious negative impact on the company's operating results and financial pretensions. Southwest Airlines' financial statements for the year 2020 stated that as their operational capacity was hit by COVID-19, they introduced a voluntary separation program to maintain an appropriately sized workforce. Strategies such as pay cuts were also implemented. Delta Air Lines took a 50 percent pay cut for its executives and a 100 percent pay cut for its chief executive officer to reduce expenses. This resulted in a reduction of approximately $2.5 billion in planned expenditures for the year.

3.2. Health Management: Southwest Airlines & Delta Air Lines

During special times such as COVID-19, airplanes need to maintain good hygiene as a means of public transportation. Not only can it provide passengers with a sense of security and assurance, but it also demonstrates the brand's sense of responsibility in one way. Southwest Airlines implements strict hygiene management and consumption measures, including controlling the physical distance before passengers and strict sterilization. The intention is to reassure passengers and enhance their sense of simplicity and security. Delta Air Lines was concerned about the health of its employees and passengers during the outbreak which has developed its own set of hygiene testing standards to better and more effectively test the health of its passengers. Ensuring the hygiene and safety of flights. To ensure their health, many strategies were implemented to ensure safety and hygiene. For example, keeping small table boards in a sanitary condition and regular alcohol disinfection.

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3.3. Curtail Expenses: Delta Air Lines

Because of low revenues due to COVID-19, airline companies need to maximize cut expenses for them to get through the period. Delta Air Lines, in response to declining revenues, implemented a strategy of cutting expenses. All discretionary spending was eliminated. For example, the postponement of the expenditure on modifying the airplanes. Implemented voluntary separation programs and reduced employee salaries, especially for managers, which fell sharply. Delta Air Lines, in response to the low revenue, hoped that it could curb unnecessary expenditures to get through the period. Delta Air Lines realizes that in the short term, due to the epidemic. There is a great possibility that video online meetings will become a big trend. However, this could have a significant negative impact on financials and results of operations. Delta is removing some of its mainline and regional jets from active service by 2020 to reduce its financial burden, as well as grounding or even permanently grounding some of its aircraft.

3.4. Marketing Strategies: Southwest Airlines

Because of low passenger traffic due to COVID-19, Southwest Airlines has adopted the strategy of using points for airfare to incentivize consumers to purchase tickets. According to the 2020 annual report, some customers are given designated points and can redeem them for airfare. Such a strategy can strengthen Southwest's competitiveness in the market and attract more consumers to choose this airline. Moreover, Southwest Airlines also provides passengers with the convenience of changing or canceling their orders. Also, it enhanced its digital services in 2020 and gained revenue in this segment.

3.5. Fuel Price Hedging: Southwest Airlines

The financial derivatives used by Southwest Airlines are primarily a combination of instruments, including hedging, call options, call spreads, put spreads, and fixed-price swap agreements. Southwest Airlines has demonstrated that the company's operations are inherently dependent on oil, and it uses financial instruments to hedge its exposure to fluctuations in the price of oil. Although all previous hedging of this risk has helped Southwest Airlines stabilize the price of oil, in 2020, the price of oil plummeted and the hedging instruments used by the company incurred losses. As a result, Southwest Airlines adjusted its strategy, including adding short-term maturity extensions. As a result of these strategic adjustments and shifts, Southwest returned to profitability by 2021.

4. Inspiration and Development Prospects

In the face of sudden and extreme situations, airlines should make timely strategic adjustments to adapt to the changing market environment. COVID-19 has had a severe impact on the global economy, with the aviation industry being one of the hardest hits. The market share of the aviation industry plummeted. Almost all airlines experienced the most strenuous period during the epidemic, including low revenue, low passenger traffic, high debt, and rating downgrades. During a sensitive period, such as COVID-19, airplanes were the most dominant mode of public transportation, which were considered to be one of the modes of spreading the virus. As a result, passenger traffic on airplanes suffered a serious threat. As two highly competitive airline companies among many airlines in the United States, Southwest Airlines and Delta Air Lines which faced the crisis market situation, objectively analyzed and responded to it; also, made corresponding effective strategies to cope with these complicated problems. Eventually, these two airlines returned to profitability in 2021. The strategies of both companies were similar. First of all, they both value passenger satisfaction and in order to satisfy customers' needs. They constantly upgrade their systems in order to allow customers

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to operate conveniently and quickly, such as online quick adjustment of flights, and so on. At the same time, due to the characteristics of COVID-19 spread widely and quickly, resulting in a lot of people being afraid to travel. The two companies maximized the protection of passenger health and safety by establishing strict health monitoring standards. Second, faced with plummeting operating revenues, both companies adopted strategies to cut expenses. Eliminating all spending that can be postponed or is unnecessary and cutting salaries and other methods have greatly reduced operating costs. To a certain extent, operational efficiency has been improved. Among them, Southwest Airlines, as a business philosophy based on "low-cost operation", has outstanding performance in reducing operating expenses. This also demonstrates the benefits of low-cost operations in extreme situations.

However, there is a need for improvement in hedging the losses incurred when oil prices fluctuate. Fuel, being one of the most significant operating costs of an airline, has an impact on the company that cannot be underestimated. Therefore, fuel price is a concern for every airline and every airline uses financial extensions as the hedging tool to ensure that oil price fluctuations do not pose too much of a threat to their company. Even though the fuel price is on a continuous upward trend, there are still special requests that can cause the fuel price to fall which can cause the company to lose money on its hedging instruments. COVID-19 caused a drop in demand for fuel, but not in supply, which ultimately caused fuel prices to plummet. Southwest Airlines has experienced periods of skyrocketing oil prices, all of which could be smoothed out with existing strategies and portfolios to keep oil prices at a reasonable full. However, Southwest was caught off guard by the unexpected situation and the hedging tools used resulted in some losses. Therefore, airlines need to use appropriate hedging strategies to ensure that they do not incur large losses in the face of extraordinary movements.

Exceptional circumstances, including COVID-19, are times of challenge and opportunity for all industries. It is a time when companies can identify shortcomings in their operations and make appropriate adjustments. It is also a time to gain experience that can be applied to similar scenarios in the future.

5. Conclusion

Overall, the impact of COVID-19 on the aviation industry has been extremely severe and has threatened the industry in several ways, with airlines being hit hard by the low operating revenue associated with the severe downturn in passenger traffic. Therefore, airlines need to adjust and anticipate the changes in the market environment to improve their competitiveness and position. Southwest Airlines and Delta Air Lines, mentioned in this paper, faced unpredictable and extreme conditions, COVID-19, and stabilized through this period. Therefore, managed to be profitable in the next year. The strategies of the two companies are much the same, but they are valuable to learn from, such as their strategies and be prepared for similar situations in the future. Moreover, the price of oil is extremely important to the aviation industry, and because it is unstable, predicting the future direction of oil is also extremely important. It is also crucial to predict the future direction of oil, such as political factors, environmental changes, etc. may affect the fluctuation of oil prices. Therefore, airlines need to be accurate in the selection, combination, and use of financial instruments to avoid unnecessary losses caused by the use of instruments to hedge against oil price fluctuations.

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