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STRATEGIC RESPONSES FOR THE AIRLINE BUSINESS DURING THE COVID-19 PANDEMIC: A REVIEW OF PAST CRISES

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Abstract

This research article proposes strategic responses for airline businesses during the COVID-19 pandemic. Using a documentary method to review published academic journals and grey literature available in the online public domain, documents related to strategic responses from past crises in the airline industry were gathered and examined using content analysis. Well-recognized management consultant publications, and interview clips from airline management were also reviewed to extract lessons learned for formulating strategic responses to the COVID-19 crisis. This study found that government support, technological adoption, passenger-based collaboration, and airline management strategies are keywords underlying airline businesses' strategic responses to withstand COVID-19. Managerial implications for airline management and industry stakeholders are presented at the end of the article.

Keywords: Strategic response, Crisis management, Airline business, COVID-19, Lessons learned

1. INTRODUCTION

The COVID-19 pandemic has caused several important changes in human behavior, consumer behavior, and service. The airline industry has experienced meteoric and severe impacts in light of the pandemic (Budd et al., 2020; McKinsey & Company, 2022; Ou & Wong, 2021; Sun et al., 2021). The outbreak of the virus affected every aspect of the global aviation industry. Impacts included flight suspension, flight path restrictions, airline cancellations, cost reduction, and reductions in the number of airline employees, all of which have severely impacted the airline business (Deveci et al., 2022; Fontanet-Pérez et al., 2022; Kim & Sohn, 2022; Migdadi, 2022; Pascual & Cain, 2022; Wang et al., 2023). For example, 18 European-registered airlines, such as LOT Polish Airlines, CSA Czech Airlines, and SWISS, were required to stop servicing passengers altogether during the pandemic (Budd et al., 2020).

The novel coronavirus outbreak, or COVID-19 pandemic, which emerged in Wuhan, China, is of great global concern (Gössling, 2020; Sun et al., 2021). In response to the intensification of the outbreak, governments worldwide began expeditious imposition of travel bans to prevent the spread

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of the disease and protect national health security, including implementing measures to shut down cities or even the entire country (Abate et al., 2020; Deveci et al., 2022; Suk & Kim, 2021; Zhang & Zhang, 2021). These response measures resulted in the aviation industry, particularly global commercial airlines, suspending approximately 60% of their flights, placing the industry in a dire situation (Albers & Rundshagen, 2020). In this regard, the industry experienced far-reaching changes, such as flight cancellations, route restrictions, airline bankruptcy, cost reductions, reductions in the number of employees, and passenger travel restrictions (Dube et al., 2021; Fontanet-Pérez et al., 2022; Kim & Sohn, 2022; Vinod, 2022).

Adapting to this severe crisis to ensure business survival requires the airline industry to ensure business survival by exploring and employing strategic responses. The airline industry has experienced several past crises (Figure 1), such as the Asian financial crisis, the 9/11 attacks, the outbreak of severe acute respiratory syndrome (SARS), and the global recession. Therefore, COVID-19 is not the first crisis the airline business has faced (Dube et al., 2001; Cento, 2008; International Civil Aviation Organization, 2020). Therefore, studying lessons from past crises seems to be an established solution for devising strategies and responses to adapt to such an unexpected eventuality as the COVID-19 pandemic.

Nevertheless, studies related to reviewing strategic responses for the airline business from past crises are fragmented. Additionally, none of these studies attempt to comprehensively review responses from past crises and propose lessons learned to guide the industry's response to the current pandemic. Consequently, this research article extracts lessons from past crises to propose strategic responses that airline businesses should take in light of the COVID-19 pandemic. Using a documentary research approach, strategic responses suggested by published academic articles and grey literature available in the public domain, such as well-recognized management consultant publications, and interview clips from airline management, were gathered to propose strategic responses for airlines during COVID-19.

This research paper is organized as follows: The next section provides an overview of past crises in the airline industry, namely, the Asian crisis, the 9/11 attacks, the SARS outbreak, and the global recession. Section 3 describes the research methodology, including data collection, data analysis,

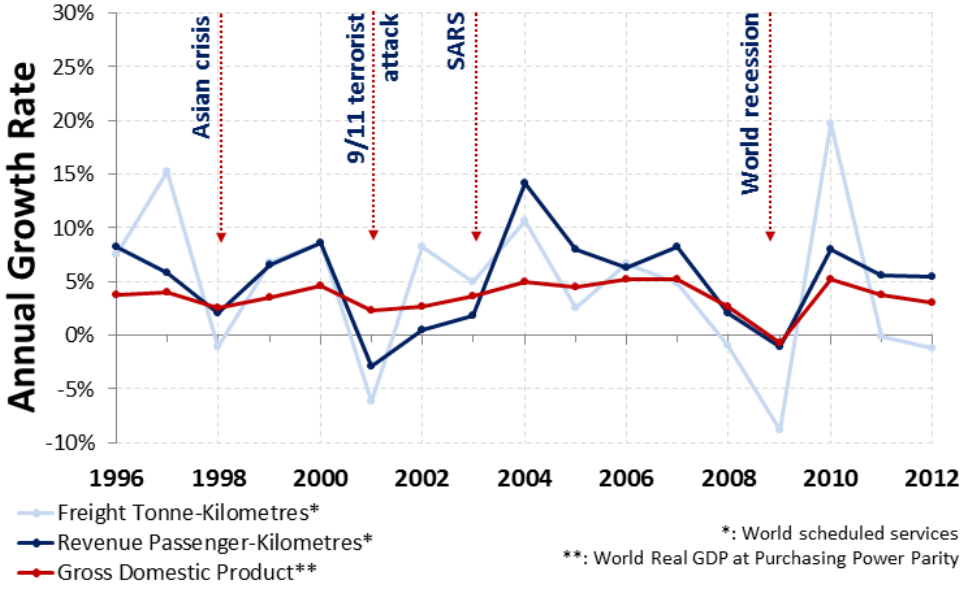

Figure 1 Annual Growth of Global Airlines During Crises
Source: International Civil Aviation Organization (2020)

and secondary data sources. Section 4 shows the results and presents a discussion derived from documentary evidence. Finally, Section 5 presents the conclusion of the study and its managerial implications for the airline industry.

2. AN OVERVIEW OF PAST CRISES IN THE AIRLINE INDUSTRY

2.1 Asian Financial Crisis

After deregulation in Southeast Asia, which was the central hub for aviation, the airline sector enjoyed an expansion of demand for international air transportation (Chutiphongdech, 2019). However, the economic crisis of July 1997 caused regional airline businesses to face bankruptcy and closure due to the ensuing economic stagflation (Sadi & Henderson, 2000). This currency crisis started with a sequence of events in Thailand in mid-1997 and spread rapidly throughout the region. Many businesses, especially those in the airline industry, were affected by the impact of the Asian financial crisis when the economies of many countries in the region were adversely affected by currencies with reduced value. When regional currencies fell sharply in value, disposable incomes subsequently contracted (Chin et al., 1999; Rimmer, 2000).

The Asian financial crisis caused decreased passenger traffic from corporate and leisure travelers (Doganis, 2005). According to Singh & Yip (2000), the International Air Transport Association (IATA) reported that airline businesses, especially in Indonesia, Malaysia, the Philippines, and Thailand, were severely impacted by the regional crisis, which also affected the performance of other Asian airlines. Since the Asia Pacific airline industry contributed approximately 50% to the global aviation industry in 2010, such crises severely impacted global aviation performance (Chin et al., 1999; Rimmer, 2000; Sadi & Henderson, 2000; (Chin et al., 1999; Rimmer, 2000; Sadi & Henderson, 2000; Wang, 2013).

2.2 9/11 Terror Attacks

The airline industry was the main business affected by the 9/11 terrorist attacks. Following September 11, 2001, many airlines worldwide experienced a financial crisis (Ito & Lee, 2005; Nolan et al., 2004; Wang, 2013). The attacks made passengers fearful and depressed, directly affecting the reliability of air travel. The 9/11 tragedy impacted customer experience and passenger confidence in airline operations (Hunter & Lambert, 2016). Furthermore, since reliability in terms of safety is a determinant of the demand for air transport, it impacts the interests of tourists or people who wish to travel by air transport (Chuti-phongdech, 2019; O'Connor, 2001).

Besides its negative impact on passengers' psyches, the 9/11 terror attacks also had a huge negative impact on many airlines globally. All major airlines were impacted because of reduced trust and lower passenger volumes (Gillen & Lall, 2003). In addition, some airlines faced bankruptcy, especially in the US aviation industry, which was disproportionately affected (Blunk et al., 2006; Ito & Lee, 2005; Kim & Gu, 2004). The empirical analysis from Ito and Lee (2005) and Wang (2013) reported that the 9/11 terror attacks resulted in decreased demand for air transport of more than 30% for international airlines, while there was a demand shock of more than 90% in the case of the US airline industry.

2.3 SARS

Compared to other epidemics, the impact of the SARS epidemic on China in 2002 was revealed as having devastating effects on neighboring Southeast Asian countries and economies (Figure 2). This outbreak destabilized consumer confidence in airlines, which spread globally (Bowen & Laroe, 2006). Through international travel, the crisis resulted in a 33% reduction in global passenger traffic. IATA (2020) reported that SARS had been a serious epidemic impacting traffic volume during the period. In May 2003, SARS reached the height of its outbreak, with Asia-

Pacific airlines' monthly revenues per kilometer (RPKs) at 35% lower than their pre-crisis levels due to the loss of confidence and fears of global spread impacting both business and leisure passengers. It was expected that the epidemic would have exhausted $61 billion of the aviation industry's reserves. The damage was then doubled, to $120 billion, impacting the industry's total global debt of $ 550 billion (Bowen & Laroe, 2006; International Air Transport Association, 2020).

2.4 World Recession

After the previous crises, the airline industry faced a global recession, which was an immediate outcome of the attacks (Nolan et al., 2004). The impact of the world recession drove industry revenues down to US$501 billion from US$536 billion, mainly due to the impact on North American airlines and expected massive industry losses (Pearce, 2012). The highest record in 2008 was US$3.9 billion, passenger traffic dropped by 5%, while the last drop in 2001 was 6%. Oil prices in 2009 were US$60 per barrel, which is US$3.9 billion lower than in 2008. It also affected other regions; for example, the losses recorded by the Asia Pacific region more than doubled from US$500 million in 2008 to US$1 billion in 2009. Losses for European carriers increased tenfold to US$1 billion, putting the leading European economy in recession (Clark, 2016; Doganis, 2005).

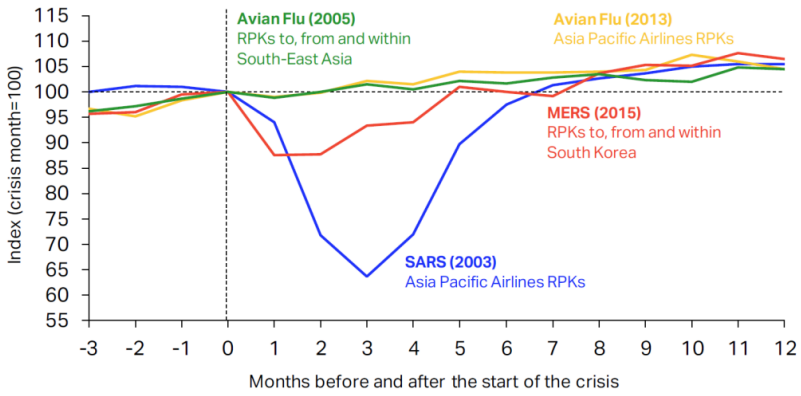

Figure 2 The impact of SARS on Asia Pacific airlines
Source: International Civil Aviation Organization (2020)

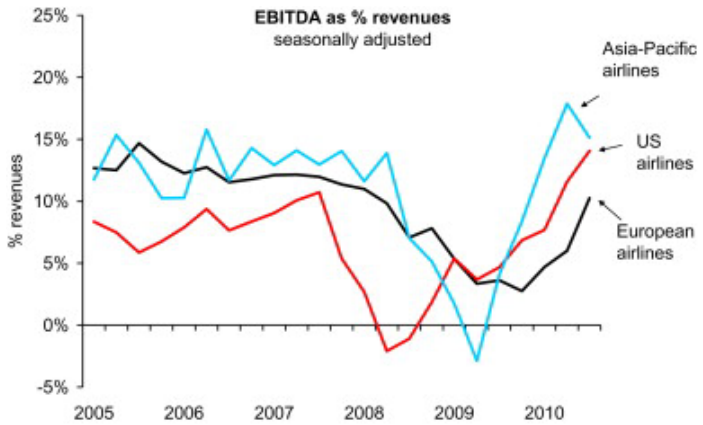

Figure 3 Worldwide airline performance during the global recession
Source: Pearce (2012)

Middle Eastern airlines doubled their losses to $200 million, regional growth slowed significantly in the economic crisis, and African airlines lost $300 million. The severity of the economic crisis overshadowed profits. According to Pearce (2012), IATA reported that 230 airlines, constituting 93% of international air traffic, announced that the global flight industry recorded losses of US$5.2 billion, leaving airlines struggling to survive the global recession. Despite the improvement in oil prices, the average price remained at US$113 per barrel or US$40. As a result, airlines were forced to cease their traditional mode of operations to cut their non-fuel costs by 18% (Clark, 2016; Franke & John, 2011; Pearce, 2012).

3. RESEARCH METHOD

This study used a documentary research approach to answer the research question as such an approach can help in systematically obtaining sources of information related to past historical evidence. Documentary research is qualitative research that applies grey literature, utilizing secondary sources of various forms apart from academic journal articles (Bowen, 2009; McCulloch, 2004; Mogalakwe, 2006; Tillett & Newbold, 2006). Grey literature refers to unpublished and non-commercial documents created outside certain publications, such as reports, government documents, videos, and theses (Pappas & Williams, 2011). Furthermore, although grey literature does not go through the peer-review process, the multiple embedded cases of data triangulation and the data saturation process increase the validity and reliability of the data prior to data analysis (Carter, 2014; Decrop, 1999; Pappas & Williams, 2011; Saunders et al., 2018).

The secondary data used in this research included both published academic papers and grey literature available in the public domain. The academic papers were all indexed in Scopus, a database of reliable sources offering citation analysis tools and providing access to scientific journals (Chutiphongdech & Kampitak, 2022). Additionally, grey literature available in the public domain, such as well-recognized consultant company publications and interview clips from airline management, were gathered during the data analysis using content analysis. Content analysis is used as an analytical tool to process data. Regarding Harwood and Garry (2003), content analysis is a process used to analyze qualitative data, emphasizing the interpretation and understanding of data to groups by coding keywords and sub-keywords to analyze the results.

The research method (Table 1) and procedure (Figure 4) can be summarized as follows:

- Collect secondary data, including academic journal articles indexed in the Scopus database; well-recognized management-consultant publications, such as McKinsey, KPMG, Deloitte, and BCG; and interview clips from airline management available in the online public domain and relating to past crises, including the Asian financial crisis, the 9/11 attacks, the SARS epidemic, and the global recession.
- Analyze and transcribe the data using content analysis by categorizing keywords and sub-keywords from the collected information.
- Check the data saturation from the coded keywords to ensure the validity and reliability of the data, and then prepare the findings and discussion.

Table 1 Research Method

Research Methodology	Types of Data	Data Collection	Data Analysis
Qualitative methodology	Secondary data	1) Published academic articles 2) Consultant company publications 3) Interview clips from airline management	Content analysis

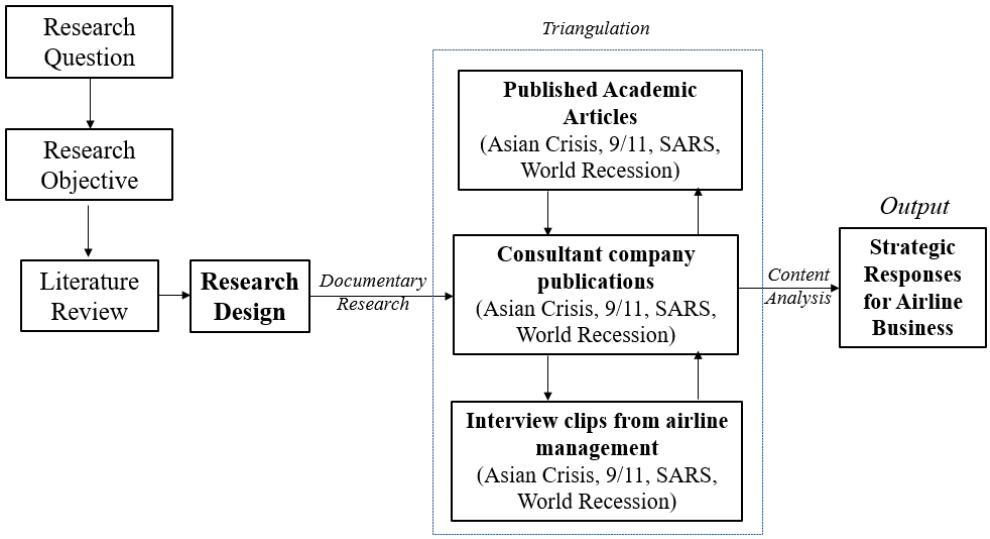

Figure 4 Research Procedure

4. STRATEGIC RESPONSES FOR THE AIRLINE BUSINESS DURING COVID-19

Using data triangulation, the documentary research shed light on four main keywords aligned with the data saturation principle. In this regard, government support, technological adoption, passenger collaboration, and airline management strategies, were the most common domains respectively found in the content analysis process.

4.1 Government Support

Governments can render support by providing bailouts for airlines to achieve more flexible mobility and prevent financial problems. This measure corresponds to what is suggested in recent publications on the strategic response for airlines during COVID-19 by Abate et al. (2020), Albers and Rundshagen (2020), Nhamo et al. (2020), and Zhang and Zhang (2021).

In addition to direct payments, fee waivers or deferrals, including tax exemptions, should be provided in some cases. Furthermore, the airlines should be developed, improved, and appropriately managed when they receive government funding, guided by government-backed treasury management in terms of economic recovery. For example, European governments support the airline industry via "EUROCONTROL," announced to cancel air traffic control fees of around 1.1 billion euros. Also, American airlines planned to apply for US$12 billion in US government subsidies, postpone capital expenditures for airport lounges and cut unnecessary expenses (Budd et al., 2021; Dube et al., 2021).

It has also been suggested that taxation should be exempted or reduced during crises, like the prevailing situation of COVID-19, and that the government should render assistance. Therefore, the concept of tax management by the government is very important for airlines to adapt effectively.

4.2 Technological Adoption

The COVID-19 pandemic accelerated the trend toward digital transformation in the airline industry. Technological support has been used to preserve passenger confidence in air transport during many past crises. Within the context of COVID-19, it can be used to improve user safety, ensure hygiene and restrict the spread of the pandemic; for example, using cleaning robots for contactless self-check-in and HEPA filters to control the spread of the epidemic. Some governments established national transport government agencies and used technology to make airports more secure after the 9/11 attacks (Hunter & Lambert, 2016).

This keyword aligned with what was

studied by Amankwah-Amoah et al. (2021) and Shiwakoti et al. (2022). They reported on the innovative measures taken during this recent pandemic in the global airline industry, such as disinfecting aircraft with ultraviolet light, touchless technologies at airports, innovative masks and gloves, and biometric check-in. Significant technological advancements can help reduce the impact of the pandemic by servicing consumers so that they can have more convenient, and secure experiences and reducing the cost of flight operations.

4.3 Passenger-based Collaboration

Passenger-based collaboration is crucial for airline protocol implementation during a crisis. During a crisis, passengers are asked to comply with many recommendations, which can sometimes prove challenging to them. For example, they may be required to show an identity document, evidence of COVID-19 testing or vaccination before travel, maintain a social distance onboard, or wear face masks during the flight. Moreover, airlines may limit passenger movement during the flight to meet their social distancing rules. Therefore, clearly explaining regulations to passengers to gain mutual understanding is sometimes necessary for smooth flight operations and is also a strategy that fosters customer satisfaction. Passenger-based collaboration as a strategic response is supported by many recent publications, such as Monmousseau et al. (2020), Zhang et al. (2021), Zhang & Zhang (2021), and Wang et al. (2023).

Collaboration from all passengers can assist in the survival of the airline industry, and it can also benefit passengers. Furthermore, it can help prevent the continued spread of the novel coronavirus and keep passengers and airlines safe during the pandemic.

4.4 Airline Management Strategy

Airline strategy has played a critical role in business survival in past crises, and the lessons learned from these crises revealed that revenue streaming from other businesses, such as additional cargo operations and suspending conventional commercial flights, are promising strategies. This is similar to recommendations from Albers and Rundshagen (2020), Budd et al. (2020), Deveci et al. (2022), Gössling (2020), Suk and Kim (2021), and Scheiwiller and Zizka (2021) regarding COVID-19 related studies on airline business operations.

Regarding cargo operations, from the beginning of the pandemic, few airlines started new cargo routes transporting commodities and pharmaceuticals. Currently, most airlines operate only cargo routes and are increasing these routes because it is the safest option. Airlines such as Lufthansa have supplied cargo options to retain their flying status by continuing to fly international routes, excluding China (Hätty & Hollmeier, 2003). While airlines had to respond to the crisis in terms of flight operations, most airlines chose to suspend flights. Notably, scheduled international flights were suspended in some countries. For example, Qantas Group suspended approximately 150 aircraft, while flight schedules were reduced in other cases. Due to decreased passenger numbers, it was necessary to cancel previously scheduled flights in order to cut fuel costs and other expenses. For example, Air France suspended all A380 flights for two months (Budd et al., 2021).

Apart from business operation strategies, some attention was paid to passenger benefits. Due to flight suspensions, extensions of the expiration dates of reward points were applied. In addition, airlines provided customer cards offering reward redemption incentives at lower points. Therefore, loyalty programs have become an increasingly important financial and marketing asset for airlines. These findings regarding past crises align with Pascual and Cain's (2022) findings, which reported that loyalty programs were a key element in the COVID-19 response.

Another sub-keyword derived from the analysis was "airline personnel strategy." Some mitigating measures related to reducing employment were implemented as a quick-win strategy. Considering past crises, airlines

were required to adapt to these situations to cut unnecessary costs by reducing salaries and staff schedules to reduce work hours. Additionally, they offered their employees voluntary leave to reduce their working hours and remuneration by up to 25%–50% lower than normal. Airlines also offered 90 days of vacation for employees and allowed more employees to work from home. These response measures correspond to studies by Albers and Rundshagen (2020), Budd et al. (2020), and Sobieralski (2020).

5. CONCLUSION AND MANAGERIAL IMPLICATIONS

The COVID-19 pandemic is changing the airline business landscape. Notably, 60% of the world's commercial airlines have been grounded. In addition, each airline executes different strategies in response to government policies aiming to prevent the spread of the pandemic, such as lockdowns. Such consequences incur massive financial losses for airlines, shocking the industry. However, COVID-19 is not the first crisis faced by the airline industry. In the past, the airline business has been disrupted by natural and human-induced crises, such as the Asian financial crisis, the SARS epidemic, the 9/11 terror attacks, and the global recession. Notwithstanding the diverse crises that have impacted the airline business, no recent study has extracted lessons learned to propose strategic responses to the current COVID-19 crisis.

This study seeks to answer the research question and fill the research gap in the literature by using a documentary research approach to collect strategic responses from past crises. Academic journals, well-recognized management consultant publications, and interview clips from airline management available in the online public domain, were analyzed to draw lessons learned for formulating strategic responses to the COVID-19 situation. After the content analysis process, it was found that government support, technological adoption, passenger-based collaboration, and airline management strategies, were the most common themes in the dataset.

It is implied that government support assists airlines in financially surviving the COVID-19 pandemic. The airline business has been maintained in past responses in times of need through seeking governmental support, including in policies related to bailouts, fee waivers, tax exemptions, and deferrals. Airlines should also take advantage of technological advancements that help them to control the cost of flight operations and assist passengers. Before establishing stringent control and inspection measures, airlines should arrange clear guidelines that seek passenger-based collaboration since these measures impact customer satisfaction. Moreover, airline management should consider strategies that cover additional revenue streaming from non-commercial flight operations, such as the cargo business. Lastly, airlines should pay attention to remaining marketing relationship strategies to retain passengers, such as frequent flyer programs. Additionally, personnel-related strategies should be considered a quick win for cost reduction and maintaining corporate cash flow.

The limitations of the study should be addressed. Evidently, strategic responses for the airline business during COVID-19, extracted from grey literature, are lessons learned from past crises. However, some may not apply to the current crisis, especially those pertaining to specific matters. Therefore, further studies should be conducted to carefully observe and specify each type of management problem during each crisis. Moreover, conducting studies related to gaining insight into recent information from airline expert panels whose airline businesses survived the crisis would benefit the industry.

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REFERENCES

Abate, M., Christidis, P., & Purwanto, A. J. (2020). Government support to airlines in the aftermath of the COVID-19 pandemic. *Journal of Air Transport Management, 89*, 101931.

Albers, S., & Rundshagen, V. (2020). European airlines′ strategic responses to the COVID-19 pandemic (January-May, 2020). *Journal of Air Transport Management, 87*, 1-7. doi:10.1016/j.jairtraman.2020.101863

Amankwah-Amoah, J., Khan, Z., & Osabutey, E. L. (2021). COVID-19 and business renewal: Lessons and insights from the global airline industry. *International Business Review, 30*(3), 101802.

BCG. (2020). The post-COVID-19 flight plan for airlines. USA: Boston Consulting Group.

Blunk, S. S., Clark, D., & McGibany, J. M. (2006). Evaluating the long-run impacts of the 9/11 terrorist attacks on US domestic airline travel. *Applied Economics, 38*(4), 363-370. doi:10.1080/00036840500367930

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27-40.

Bowen, J., & Laroe, C. (2006). Airline networks and the international diffusion of Severe Acute Respiratory Syndrome (SARS). *The Geographical Journal, 172*(2), 130-144.

Budd, L., Ison, S., & Adrienne, N. (2020). European airline response to the COVID-19 pandemic–Contraction, consolidation and future considerations for airline business and management. *Research in Transportation Business & Management, 37*, 100578.

Carter, N. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum, 41*(5), 545-547.

Cento, A. (2008). *The airline industry: Challenges in the 21st century*. Italy: Springer Science & Business Media.

Chin, A., Hooper, P., & Oum, T. H. (1999). The impacts of the Asian Economic Crises on Asian Airlines: Short-run responses and long-run effects. *Journal of Air Transport Management, 5*(2), 87-96. doi:10.1016/S0969-6997(99)00003-4

Chutiphongdech, T. (2019). Airline economics: An essay on international airline alliances. *Thailand and the World Economy, 37*(2), 78-95.

Chutiphongdech, T., & Kampitak, T. (2022). A systematic review of the key success factors of sports event management: A resource-based view approach. *Annals of Applied Sport Science, 10*(4), 1-10. doi:10.52547/aassjournal.1100

Clark, P. (2016). *Stormy skies: AIrlines in crisis*. London: Routledge.

Decrop, A. (1999). Triangulation in qualitative tourism research. *Tourism Management, 20*(1), 157-161.

Deloitte. (2020). COVID-19: Aviation's recovery flight plan - Stronger ecosystem collaboration needed. Canada: Deloitte Design Studio.

Deveci, M., Çiftçi, M. E., Akyurt, İ. Z., & Gonzalez, E. D. R. S. (2022). Impact of COVID-19 pandemic on the Turkish civil aviation industry. *Sustainable Operations and Computers, 3*, 93-102. doi:10.1016/j.susoc.2021.11.002

Doganis, R. (2005). *Airline business in the 21st century*. UK: Routledge.

Dube, K., Nhamo, G., & Chikodzi, D. (2021). COVID-19 pandemic and prospects for recovery of the global aviation industry. *Journal of Air Transport Management, 92*, 102022.

Fontanet-Pérez, P., Vázquez, X. H., & Carou, D. (2022). The impact of the COVID-19 crisis on the US airline market: Are current business models equipped for upcoming changes in the air transport

sector? *Case Studies on Transport Policy, 10*(1), 647-656. doi:10.1016/j.cstp.2022.01.025

Franke, M., & John, F. (2011). What comes next after recession?–Airline industry scenarios and potential end games. *Journal of Air Transport Management, 17*(1), 19-26.

Gillen, D., & Lall, A. (2003). International transmission of shocks in the airline industry. *Journal of Air Transport Management, 9*(1), 37-49.

Gössling, S. (2020). Risks, resilience, and pathways to sustainable aviation: A COVID-19 perspective. *Journal of Air Transport Management, 89*, 101933.

Harwood, T. G., & Garry, T. (2003). An overview of content analysis. *The Marketing Review, 3*(4), 479-498.

Hätty, H., & Hollmeier, S. (2003). Airline strategy in the 2001/2002 crisis—the Lufthansa example. *Journal of Air Transport Management, 9*(1), 51-55.

Hunter, J. A., & Lambert, J. R. (2016). Do we feel safer today? The impact of smiling customer service on airline safety perception post 9–11. *Journal of Transportation Security, 9*(1-2), 35-56.

International Air Transport Association. (2020). *What can we learn from past pandemic episodes?* Retrieved from https://www.iata.org/en/iata-repository /publications/economic-reports/what-can-we-learn-from-past-pandemic-episodes/

International Civil Aviation Organization. (2020). *Facts and figures: World aviation and the world economy*. Retrieved from https://www.icao.int/sustainability/Pages/Facts-Figures_WorldEconomyData.aspx

Ito, H., & Lee, D. (2005). Assessing the impact of the September 11 terrorist attacks on U.S. airline demand. *Journal of Economics and Business, 57*(1), 75-95. doi:10.1016/j.jeconbus.2004.06.003

Kim, H., & Gu, Z. (2004). Impact of the 9/11 terrorist attacks on the return and risk of airline stocks. *Tourism and Hospitality Research, 5*(2), 150-163.

Kim, M., & Sohn, J. (2022). Passenger, airline, and policy responses to the COVID-19 crisis: The case of South Korea. *Journal of Air Transport Management, 98*, 102144.

KPMG. (2020). Airlines: Financial reporting implications of COVID- 19. Singapore: KPMGInternational Cooperative.

McCulloch, G. (2004). *Documentary research: In education, history and the social sciences*. NY: Routledge.

Mckincey & Company. (2022). *The six secrets of profitable airlines*. Boston: McKinsey Global Publishing.

Migdadi, Y. K. A.-A. (2022). Airline effective operations strategy during COVID-19 pandemic: Across regional worldwide survey. *Review of International Business and Strategy, 32*(1), 10-38. doi:10.1108/RIBS-11-2020-0146

Mogalakwe, M. (2006). The use of documentary research methods in social research. *African Sociological Review/ Revue Africaine De Sociologie, 10*(1), 221-230.

Monmousseau, P., Marzuoli, A., Feron, E., & Delahaye, D. (2020). Impact of Covid-19 on passengers and airlines from passenger measurements: Managing customer satisfaction while putting the US Air Transportation System to sleep. *Transportation Research Interdisciplinary Perspectives, 7*, 100179. doi:10.1016/j.trip.2020.100179

Nhamo, G., Dube, K., & Chikodzi, D. (2020). *Counting the cost of COVID-19 on the global tourism industry*. Singapore: Springer.

Nolan, J. F., Ritchie, P., & Rowcroft, J. (2004). September 11 and the world airline financial crisis. *Transport Reviews, 24*(2), 239-255.

O'Connor, W. E. (2001). *An introduction to airline economics*. Westport, Conn: Praeger.

Ou, J., & Wong, I. A. (2021). Strategic crisis response through changing message frames: A case of airline corporations. *Current Issues in Tourism, 24*(20), 2890-2904.

Pappas, C., & Williams, I. (2011). Grey literature: Its emerging importance. *Journal of Hospital Librarianship, 11*(3), 228-234. doi:10.1080/15323269.2011.587100

Pascual, M. E., & Cain, L. N. (2022). Loyalty programs: The vital safety feature for airlines to survive COVID-19. *International Hospitality Review, 36*(1), 124-130. doi:10.1108/IHR-03-2021-0017

Pearce, B. (2012). The state of air transport markets and the airline industry after the great recession. *Journal of Air Transport Management, 21*, 3-9.

PwC. (2013). Aviation finance: Fasten your seatbelts. UK: PricewaterhouseCoopers.

Rimmer, P. J. (2000). Effects of the Asian Crisis on the geography of Southeast Asia's air traffic. *Journal of Transport Geography, 8*(2), 83-97. doi:10.1016/S0966-6923(99)00041-1

Sadi, M. A., & Henderson, J. C. (2000). The Asian economic crisis and the aviation industry: Impacts and response strategies. *Transport Reviews, 20*(3), 347-367.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity, 52*(4), 1893-1907.

Scheiwiller, S., & Zizka, L. (2021). Strategic responses by European airlines to the Covid-19 pandemic: A soft landing or a turbulent ride? *Journal of Air Transport Management, 95*, 102103.

Shiwakoti, N., Hu, Q., Pang, M. K., Cheung, T. M., Xu, Z., & Jiang, H. (2022). Passengers' perceptions and satisfaction with digital technology adopted by airlines during COVID-19 pandemic. *Future Transportation, 2*(4), 988-1009.

Singh, K., & Yip, G. S. (2000). Strategic lessons from the Asian Crisis. *Long Range Planning, 33*(5), 706-729. doi:10.1016/S0024-6301(00)00078-9

Sobieralski, J. B. (2020). COVID-19 and airline employment: Insights from historical uncertainty shocks to the industry. *Transportation Research Interdisciplinary Perspectives, 5*, 100123.

Suk, M., & Kim, W. (2021). COVID-19 and the airline industry: Crisis management and resilience. *Tourism Review, 76*(4), 984-998. doi:10.1108/TR-07-2020-0348

Sun, X., Wandelt, S., Zheng, C., & Zhang, A. (2021). COVID-19 pandemic and air transportation: Successfully navigating the paper hurricane. *Journal of Air Transport Management, 94*, 102062. doi:10.1016/j.jairtraman.2021.102062

Tillett, S., & Newbold, E. (2006). Grey literature at The British Library: Revealing a hidden resource. *Interlending & Document Supply, 34*(2), 70-73.

Vinod, B. (2022). Airline revenue planning and the COVID-19 pandemic. *Journal of Tourism Futures, 8*(2), 245-253. doi:10.1108/JTF-02-2021-0055

Wang, X., Zheng, J., Tang, L., & Luo, Y. (2023). Recommend or not? The influence of emotions on passengers' intention of airline recommendation during COVID-19. *Tourism Management, 95*, 104675. doi:10.1016/j.tourman.2022.104675

Wang, Y. S. (2013). The impact of crisis events on the stock returns volatility of international airlines. *The Service Industries Journal, 33*(12), 1206-1217.

Zhang, L., Yang, H., Wang, K., Bian, L., & Zhang, X. (2021). The impact of COVID -19 on airline passenger travel behavior: An exploratory analysis on the Chinese aviation market. *Journal of Air Transport Management, 95*, 102084. doi:10.1016/j.jairtraman.2021.102084

Zhang, Y., & Zhang, A. (2021). COVID-19 and bailout policy: The case of Virgin Australia. *Transport Policy, 114*, 174-181. doi:10.1016/j.tranpol.2021.09.015