รับเข้าระบบ : 26/3/2564
พิจารณา : 3/4/2564
สิ้นสุดกระบวนการ : 4/6/2564

The Impact of COVID-19 on Global Aviation Industry: A Phenomenological Study

Vichai Premmanisakul[1] Sirikorn Loedlukthanathan[2*] Adunyarat Chaemlek[3] and Amnart Ussavachaiyakul[4]

Abstract

This paper analyzed the influence of Covid-19 on the global aviation industry and understood how sudden changes were going to affect the upcoming global airlines' industry. Before the other health crises such as SARS, the impact of Covid-19 was unparalleled, bringing some never seen before losses to the aviation industry. This paper discussed and examined the contemporary challenges faced by the aviation industry due to Covid-19, regarding its halting post lockdown, the downfall of the business and reduced workforce and measures undertaken to minimize the negative impact on the capital-intensive industry. The results, based on the study aims, were as following: 1) the identified measures needed were equity injection, wage subsidies, new suits of loans and aviation industry's support, 2) as for the impact of measures undertaken, the data revealed that the government had given a support worth of $160 billion to the airline industry, in which one quarter was for wage subsidies and two-thirds belonged to direct supports, such as cash injection, equity, loans and subsidies, and 3) the steps undertaken by aviation businesses, the measures undertaken for health management of passengers were the operating costs of additional requirements to ensure passenger safety and also social distancing measures affecting the passenger load factor. Therefore, it was suggested that these changed over the long-term leaded to major changes in the structure of demands for air transportation. The study suggested that further researches should be in the following ways: 1) to promote a prioritize sector-wide competition and measures for maintaining a sustainable trajectory by the government policies 2) to preserve dynamics of aviation business and consent

[1] Lecturer, Faculty of Humanities and Social Sciences, Chandrakasem Rajabhat University.
[2] Lecturer, Faculty of Humanities and Social Sciences, Chandrakasem Rajabhat University.
[3] Lecturer, Faculty of Humanities and Social Sciences, Chandrakasem Rajabhat University.
[4] Lecturer, Faculty of Humanities and Social Sciences, Chandrakasem Rajabhat University.
* Corresponding author: siricru111@gmail.com

exit and 3) to encourage more planning and investments for the aviation industry's green transition.

Keywords: Covid-19, Measure, Transportation, Aviation Industry

Introduction

The airline industry is a small but very important part of the economy because apart from the direct revenue generated by them, they also majorly contribute to other industries by enabling business personnel and VIPs to travel from one place to another for business conducts. The airline industry depends upon several upstream sectors such as rental and leasing services, aircraft manufacturing, support activities for transportation which also includes airports operations, and refined manufacturing of petroleum (Dube et al., 2021). Many major airports such as that of the USA and Dubai also depends upon global organizations which use them as hubs. The industry also serves as the key input to several downstream sectors because it allows various economic conducts through enabling trades and air cargos (Abu-Rayash et al., 2020). After the announcement of the Covid-19 outbreak in March, the travelling pattern and behaviour of passengers dramatically decreased due to the various restrictions and the ensuing economic crisis imposed by governments around the world. Civil activities of Canada reduced by 71% as compared to their usual, while that of military reduced by 27%. Cities having mobility index of more than 50% such as Hong Kong, Moscow, Paris, Lyon, Stockholm, Singapore and Brussels by the end of June 2020 reached 76%. While major cities in America had mobility indexes as low as 20% (Gössling, 2020).

Due to that disruption, the liquidity buffers of these companies were put under pressure, forcing them to deal with the problem to various policies as a response. This study will discuss the various aspects of the different kinds of influences of the Covid-19 outbreak on the aviation industry, such as on the revenue, demands and sustainability initiatives were undertaken.

Research Objective

The objectives of the research were:

• To identify the measures undertaken by governments around the world post-Coid-19 outbreak, which directly or indirectly affects the global aviation business

• To analyze the direct or indirect impacts of these measures on the global aviation business

• To analyze the steps undertaken by aviation businesses around the world to deal with the losses

• To recommend how to deal with the short and long-term influences of these measures on the future of the aviation business

Research Questions

• What were the immediate and long-term measures undertaken by the global government to deal with the Covid-19 outbreak, affecting the global aviation businesses?

• How immediate lockdown and transportation halting measures affected the global aviation industry?

• What measures were undertaken by the global aviation business to deal with the losses?

• What steps should be undertaken to manage the long-term influence expected as a result of the immediate measures adversely affecting the global aviation business?

Theoretical Framework

Due to the global lockdown as a preventive measure, the entire industry came to a standstill as major tourist destinations, as well as business organizations, were paused until an uncertain period (Dube et al., 2021). It is difficult to comprehend and understand all kinds of influences of Covid-19 on the global aviation industry, therefore it was made sure that a wide range of sources was referred for data collection and all the key areas which were highly affected in the aviation industry are considered for analysis, which is:

• The sharp decline in the workforce or the employees of the aviation industry

• The sharp decline in the demands for air travel

• The precautionary measures are undertaken to comply with the social distance measures, such as flying flights with mandatory empty seats (Amankwah et al., 2020)

• The permanent losses in demands such as business travels, after the rising popularity of online conferencing applications

• The strict measures were undertaken by the aviation business to deal with the losses, such as reducing the workforce and investment in the safety of passengers, such as the installation of sanitization booths, PPE kits, etc. (Amankwah et al., 2020)

• The failure of demands for long haul flights as a result of precaution taken by air passengers and the tendency of opting for other modes of transportation.

All the above-mentioned areas were covered in the discussion and analysis of this research so that a collective impact of the outbreak can be understood. Through an observational approach, the discussion in the research develops a critical understanding of the interrelationship between different firms, which comes under the aviation industry. That the interpretivism approach was undertaken for the interpretation of the collective impact on the global aviation industry.

Research Methodology

This research was a documentary research through the process of qualitative research. The population was the 27 documents collected purposively. The research tools were survey and summary forms in order to categorize the documents whether they were satisfied with the research title or not, and to summarize the findings whether they develop and prove the research objective or not. The collected data was from the classified documents involving aviation industry as secondary sources. The data collection was obtained through the four-step approach to control the quality of the content: 1) authenticity of the documents, 2) credibility of the documents, 3) representativeness of the documents, and 4) meaning derived from the documents. For this, the study gathered data and figures from a wide range of academic resources which includes research papers of credible authors, extracted from credible sources such as Google Scholar and credible websites and resources such as OECD, ICAO and Deloitte. The paper involved the economic influences on the aviation industry on the outbreak by highlighting the key changes in trends and patterns of passengers in compliance with governmental regulations. Then, the obtained data was analyzed by qualitative approach: tally and category using the survey form, summarization based on key words and research aims using the summary forms. The study attempted to analyze the preventive measures and response policies undertaken by the industry and global government to manage the current losses and prepare for the future scenario, given that it is still uncertain how long the industry has to suffer the outbreak (Maneenop and Kotcharin, 2020). Then the study determined the effectiveness of

these measures undertaken and present some recommendations and suggestions on behalf of the study, which can further help the industry to overcome the crisis. This research was conducted in compliance with the necessary research ethics such as giving the proper credit to the writers through in-text reference, the data collected was analyzed unbiased and all the key impacts of Covid-19 was covered in the analysis and results. The only limitation with this research was the possibility of missing any other aspects of the diverse impacts of Covid-19 on the global aviation business.

Research Results

It was found that there has been a dramatic influence of Covid-19 on the airline industry, which is considered as one of the first areas of focus in response to the crisis by the global government. After the official announcement of WHO regarding the outbreak and followed by the banning of international travel by countries around the world, the stock market plunged and increased the stress and anxiety levels among financial markets around the globe (Mhalla, 2020). Air transport has a small economic share but is closely related to other sectors such as aircraft manufacturing and airports business, which is together termed as the "aviation industry". Also, this industry is a key enabler for a range of various economic activities. After the lockdown and transport ban, the industry witnessed a dramatic drop in passengers seeking air travel as well as air freight was also significantly reduced, which is threatening the capability of other directly and indirectly related firms (Macilree and Duval, 2020). These firms are in both the transportation as well as the rest of the aviation industry operations, putting the jobs of thousands of workers at stake. It is quite evident that because of such a major role played by the aviation industry, it is always the target of policies of governmental bodies around the world. Thus, the Covid-19 crisis has raised the need for equity injections, wage subsidies, loan guarantees and new suits of loans, which is making competition management and public resource usage efficiency a challenge for the aviation industry. Due to the uncertain nature of the outbreak, it can be expected that governments around the world may resort more to equity injections. Thus, despite not entering the crisis with higher leverage that other sector firms, Nicola et al. (2020) found that the debt level could rise as high as 29% by 2021. This will have a significant influence on the new finance investment capacity of the industry too. The crisis of Covid-19 has strengthened few rationales which were used previously for justifying the aviation industry’s support. Particularly, uncertain prospects, increasing debt burdens and liquidity

challenges can endanger investments made to reduce the carbon intensity of the aviation industry (Iacus et al., 2020). The policies of the global aviation industry mainly prioritized the manufacturers of aircraft, but the outbreak at its impacts have highlighted the vital role of airport infrastructure and air transport for the link between marginal regions.

Since desperate times calls for desperate measures, the immediate steps undertaken by the government despite being not the best, were vital. For managing the challenges mentioned above, the global governmental bodies are required to regain the balance between the need to preserve competition and support the aviation industry. This is particularly while considering measures specific to the firms (Lau et al., 2020). Apart from that, it will be highly beneficial for the industry if the government prioritize the preservation of business dynamics. Apart from that, the discussion suggests some other measures such as interventions of policy for encouraging investment for improving aviation's business sustainability.

As a response to the Covid-19, the most targeted industry is the aviation industry. According to (Serrano and Kazda .2020), the August 2020 data suggests that the government have given a support worth of $160 billion to the airline industry, in which approximately one quarter is for wage subsidies and two-thirds belongs to direct support (such as cash injection, equity, loans and subsidies).

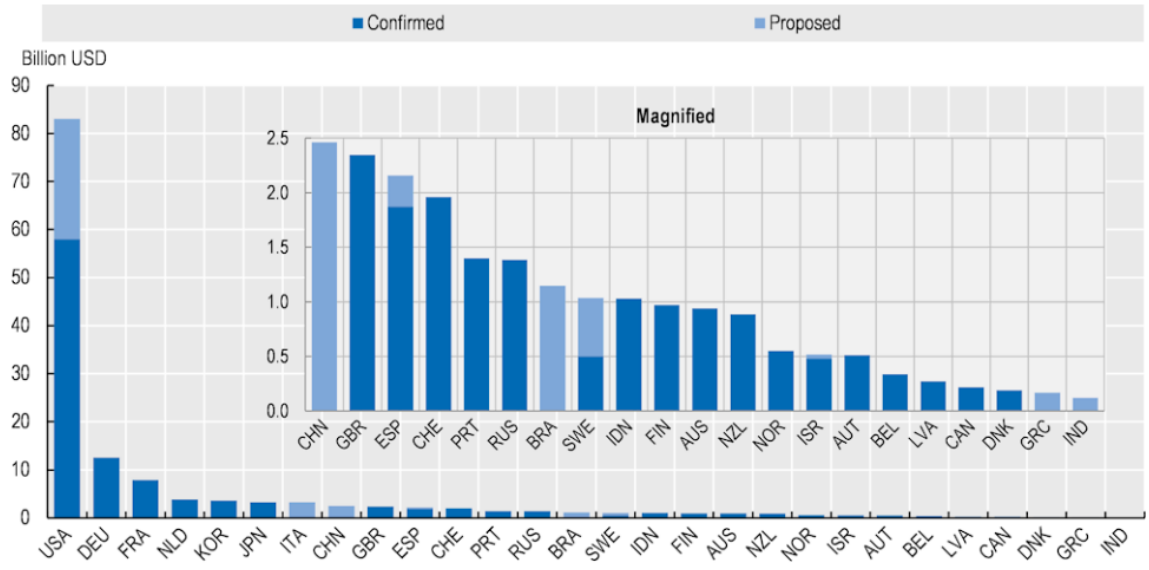

Figure 1 Government support to airlines in the aftermath of the COVID-19 crisis

Source: [OECD, 2020]

According to a report of The Economic Times, around 400,000 employees working for the aviation industry were fired and many were warned that they were about to lose their jobs, as per the estimations of Bloomberg. American Airlines Group Inc., United Airlines Holdings Inc. and Delta Airlines Inc. also warned around 35,000 of their employees of losing their jobs which makes a total loss of 100,000 employees of the trio combined (Feyisa, 2020). Even the cabin crew and pilots who managed to secure their jobs faced major salary cuts. Due to the shock, the liquidity buffers of these companies were put under pressure, forcing them to deal with the problem to various policies as a response. The aviation consultant CAPA stated that almost all the airline industries around the world will go bankrupt by the end of May because of the outbreak. As the virus started to spread through major regions such as Europe, Africa and America; and with the rising number of infected and deaths, passengers dropped their upcoming travelling plans and decided to stay at home as a precaution. Apart from that, many of them also delayed air ticket purchases due to the uncertainty regarding how long the problem will continue. The scale of economic losses became visible when the regional airlines in the UK started to go bankrupt and entered administration during the beginning of March. Countries around the world started to close their borders to limit the spread but according to an estimation of IATA, the global airline companies will lose approximately $324 billion.

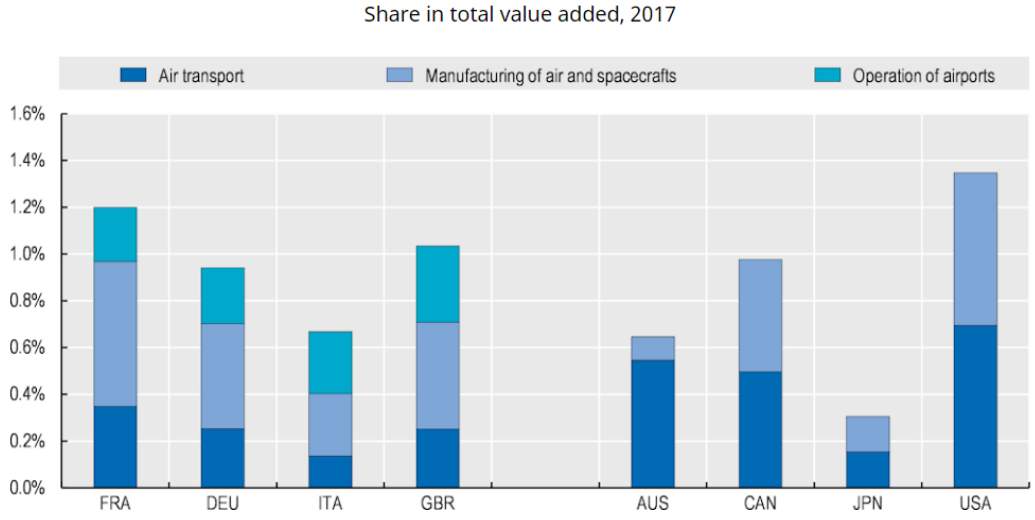

Figure 2 Size of the aviation industry, selected OECD economies

Source: [OECD, 2020]

Research Discussion

It can be concluded that the situation of airline companies was very different from their current situation. Particularly, air transport is one of the most highly affected sectors, since previously it was the highest productivity dispersion. Therefore, while the outbreak of Covid-19 was at its peak around the world, the airline business had very different abilities for withstanding such shocks and heterogeneous predictions for the future of the aviation industry. Mergers, acquisitions and bankruptcies hurt the competitive environment, which also reflects on the fare of air travel resumed currently (Ozili and Arun, 2020). The discussion suggests that despite more than 80% of passenger seats being on routes with other carriers, a large number of these routes depends upon the lesser number of firms. Therefore, the influence of Covid-19 on the aviation industry is not only because of the reduction in travel patterns but also because of the halt of these small firms during the lockdown periods (Nižetić, 2020).

The two key uncertainties faced by the aviation industry due to the Covid-19 outbreak are:

• Costs pertaining to the measures undertaken for health management of passengers/people. In the short run, the operating costs are likely to increase the aviation business due to the requirement of additional requirements to ensure passenger safety. These requirements include viral tests kits, temperature checking equipment, PPE kits, disinfectants, sanitisers, and so on. Apart from that, compliance with the social distancing measures is also affecting the passenger load factor since people cannot be allowed to spend time close to each other, leaving no options for the companies to intentionally fly with empty seats (Uğur and Akbıyık, 2020).

• The shape of a commercial fights recovery trend. Changes in transportation behaviour, contraction of economic activities and restrictions on international travel by the worried and caution travellers will also hinder the falling back of industry to its previous demands before the outbreak, even after loosening of restrictions in many countries. According to Uğur and Akbıyık, (2020), it is predicted that commercial air traffic will recover slowly. This is because, in September 2020, the count of flights was lesser than 40% as compared to what was before the outbreak. Also, this factor doesn't tell anything about the difference between flights' length, which also fell sharply as people avoided long-haul flights. Therefore, (Suau et al., 2020) suggest that these changes over the long-term may bring major changes in the structure of demands for air transportation (Xu et al., 2020).

Some studies such as that of Suau et al. (2020) and Abate et al. (2020) states that the rebound of domestic flights in some countries was suggesting that the demands may reach their pre-crisis level, it was soon realized that the aviation industry has undergone a permanent loss of demands, such as several business flights after people got used to video conferencing; or people opting other modes of transportation such as trains (Gupta et al., 2020). The mixture of uncertainty regarding the medium-run outlook and negative demand and supply shocks brings more insecurities among the global aviation industries, because of the inter-industry linkages with other air travel-related businesses. Also, (Sobieralski, 2020) stated that the aviation industry is still vulnerable to other risks such as the resurgence of the pandemic as a result of permanent measures undertaken by governments. These measures can be new restrictions for tackling any possible second wave of the Covid-19 outbreak. This uncertainty threatens the small firms which rely largely on the aviation industry since their production and revenue will remain inferior.

According to CAPA, the cash reserves quickly started to run down as almost every fleet of airlines were grounded and the ones still operating were running less than half of their capacities. The fear of spread resulted in anxiety among the global governments as every country were preparing and adopting solutions immediately which best suited their needs, whether right or wrong and even without considering international trading relations. According to a report of CNBC, the Travel data company Cirium found that around 43 airline companies have failed till now, with either suspended operations or are completely ceased so far this year. Among the suspended 43 airlines in 2020, around 20 were operating 10 aircraft, which was 12 in 2019. Also, around 485 planes were grounded and stood idle this year, which was less than 431 in the year 2019 (Priyadarshini et al., 2020).

Further Research Suggestion

The research suggests that for helping the aviation industry to efficiently manage the losses and risks post the Covid-19 outbreak, there is a need to further research the best practices in the following fields:

- The government policies to promote a prioritize sector-wide competition and measures for maintaining a sustainable trajectory. For this, the government need to maintain a balance between the risk of twisting competition and the need for support. If in some places this initiative for having a firm-specific support measure is already implemented, they further need to research

and identify ways to avoid tilting or distorting its relations and operational networks with other aviation industry-specific firm.

• Preserve dynamics of aviation business and consent exit. Since the demands for air travel and other services may differ in their structure from what they used to be before the crisis, the governments should identify ways to avoid backing impractical business relations and foster restructuring, while supporting and sustaining the workers displaced.

• Ways to encourage more planning and investments for the aviation industry's green transition, therefore enhance the long-term flexibility. This can be done by making support decisions on the firm level of the industry on improving environmental conditions. This demand addressing sustainability throughout the value chain of the aviation industry, which includes airports and aircraft manufacturing firms. (Shrestha et al., 2020) stated that the industry must maintain co-ordination throughout the sectors, the industry must find ways to integrate the policy responses to the outbreak, in the low-carbon transition strategies. (Sobieralski, 2020) stated that such strategies are already either in discussion or implemented in various OECD countries.

References

Abate, M., Christidis, P. and Purwanto, A.J. (2020). Government support to airlines in the aftermath of the COVID-19 pandemic. **Journal of air transport management**, 89, 101931.

Abu-Rayash, A. and Dincer, I. (2020). Analysis of mobility trends during the COVID-19 coronavirus pandemic: Exploring the impacts on global aviation and travel in selected cities. **Energy research & social science**, 68, 101693.

Amankwah-Amoah, J. (2020). Stepping up and stepping out of COVID-19: New challenges for environmental sustainability policies in the global airline industry. **Journal of Cleaner Production**, 271, 123000.

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

Feyisa, H.L. (2020). The World Economy at COVID-19 quarantine: contemporary review. **International Journal of Economics, Finance and Management Sciences**, 8(2), 63-74.

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

Gupta, M., Abdelmaksoud, A., Jafferany, M., Lotti, T., Sadoughifar, R. and Goldust, M. (2020). **COVID 19 and economy.** Dermatologic therapy.

Iacus, S.M., Natale, F., Santamaria, C., Spyratos, S. and Vespe, M. (2020). Estimating and projecting air passenger traffic during the COVID-19 coronavirus outbreak and its socio-economic impact. **Safety Science**, 129, 104791.

Lau, H., Khosrawipour, V., Kocbach, P., Mikolajczyk, A., Ichii, H., Zacharski, M., Bania, J. and Khosrawipour, T. (2020). The association between international and domestic air traffic and the coronavirus (COVID-19) outbreak. **Journal of Microbiology, Immunology and Infection**, 53(3), 467-472.

Macilree, J. and Duval, D.T. (2020). Aeropolitics in a post-COVID-19 world. **Journal of Air Transport Management**, 88, 101864.

Maneenop, S. and Kotcharin, S. (2020). The impacts of COVID-19 on the global airline industry: An event study approach. **Journal of air transport management**, 89, 101920.

Mhalla, M. (2020). The impact of novel coronavirus (COVID-19) on the global oil and aviation markets. **Journal of Asian Scientific Research**, 10(2), 96.

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Agha, M. and Agha, R. (2020). The socio-economic implications of the coronavirus and COVID-19 pandemic: a review. **International journal of surgery**.

Nižetić, S. (2020). Impact of coronavirus (COVID-19) pandemic on air transport mobility, energy, and environment : A case study. **International Journal of Energy Research**, 44(13), 10953-10961.

OECD. (2020). **COVID-19 and the aviation industry: Impact and policy responses**. http://www.oecd.org/coronavirus/policy-responses/covid-19-and-the-aviation-industry-impact-and-policy-responses-26d521c1/. March 13, 2021.

Ozili, P.K. and Arun, T. (2020). **Spillover of COVID-19: impact on the Global Economy.** Available at SSRN 3562570.

Priyadarshini, I., Mohanty, P., Kumar, R., Son, L.H., Chau, H.T.M., Nhu, V.H., Thi Ngo, P.T. and Tien Bui, D. (June 2020). **Analysis of Outbreak and Global Impacts of the COVID-19**. In Healthcare (Vol. 8, No. 2, p. 148). Multidisciplinary Digital Publishing Institute.

Serrano, F. and Kazda, A. (2020). The future of airport post COVID-19. **Journal of Air Transport Management**, 89, 101900.

Shrestha, N., Shad, M.Y., Ulvi, O., Khan, M.H., Karamehic-Muratovic, A., Nguyen, U.S.D., Baghbanzadeh, M., Wardrup, R., Aghamohammadi, N., Cervantes, D. and Nahiduzzaman, K.M. (2020). **The impact of COVID-19 on globalization.** One Health, 100180.

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

Suau-Sanchez, P., Voltes-Dorta, A. and Cugueró-Escofet, N. (2020). An early assessment of the impact of COVID-19 on air transport: Just another crisis or the end of aviation as we know it?. **Journal of Transport Geography**.

Uğur, N.G. and Akbıyık, A. (2020). Impacts of COVID-19 on global tourism industry: A cross-regional comparison. **Tourism Management Perspectives**, 36, 100744.

Xu, Z., Elomri, A., Kerbache, L. and El Omri, A. (2020). Impacts of COVID-19 on global supply chains: facts and perspectives. **IEEE Engineering Management Review**, 48(3), 153-166.