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Review Article
Published: 15 Jul, 2020

SF Journal of Aviation and Aeronautical Science

Aviation During and Post Pandemic COVID-19 - Impact and Strategies

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Abstract

Aviation is the indispensable part of transportation of any nation which has been now come to standstill due to the pandemic called COVID-19. Those airlines which are the source of fast transportation for passengers are now found to be responsible for transporting the virus across the boundaries. Due to this, countries have prioritised the public health over economic growth and have halted their flying operations. However, many countries have initiated some of its domestic flying operations to fulfil the essential flying purposes of their citizens but that incurs only losses for them. The present study has been aimed to determine the various glitches faced by the aviation industry at global level due to the emergence of pandemic. Also, study has highlighted the various measures adopted by government and airlines to revive their aviation sector. For framing the paper various articles from newspapers, national and international reports and academic papers have been shortlisted on the basis of combination of keywords, such as, aviation, airlines COVID-19, coronavirus, SARS-CoV 2, pandemic, virus, quarantine, sanitisation etc. Study has concluded that pandemic has brutally impacted the aviation sector all around the world which is consequential for the growth of other sectors of economy. Further study has reviewed the strengths and opportunities for aviation industry which can be used by aviation sector to fight against the threats which have been generated due to the pandemic. The study has also derived the SWOT model for the aviation industry which would assist the decision makers, government and airlines in framing of the various strategies and interventions to recuperate their aviation sector during and post COVID-19.

Keywords: Pandemic; Aviation; Airlines; COVID-19; Air transport; Virus; Aircraft

Introduction

"Welcome to the airline flight of 2021. Before boarding, please walk through the disinfection tunnel and thermal scanner, and have your bags 'sanitagged.' You won't find any in-flight magazine to entertain you on board, but look out for the disinfectant wipes as part of the in-flight service. And don't count on being allowed on the aircraft if you start coughing at the gate."-SimpliFlying(2020).

COVID-19 has flared a severe tension all around the world as a public health emergency. Pandemic has influenced the prevailing lifestyle of people which has subsequently influenced the various sectors of the economy (Nicola et al., 2020). Also, consequent lockdowns have impelled substantial contraction in the level of services and productivity of various industries which has destabilised the economic condition of countries (Barua, 2020; McKibbin& Fernando,2020). The aviation sector, alike all other sectors has also found to suffer from extensive financial losses and uncertainties due to the emergence of pandemic (Mhalla, 2020). Many countries have prioritised the public health over economic growth and have ceased their flying operations. Figure 1 has presented the data on global flights which have declined due to the rise in the cases of COVID-19. Halt in aviation sector has further influenced the other forces of the ecosystem. Like, closed operations of airlines have reduced the aeronautical and non- aeronautical revenues of the airports (Lioutov, 2020). Also, due to the non-functioning of airlines the demand of working staff has been alleviated which has raised the question on employment status of various employees. Further, tourism industry has also been adversely impacted from pandemic as people have become conscious and suspicious to travel due to the transmission of virus (Gössling et al., 2020).

Aviation is the prime mode of rapid and fast travelling for passengers which has the potential to boost economic growth and tourism. Also, it is responsible for creating 65.5 million jobs globally which includes indirect job support through economic activities like hotel, restaurants, tourism, trade links, etc (IATA, 2020a). Industry has supported 3.6 percent of the world's GDP which has underlined a very interesting fact that if Aviation would be a country then it would be ranked at 20th

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Received Date: 22 Jun 2020
Accepted Date: 10 Jul 2020
Published Date: 15 Jul 2020

Citation: Mehta P. Aviation During and Post Pandemic COVID-19 - Impact and Strategies. SF J Aviation Aeronaut Sci. 2020; 2(1): 1013.

ISSN 2643-8119

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in size by GDP which is as same as GDP of Argentina and Switzerland (Asquith, 2020). Globally, contribution of aviation industry in GDP is more than the contribution by automobile and pharmaceutical industry (Aviation, 2020). Further, aviation industry has also been found suitable for transportation of perishable and valuable goods which covers about one third of the world's trade. Also, during lockdown, air transport has been used by various countries to evacuate their passengers and for supplying essential food and medical supplies which signifies about their substantial role during emergencies.

For fulfilling the essential flying purpose of citizens many countries have initiated their domestic flying operations. However, they are able to fill only 2-10 percent of the total capacity of their flights which is economically unviable for them. Considering this, present study has been aimed to determine the various glitches faced by the aviation industry at global level due to the emergence of pandemic. Also, study has highlighted the various measures adopted by government and airlines to revive their aviation sector. For framing the paper various articles from newspaper, national and international reports and academic papers have been shortlisted on the basis of combination of keywords, such as, aviation, airlines COVID-19, coronavirus, SARS-CoV2, pandemic, virus, quarantine, sanitisation etc. This study has also derived the SWOT model for the aviation industry which would assist the decision makers, government and airlines in framing of the various strategies and interventions to revive their aviation sector during and post COVID-19.

Impact of Pandemic on Aviation

Presently aviation industry is in crises due to the pandemic as majority of the fleets are grounded during lockdown period. Further, unpaid staff, ticket liabilities and fixed cost associated with parking and maintenance of aircrafts have made difficult for airlines to survive in this situation. IATA has mentioned in their report that aviation industry has incurred a net loss of $252 billion in the first quarter of the year 2020. Experts are saying that it will take couple of years to regain the 50 percent of that position which aviation had before covid-19. Presently, passenger volume in sector has been reduced by 48 percent which has further alleviated the Revenue Passenger Kilometres (RPKs) of airlines by 52.9 percent. Also, available seat kilometers i.e., ASK's has been found to fell by 36.2 percent in March, 2020. Also, it has been determined that new standards of sanitation for the aircrafts have increased the turnaround time of airlines which would further influence their frequency of departures and landings. For years many airlines are successful in reducing their turnaround period to provide low cost tickets to their passengers which would not be possible during COVID-19. Many airlines have admitted that their benchmark of 30-minute turnaround would be a myth in future as aircrafts are found to be more on land than sky.

Majority of the airlines are found to have planes on lease and loans which has imposed a big interest amount on airline owners (Black, 2020). Hence, many airlines have decided to shut down their operations and have returned their fleets to lessors. In this context, Lufthansa has announced to ground 6 percent of their fleets including budget airline Germanwings (Ziady, 2020). Major manufactures of planes like Airbus and Boeing have found to receive cancellations of recent orders of planes (Oestergaard, 2020). Many airlines have even planned to retire their old fleets before time. Also, it has been emphasised that pandemic has raised a situation of doubt among passengers to travel again which has reduced their confidence and

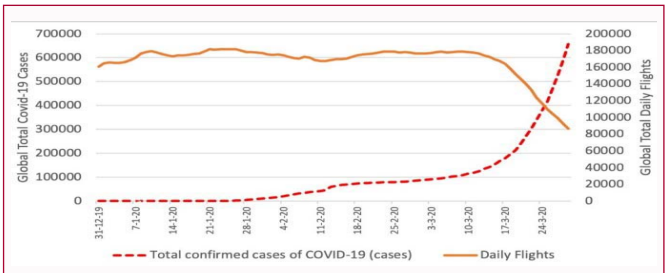

Figure 1: Global flights and COVID-19 case.
Source: ECDC (2020)

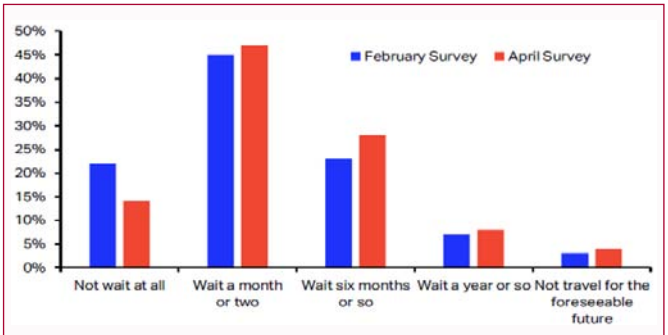

Figure 2: Data on air traveller confidence.
Source: IATA

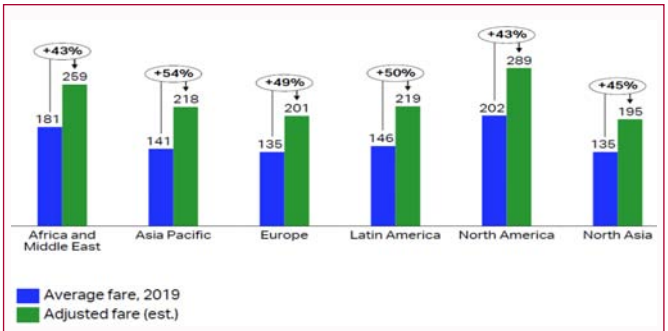

Figure 3: Hikes in fares due to pandemic to get breakeven of 62%.
Source: IATA Economics

willingness to travel by air. One of the surveys of IATA (refer Figure 2) in the month of April has determined that about 30 percent of the respondents would not travel for the coming next six months, while 10 percent have responded to not prefer the air travel for one year. It has been estimated that due to the pandemic many of the past flyers would fly for only essential purpose which accounts for only 30 percent of the previous total flying. All leisure flying for vacations, social trips and business meetings are found to be considered as non - essential flying for passengers which would reduce the capacity of airlines.

Furthermore, due to non-functioning of international operations and reduction in capacity of operating airlines, employees of aviation have suffered a lot. Many airlines have laid off their expat pilots, insisted them to be on leave without pay and have reduced their salaries by 50 percent (Isidore, 2020; Sayal, 2020). Also, various popular aircraft engine makers, such as, Rolls-Royce and General Electric's have reduced their workforce due to the cancellation of orders (Thompson &Ziady, 2020). It has been found that pandemic has created a high level of physical, psychological, financial stress among employees which has impaired their wellbeing (Sahadi, 2020).

Additionally, for following the norms of social distancing, aircraft with 3-3 seat configuration has to follow some rules under which middle seat would not be allowed to book by passengers. And, in turboprop aircraft with 2-2 seats configuration are allowed to fill only one seat on each side. This would reduce the aircraft capacity to 62 percent of normal capacity. With this capacity majority of airlines are not even able to attain break-even point which again promotes hike in flight fares. Accordingly, IATA has estimated that there is a chance that airlines would increase the regular fares by 43-54 percent (refer Figure 3) which would restrict the flying up to elite class only specially in price sensitive economies like India. In this reference, IATA has recommended that vacating the middle seat in airlines would not be a good solution for reducing the risk of transmission of virus.

Recovery Plans

Despite of all turbulences, airlines are trying to revive themselves in this challenging situation. Government of many countries have now planned to recover their aviation sector by infusing some cash in the sector. One of the reports by The Airline Analyst has found that about 50 airlines from 220 airlines which they have surveyed has the ability to survive after lockdown as these airlines have some satisfactory liquidity on standby. These airlines are supported by their respective government which has made them solvent like Chinese Airlines. Similarly, few US airlines are found to access subsidies provided by the government due to the presence of strong lobbying support. Gulf flights are also found to have support from their respective airline owners which has provided a confidence to various airlines to fly again (Duff, 2020). Hence, sector has been required by good bailouts from external sources to maintain cash for performing operations in a viable manner. CAPA (2020) has mentioned that by the end of May, 2020 many of the airlines would become bankrupt if government would not imbue some cash in the sector.

Besides, airlines are also trying to rebuild their operations focusing on sanitised and touchless travel. Many airlines like, Alaska, Jetblue, American Airlines and South west airlines are coming with their unique marketing plans to gain customers to stimulate some revenues (Leigh, 2020). As a business unit airline are found to frame various strategies for raising their revenues, however, this time sanitisation and hygiene is itself a market strategy for various airlines (Dinesh, 2020). Airlines have changed the experience of travelling with the acceleration of technologies like, automation, thermal scanning, UV-rays disinfection, biometrics, contactless and self- service technology (Carter, 2020). Also, airlines have announced various attractive offers for passengers in the form of loyalty programmes to enhance their aircraft capacity. In this concern, airlines have slashed the prices for the near-term bookings. In this context, Jet blue has introduced the true blue Mosaic programme for their loyal customers. Accordingly, any ticket purchased till 15 June, 2020 for flying by the period of 4 January, 2021 would give double true blue points to the customers. Also, Jet Blue has introduced a policy under which passengers who know each other can book adjacent seats on similar airline which would increase the capacity of airplane. For example, if 10 families of 4 travellers have booked a paired seat in E-190 aircraft which has the occupancy of 100 passengers then automatically airlines are required to block half seats of 60 not 100 seats which would increase the load factor of airline (Honig, 2020).

Further, many countries have adopted to create a travel bubble which involves reconnecting countries or states that have shown a good level of success in containing the virus. Travel bubble is a great option for members of the group to boost the air travel within states or countries. In this reference, some Baltic countries are found to create their travel bubble, such as, Estonia, Latvia and Lithuania as these regions are effective in containment of the virus (BBC, 2020). These regions have allowed passengers to travel via rail, air and sea without adopting quarantine measures. Similarly, Australia and New Zeeland have also decided to form a travel bubble. Furthermore, Yin-Yang seating arrangements has been introduced by Avio interiors for keeping the capacity of planes at par without distorting the concept of social distancing of passengers on board. They have planned to make centre seat of the airplane in opposite direction of the side seats due to which passenger seated on central seat would not be able to face passengers seated on side seats. Also, they have mentioned to include a transparent glass divider shield between seats which isolate them from other passengers and those moving around the aisle.

STRENGTHS	WEAKNESSES
-Technology for contactless travel. -Prohibition of unfair competition from Low cost airlines to full carrier airlines. -Point to point flights rather than hub and spoke.	-High fixed cost of aircrafts (lease, loan, buy) -Parking charges and high maintenance cost. -Increased turnaround period. -Unpaid salary of staff. -Liabilities due to ticket cancellation.
OPPORTUNITIES	**THREATS**
-Reduced cost of ATF will give confidence to the airlines of developing countries. -Bailouts and financial support/assistance from government can help in infusing some cash reserves. -Suspension of the 80/20 rule. -Safest and rapid option in comparison to the other mode of transportation.	-Insolvency of the airlines due to the lack of cash Reserves. -Unwillingness among passengers to travel more frequently. -Low revenues due to the reduced capacity of Airlines. -Presence of video conferencing options will restrict business purpose travelling.

Figure 4: SWOT analysis of aviation Industry during and post pandemic. Source: Author

Also, it has been determined that pandemic would promote point to point flying model against hub and spoke flying. In this context, it has been found that due to the fear of transmission of virus passengers would prefer to travel quickly and conveniently through point to point flying pattern without coming in contact to those hub airports which are located in cities where cases of transmission are more. This point-to-point flying would reduce the ground crew and gate service officials and can be operated from smaller commercial airports which are not possible in hub and spoke flying. Further, point-to point flying would encourage the aircrafts to remain on sky for a longer period rather than land which would also reduce parking charges of airlines. Further, decision of European Commission to suspend the rule of 80/20 for some period would allow the airlines to schedule their aircraft on those routes where demand is high. This will also save the environment as previously many of the airlines are found to fly without passengers to save their slots which are harmful for the sustainability of environment and viability of airlines (IATA, 2020b).

Furthermore, aviation is always considered as a safest mode of travel when it is compared to the other prominent mode of transportation, such as, railways. In this context it has been determined that travelling time through railways is more than the airlines. This confers that more the time people would take to travel, more are the chances of having a contact with other people which further raises the chances of transmission of virus. On contrary airlines are fast and rapid in transportation which would create very few chances to have contact with more number of people and would reduce the

risk of transmission (Sinha, 2020). Further, it has been analysed that pandemic has impacted every airline in similar manner which would disable the unfair competition prevailed among low cost airlines and full service carriers (Chaturvedi, 2020). Also, cost of jet fuel has been found to reduced by 50 percent which may benefits aviation sector of various developing and emerging economies like India and China (Sinha, 2020).

Discussion

The economic impact of COVID -19 has been found to be disruptive for aviation sector. Losses incurring due to the pandemic is even higher than the combined effect of crisis of 9/11, global financial crises of the year 2008 and Iceland volcanic eruption in the year 2010. On the basis of current scenario, it is clear that Pandemic has raised the anxiety and doubt among passengers which is mainly responsible for declining revenues of the industry. In this context it has been determined that presence of large numbers of COVID cases in any particular nation would restrict the passengers to travel that nation. Also, it has been estimated that domestic travel may show some demand from passengers but international travel would not be possible till all countries would give nod on uniform protocols for receiving a passenger from other parts of the world. Hence, for surviving in this situation airlines have decided to initiate its domestic flying operations with the inclusion of sanitisation as a quality standard along with the safety and sustainability in their working culture.

Further, new norms for promoting sanitised travel has raised the turnaround time of airlines which has created an urgency to develop a new and fast technology for sanitisation and cleaning purpose, such as, self-sanitising toilets, robots and artificial intelligence. Many of the airlines, such as, Alaska Airlines, Air France and Qatar Airways are proceeding to adopt these technologies. Also, countries specially from Asian region like, India, Indonesia, Japan, Sri Lanka, Philippines, Malaysia are required to have some financial plans supported by their government, such as, bailouts, tax relief, loans, waiving of parking fees/charges etc. Also, it is important to provide a rescue package for providing payroll support to the employees of aviation along with the counselling and stress management support.

Further, many airports are found to be unprepared and have raised a situation of dilemma among passengers due to the presence of various quarantine protocols, medical certifications and declaration forms. Also, quarantine period has added a lot of chaos in managing the passengers as this period varies due to the different norms of different states and countries. Also, many airports are found to be incompetent in informing their passengers about flight cancellations which has raised the outrage among passengers (Bailey, 2020). Hence, on the basis of above discussion present study has presented a SWOT analysis of the aviation industry focusing on the situation due to pandemic (refer Figure 4).

Conclusion

Pandemic has changed the way of living, eating, working and so on travelling. This change has provoked the airlines and airports to restructure and rebuild its flying operations on the foundation of sanitisation. For surviving in a short run, airlines and government have been doing few things, however, changed perception of passengers towards travelling and unavailable cash reserves has become a threat for its long- term subsistence. Overall, passengers are the backbone of this sector and raising their willingness to travel would be a challenging task for the airlines. People are equipped with fear of transmission which have made them suspicious about travelling. Hence, aviation sector is required by multi-layered approach based upon their strengths and market opportunities. For this every force of environment such as government, banks, airline owners, staff, passengers are required to participate cooperatively. Currently, recovery speed of aviation is very slow but for future it has been estimated that it will bounce back with more strength.

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