

ADAPTING TECHNIQUES AND CHALLENGES BY AIR CARGO PLAYERS IN COVID 19 PANDEMIC AND THE POST RECOVERY STRATEGY ADOPTED

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Abstract

The Covid-19 pandemic is a global phenomenon that has caused various obstructions to many businesses in various sectors including the aviation industry. This study aims to answer three research questions: what are the key barriers faced by air cargo players during the pandemic?, how air cargo players respond to the impact of the pandemic?, and how air cargo players adjust their operation and business to recover from the pandemic impact? Qualitative interpretive research was adopted in this study by utilizing in-depth interviews with personnel from four cargo organizations. The study found four key barriers faced by air cargo players during the pandemic: great losses in business, unpreparedness, fluctuating demand, and insufficient freighter. Additionally, the study found three main implications from the pandemic on air cargo players, namely, changes in business model, communication, and rearrangement of the staff. The results also indicated two key recovery strategies by air cargo players which are capacity collaboration and route collaboration on responding to the pandemic. This study uses the theory of constraint as a theoretical base and future research is recommended to look into more issues in detail with focusing on every sector within the aviation industry.

Keywords: Covid-19, Pandemic, Recovery Strategy, Cargo, Aviation, Air Cargo

Introduction

The recent Covid-19 pandemic has changed the world and created a great shock to the worldwide economy. It has affected and brought on many challenges to various global sectors, especially public health, humanitarian, and business, among others. Increased number of Covid-19 cases, lockdowns, closure of some business sectors impacted in

various ways to many organizations. Presumably, some industries will take years to get back in operation where small and medium businesses may take longer to recover.

The aviation sector is one of the badly affected industries by this pandemic. Although it is a small sector compared to manufacturing, aviation is considered one of the many important sectors for a country's economic development. It supports the travel and tourism industries, as well as the business sector for import and export, and many others. The aviation industry consists of multi-players such as airlines, airports, ground handlers, airline caterers, maintenance, repair, and overhaul (MRO) organizations, and manufacturing. Many of these organizations have been badly affected by the pandemic. For instance, airlines have experienced a dramatic drop in ticket sales due to travel restrictions in almost every country. The traveling restrictions are causing aircraft to be grounded which in turn have domino effects on the airline catering and MRO businesses. Sectors related to shipping and logistics, which may also include air cargo, are also affected by this pandemic. This has been seen to lead to disruption of operations in the supply chain industry.

Throughout the history of various pandemics around the world, the air cargo sector has been playing an important role in assisting health and humanitarian disaster recoveries and aides. Air cargo has been used in transporting aides to make sure there is no serious disruption on food, medical supply, and other essential supplies to those affected in the pandemic hit areas. As highlighted by CAPA- Center for Aviation, since this Covid-19 pandemic begins, air cargo players play a critical role in delivering medical equipment, medical supplies, Covid-19 specimens and test kits, and many more to various parts of the world.

After more than a year of this outbreak, many organizations are struggling to continue their operation and sustain themselves in the industry. It is more so for the aviation and tourism sectors as most all traveling is banned in many countries. Ivanov (2019; 2021) emphasized that current health disasters could lead to supply chain disruption and affect day-to-day disturbance to the business operation and performance. Every organization should have a recovery plan to make every strategy path more flexible. During big crisis such as this, every business player needs to cooperate and work collaboratively in identifying the best practices for an organization to sustain in business (Steven et al, 2020). In the present situation with extreme uncertainty, every organization should prepare for the worst, and that without proper management and plan, the organization could go bankrupt (Nizetic, 2020).

Having this as background, this study aims to achieve the three following research objectives:

- i. To explore the key barriers faced by air cargo players during the pandemic

- ii. To explore how air cargo players respond to the impact of the pandemic
- iii. To explore how air cargo players adjust their operation and business to recover from the pandemic impact

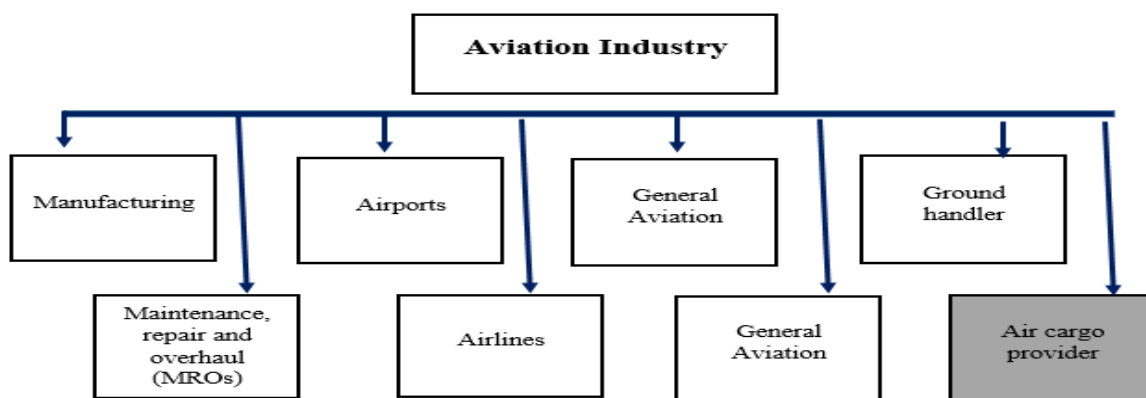
The main objective of this study at this stage is to gather feedback from air cargo players in relation to the issues mentioned in the objectives. The novel and original contribution from this study would be the reference for other players and could be recommended to the policymaker to help to preserve business dynamics in the aviation industry. Using the theory of constraint as the main theoretical model for this study, a recommendation for a future research proposal is also presented.

Literature Review

Recovery Strategy in Aviation Industry and Cargo Sector Post Covid-19 Pandemic

As reported by ICAO (2018, p.68), the aviation industry contributes about USD2.7 trillion to the world’s gross domestic product (GDP). The ecosystem of the aviation industry in Malaysia consists of multiplayer such as regulators, policymakers, and customers, while the sectors include general aviation, manufacturing, maintenance repair and overhaul (MROs), travel agent, airport, airline, as well as airline cargo and airline caterer among others (see Figure 1 for a detailed illustration of aviation sectors). Different aviation sectors may have adopted a different strategy for their sub-business strategy. However, during a health disaster or a pandemic, the strategy adopted for crisis management is significant and the cooperation among aviation multi-players is vital to growing the industry back to normal operation.

Figure 1: The Aviation Spectrum



Source: The authors

Essentially, the prevalent objective for any organization is to successfully grow in the industry (Parnell et al 2012). A strategy could be defined as an organizational blueprint or master plan that directs the organization to achieve its goal (Wheelen and Hunger, 2000). Strategy defines a company's distinctive approach to compete in their industry locally and globally, intending to achieve a competitive advantage. As highlighted by many management scholars, including Abdul Rahman et al. (2018), competitive advantage can be achieved if the organization can perform better compared to their competitor and offering new innovative business value to their customer. On the other hand, knowing who is your rival and what they are offering could help your organization to create a pathway for long-term sustainability. However, during health disaster such as Covid-19 pandemic, every organization should work together to respond and adapt to any constraint from this pandemic. They could share the resources and plan for further cooperation to benefit every player in the industry.

Key Challenges of Covid-19 Pandemic

As highlighted by ICAO (2020), travel bans will not stop the Covid-19 infection completely, however, it may help to reduce the level of contagion between countries. Every aviation sector should review its activity and implement proper guidelines in accordance with standards developed by ICAO in relevance to Covid-19. To promote sustainable business activity in the aviation industry, help from the government, from a policy perspective, it is important to balance the support and distorting competition (OECD, 2020). The coordination across the spectrum with appropriate policies is crucial.

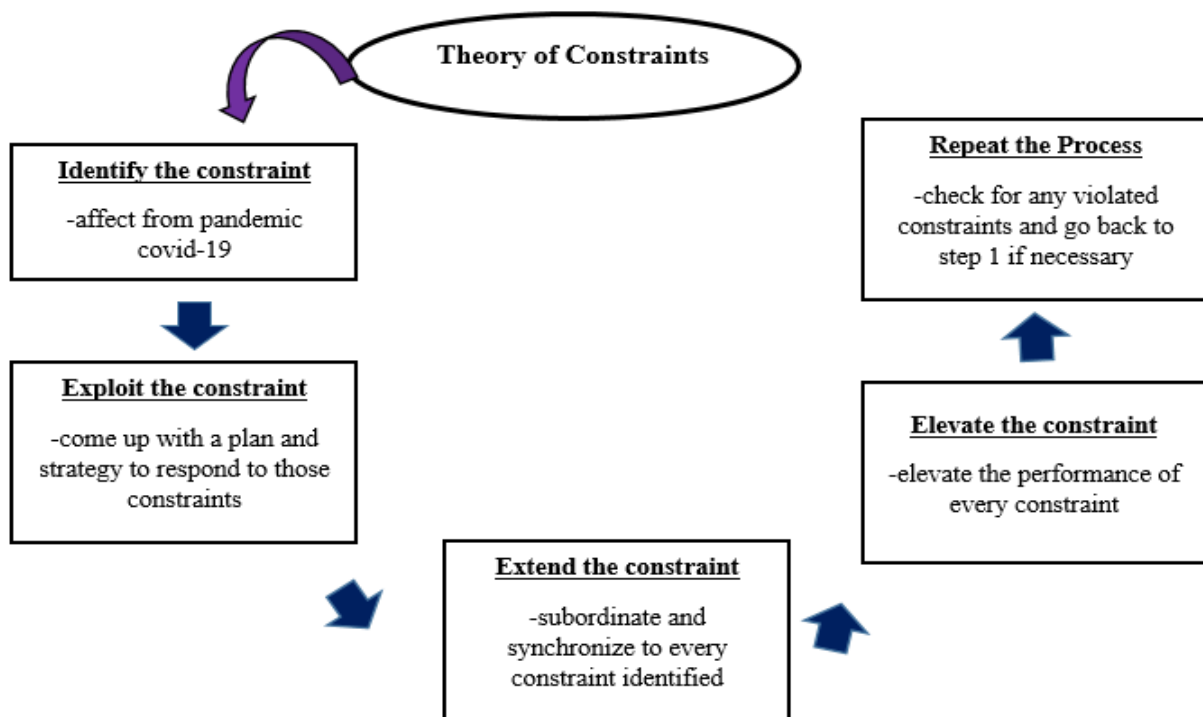
Since the pandemic is still continuously happening, considerable attention has focused on the food supply, medical equipment supply, and medicine supply in a time of crisis. During the Covid-19 pandemic, even though the air cargo provider is still in operation, there are some challenges the organization has to face such as labor shortage due to health issues, movement restriction, routes changes, capacity arrangement, and many more (Hobbs 2020).

Theory of Constraint as Theoretical Base

In this research, the central idea of using the Theory of Constraint (TOC), as introduced in 1984 by Dr. Eliyahu Goldratt (Cox and Scheleir, 2010), is to identify the challenges or limiting factors faced by aviation sectors during the Covid-19 pandemic. In principle, the central idea of TOC is that a cargo organization could measure its performance by a variation on three components namely, cargo throughput, operational expenses, as well as inventory. The organizations could then work on the identified limitations until it is no

longer a limiting factor for growth. New recovery and performance strategies could be developed and adopted to increase organizational performance. The suitability of the TOC is in identifying the constraints from a pandemic hit, exploiting the constraint, and to elevate the performance of every constraint. This is in relevance to current literature on crisis management and recovery strategy from an aviation cargo perspective. Additionally, TOC could enhance current understanding and extend the knowledge towards constraint adaptation in the aviation sector, specifically the air cargo sector. In this research, inventory refers to the money that cargo organization has spent and invested in purchasing the needful for its cargo services. Figure 2 shows the five (5) stages of constraint management and adaptation using TOC.

Figure 2: Theory of Constraint as Theoretical Base for This Study



Source: The authors

Research Methodology

Qualitative research method: Data collection and sampling

This research opts for interpretive qualitative study in exploring Covid-19 pandemic challenges in the air cargo sector. This is in response to the call from previous studies (Abdul Rahman et al, 2016; Marasco 2008) to have more qualitative research in understanding logistics and supply chain including air cargo context. The aim of a qualitative study is to understand the phenomena, get a rich explanation and deeper understanding of the observable phenomena as opposed to the positivist research approach which the aim of the study is to generalize. Furthermore, as mentioned by Merriam (1992, 1998), one organization involved in a qualitative study is also acceptable since the aim of qualitative study is to explore the phenomena. The number of respondents contributes to further understanding and a rich explanation of the study. Seven respondents from four local and international organizations that provide air cargo services have participated in this study. Details of respondents are stated in Table 1.

Table 1: Respondents' Profile

Interviewee	Gender	Years of experience	Position/ Division	Company
MH	Male	7	Commercial	A
MF	Male	2	Operation	A
MY	Male	18	Operation	B
MJ	Male	21	Operation	C
SZ	Female	12	Asst Manager	D
HH	Female	6	Cargo Manager	C
IS	Male	16	Commercial	C

Source: The authors

All in-depth interviews with the seven respondents were performed online. In this research, the researcher utilizes theoretical sampling, purposive sampling, and snowball sampling techniques. The interview was performed with a guide from the interview protocol developed earlier consisting of eleven interview questions. The questions can be categorized into three main sections namely warm-up questions, main questions, and closing questions. The unit of analysis in this study is a cargo organization that provides air cargo services.

Key Findings and Discussion

Perception Relating to Key Barriers Faced by Air Cargo Players

Several key themes were explored from the interview data gathered from in-depth interview analysis. Concerning key barriers faced by the air cargo players, it was agreed by all respondents that they were hit hard by the pandemic. They mention that this pandemic was never expected to hit the global airline industry as badly that it will cause all airlines to shut down their operations. Cancellation of the passenger airlines had a negative impact on the cargo provider, as well as airline caterer. No passenger means no luggage, or cargo from the passenger. They mention the losses they need to bear since they have to control and maintain the optimal number of cargo staff and cargo equipment. As one of the interviewees highlighted:

“We need to maintain the optimal number of our staff and equipment.... No cargo movement means we bear losses” MH.

This is also supported by MF saying that: *“...less airlines travel indicates less passenger... and less cargo load....”*

However, as mentioned by other respondents, they did have loads coming from industry key customers. They mentioned that even though a travel ban has been enforced on passenger airlines, there were demands for freighter airlines, and sometimes it was difficult to meet the emergency loads. This emergency load is referring to cargo that carries medical supplies, medical equipment, food, and other essentials. Even though this represents good demand to transport emergency cargo and was beneficial to their air cargo organization, the insufficient freighter to transport this emergency cargo cases they faced at times were quite challenging as they have to maintain their on-time performance in transporting cargo. One of the respondents said:

“we have problem in getting the right aircraft size and the freighter that we have, we should ensure our loads were filled to the optimal maximum space”. -MJ

One of the respondents added, the fluctuation number of cargo capacity demand during this pandemic sometimes creates a problem for them to plan for cargo loading. They have to ensure their loads are optimized for every aircraft they use. In this pandemic, the passenger airlines have been shifted to cargo aircraft and they are flying to carry cargo. This is also agreed upon by the other respondents.

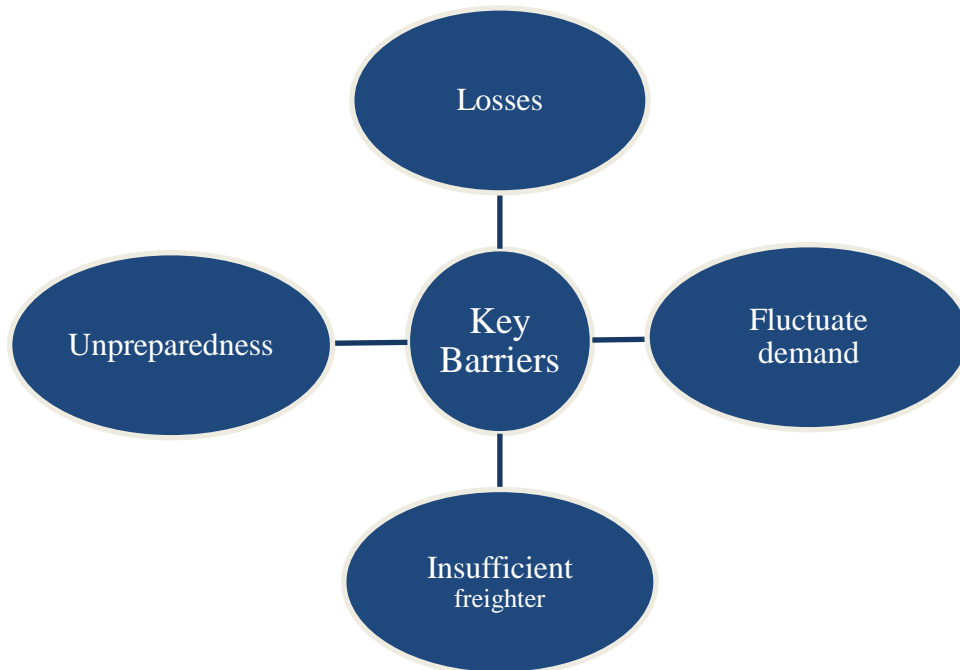
One of the respondents highlighted:

“since the pandemic hit the industry, we realize that we never expect this emergency situation could be this bad” – MY

The industry was in a vulnerable position and not ready to handle this situation. However, even though they face many challenges and barriers during this pandemic, as the industry is highly regulated, they could refer to the higher authorities and associations to help manage and ensure the survival of this industry. The International Air Transport Association (IATA) is an association for the airlines and cargo players and it provides the manual and latest information to help the industry to respond to challenges during this pandemic.

To conclude from the findings, there are about four main key challenges or barriers that the cargo industry is facing during the Covid-19 pandemic namely bearing losses, cargo demand fluctuation, insufficient freighter to meet emergency loads, as well as unpreparedness to face such big scale of a pandemic. These key findings are summarized in Figure 3.

Figure 3: The Key Barriers Faced by Cargo Players During the Covid-19 Pandemic

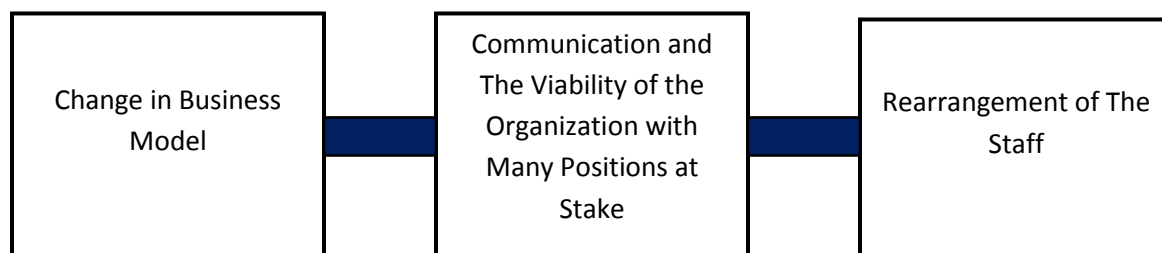


Source: The authors

The Impact from Pandemic and How Do They Respond

From the findings, all respondents agree that there are three main impact or implications to air cargo players due to this Covid-19 pandemic with the major impact is related to their business model. As highlighted by the respondents, the most important impact is on the need to change their business model. Another impact of the pandemic that hit their organization is on the communication and viability of the organization with many positions at stake. The third impact of the pandemic to their organization is regarding the rearrangement of the staff or workers. The impact or implications to air cargo players due to the Covid-19 pandemic is illustrated in Figure 4.

Figure 4: Three Main Implications to Air Cargo Players Due to Covid-19 Pandemic



Source: The authors

According to the interview respondents, due to scale disruption and the demand fluctuation of their cargo capacity, they have to change their business model, especially on their air freighter arrangement and their routes or cargo network to support humanitarian aides such as transporting medical supplies and equipment. One of the cargo operators mentioned:

“the main revenue during this pandemic is from their charter aircraft “ -IS

This is also agreed upon by the others. Since the issue they were dealing with was cargo load fluctuation, they agreed that they had to respond to this issue by continuing with an operation where there is a demand. As highlighted by one of the respondents:

“we will continue to operate on those segments where there is a demand”-SZ.

This is also supported by other respondents. The other impact of the pandemic is the issue related to the communication system. They continue to communicate with all their network every day to avoid miscommunication. As agreed by all respondents, the other impact of changes on their operation and business model, they also need to rearrange their staff in all departments.

Recovery Strategy from Pandemic and How Do They Respond

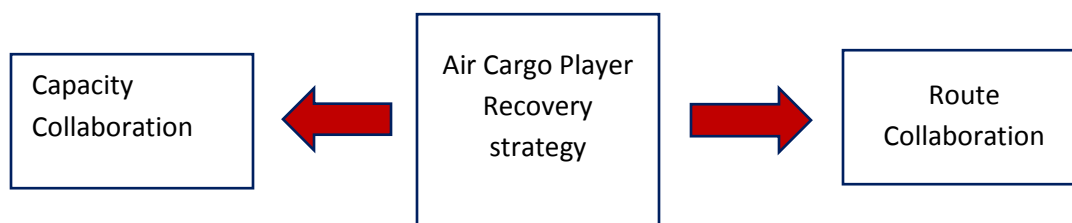
One of the key recovery strategies identified from this study is that the air cargo player's survival strategy is now moving towards cooperation with competitors. They are now thinking about collaborating with competitors in any way they can to survive. One of the most noteworthy recovery strategies of this matter is capacity collaboration. As highlighted by one of the respondents,

“we do collaborate with XXX.... this is what we should do to have cost-effective”-MH.

This is agreed upon by all respondents. The respondents were also hoping that the travel ban will be lifted very soon and hoping to have demand again from the cargo-passenger market.

The other recovery strategy identified in this study is the collaboration route. It is interesting to note that to improvise and slowly recover from the pandemic, they are also very open to having a collaboration route. This means that the cargo airline will focus on a specific route and the same goes for the other cargo airlines. These two key recovery strategies identified in this study as suggested by the respondents are summarized in Figure 5.

Figure 5: Two key recovery strategy from the Air Cargo players



Source: The authors

Conclusion: Originality, Contribution and Research Recommendation

To conclude, this study's originality is from the recovery strategies identified from the perspectives of air cargo providers in responding to Covid-19 pandemic challenges. The findings from this study could provide reference to the air cargo players and as input to the regulators or policymaker in finding ways to help the aviation industry to survive in a pandemic and to further grow in the future.

From a theoretical contribution point of view, this study enhances our current understanding of the issue of organizational recovery strategy by enhancing the theory of constraint elements in the study. This finding added to the literature by providing a detailed explanation of the key themes identified in this study in explaining the key barriers of Covid-19 pandemic affecting air cargo players, the implications, as well as the recovery strategy plan.

From a practical point of view, the recovery strategy model developed in this study could also be referred to by other sectors within the aviation industry as well as other relevant industries. This is vital for every business in any industry to rebuild their business and operation to sustain the existence of their organization. Future research is recommended to look into the discussed issues in more detail with focusing on every sector within the aviation industry.

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