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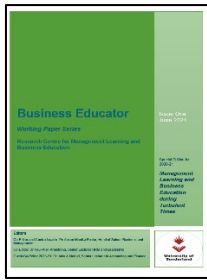
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**COVID-19 on aviation: Insights on challenges facing the airlines; managing uncertainty, and the potential role of leadership in dealing with a crisis.**

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**Abstract**

Today's COVID-19 situation has devastated the aviation industry, and as a result, airlines have great uncertainty about lower levels of air service, a slowdown in demand, and an unknown return to levels seen before 2020. While an airline's business model is vital for the company's overall success, this model does not just impact short-term results but also long-term survival. As the sector recovers from the recession, implementing the current course of action will have consequences. Even while crises can be destructive to economies and communities, they also offer opportunities for strategic change. This, then, encourages businesses and people to see things differently and even make changes to their thinking that they may not have been prepared to accept what was previously thought to be impossible or impractical. Covid-19 quickly and powerfully depleted the individual's social connections, placed them at risk of losing professional stability, and encouraged their isolation. Team collaboration has a more significant impact during a crisis because team collaboration raises morale, relieves stress, and fosters a sense of unity that helps the employees in the long run.

*Keywords:*  
Uncertainty  
Leadership  
Strategic management  
Response strategies

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## Introduction

With more than 1.16 million cases and more than 2.5 million deaths affecting more than 200 countries and most companies (World health organisation, 2021), the COVID-19 pandemic remains one of the unprecedented global crises of our modern times. There are more than 39.77 million cases in Europe, more than 51.5 million in the US, more than 13.6 in Southeast Asia, 6.6 million in the eastern Mediterranean and more than 2.8 million in Africa (WHO, 2021), making this an actual global pandemic.

The pandemic has had a significant effect on the air transportation industry, which derives its revenue from offering transportation services for passengers and goods. The industry has been affected directly and indirectly by the restrictions on human travel. The COVID-19 pandemic will cost European airlines 76 billion USD in 2020, while Middle East markets would lose 24 billion USD under various COVID-19 evolution scenarios (IATA, 2020). Aviation is one of the first and most visible economic losers of the restrictions placed to prevent the spread of COVID-19, with 95 per cent of passenger flights grounded. These measures include border closures, social isolation, and limits on people who move and travel (Early, 2020). That generated revenue losses of around US \$100 billion in 2020 for the industry in the region.

International flights have been dramatically cancelled as a result of travel restrictions imposed from high-risk regions, followed by domestic flight cancellations in the Middle East, Europe, and the United States to prevent the virus from spreading domestically; in the Middle East, industry-wide revenue passenger-kilometres (RPKs) declined in January 2021 after several months with no discernible change. They were 72 per cent lower than January 2019, a more reliable comparison due to the significant traffic shifts in early 2020 (IATA Economy, 2021).

There were 3.5 million fewer passengers in Jordan, resulting in a revenue loss of US \$0.7 billion, putting 34,000 jobs at risk and contributing US \$1.1 billion to the Jordanian economy (IATA press, 2020). The cancellation of flights has resulted in a direct reduction in air passenger transportation and a significant reduction in foreign and domestic freight transfer. On the demand side, school closures, tourism, and

businesses reduced travel demand, and disabled retail markets reduced the supply chain demand, thus weakening the global air transport industry's vitality.

This paper aims to discuss the role of leadership in the global airline industry and the contemporary challenges of introducing new policies in the wake of COVID-19. It is based on a systematic literature review to discuss emerging calls on the impact of COVID-19 as a non-traditional crisis on the aviation industry.

## **Literature Review**

Researchers and decision-makers have become increasingly worried about COVID-19's harmful impact on the business, industry, and the global economy. Despite the plenty of new lines of COVID-19 research and companies being surrounded by the ensuing uncertainties, research into new management and leadership styles, adapting or creating new strategies for emerging risks remains in dearth (Gostin and Wiley, 2020).

The existing literature examines demand risk, financial risk, and other macro risks such as environmental risk, natural disaster risk, political and social risk (Black, 2020). Only a tiny amount of research has been conducted on the impact of such a pandemic on leadership and decision-making. However, there are limited studies that exam considering models in a pandemic situation such as COVID-19, where the effects are global and long-lasting, (e.g. natural disasters), which may be significant because strategic management models, overall, fail to incorporate risk management effectively. COVID-19 is causing uncertainty in a wide variety of countries and sectors. The disturbance is fluid, moving in waves through regions.

Recently, COVID-19 research in the airline sector has taken a toll on stakeholders' demand for the fast response and action planning that is needed. Some investigated popular health-related subjects, whereas others researched domain-specific areas of the aviation industry for airlines. The role of Airlines' actual spread of COVID-19 suggests an elevated risk in 2020 (Wells et al., 2020). The impacts of uncertainty shock on airline jobs studied by Sobieralski (2020). The hardest-hit jobs are those involved with passengers' in-flight services and in-flight operations.

Motivated by the academic gap in tandem with COVID-19's devastating effects on how businesses work, this paper comes as part of a study that aims to examine the processes of operations, the role of leadership and the strategies adopted in the global airline industry, and outline the contemporary challenges of introducing new policies in the wake of COVID-19. The study is limited to the obstacles inherent in adopting and applying strategies and leadership styles in the global airline industry to achieve this objective.

The study predicted substantive contribution to the literature of strategy and leadership. First, given the increasing global calls for a better understanding of the impact of COVID-19 on companies, the study will contribute to the current literature by reviewing leadership practices in the global airline industry and analysing the potential challenges facing the leadership ability within the aviation industry, and the short and long-term strategies in the wake of COVID. In the following discussion section, three themes have been evolved based on a systematic literature review; the critical challenges of business practices in the wake of COVID-19; managing risk under uncertainty in the era of COVID-19; strategic management and crisis response.

## **Discussion**

### **Theme one: Challenges of business practices in the wake of COVID-19**

The financial losses resulting from the cancellation of flights and closures at airports are likely to cause many airlines to pursue innovation to survive and succeed. Indeed, the policies of introducing social distancing steps relevant to COVID are likely to influence pricing strategies. Some popular airlines have already adopted such ways of social distancing inflight. For example, airlines such as Royal Jordanian Airlines, Qatar Airways and Emirates have already tried some social distancing elements by not seating middle seated passengers and enabling them to switch seats to resolve their health issues. Furthermore, they decreased in-flight refreshments to minimise interaction between the inflight crew and passengers.

Taken together, these factors are likely to make it challenging to achieve low prices, especially for low-cost airlines competing on high-density seating prices. Legacy airlines such as Emirates and Qatar Airways have historically focused on quality services and access to a massive network. Thus, social distancing inflight may improve customer satisfaction and make it hard to achieve affordable prices (Amankwah et al., 2017).

One of the critical challenges facing industry and companies is that some firms can deprioritise long-term plans, move capital away from the human course, and concentrate on short-term survival (Davis-Peccoud and van den Branden, 2020); policymakers have taken measures to loosen some labour compliance regulations.

The study will contribute to the ongoing discussion on the impact of COVID-19 on the airline industry's governance policies and business practices. The study primarily looks at the difficulties and opportunities of implementing new strategies and leadership styles in a competitive market climate precipitated by COVID-19 instead of the neutral atmosphere where the policies were introduced and implemented. Besides, it will investigate the organisations' practices in the socio-economic climate and identify the impact of such practices on the workforce.

From a practical point of view, the pandemic made standard practices and strategies tougher in the short term for some companies by unleashing operational stresses and threats to companies' survival that restrict managers and firms' ability to respond to such challenges (Davis-Peccoud and van den Branden, 2020). Therefore, COVID-19's effect emphasises strategic collaborations' value in ensuring that operations flow sustains momentum during and after the crisis. Practising airline managers and executives are expected to innovate in methods that provide customers with safe service assurance to mitigate the COVID-19 impact and contribute to sustainable success.

## **Theme two: Managing risk under uncertainty in the era of COVID-19**

The current COVID-19 issue has devastated the aviation industry with uncertainty about reduced availability, insufficient demand, and an unknown return to pre-2020

levels. The pandemic's effect on airlines is an ongoing topic of debate for policymakers, given the industry's substantial economic influence and importance. However, the conversation about the post-stimulus impacts of airline labour is usually an afterthought. The ongoing research will contribute to the policy debates by offering information on the potential consequences of Jordan's current airline labour crisis.

In the definition of risk, uncertainty is significant. The existence of risk necessitates a certain amount of ambiguity. If the emphasis is on the likelihood of the danger arising or its effects, the underlying factor is uncertainty. Although this difference of focus will profoundly impact how risk is handled, any attempt to minimise risk is met with various uncertainties (Baroang et al., 2009; Aven, 2016). To gain insight into unpredictable events, one must follow more comprehensive risk viewpoints, principles, and methods. Risk assessments are often possible. Regardless of data availability, risk can still be conveyed. On the other hand, significant uncertainties make accurate forecasts and decision-making a complex task (Aven and Krohn, 2014; Ruozi and Ferrari, 2013).

Risk is classified into three categories based on its degree of uncertainty: known unknowns, knowable unknowns, and unknowable unknowns. Unknown unknowns: irreducible (not simplifiable) complexity unaffected by additional knowledge; the occurrence will occur, but the date, time, and magnitude of the event are unknown. It is the simplest form of risk to handle because data is frequently available, and experience-based evaluations offer guidance on acceptable levels of contingency (Lemos, 2020).

Unknowns that can be known epistemic (reducible) uncertainty is inherently knowable but unknown due to process/skill failure or a lack of sufficient insight. Via innovative risk detection, discovery, and education, one challenge of successful risk management is transforming as many knowable unknowns into known unknowns as possible. Unknowable unknowns: ontological (by design) uncertainty; the occurrence or result cannot be predicted before it happens. It is not possible to handle something one does not fully understand. As a result, the most destructive uncertainties are the unknowable unknowns (Lemos, 2020).



COVID-19 was not a surprising incident that occurred without warning. Many nations, leaders, and groups have already made pandemic preparations. Infectious diseases were ranked as the top ten risks for the next ten years by the world economic forum (WEF, 2020). As a result, COVID-19 should have come as no surprise. Understanding which group of uncertainty COVID-19 belongs to will help leaders better prepare for or cope with such events.

COVID-19, as an infectious disease was expected, appears to be an occurrence that generates much uncertainty, particularly in terms of knowable unknowns. However, it has become a global disturbance due to a lack of process and expertise and failure or a lack of proper insight. Therefore, the task is to convert as many knowable unknowns as possible into known unknowns. The solution to the problems can be found in risk management, which focuses on two perspectives: immediate response to short-term developments and long-term response through strategic planning to transform the crisis into an opportunity.

Throughout history, the aviation industry has been affected by global crises. The industry has weathered many storms, including the oil embargo, airline deregulation and terrorist attacks (Davies, 2016). airline's success during and after this crisis is also associated with the business model of the airline. The 9/11 attacks resulted in a marked decline in air traffic and airlines struggling to stay operational. As SARS spread followed those events, in 2004, demand only returned to pre-2001 levels (Franke and John, 2011). Low-cost carriers gained market share during this time as significant air carriers struggled to recover as the competition for prices increased (Tan, 2016).

In response to the pandemic, Royal Jordanian Airlines has made some critical changes to their airport service model and in-flight safety measures to ensure a safe operation; for example, they now encourage passengers to check-in online to minimise social interaction at the airport, have installed new self-check-in machines and increased the number of baggage drop-off counters, and have increased the number of they provide local amenities onboard to minimise contact; the crew is qualified to deal with suspicious incidents, and pre-and post-flight disinfection, hygiene, and deep cleaning are improved. Onboard restrooms are sanitised more regularly throughout the flight, passengers are expressly advised to wear face masks

during the flight, and economy class passengers receive prepackaged catering. Regarding the crown class, they have planned their catering services to minimise interaction with the crew. Their aircraft are equipped with the most sophisticated air filtration systems available, and their industrial-size HEPA filters eliminate 99.97 per cent of viral and bacterial pollutants from recirculated air.

Less discussed in the literature are shifts in the workers in the sector because of such a crisis. For instance, airlines moved to restructure their operations after COVID-19 to reduce fixed and variable costs. These efforts have been marked by layoffs of workers and labour contract renegotiations; the remaining workers faced pay and benefit reductions that differed depending on their occupation and ranged from 9 to 50 per cent.

The study indicates that if individuals have several 'self-identifiers, which means they have better psychological well-being, social, professional and personal, leading up to self-awareness that serves as a shield against any determinant effect on one's sense of well-being (Lester, 2012). Arguably, without actually providing the support networks to handle it successfully, COVID-19 soon took individuals of personal connections, challenged their professional stability and forced individuals into isolation.

During periods of organisational stress, awareness of the need for authentic leadership and emotional intelligence combined with their already well-managed cognitive and functional intelligence can boost the capacity of managers to solve problems and provide a context that can be accepted by staff who have been unexpectedly pushed beyond their usual operating framework (Tisdall and Zhang, 2020). In a crisis, true team collaboration will enhance workers' integrity, minimise pressure, and foster a sense of harmony that brings long-term positive impacts.

Relatedly, other studies have revealed the role of decision-making power in the crisis response innovation process. It showed, for instance, that firms performed better in the middle of the crisis if more diminutive and more accountable boards controlled them and if they had a more assertive leader with far-reaching space for a manoeuvre (Dowell et al., 2011). More specifically, the study demonstrated that a strong CEO and a small board of directors would allow a company to move faster

than competitors without such organisational structures. Importantly, however, this conclusion only seemed to hold for businesses, mainly affected by the crisis.

### **Theme three: Strategic Management and crisis response**

"When a crisis occurs, it usually arrives as a barrage of urgent, unexpected and unpleasant events, allowing little time to organise or plan appropriate responses" (Nathan, 2000, p. 12). An unprecedented situation such as the COVID-19 pandemic means that not only is there little time for coordinating and preparing responses, but traditional strategies for response are often ineffective (Wenzel et al., 2020). The steps currently being taken would have consequences for the sector emerging from the crisis, even after the crisis.

In times of crisis, decisions made now would significantly affect airlines' manoeuvring position and performance in a post-COVID-19 crisis environment. After implementing lockdown steps, the COVID-19 pandemic will change the global aviation industry's competitive environment. Despite clear and understandable immediate and near-unanimous efforts by airlines to reduce cash burn in the revenue-stifling crisis, their strategies varied considerably as the crisis spreads (E.g., Air France – KLM prematurely pulls back its A380 fleet (Dunn, 2021) while Wizz Air plans to extend to new euro countries following the crisis (Reuters, 2021). Airline firms in Jordan should be aware of such circumstances and strategies. Hence, one of the study objectives is to shed light on such strategies that may benefit Jordan's airline industry.

Critical articles which shed light on how airlines respond to crises are published in the Strategic Management Society (SMS) journals; here, the emphasis is on papers that specifically relate to strategic responses to crises in a narrow sense, i.e. crises viewed as sudden, unforeseen, and significantly disruptive by organisations' leaders (Pearson and Clair, 1998). That suggests four strategies for crisis response: retrenchment, preserving, innovation and exit.

Retrenchment is a strategic reaction to a commonly accepted crisis (Bruton, Ahlstrom, and Wan, 2003). This response refers to cost, properties, goods, product lines and overhead reductions (Pearce and Robbins, 1993). Therefore, such

strategies effectively limit the reach of the business operations of a company. As previous research indicates, decreasing the market scale by retrenching allows mixed contributions to its turnover. Some researchers find retrenchment to be a significant part of long-term firm recovery since it stabilises declines in performance (Pearce and Robbins, 1994; Robbins and Pearce, 1992). It improves the emphasis on ongoing operations by reducing uncertainty and increasing accountability, thus providing a stable base for strategic renewal (Barker and Duhaime, 1997; Barker and Mone, 1994).

Leaders need to be mindful of the possible loss of synergy effects in times of crisis. However, the lack of synergy impact in the longer run obstructs economies of scale, as management can no longer distribute resources and costs across companies (De Figueiredo, Feldman, and Rawley, 2019). Thus, while in the short term, retrenchment may be partly a requisite or even an inevitable response to the crisis, the long-term feasibility of this solution is far from an argument (Chadwick, Hunter, and Walston, 2004). Particularly when a crisis takes longer continued downsizing may lead to the deterioration of a company's valuable capital, skills, and culture (Ndofor, Vanevenhoven, and Barker, 2013), leading to thinking about an alternative strategy for crisis response.

On the other hand, preserving is about steps intended to continue the commercial operations of an organisation in response to the crisis. Thus, contrary to a restricted range of retrenchment activities, these strategies aim to maintain the market share and reduce the crisis's detrimental consequences (Wenzel, 2015). Previous studies suggest that preserving can be a highly successful strategic response to a crisis (Stieglitz et al., 2016). In particular, in unpredictable situations where businesses face changing circumstances daily, persevering firms may outperform rivals undertaking strategic renewal because – repeated changes in direction weaken the importance of (strategic renewal) and transfer performance gains firmly to inert organisations that maintain the market share (Stieglitz et al., 2016).

Preserving can be an essential strategic response to the crisis, so leaders might be well-advised to initiate strategic renewal too early. The response, however, is ultimately linked to the availability of assets. The likelihood that an organisation will exceed the limits of its available assets and resources as the length of the crisis it is

facing increases. As a result, preserving will lead to firm survival's medium-term sustainability, but enforcing this approach will be difficult, if not impossible if the crisis lasts longer.

Although crises can have catastrophic impacts on economies and communities, they also open room for strategic transformation opportunities. So, decide to understand what used to be unthinkable or impracticable (Roy, 2018). In that context, in reaction to a crisis, studies relate to innovation as the realisation of strategic renewal.

Given the resource-based limitations of preserving over time, innovative strategies can be increasingly crucial for maintaining firm survival over the long term if the crisis lasts longer. Nevertheless, managers and workers can make something out of nothing (Nelson, 2005) or understand their assets' flexibility and exploit it (Danneels, 2011). Excess capacity is most likely needed to realise strategic renewal in response to a crisis. As a result, if managers wait too long and spend the company's capital on preserving or retrenchment, the potential scope for strategic renewal will be reduced.

Exit Strategy involves discontinuing an organisation's operations in response to the crisis (Argyres et al., 2015). When the other solutions fail, an exit may be necessary. It can also result from pessimistic decisions, which means leaders discontinue their business because they do not believe that any other approach will help their company survive the crisis (Cornelissen et al. 2020).

Exits can be an essential cornerstone for strategic renewal (Ren, Hu, and Cui, 2019), as they unlock dedicated capital and thus lead to new projects being created (Carnahan, 2017). Thus, while exits are not cost-free (Moulton and Thomas, 1993) and potentially leave a failed business's reputation (Xia et al., 2016), such responses may not simply be the end of the path.

The impact of the pandemic on airlines is a point of contention for policymakers, considering the industry's enormous economic clout and significance. Numerous countries, officials, and organisations have already begun making pandemic plans. Even the world economic forum rated infectious diseases as one of the top ten threats for the next decade. Understanding which group of uncertainty COVID-19 pandemic belongs will assist leaders in better preparing for, or coping with, such incidents.

Global crises throughout history have impacted the aviation industry. COVID-19 erupted into a global crisis as a result of a lack of mechanisms and experience. During and after a crisis, the success of an airline is also dependent on the airline's business model. True team collaboration during a crisis strengthens employees' dignity, alleviates pressure, and fosters a sense of unity with long-term beneficial effects.

Financial losses resulting from flight cancellations and airport closures are likely to drive many airlines to innovate to survive and thrive. Inflight social distancing can increase customer satisfaction while making it more difficult to maintain affordable prices. Practising airline managers and executives are forced to innovate to minimise the COVID-19 effect and contribute to the airline's long-term success.

The COVID-19 pandemic containment measures alter the competitive environment of the global aviation industry. Jordanian airline companies should be cognizant of such situations and strategies. Leaders must be cognizant of the possibility of losing synergy effects during times of crisis.

While retrenchment may be a necessary or even unavoidable response to the crisis in the short term, the authors argue that its long-term viability is far from certain. The new course of action will have ramifications for the sector when it emerges from the crisis. Airlines should consider how to respond to crises that could favour Jordan's airline industry. Continued downsizing could result in the degradation of critical capital, skills, and culture. Preserving has been shown in previous research to be a highly effective strategic response to a crisis. Excess capacity is almost certainly needed to carry out strategic renewal in the aftermath of the crisis.

Managers who delay and waste the company's money on preserving or retrenchment reduce strategic renewal opportunities. Although crises can have devastating consequences for economies and societies, they also provide opportunities for strategic change. Therefore, resolve to comprehend what was previously impossible or impractical.

## **Conclusion**

Exit strategies will serve as a critical pillar of strategic renewal. They mobilise committed resources, resulting in the development of new ventures. Though exits are not accessible and may harm the image of a failed company, such responses may not be the end of the road. Given the presence and severity of the ongoing COVID-19 pandemic, more research is required in times of crisis for strategy building. Specifically, while uncertainty in many strategic management theories has fallen out of favour (Alvarez et al., 2018), that is an integral part of crisis responses. Therefore, one study explores the internal and external enablers and disablers that drive managers and employees to react appropriately to the contextual factors triggered by crises.

The relative importance of strategic crisis responses based on different time horizons points to temporal differences in the crisis response phase. That is, at some points in time, one response may be superior to another, and following some of the strategic responses to the crisis may be too early or too late (Kunisch et al., 2017). For this purpose, future research is required to explore the role of time and temporality in reacting more deeply to the crisis.

Strategic crisis responses are not unrelated; that is, one possible response may be a necessary first step to another. While past studies point partially in this direction, the dynamics of shifting between strategic responses are little known (Fallon and Kakabadse, 2009). As a result, it is necessary to investigate the sequential patterns of responses and the underlying mechanisms that are more or less successful in resolving crises.

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