

Organizational Risk Management Practices in Time of Crisis: An Exploratory Case Study of Ethiopian Airlines in the Corona virus Pandemic

G. Nekerwon Gweh

Public Health Fellow, Information & Communication at Africa CDC, African Union Commission, Addis Ababa. E-mail: nekerwon@gmail.com

and

Dejene Mamo Bekana¹

Assistant Professor of Finance and Political Economy, Ethiopian Civil Service University, P.O.Box 5648, Addis Ababa, Ethiopia. Email: dejenemamo@gmail.com

Abstract

The purpose of this investigative case study research was to scrutinize the approaches of organizational risk management strategies applied by the Ethiopian Airlines throughout the global COVID-19 pandemic. It aimed at assessing and documenting risk management methodologies, best practices and lessons learned by the Airlines to survive the damaging impact the health crisis. The researcher limited the participants to six senior and middle level staff who are responsible to handle the Airlines risk management operations and the project management departments. The Situational Crisis Communication Theory (SCCT) and the Team Leadership Model (TLM) were the conceptual frameworks used as the basis for this study. Data triangulation was used to support the review and analysis of data gathered from various sources. Data analysis methods in conjunction with the NVivo software were used to support the identification of core themes. Situation Awareness and Decision Making, Leadership Presence Strategy, Strategic Internal Communication and Transparent Public Communication were the themes identified. A fundamental finding from the study revealed that Ethiopian Airlines' Strategic Business Plan calls for the establishment of "multi-business units" as a key principle. This is seen in how the company has diversified its operations into tourism, hospitality and Aviation trainings in addition to the original passenger and cargo services it offers as an airline.

Keywords: Strategies of Risk Management, Team Leadership Model, Situational Crisis Communication Theory

1. INTRODUCTION

¹ Corresponding author

1.1 Background of the study

In a world full of uncertainties, every business and organization faces the risk of unexpected, harmful and catastrophic events that can cost the company losses in terms of financial or human resource, especially in this era of massive globalization (Burke 2003). These eminent threats, which may also be avoidable, could derive from a wide variety of sources, including financial uncertainties, legal liabilities, strategic management errors, accidents and natural or manmade disasters. Additionally, Information Technology (IT) security threats and data-related risks, and the proper kind of risk management strategies to alleviate them are now creeping in as top priorities for companies who deal in the digital space, with the fast emergence of the internet age in the 21st century (Schwalbe, 2006). Hence, Risk management allows organizations to attempt to prepare for the unexpected by minimizing risks and extra costs before they happen. Through implementing a risk management plan and considering the various potential risks or events before they occur, an organization can save itself crucial resources and protect its future. This is evident that a robust risk management plan will help a company establish procedures to avoid potential threats, minimize their impacts should they occur and cope with the results, (Chapman & Ward, 1997). This ability to understand and control risk enables organizations to be more confident in their business decisions. Furthermore, strong corporate governance principles that focus specifically on risk management can help a company reach their goals (Rouse, 2020).

Different organizations react to crisis situations differently resulting in either turning around their businesses or leaving them to perish (Pan & Chen, 2014). Effective crisis mitigation is designed to avoid or reduce the negative effect to protect institutions, personnel, or enterprises from being damaged (Lei & Chang, 2016). Consequently, the ability of a leader to turn crisis to an advantage will depend on the leader's ability to adopt appropriate risk mitigation strategies and best business practices. Thus, crisis effect mitigation will play a significant role in the sustainability of the aviation industry which is already being hugely impacted by the ongoing health crisis. The objective in this study is therefore to investigate the strategies of risk management and understand what approaches and best practices has been employed by Ethiopian Airlines to keep the company operating through the global COVID-19 outbreak. Many big and well recognized companies in the airlines or travel industry have experienced an unprecedented degree of losses in terms of income or revenue generation due

to lack of operation. Airplanes have been grounded for months due to global lockdowns and some companies even lost their employees to the corona virus pandemic which has ravaged the entire 2020 year. According to the International Civil Aviation Organization (ICAO), aviation-supported jobs potentially fell from 46 million in 2019 to 41.7 million (-52.5%) in 2020 while direct aviation jobs (at airlines, airports, manufacturers and air traffic management) fell by 4.8 million (a 43% reduction compared with pre-COVID situation). Furthermore, nearly 39,200 special repatriation flights took nearly 5.4 million citizens home after borders closed in March 2020 and special cargo flights totaling nearly 46,400 transported 1.5 million tons of cargo, mostly medical equipment, to areas in need during the height of the pandemic response throughout the year (ICAO, October 2020).

In a more specific context to Africa, a recent analysis by the International Air Transport Association (IATA) Regional office for Africa and the Middle East indicates that Africa aviation's recovery will be weaker than expected. The estimates indicate that the industry will reach just 30% of its 2019 levels. According to IATA's projections, the region is expected to see around 45 million travelers in 2020 rising to 70 million travelers in 2021 in terms of absolute numbers. A full return to 2019 levels which was about 155 million travelers is not expected until late 2023. Though domestic travel is picking up across Africa as countries re-open their borders, international travel remains heavily constrained as major markets including the European Union remain closed to citizens of African nations. The report further disclosed that four (4) of the continent's flyers have ceased operations due to the impact of COVID-19 and two (South African Airlines and another) are in voluntary administration, with many more in serious financial distress. Without urgent financial relief more carriers and their employees are at risk, as is the wider African air transport industry, which supports 7.7 million jobs on the continent (IATA, November 2020).

As recent developments show, the COVID-19 outbreak looks determined to cross over to the New Year (2021) as many countries in the developed world and even in Africa are still grappling with second wave of surge in cases. However, with the emergence of several COVID-19 vaccines in recent months, there seem to be hope on the horizon that could help the world put an end to this huge catastrophe and prepare to deal with its impacts on the global

economy and the livelihoods of the world's more than 7 billion population. Consequently, these researches and critical analyses by ICAO, IATA and global bodies like the WTO and others have identified the causes of economic devastation which leads to the loss of investment for shareholders and source of livelihood for so many, including customers and employees and their families. To proffer key solutions to such mind-blowing crisis affecting global public health, strategies to mitigate the effect of the crisis situations at various levels may prove effective (Meiste & Jakstiene, 2015). Beyond the knowledge of possible crisis management, business/project managers will need a comprehensive risk mitigation strategy to protect their institutions against future occurrences. Findings from this research work could reduce the adverse impacts of risk the crisis poses and ensure best practices needed for sustainability depending on what we can discover from the ET's approach.

1.2 Statement of Problem

In the midst of such extraordinary crisis the world is faced with and the momentous risks it poses to the survival of businesses especially in the airlines, travel and tourism industry, one company in Africa that has managed thus far to continue its operations is the Ethiopian Airlines. So far, ET, (as the airline is widely known around the world) has been able to sustain its operations, maintain almost all of its thousands of employees globally and protected the investment of shareholders, especially shifting to its cargo. How did the ET managed to accomplish that? The general business problem in this study is that many big companies seem to overlook the critical issue of risk management when it comes to their operations. This is evident by the level of damage this corona virus crisis has done to many reputable airline businesses (ICAO 2020). The specific business problem that I addressed in this study is that some managers in the airlines sector do not take time to acquaint themselves with possible crisis situations for planning purposes, hence, they lack proper risk mitigation strategies to safe their companies from possible collapse and to remain sustainable after a crisis happens.

The travel sector has been one of the worst casualties of the corona virus disease outbreak since it was declared a pandemic in early 2020, with flights grounded and borders closed. From government bailouts to staff layoffs and forced retirements in some cases, commercial airlines have taken drastic measures to stay afloat through this damaging health crisis (AFP). But Ethiopian Airlines

found a way to limit the damage. According to CEO of the company, the company pivoted to meet surging demand for air shipping in March, repurposing 45 passenger jets to build out its cargo fleet. "We were very quick, very fast, flexible and agile to move our forces, resources and everything to cargo; I would say that those actions have saved the airline". So far these measures have caused Ethiopian Airlines to avoid seeking a bailout from government, laying off any full-time employees or requesting deferrals on debt payments (Tewolde, 2020). For the first half of the year (2020), ET reported an unaudited profit estimate of 44million dollars, a gain which is largely credited to its partnership with the World Food Program (WFP) following the United Nation's decision taken in April to open a humanitarian transport hub at the Bole international airport in Addis Ababa. To date Ethiopian has operated 360 cargo charters of personal protective equipment (PPE) to more than 80 countries, and the airlines has planned to make available at least 40 airplanes to join the global vaccine distribution, the CEO noted.

As the industry attempts to gradually recover, ET is aiming to cement its ties with other African carriers, starting with the struggling South African Airways (SAA). This comes in addition to a 45-percent stake the company holds in Zambia Airways which the CEO said he expected would be launched in October/November last year and the already existing partnerships with Malawian Airlines and ASKY Airlines out of its Western African hub stationed in Togo. However, these promising signs are not without key challenges that has faced Africa's biggest airline (ET) and the global aviation industry as a whole. In the early parts of 2020, Ethiopian Airlines reported a loss of \$550 million resulting from international flight restrictions due to the COVID-19 pandemic, a revenue loss which led to 90% cut of international flights for the national carrier. This means flying to only 19 international destinations out of 110 destinations that the airline used to cover pre-COVID 19 times. The international aviation industry in general lost \$52 billion, with African airlines losing \$4.2 billion of said total (ICAO, 2020). In more positive news for Ethiopian Airlines, the company officially completed and launched its 86,000-square-meter terminal expansion project at Addis Ababa's Bole International Airport in late August 2020. With the capacity to serve 22 million passengers a year, Africa's main transit hub is now home to the continent's second largest capacity airport after South Africa's O.R. Tambo International. But this is no ordinary terminal project: the \$300 million Terminal 2 has the distinction of

being the world's first completed amid the pandemic and designed with an eye towards bio-safety.

Aside from daily airport cleaning procedures, this means digitized features, including state-of-the-art thermal scanners, 30 self-check-in kiosks, 60 check-in counters, 32 arrival immigration counters with eight e-gates, 16 security screening areas, touch-free sanitizing gel dispensers, and socially distanced gate seating. The new facility now provides a contactless experience for travelers. "Using the Ethiopian mobile app, you can book, pay, check in, print tags, drop baggage, scan your boarding pass at immigration, or at the lounge. It's about empowering the customer to own the experience end to end", Miretab Teklaye," Ethiopian Airlines' director of integrated marketing, told the audience during the launch. The ultramodern terminal which was built in multiple phases over three years is part of Ethiopian's strategy to continue investing in infrastructure, one of its four key pillars. The project was financed by EXIM Bank China and designed by Singapore firm CPG. Although the airline went from growth mode to survival mode in March, future plans remain in place for the redesign of Addis' domestic terminal by 2021, as well as an 80 to 100-million-passenger \$5 billion airport just 39 kilometers southeast of the capital. Like the world's major commercial carriers, Ethiopian has suffered a massive loss in passenger flight revenue since Covid-19, to the tune of \$1 billion by the close of June 2020. What's notably different, however, is that the airline hasn't been impacted negatively in the way other carriers have: no government bailout request, no layoffs and no salary reductions. Instead, it has managed to turn a profit.

In late March, while other African airlines were grounded, Ethiopian saw the opportunity to recoup its passenger revenue loss by expanding its established 10-fleet cargo unit. The airline converted 25 passenger planes to cargo and deployed its 54,000-square-meter, high-tech pharma wing to store and distribute Covid-19 medical supplies and millions of PPE donations from China and from the UN World Food Programme to over 80 countries in Africa, Canada, the U.S., Europe, Asia, and South America. In addition to completing the airport expansion, the global shutdown has opened a window of new opportunities for the airline. Ethiopian began transporting Norway's fish exports and Kenya's flower exports. As a result of the skyrocketing demand through June, the airline doubled its cargo revenue and its cargo route expanded

to 74 destinations. “If cargo hadn’t been our strategic pillar back in 2010, we couldn’t do anything now, (CEO Teklaye).

Additional cash revenue sources have come from aircraft maintenance, repair and overhaul (MRO) services, which is another of Ethiopian’s established business units. In this sector, 40 aircraft from sub-Saharan Africa, plus a Middle East carrier — as well as from 63,000 repatriation charter flights to the Americas, Middle East and Asia since March. Ethiopian airline’s decision to diversify over the years had proven to be “a life-saving decision” according to the company’s veteran CEO. In June 2020, just as PPE cargo and repatriation demands decreased, Ethiopian Airlines began resuming its commercial flights. Thirteen aircrafts have been reconfigured back to passenger and the airline is currently operating 68 daily flights, albeit at limited capacity and reduced frequency, to destinations such as Dubai, Istanbul, Paris, London, and two of Ethiopian’s heaviest Africa routes – Ghana and Nigeria. It’s a number that keeps shifting as more governments lift flying bans. Aviation experts have expressed doubt that increased cargo revenue could keep Ethiopian afloat over the long-term. With other African airlines crumbling, the current aviation climate may also open the door wider to outside competitors looking for a share of African skies. But Ethiopian remains optimistic it can empower its fellow African carriers, while continuing to eye global opportunities in cargo, MRO, and even in hospitality with vacation packages aimed at Addis Ababa’s 70 percent transit passengers, incorporating the city’s new green and historic attractions, such as Unity Park and Entoto Park. Hence the research question is:

- What approaches of risk management practices has the Management of the Ethiopian Airlines employed to keep the company operating through the global COVID-19 outbreak?

2. LITERATURE REVIEW

2.1 Theoretical Literature

In this era of global connectivity and growing technology, many companies conduct abundant portions of their jobs in the form a project. Projects were mainly found in the construction industry and sections of the military as a traditional practice during the 19th century; but the global competition in today’s markets couple with fast-changing technology is inspiring most companies to

adopt project management methods (Burke, 2003). This is clearly seen by the immense successes gained through the implementation of mega projects across the world. To put this in context, the Project Management Institute defines Project management as the application of knowledge, skill, tools and techniques to project activities to meet project requirement. This process is mostly accomplished through the use of the processes such as: initiating, planning, executing, controlling, and closing (PMBOK guide, 2000).

Due to global economic pressures, instability in the corporate environment and market forces which leads to increasing demands and tougher competition, projects have to be implemented at lesser cost, within shorter timeframe, and with better functionalities (qualities). This further escalates growing demands on the management's ability to forecast and react to unforeseeable events or risks (Timothy & Warren, 2002). Risk is described by (Raftery, 1994) as an abstract concept whose measurement is very difficult. The 5th edition of Oxford Advanced Learner's Dictionary defines the term "risk" as –the possibility or chance of meeting danger, suffering loss or injury"; while the British Standard (BS 4778) considers risk to be "A combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence".

Risk as a general concept may include other related connotations, for example, the Corporate Financial Institute (CFI) views risk in the Business context to be a threat to a company's ability to achieve its financial goals. CFI goes further to explain that risk in business means that a company's or an organization's plans may not turn out as originally intended or that it may not meet its target or achieve its goals. Such risks cannot always be blamed on the owner of the company, as risk can also be influenced by various external factors, which may include rising prices of raw materials for production, growing competition, or changes or additions to existing government regulations and civil unrest or health crisis (CFI, 2020). Consequently, risk management is a critical factor to successful project management in today's ever changing world.

Project risk management is the scientific art of identifying, analyzing, and responding to risk throughout the lifecycle of a project and in the best interests of meeting project objectives (Schwalbe, 2006). Risk management has been practiced informally by everyone, with or without noticeable consciousness

since the onset of time. Modern risk management, which had become a widely accepted management function during the period from 1955-1964 has its roots in insurance to which it has been closely aligned for more than three centuries (Snider, 1991). Moreover, the story of risk management has not all been positive and supports the argument that it is currently ineffective at managing surprise. In the 1960's project management was under heavy criticism for project failures due to technical uncertainty, contract strategy, community opposition and project environmental impacts (Morris, 1997). A project manager may still today argue that the last two are external project factors and outside the immediate project environment under their control (Ibid) and it may be often assumed that these will be passed up the line to higher management levels (Chapman & Ward, 1997). The main objectives of risk management according to (Yee et al., 2001) include: a) enables more systematic and less subjective decision-making; b) Provides an improved understanding of the risks facing a project by identifying risks and response scenarios; c) Assists in deciding which risks require urgent attention and which can be addressed in the future; and d) Alert management's attention to the many possible outcomes for a project, and that appropriate measures should be planned for any adverse consequences. Flanagan and Norman (1993) proposed a risk management framework as shown in Figure 1 which depicts the elements of the risk management system – risk identification, risk classification, risk analysis, risk attitude and risk response.



Figure 1: Risk management Framework

Source: Flanagan & Norman (1993).

According to PMI (2000) and Schwalbe (2006), project risk management has the following processes as displayed in figure 2.

Risk Management Planning
Risk Identification
Qualitative Risk Analysis
Quantitative Risk Analysis
Risk Response Planning
Risk Monitoring and Control

Figure 2: Risk management processes

Source: Flanagan & Norman(1993)

Figure 3 depicts how risk management processes involved in each step of the project management cycle

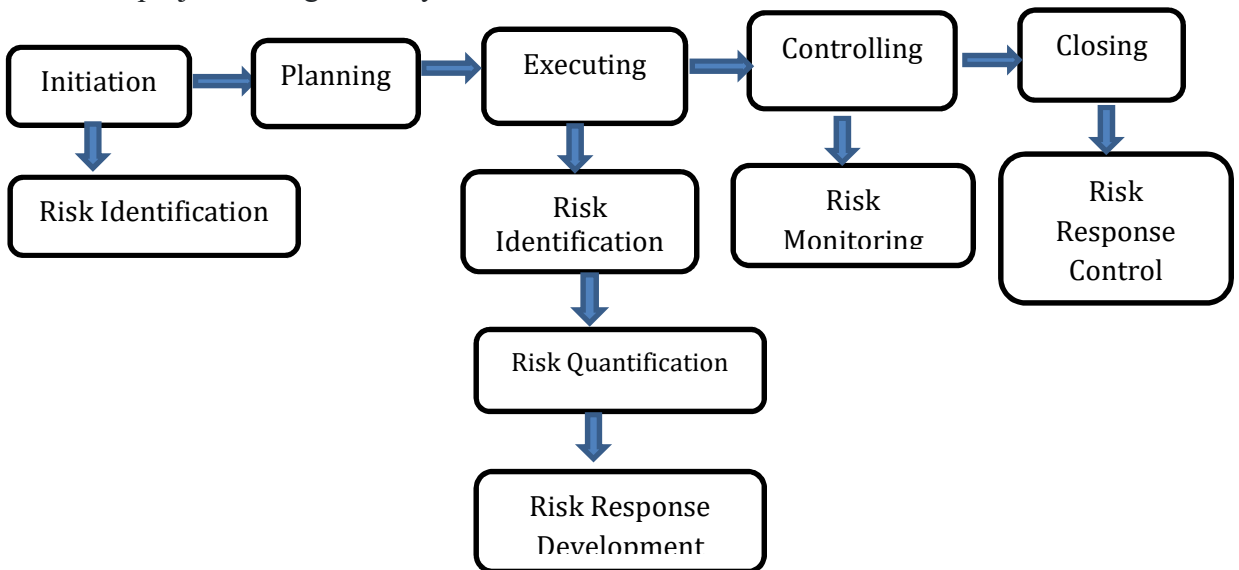


Figure 3: Risk Management Processes in each Project Management Process

Source: Dan Brandon(2006)

Risk management will not get rid of all the risks. However, it will enable explicit decision making which will reduce the potential effect of certain risks. It will also engender the process of rational and secure decisions regarding the allocation of risk among the stakeholders to the project. Moreover, Risk analysis is not a substitute for professional judgments and experience. On the other hand, it helps professionals to make use of the full extent of their experience and knowledge by redeeming them from the necessity of making simplifying assumptions in order to produce predetermined plans and forecasts.

Risk analysis is a supplement to, not a substitute for professional judgments (Flanagan & Norman, 1993). Taking cue from the Project Management Body of Knowledge (PMBOK Guide), one of the most important of the Nine Knowledge Areas in Project Management is Project Risk Management. This simply means, project risk management deals predominantly with the need for project leaders and managers to think ahead and visualize how to compensate for minimizing the potential of things going wrong in the project. This research would further emphasize that effective risk management should ensure that all the identified risks are analyzed on the basis of the likelihood of their occurrence and the magnitude of their impact on the project. This will make it possible to identify those risks that are most likely to occur and those with the highest severity on the project. Using such procedure, one can then classify risks in term of priority as follow:

2.2 Empirical Literature

Risk is considered as a phenomenological variable, which implies that this concept is interesting to investigate in terms of how people understand it. However, if a risk is equated to a threat, it relates mainly to the uncertainty and variability of the specific resulting actions. A prevention or mitigation system for possible threat effects should be created by taking into account the experience and the dynamics of the threats to safety development at the international, regional, national and local levels. Such a system should be based on the rules of risk management in crisis situations (Beck & Baran, 2012). Threats and uncertainty on the other hand have always been the part of human existence, and, in the past, this phenomenon used to be even greater than it is today. The risk of individuals and their families developing a disease, sustaining a premature death, or societies being decimated by famine and plague, was much greater in the Middle Ages than it is at present. Risk semantics is something quite different. Since the early modern period it has been associated with the growing impact of decisions, uncertainties and probability in the process of modernization. It concerns future threats, which we can see now, stemming from civilization's success (Beck & Baran, 2012: 15).

A crisis can be defined as a moment, a period of breakdown, a turning point, a time of economic crisis (Kopaliński, 2000: 282). It is associated with an enduring disruption of the regular and goal-oriented activities, upsetting the functional balance, and even with a threat to one's existence. The basic

characteristics of a crisis include the surprise factor, time pressure, late response, a loss of control, a danger to important functions, an increase in tension, and information deficit (Gołębiowski, 2003: 10). The concept of a crisis is very often equated to the concept of a crisis situation; however, these concepts are not identical and there are significant differences between them (Kosowski, 2008: 24): A crisis is an element of a crisis situation, every crisis is a crisis situation, but not every crisis situation has an element of a crisis, The occurrence of crisis symptoms does not have to cause changes to the organization core, but it poses a challenge for the subjective sense of the operation normality. According to Krzakiewicz (2008: 11-15), crisis situations are characterized by the following factors: Threat of the losses incurrence and the survival of the organization being in danger, Loss of control over the ongoing events, Serious, negative impact on the organization's resources, Not enough time to take necessary actions or to react, Lack of credible information, i.e. the occurrence of uncertainty. The taxonomy of threats in crisis management involves the assignment of threats to specific groups, which characterize a given threat. From the perspective of crisis management, not all groups will be prioritized in the same way. While conducting a threat analysis as part of crisis management, the first step is to locate the threat by taking into account its source, and then its destructiveness level and spatial extent (Grodzki, 2012: 71).

The broader concept of risk is commonly associated with uncertainty. Several scholars have contributed extensively to this topic but this research has singled out the work of Willet (1901). He was one of the first authors who made efforts to differentiate between risks and uncertainties. In 1901, in his work titled "The Economic Theory of Risk and Insurance", Willet presented the economic theory of risk. He based the presented concept on the negation of the randomness of external processes. Willet, being an advocate of philosophical determinism, posited that risk was a measure of the uncertainty degree resulting from an imperfect knowledge of the laws governing external processes. His theory spurred further discussion on the topic of risk and mutual relations between risk and uncertainty (Śliwiński, 2002: 15). As indicated earlier, risk is considered a phenomenological variable, which implies that this concept is interesting to investigate in terms of how people understand it. However, if a risk is identified with a threat, it relates mainly to the uncertainty and variability of the specific actions results. Thus, we have various suggestions concerning

distributional risk measures, such as variance, semi variance, standard deviation or variability. Therefore, it is assumed that we know the distribution probability of selected important environment states with a negative impact on the value of expected action results. Risk is a function of two variables – the probability of failure and the magnitude of the loss. Probability is also a function of the quantity and quality of information on the economic and social and political processes (Sienkiewicz, 2006: 45). Risk is an objective phenomenon as it involves real economic phenomena connected with the existence of a threat (danger) stemming from, among other things, the demand fluctuations, the activity of competitors, cooperation conditions, and State regulatory actions. It is also a subjective phenomenon, because it results from the decision-makers' knowledge of economic processes. We are dealing with a risk when the decision results of a situation are not fully known. In practice, to determine the risk, the following mathematical formula can be applied: Risk = loss probability x loss value.

The development of an enterprise involves uncertainties and danger, but it also creates opportunities. Risk management primarily aims at identifying threats and opportunities. The determination of the diversified risk impact extent on the enterprise is of pivotal importance (Kaczmarek, 2008: 11). Risk management can be defined as a decision making process in a way that ensures the highest level of security by reducing the impact of anticipated factors on the economic entity functioning. Therefore, risk management focuses on the prevention and mitigation of losses. The concept of risk management should constitute an inseparable part of an enterprise's development strategy. Once drawn up, it will make it possible to plan the organization's performance taking into account risk factors, and to monitor the extent of the impact of these factors on the broadly-defined financial performance and financial standing (Sienkiewicz, 2006: 45). Risk management is aimed at the complete elimination or, at least, the mitigation, of causes and/or the effects of events that can disrupt the organization's economic processes resulting in a crisis. There are two phases of risk management: Risk analysis (identification, estimation, evaluation and Risk management (planning, control, monitoring).

2.3 Research Gap Analysis

Gap analysis in general business context is defined as a method of assessing the differences between the actual performance and expected performance in an organization or a business. The term "gap" refers to the space between "where

we are” (the present state) and where “we want to be” (the target state). A gap analysis can also be referred to as need analysis, need assessment or need-gap analysis (Sanaullah Panezai, 2016). Consider a hypothetical case, where an organization manufactured product A. This product has reached the target audience in the market. Product A has all the qualities to excel in the market, the right features, pricing margin, and demand. Yet for some reason, the product didn’t perform well in the market. This signals a gap exists that must be analyzed in order to have the product perform well. In its literature review, this study has searched and reviewed several books, journals, professional articles and other researches. These materials have lengthily discussed key related topics and analyzed theories in the context of leadership, crisis management and risk management and/or mitigation strategies. There has also been numerous studies that look at operations within the aviation industry considering key sectors such as tourism, air transport and hospitality, just to name a few. However, the specific area of risk management especially during time of crises has not been fully dealt with in term of research. Our review of available literature on the topic “Assessing Organizational Risk Management Practices in time of crisis”, did not find any resource that addressed this topic and particularly studied an individual business organization or company. And that’s where the gap exists and this research is focused on reducing the knowledge gap and is also hoping to provide some answers and propose key recommendations for future studies.

2.4 Conceptual Framework

The concept of risk management should constitute an inseparable part of an enterprise's development strategy. Risk management is aimed at the complete elimination or, at least, the mitigation, of causes and/or the effects of events that can disrupt the organization's economic processes resulting in a crisis. Additionally, Ostrowska (2014) considers risk as a phenomenological variable, which makes this concept interesting to investigate in terms of how people understand it. However, if a risk is equated to a threat, it relates mainly to the uncertainty and variability of the specific actions results. A prevention or mitigation system for possible threat effects should be created by taking into account the experience and the dynamics of the threats to safety development at the international, regional, national and local levels. Such a system should be based on the rules of risk management in crisis situations (Ostrowska, 2014).Based on the fact of unavaliabe theory that specifically addresses risk

management, the Situational Crisis Communication Theory (SCCT) and the Team Leadership Model (TLM) are used as the conceptual basis of my study. These theories have been analyzed in the general context of crisis management as this research endeavors to draw out the benefits of a comprehensive risk management strategy in time of a given crisis. The SCCT and the TLM serve as the conceptual basis of my study. Coombs developed the SCCT in 2007 and provided a framework for understanding the behavior of stakeholders during crisis situations (Coombs, 2007a). The SCCT projects the pattern of the reaction of stakeholders in response to the crisis that threatens the reputation of an organization. The SCCT holds that communication affects people's perceptions of a crisis. The words that management uses and the actions they take affect how people perceive an organization during the crisis (Coombs, 2015).

In turn, those perceptions shape evaluations of the organizational reputation as well as stakeholders' emotional response toward future interactions with the organization. From the SCCT, I related the global health crisis affecting the world's economies with specific reference to the aviation industry to the leader's ability to understand and adopt strategies to mitigate the crisis. The main assertion to a functional approach to team leadership is that the leader's main job is to implement what the group needs to be successful (Nouthouse, 2016; Zaccaro, Rittman, & Marks, 2001). The Team Leadership Model stemmed from the functional leadership approach by McGrath in 1962, which emphasized the diagnose selection of the appropriate tools and the guidelines to mitigate the crisis. Thus, the SCCT guidelines for managers and leaders in a crisis situation entails the adoption of strategic communication with stakeholders to repair the reputation, reduce the adverse effect, and to prevent harmful behavioral intentions (Coombs, 2007a; Park, 2017), whereas the proponents of TLM emphasized the ability of the leadership to diagnose, and select the appropriate tools and the guidelines to mitigate the crisis.

3. Research Methodology

3.1 Research Approach and Design

The three research methods that were considered for this study are qualitative, quantitative, and mixed methods. Quantitative research involves examining

relationships or differences among variables by testing statistical hypotheses measure numerically and analyzes outcomes (Saunders, Lewis, & Thornhill, 2015). However, because this study is not focused on testing the efficiency of risk management strategies in many institutions, except a single research subject, the quantitative method is not appropriate in the instant case. As a conventional practice, researchers use mixed method which comprises both the quantitative and the qualitative methods; which are not also necessary for this study as well based on reason given above. In view of the above mentioned approach, this research has therefore opted for a more qualitative research method considering the nature of the study. This research employed the descriptive technique using the following selection criteria: (a) The desire to gain an in-depth understanding of a group of individuals and the nature of their works in existing settings, the Ethiopian Airlines in this case;(b) The ability to develop a complete detailed description of the key focus areas which the study has investigated; and (c) The ability to explore and address intangible aspects such as thinking, believing, and reasoning (Yin, 2014).

Qualitative research for its part has different research designs to choose from in collecting data. The popular and helpful categorization of qualitative research designs to collect qualitative data includes ethnography, narrative, phenomenological, grounded theory, and case study (John Creswell, 2015). Counting on the qualitative research method, this study is structured around the case study design taking advantage of the questionnaire and semi-structured interview technique; as a key focus, our study was aimed at drawing from the knowledge and experiences of both senior and junior level managers who are considered as experts in the company and to use multiple sources of data, like desk review and review of related literature to establish a greater understanding of the topic concerning risk management practices in crisis time. Other data collection methods were applied necessarily in cases where the research subject required the researcher to meet other specific conditions based on company policy.

3.2 Data Sources and Collection methods

As a general research principle, two main types of research data collection has been used for this study. This involved the use of Primary data that is usually collected by a researcher from first-hand sources, using methods such as surveys, observations, experiments, questionnaires, focus groups, interviews,

etc. The secondary data on the other hand refers to data that is collected by someone other than the primary user or researcher, and notable sources of these data include books, journals, information from government departments, organizational records, research articles, web pages, and blogs, etc. For the purpose of this study, specific questionnaires were designed and sent out to risk management experts at Ethiopian Airlines. A semi-structured interview process was also conducted with selected subject matter experts from the company's project management department as part of the sample size for the primary data collection. The secondary data collection method entailed reviewing key documentary evidence of the Airlines and from other supporting sources to identify strategic implementation methodologies and assess best practices of risk management in addition to the general literature reviewed.

The researcher plays a significant role in the data collection process. Yin (2014) as well as Harvey (2015) noted that the researcher is the primary data collection instrument given the level of interaction he/she will have with all other sources of evidence in a qualitative case study research such as this one. In this instance, I was therefore, the ultimate primary data collection instrument in addition to the questionnaire and interview that I developed to assist me in describing the various events during the data collection process. While Eizenberg, Orenstein, and Zimroni (2017) emphasized the use of focus groups in qualitative case studies, Yin proposed that a case study investigation should involve multiple sources of evidence involving documentation, archival records, interviews, direct observations, participant observations and physical artifacts. Yin further indicated that a researcher must use at least two of the data origins; and in this study, I collected data from a well-structured questionnaire and conducted a limited semi-structured interviews of experts for follow-up purpose. We also used existing documents relevant to crisis management and risk mitigation strategies from the participants to explore the organizational risk management practices in time of crisis at the Ethiopian Airlines.

Semi-structured interviews allow the use of open-ended questions and also enable the researcher to ask follow up questions to gain the understanding of participants' submissions. Interviews provide learning opportunities through participants' experiences, values, attitudes, and opinions (Cridland *et al.*, 2016). Specifically, Elsayah *et al.*(2015) posited that researchers administer semi-structured interviews for the purposes of interpreting the information, capturing

data about the participants' thoughts and then making judgment. From the perspective of Kallio *et al.* (2016) semi-structured interviews are flexible, versatile, and successful in enabling mutual exchanges with the interviewees, thereby allowing the researcher to improvise follow-up questions based on participant's responses. Documentary evidence is another strategic source of data for qualitative research. Yin (2014) explained that documentary evidence could take many forms and include sources such as announcements and minutes of meetings, and other written reports of events, proposals, progress reports, and formal studies or evaluations. Hence, the authors managed to gather many relevant documents as much as possible from the organization through ethical means to substantiate and enhance other data sources for this study. However, the authors also guarded against getting lost in too much information and not focusing on material details to support the study (Yin, 2014). It is keen to note that obtaining hard copies of these documents from authorities at the company was challenging since the management has a very restricted policy on releasing company records. We were constantly referred to the company's website and other digital platforms.

3.3 Population Sample size

The targeted sample size for this research comprised 6 managers (2 senior and 4 junior levels). The researchers limited the participants to six senior and middle level staff who are responsible to handle Ethiopian airlines' risk management operations and the project management departments who have successfully managed the company through this and other crises. Due to the technical nature of the topic and other compelling situations such as pandemic restrictions and safety measures, this study could only managed to keep within the sample size of six participants.

3.4 Data Analysis Method

Having collected and processed data, a critical element of a researcher's duty is to provide analysis of the data. Data analysis involves discovering meaningful patterns, themes and description of the data relative to the purpose of the research (Yin, 2014). An important process towards credible research outcome is triangulation. Triangulation is a validation technique and involves using more

than one source of data and method of collection to confirm the authenticity of research data, analysis, and interpretation (Saunders *et al.*, 2015). In the social sciences, triangulation refers to the application and combination of several research methods in the study of the same phenomenon. By combining multiple observers, theories, methods, and empirical materials, researchers hope to overcome the weakness or intrinsic biases and the problems that come from single method, single-observer, and single-theory studies. (Nightingale 2020), explains triangulation as a technique to analyze results of the same study using different methods of data collection. It is used for three main purposes: to enhance validity, to create a more in-depth picture of a research problem, and to interrogate different ways of understanding a research problem. Most often, triangulation helps validate research findings by checking that different methods or different observers of the same phenomenon produce the same results. In particular, triangulation can be used in both quantitative and qualitative studies. It is a method-appropriate strategy of founding the credibility of qualitative analyses and becomes an alternative to traditional criteria like reliability and validity. Most researchers in the social sciences preferred triangulation for alignment in data.



Figure 4: A trend of the triangulation process.

As shown in Figure 4, the purpose of triangulation in qualitative research is to increase the credibility and validity of the results. Several scholars have aimed to define triangulation throughout the years. Cohen and Manion (2000) define triangulation as an "attempt to map out, or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint." Altrichter *et al.* (2008) contend that triangulation "gives a more detailed and balanced picture of the situation." According to O'Donoghue and Punch (2003), triangulation is a "method of cross-checking data from multiple sources to search for regularities in the research data." Denzin (2006), for his

part identified four basic types of triangulation: Data triangulation: involves time, space, and persons. Investigator triangulation: includes multiple researchers in an investigation. While Theory triangulation: comprises using more than one theoretical scheme in the interpretation of the phenomenon and methodological triangulation: involves using more than one method to gather data, such as interviews, questionnaires, documents, observations, and etc.

3.5. Data Organization

The logical and sequential process for data analysis is another stage of a qualitative case study research. Boddy and Boddy (2016) introduced the NVivo software as a potent and credible tool for research data analysis. They suggested a three-step approach in using the NVivo software which involves data impute, review and analysis. Thus, the first stage enhances the data analysis process while the review stage helped to identify and clean out redundant materials, thereby limiting the themes for analysis. These three-step approaches were therefore adopted for this study beginning with inputting data into the NVivo software, reviewing and analyzing the data to form the core themes that are relatable to the objective and conceptual framework of this research. Newcombe *et al.* (2015) argued that the NVivo software ensures coherence in the process of qualitative data analysis. Thus, my main focus was to ensure a pattern of consistent sequence during the entire data analysis process in order to achieve a credible desired outcome. Hence, we also opted to manually review all the data since the sample size for the study is not so large. This was done to validate the results produced by the NVivo software which we used for the first time. To achieve this, we literally had to read and review each of the responses 5 to 7 times and compare it with that which the electronic tool (NVivo) was showing me as an outcome.

Weigl *et al.* (2017) pointed out that using manual data analysis order than a data management tool like the NVivo software, was time consuming, error-prone, and could lead to inefficient data analysis. NVivo software was used to reduce personal biases that may have arisen from the manual data analysis to ensure effective use of available resources and quality research output. Beyond the sequential process of data analysis were efforts in linking the core themes derived from the data to the conceptual frameworks. Weigl *et al.* (2017) emphasized text and contextual alignment in research studies and its importance in promoting reliability of the study. In this regard, the study

focused on pointing out the link between core themes and the conceptual frameworks which involve the role of situational crisis communication and team leadership model in identifying the approaches of risk management and strategies of mitigating the effect of crisis, using the Ethiopian airlines as a case study.

The data analysis demonstrates the neutrality and the examination of the audit trail to validate the avoidance of researcher biases (Bengtsson, 2016; as MacRae *et al.* (2015) noted, a qualitative study that endeavors to satisfy these elements, therefore ensure quality and rigor. To this point, my focus during the data collection and analysis stages was on quality control measures given the need to prove the consistency and high degree of transparency in the research findings to avoid possible doubts. To achieve this and for the purpose of confidentiality, I coded each of the six respondents as follow: SLM-1 PMD, SLM-2 RMS, JLM-1 RMS, JLM-2 PMD, JLM-3 PMD and JLM-4 RMS; where SLM represents senior level manager and JLM stands for junior level manager. I used the approved questionnaire and observed the semi-structured interview protocol to acquire all the data for this study.

4. Results and Discussion

This section of the paper contains basic in-depth information about research subject (Ethiopian Airlines), and an outline and discussion of the key emerging themes from the study. The overarching research question for this qualitative single case study research was: *What approaches of risk management practices has the management of Ethiopian Airlines employed to keep the company operating through the global COVID-19 outbreak?* The data collection process the authors used for this study involved questionnaire which we sent to all respondents and a semi-structured interviews with the two senior level managers that have experienced some form of crisis with the company and have survived. These managers work as key figures within the project management department and/or the risk management section. Some of them are with more than ten years of experience between working for the Ethiopian Airlines Group. We had gone through a rigorous process with the company's HR office for over three weeks to get the right participants from the appropriate department for my study. Out of the almost 15 staff between the two sections (project management department and the risk management section), we were able to work with six nominees. The 4 junior level managers with supervisory roles received the

questionnaires through emails and returned them within 5-7 days each, while the 2 senior managers received the questionnaires as well and were also interviewed at different time intervals for the purpose of follow-up based on the responses they provided on the questionnaires. Upon manual transcription of the interview materials, we sent the draft transcript back to each participant to review and correct any answer we may have gotten wrong. Once corrected, the final interview transcript was compared to the answers given on the questionnaire in order to determine if the emerging themes as discovered have direct relationship to the key findings of the study. We also discussed the aspects of the findings that confirmed the conceptual frameworks and the existing literature on risk mitigation strategies in crisis management.

4.2 Core Themes

1) Situation Awareness and Decision Making

Risk Management experts explained situation awareness as the perception of environmental elements and events with respect to time or space, the comprehension of their meaning, and the projection of their future status. Good risk management practice involves consistently assessing situations for any existing or future threats or risks based on the current situations. This concept of situation awareness speaks to the act of being aware of what is happening around you, where you are in relation to other people or things, and what potential threats there might be. It forms part of a well carved risk management strategy. We discovered that when this critical information are gathered from every step of the ladder (bottom to top) and made available to decision makers, it leads to decisive action and smooth implementation. Furthermore, it points to how much a leader or the company management values collective team efforts. As shown in their responses, most of the respondents, if not all, clearly showed how the ET management saw the possible negative impacts the COVID-19 crisis could have on the company, but they also saw the opportunities to diversify the company's operations. They allowed their own experts to evaluate the situation and listened to whatever opinion that came from the experts as an advice before management took any strategic decision.

2) Leadership Presence Strategy

We found that leadership presence and availability in an organization during crisis play a significant role in reducing the effect of the crisis on the employees,

the clients and the company itself. The participants in their responses emphasized the importance of leadership-employee-client engagement. SLM-1 during the interview stressed on the physical presence, strategic direction, and exemplary behavior at the highest level of the company. This perspective on leadership presence strategy involves management making themselves available sometimes to interact with employees and clients personally. SLM-2 for his contribution to this theme indicated that the physical presence of leadership during the time of crisis increases the trust and confidence of the customers in the company and it also reassures the employees “that yes, there is a crisis, but we believe in our management to solve this and protect our livelihood”.

In line with the conceptual framework of this study, this emerging theme of leadership presence and availability involve the physical presence, strategic direction, and exemplary disposition. The proponents of internal task function of the team leadership concept promote the ability of the leader to focus on goals and get the buy-in of team members and juxtaposing goal orientation with restructuring plans, processes, and roles to achieve organizational objectives (Northouse, 2016). Furthermore, Northouse (2016) listed eight characteristics of team features involving clear team goals, having a results-driven structure, competent team members, unified commitment, collaborative climate, standards of excellence, external support and recognition, and principled leadership that help in effective teams. These characteristics played major roles in bringing to light the risk management approaches employed by the management team at Ethiopian Airlines to mitigate the impact of this COVID-19 crisis on the company. This was demonstrated by the management swift action to remodel several passenger aircrafts to cargo planes when lockdowns were being imposed across the world to limit the spread of the corona virus. All the respondents in this study mentioned this move by the company’s management as very impressive and a form of strategic thinking.

3) Strategic Internal Communication

One significant theme that emerged during the conversation with the various managers is how management communicates with the employees internally and how management and staff jointly work together to communicate with customers externally. SLM-2 admitted that communicating with the over thousand employees across all departments of the company was the most

critical thing in dealing with a crisis of such magnitude. This, he noted was a challenge for both the management and the employees since such health crisis was new to everyone and there was just little information from the beginning. “However, we managed to work aggressively with our internal structures that already exist to get important management decisions and critical messages to the employees at all levels”. This implies that systematic and factual communication is a critical component of the risk management strategy of Ethiopian airlines and the top management adopted it as one key strategy to mitigate the impact of the COVID-19 crisis on the company to remain in business till date.

4) Transparent Public Communication

Transparent public communication was another significant crisis mitigation strategy used by the ET management. The two senior participants (SLM-1 & SLM-2), as well as junior managers (JLM-2 & JLM-3), indicated how the ET management recognized the critical need to be transparent with external customers when communicating about the crisis in order to better position the company in the view of the public so the crisis would not present a damaging impact in terms of public relations. As SLM-1 emphasized “the currency for public trust is truth and transparent communication”. This idea, he said the ET management borrowed from public health experts and that it works true for all fields of businesses and even public service.

5) Link Emerging Themes to Conceptual Framework

The crisis of any sort has varying effects on organizations and their stakeholders. Crisis leaders will either design mitigation strategies to reduce the probability of the event occurring, reduce the magnitude of associated consequences, or both (Kirkos, 2015; Yang, Hsu *et al.*, 2017). The effect of crisis can be addressed from preventive, proactive and reactive perspectives (Gurtner, 2016; Lam & Su, 2015), depending on the phase of the occurrence (Gaudard & Romerio, 2015; Sztojanov & Stamatescu, 2015). Hence the crisis effect mitigation strategy cannot be universal. More also, given most crises have early signals that suggest potential danger, sensing and taking proactive steps, such as developing a comprehensive risk management plan and mitigation strategy is deemed the first step toward evading or resolving a crisis

or minimizing their impact (Aljuhmani & Emeagwali, 2017). Managers in a crisis can take various corrective measures depending on their specific conditions. As pointed out in chapter 2 of this study, the SCCT for crisis communication has been empirically supported in various crisis situations involving product recalls, organizational misdeeds, and accidents (Conrado *et al.*, 2016). However, our review of available literatures showed that there has been no research conducted specifically looking at risk management approaches to mitigate the effect of the crisis in the aviation sector using SCCT. This also speaks to the fact that no health crisis of this magnitude has hit the airlines industry over the last century.

Pillai *et al.* (2015), observed that during a crisis; leaders have the responsibility to deal with strategic challenges they face, manage risks exposures and utilize opportunities, correct errors they make, avoid the pitfalls they need to avoid, and create the paths away from crisis. This view of the researchers caused them to define a leader as one who never reacts, but observes, understands, analyzes and then acts decisively. Similarly, the advocates of TLM model suggests that leaders are responsible for diagnosing any problems that could potentially impede group and organizational goal attainment as well as generating and planning appropriate solutions (Northouse, 2016). This suggestion is largely seen in the one of the core themes (Leadership presence strategy) that emerged during our interactions with the respondents. Specifically, JLM-1 mentioned in his response to one of the questions, use of the “bottom up” approach of leadership decision making by the ET management. Another respondent, SLM-1 also alluded to a cordial working relationship amongst the management and the employees. To this end, after a step-by-step review of all the resources (literatures, questionnaires, interviews, etc.) that were available for this research, it is the view of this study that authorities at the Ethiopia Airlines have demonstrated the Team Leadership Model (TLM) of leadership practices as described in our investigation and professionally managed and mitigated the impact of the Corona virus health crisis to keep the company operating to almost an 80% scale till date. This observation is vividly exemplified in the management’s strategic decisions, just considerations, and conscious but bold actions taken at the right time. The above assertion is backed by the responses given for the specific questions and follow-up interviews of the six participants chosen for this study provided as outlined in appendix 1.

4.3. Brief Discussions of Major Findings

As it has been clearly indicated in the introduction, the main objective of this thesis was to scrutinize the approaches of risk management strategies applied by authorities at Ethiopian Airlines throughout the global COVID-19 pandemic to mitigate the effects of the crisis to remain sustainable. This exploratory study is aimed at assessing and documenting risk management methodologies, best practices and lessons learned by the airlines to survive the damaging impact of this unexpected health crisis. In view of this, the following major findings were obtained on the basis of the qualitative analysis done through this study. The study revealed that Ethiopian Airlines currently uses the Enterprise Risk Management approach to manage and handle overall risks event under the company. As a key finding for this study, remodeling more than twenty (20) passenger aircrafts from its fleet for use in the cargo service of the business to accommodate the available opportunities presented by the crisis was the key risk management approach applied by Ethiopian Airlines authorities throughout the COVID-19 crisis. This was a very remarkable move which has kept the company afloat to remain in operations. It is noticed that most of the respondents agreed that for a large and international company like Ethiopian Airlines, risk management serves as the backbone of the business. In other words, risk management is a vital part of ET's Business plan and it is the surviving lifeline of the company. The study discovered that the ET management exhibited situation awareness and decisiveness in decision making. This implies that the leadership was aware of the negative impacts the COVID-19 crisis would have on the company, but they also saw the opportunities that came along with it, so they took advantage of those opportunities.

The research also disclosed the use of the leadership presence and availability strategy by ET management. This highlighted the leadership-employee-client engagement, which suggests how much the company management values collective team efforts by using the bottom to top approach in decision making. The study further revealed that Ethiopian Airlines' Strategic Business Plan calls for the establishment of "multi-business units" as a key principle. This is seen in how the company has diversified its operations into tourism, hospitality and Aviation training in addition to the original passenger and cargo services it offers. This research discovered that the practice of multi-business units is cardinal to ET's risk management strategy which allows the company to easily

accept whatever risk a given crisis poses, because it has the capacity to spread the impacts of said risk to other sectors of the business.

5. Conclusion & Recommendations for further research

5.1. Conclusions

The purpose of this qualitative single case study research was to explore the approaches of risk management strategies applied by authorities at Ethiopian Airlines throughout the global COVID19 pandemic to mitigate the effects of the crisis to remain sustainable. My participants were senior and junior level managers who have been responsible to handle the company's risk management operations and the project management departments, and they have successfully managed the company through this and other crises and remained operational and sustainable in business. As Coombs (2015) and Opitz *et al.* (2018) suggested, a crisis is a frequent phenomenon in business circles as in other areas of life and presents both threat and opportunity. However, a crisis does not happen overnight but begin, develop, and crystallizes into a disaster if not attended (Çakar, 2018; Coombs, 2015; Liff & Wahlström, 2018). The negative effect of a crisis on the aviation sector and provision of travel related services is destructive as the effect has the propensity to destroy a given organization/airline company leading to loss of capital, loss of business opportunity, loss of reputation and loss of employment. Consequently, the need for well layout strategies to mitigate the effect of the crisis has the potential of protecting the investment of shareholders and the employment of qualified employees.

The study further found out from that Ethiopian Airlines uses the Enterprise Risk Management (ERM) approach as a business principle to handle and manage the company's overall risks regardless of where such risk emerges. Relying on its firm and well- structured governance system, the management focused on the skill sets of their human resources and the availability of their leadership during this crisis. Additionally, we also discovered that the leadership adopted strategic internal communication through the staff to engage with the customers, transparent public communications to protect the image of the organization throughout the pandemic. Moreover, the ET management exhibited situation awareness and decisiveness in decision making. Respondent SLM-1, explained with no doubt that the swift move by the company management to listen to its risk management experts' advice and shift or

remodel more than twenty (20) passenger aircrafts for use in the cargo section of the business was very remarkable. This he noted above all, was a more offensive strategy of the company's business plan which re-aligns resources into innovative processes to reposition the company and remain sustainable in times of crisis. A natural situation such as this COVID-19 health crisis is a real phenomenon and has destroyed many organizations, livelihoods, and commercial projects in many countries across the globe. However, some multilateral and continental companies and individual business practitioners have adopted key strategies especially in terms of risk mitigation to overcome the difficulties presented by these crises and remain sustainable.

For seventy-five (75) years now and still counting, Ethiopian Airlines has recorded great success and survived very few crises as a company. This is due to what I will characterize as visionary and far-sighted leadership and I have documented some of their success strategies used for this global health crisis to help other leaders in the aviation/travel industry in African, who will be interested in learning from the ET experience to save their institutions and survive any turbulence during and after the crisis. I believe these findings will serve as lessons to protect investments, sustain employment and save the livelihoods of employees in the hospitality, tourism and other air travel related services in Africa and beyond.

5.2 Recommendation for Further Research

As already mentioned several times, the aim of this study was to explore the approaches of risk management strategies applied by authorities at Ethiopian Airlines throughout the global COVID-19 pandemic to mitigate the effects of the crisis to remain sustainable. The researcher limited the participants to six managers in total (2 senior and 4 junior levels) who are responsible to handle Ethiopian airlines' risk management operations and the project management departments who have successfully managed the company through this and other crises and remained operational. The limitations of the study included the possible biases of the participants, which could affect the trustworthiness of the study. The researchers could reduce participant biases by using the mixed method of data collection involving questionnaire surveys and structured-interviews based on the availability of the participants. It is also important to mention that the scope of the study was only limited to a particular company

(Ethiopian Airlines) and a small sample size of six risk and project management experts which may not represent the entire population of institutions which have faced and survived crises such as the COVID-19 pandemic. It is therefore the researcher's opinion that future studies could expand the number of case studies with a larger sample size involving more companies in the aviation industry in Africa with successful outcomes of crisis management and risk mitigation strategies for a more expanded view on the subject.

Additionally, future research work on crisis management and risk mitigation could include the other African airlines that suffered the larger blow of the crisis through bankruptcy, staff layout and subsequent closure or ceased operations. The experiences of these other airlines like South African Airways for example, might introduce a new approach and bring about different perspectives on strategies for future crisis effect mitigation. Moreover, given the perspectives of the risk and project management experts provided for this study could be limited to their experiences, the future research could benefit from the diversity of management positions to include other participants such as board members, general employees and other line managers who benefit from the work of the risk management team.

According to Jinet *al.*(2018), employees are crisis management partners and would have adopted some strategies at their own levels to handle the pressure from customers. Those other managers who would have adopted specific implementation strategies within their departments could provide more insight into crisis management and risk mitigation strategy. We, therefore, recommend further studies into effective crisis management and risk mitigation involving other employees of Ethiopian Airlines to have a more rounded and broader perspective with specific focus on effective implementation of risk mitigation strategy in time of crisis. This study notes that there may be various types of crises that the aviation industry in Africa faces, and it would be insightful to select a specific type of crisis and explore possible mitigation strategies accordingly. While some companies experience identity crisis or mission drift crisis, others also experienced either liquidity, regulatory or default crisis (Boateng *et al.*, 2016; Breza & Kinnan, 2016; Mia *et al.*, 2019; Valackienė &Virbickaitė, 2011). The crises in the aviation sector may vary in nature from natural to man-made events. Hence, such crises could also need different mitigation strategies. The future studies could, therefore, explore specific crisis

type to allow in-depth investigations and analysis of the relevant approaches to gain a greater understanding of the crisis phenomena.

References

- Ali, A. J., & Al-Aali, A. (2016). Human capital and crisis management. *Journal of Transnational Management*, 21(4): 200-216. doi:10.1080/15475778.2016.1226660
- Aljuhmani, H. Y., & Emeagwali, O. L. (2017). The roles of strategic planning in organizational crisis management: The case of Jordanian banking sector. *International Review of Management and Marketing*, 7(3): 50-60.
- Altrichter, H., Feldman, A., Posch, P. & Somekh, B. (2008). *Teachers investigate their work; An introduction to action research across the professions*. Routledge. p. 147. (2nd edition).
- Asrar-ul-Haq, M., & Anwar, S. (2018). The many faces of leadership: Proposing research agenda through a review of literature. *Future Business Journal*, 4(2): 179-188. doi:10.1016/j.fbj.2018.06.002
- Baysak, B., & Yener, M. İ. (2015). The relationship between perceived leadership style and perceived stress on hospital employees. *Procedia-Social and Behavioral Sciences*, 207, 79-89. doi:10.1016/j.sbspro.2015.10.159
- Beck, U., & Baran, B. (2012). *Global Risks: In Search of Losing Security*. Naukowe Publishing House Scholar, Warsaw.
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *Nursing Plus Open*, 2, 8-14. doi:10.1016/j.npls.2016.01.001
- Biemann, T., Kearney, E., & Marggraf, K. (2015). Empowering leadership and managers career perceptions: Examining effects at both the individual and the team level. *The Leadership Quarterly*, 26(5): 775-789. doi:10.1016/j.leaqua.2015.03.003
- Bin-Bin Chen & Chang Lei, (Feb. 2016). Procrastination as a Fast Life History Strategy, 14(1), doi.org/10.1177/1474704916630314
- Boateng, F. G., Nortey, S., AsamaninBarnie, J., Dwumah, P., Acheampong, M. & Ackom-Sampene, E. (2016). Collapsing microfinance institutions in Ghana: An account of how four expanded and imploded in the Ashanti Region. *International Journal of African Development*, 3(2): 37-62. Retrieved from <https://scholarworks.wmich.edu/>

- Boddy, C. R., & Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal*, 19(4): 426-432. Doi: 10.1108/qmr-06-2016-0053
- Brandon, D. (2006). *Project Management for Modern Information Systems*. IRM Press
- Breza, E., & Kinnan, C. (2016). Measuring the equilibrium impacts of credit: Evidence from the Indian microfinance crisis. *Manuscript, Northwestern University*. 1-48. Retrieved from <https://www.arec.umd.edu>
- Burke, R. (2003). *Product Management*. Biddles Ltd, Guildford.
- Çakar, K. (2018). Critical success factors for tourist destination governance in times of crisis: a case study of Antalya, Turkey. *Journal of Travel and Tourism Marketing*, 35(6): 1-17. doi:10.1080/10548408.2017.1421495
- Chapman, R. J., and Ward, S. (1997). *Project Risk Management Processes, Techniques and Insights*. John Wiley & Sons: Chichester, UK.
- Chapman, C. and Ward, S. (1997). *Project Risk Management: Processes, Techniques and Insights*. (2nd Edition), John Wiley & Sons Ltd: England.
- Christoffersen, M., Flyvbjerg, B. and Pedersen, J. L. (1992). The Lack of Technology Assessment in Relation to Big Infrastructural Decisions, *In Technology and Democracy: The Use and Impact of Technology Assessment in Europe*, paper presented at the 3rd European Congress on Technology Assessment Proceedings in Copenhagen, 4-7 November 1992, Vol. 1, pp 54-75.
- Cohen, L., & Manion, L. (2000). *Research methods in education*. Routledge. p. 254. (5th edition).
- Conrado, S. P., Neville, K., Woodworth, S., & O’Riordan, S. (2016). Managing social media uncertainty to support the decision-making process during emergencies. *Journal of Decision Systems*, 25(sup1): 171-181. doi:10.1080/12460125.2016.1187396
- Coombs, W. T. (2007a). Attribution theory as a guide for post-crisis communication research. *Public Relations Review*, 33(2): 135-139. doi:10.1016/j.pubrev.2006.11.016
- Coombs, W. T. (2007b). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3): 163-176. doi:10.1057/palgrave.crr.1550049
- Coombs, T. (2012). *Ongoing Crisis Communication: Planning, Managing, and Responding*. Thousand Oaks, CA: Sage.

- Coombs, W. T. (2015). The value of communication during a crisis: Insights from strategic communication research. *Business Horizons*, 58(2):141-148. doi:10.1016/j.bushor.2014.10.003
- Coombs, W. T., Frandsen, F., Holladay, S. J., & Johansen, W. (2010). Why a concern for apologia and crisis communication? *Corporate Communications: An International Journal*, 15(4):337-349. Doi: 10.1108/13563281011085466
- Coombs, W. T., & Holladay, S. J. (2014). How publics react to crisis communication efforts: Comparing crisis response reactions across sub-arenas. *Journal of Communication Management*, 18(1): 40-57. Doi: 10.1108/JCOM-03-2013-0015.
- Coombs, T., & Holladay, S. (2015). CSR as crisis risk: Expanding how we conceptualize the relationship. *Corporate Communications: An International Journal*, 20(2): 144-162. doi: 10.1108/CCIJ-10-2013-0078
- Coombs, W. T., Holladay, S. J., & Claeys, A. S. (2016). Debunking the myth of denial's effectiveness in crisis communication: context matters. *Journal of Communication Management*, 20(4): 381-395. Doi: 10.1108/JCOM-06-2016-0042
- Cridland, E., Caputi, P., Walker, B., Jones, S., & Magee, C. (2016). A personal constructivist approach for investigating the patterns of dependency of adolescents. *Journal of Constructivist Psychology*, 29(1): 30-50. doi:10/1080/10720537.2015.1005323
- Denzin, N. (2006). *Sociological Methods: A Sourcebook*. Aldine Transaction. ISBN 978-0-202-30840-1. (5th edition).
- Eizenberg, E., Orenstein, D. E., & Zimroni, H. (2018). Back to the (visualization) laboratory: Using focus groups to generate qualitative and quantitative results. *Journal of Planning Education and Research*, 38(3): 345-358. doi:10.1177/0739456X17700252
- Elsawah, S., Guillaume, J. S. A., Filatova, T., Rook, J., & Jakeman, A. J. (2015). A methodology for eliciting, representing and analyzing stakeholder knowledge for decision making on complex socio-ecological systems: From cognitive maps to agent-based models. *Journal of Environmental Management*, 151(15): 500-516. doi:10.1016/j.jenvman.2014.11.028
- Flanagan, R., and Norman, G. (1993). *Risk Management and Construction*. Blackwell: Oxford, UK.

- Gaudard, L., & Romerio, F. (2015). Natural hazard risk in the case of an emergency: the real options' approach. *Natural Hazards*, 75(1), 473-488. doi: 10.1007/s11069-014-1330-1
- Graça, A. M., & Passos, A. M. (2015). Team leadership across contexts: a qualitative study. *Leadership & Organization Development Journal*, 36(5): 489-511. doi: 10.1108/LODJ-08-2013-0114
- Grodzki, R. (2012). *Crisis Management: Good Practices*. A AFM Publishing House, Difin, Warsaw
- Gurtner, Y. (2016). Returning to paradise: Investigating issues of tourism crisis and disaster recovery on the island of Bali. *Journal of Hospitality and Tourism Management*, 28: 11-19. doi:0.1016/j.jhtm.2016.04.007
- Hawkinson, E. (2016). Team teaching and situational leadership theory: Adapting and combining frameworks for Japanese English education. *US-China Education Review*, 6(3):183-189. doi:10.17265/2161-623X/2016.03.004
- International Air Transport Association Review Report (2020). IATA Annual Review. Montréal (Quebec) Canada. Available at <https://www.iata.org/contentassets/c81222d96c9a4e0bb4ff6ced0126f0bb/iata-annual-review-2020>.
- International Civil Aviation Organization Review Report (2020). World Civil Aviation Report, 4th Edition, 2020, Montréal (Quebec) Canada.
- Kaczmarek, T. (2008). *Risks and Management: An Interdisciplinary Approach*. Difin, Warsaw.
- Kallio H., Pietilä A., Johnson M., & Kangasniemi M. (2016). Systematic Methodological review: Developing a Framework for a Qualitative Semi-structured interview guide, 72(12):2954-2965 doi: [10.1111/jan.13031](https://doi.org/10.1111/jan.13031)
- Kirkos, E. (2015). Assessing methodologies for intelligent bankruptcy prediction. *Artificial Intelligence Review*, 43(1): 83-123. doi:10.1007/s10462-012-9367-6
- Kopaliński, W. (2000). *Dictionary of foreign words and foreign phrases with almanac*. ŚwiatKBookki, Warsaw.
- Kosowski, B. (2008). *Efficient and flexible management in a crisis*. Difin, Warszawa.
- Krzakiewicz, K. (2008). *Anti-crisis management in the organization*. Publishing House of the Economic Academy, Poznań: Poland
- Lam, J. S. L., & Su, S. (2015). Disruption risks and mitigation strategies: an analysis of Asian ports. *Maritime Policy & Management*, 42(5): 415-435.

- Liff, R., & Wahlström, G. (2018). Failed crisis communication: The Northern Rock Bank case. *Accounting, Auditing and Accountability Journal*, 31(1): 237-260. doi:10.1108/AAAJ-08-2015-2159
- Machi, L. A., & McEvoy, B. T. (2016). *The literature review: Six steps to success* (3rd edition). Thousand Oaks, CA: Corwin
- MacRae, S., Brown, M., Karatzias, T., Taggart, L., Truesdale-Kennedy, M., Walley, R., & Davies, M. (2015). Diabetes in people with intellectual disabilities: a systematic review of the literature. *Research in Developmental Disabilities*, 47: 352-374. doi:10.1016/j.ridd.2015.10.003
- Marathe, G., Balasubramanian, G., & Singhal, M. (2017). Demystifying the leadership kaleidoscope into an integrated view. *Journal of Management Development*, 36(7): 859-876. doi:10.1108/JMD-09-2015-0119.
- Mia, M. A., Lee, H. A., Chandran, V. G. R., Rasiah, R., & Rahman, M. (2019). History of microfinance in Bangladesh: A life cycle theory approach. *Business History*, 61(4): 703-733. doi:10.1080/00076791.2017.1413096
- Monika Ostrowska, (2015). Diversified Risk Management. *Risk Management in Crisis Situations* 23: 615-621. doi.org/10.1016/S2212-5671(15)00370-6
- Morris, P. W. G. and Hough, G. H. (1987). *The Anatomy of Major Projects: A Study of the Reality of Project Management*. John Wiley & Sons Ltd, New York.
- Newcombe, C., Rath, T., Zhang, F., Munteanu, B., Brooker, M., & Deardeuff, M. (2015). How Amazon web services uses formal methods. *Communications of the ACM*, 58(4):66-73. doi:10.1145/2699417
- Northouse, P. G. (2016). *Leadership: Theory and Practice* (7th edition). Thousand Oaks, CA: Sage.
- Nightingale, Andrea J. (2020). International Encyclopedia of Human Geography (2nd Edition),
- O'Donoghue, T., Punch K. (2003). *Qualitative Educational Research in Action: Doing and Reflecting*. Routledge. p.78.
- Opitz, M., Chaudhri, V., & Wang, Y. (2018). Employee social-mediated crisis communication as opportunity or threat?. *Corporate Communications: An International Journal*, 23(1): 66-83. doi:10.1108/CCIJ-07-2017-0069.
- Park, H. (2017). Exploring effective crisis response strategies. *Public Relations Review*, 43: 190-192. doi:10.1016/j.pubrev.2016.12.001
- Pillai, R. R., Kumar, A., & Krishnadas, N. (2015). Role of self-managing leadership in crisis management: An empirical study on the effectiveness

- of Raja yoga. *IIMKozhikode Society and Management Review*, 4(1): 15-37.
doi:10.1177/2277975215586644
- Project Management Institute (2000). “*A Guide to Project Management Body of Knowledge*” Project management institute, 6
- Raftery, J. (1994). *Risk Analysis in Project Management*, E & FN SPON, London, UK.
- RutaMeiste& Sandra Jakstiene (2015). Crisis Diagnosis in Anti-Crisis Management process in a company, 6(4): 49-58 doi: [10.12775/OeC.2015.028](https://doi.org/10.12775/OeC.2015.028)
- Salvador, A. B., & Ikeda, A. A. (2018). Brand crisis management: The use of information for prevention, identification and management. *Brazilian Journal of Business Management*, 20(1): 74-91. doi:10.7819/rbgn.v20i1.3583
- Sanaullah Panezai, (2016). An empirical assessment of farmers' risk attitudes in flood-prone areas of Pakistan. *International Journal of Disaster Risk Reduction* ,18: 107-114, doi.org/10.1016/j.ijdr.2016.06.007.
- Santos, J. P., Caetano, A., & Tavares, S. M. (2015). Is training leaders in functional leadership a useful tool for improving the performance of leadership functions and team effectiveness?. *The Leadership Quarterly*, 26(3): 470-484. doi:10.1016/j.leaqua.2015.02.010
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2015). *Research Methods for Business Students* (7th edition). Essex, England: Pearson Education Limited.
- Schwalbe, K. (2006). *Information Technology Project Management*. Thomson Course Technology, 425
- Sienkiewicz, P. (2006). *Risk management in crisis situations*. Warszawa: Wydawn. W.A.B
- Śliwiński, A. (2002). *Insurance risk: Tariffs - construction and optimization*. Poltext, Warsaw.
- Snider, H. W. (1991). Risk Management: A Retrospective View. *Risk Management* April, 47-54
- Sztojanov, E., & Stamatescu, G. (2015). Adaptive Neuro-Fuzzy Model tuning for early warning of financial crises. *Journal of Applied Quantitative Methods*, 10(2): 53- 3. Retrieved from <http://jaqm.ro/>
- Valackienė, A., & Virbickaitė, R. (2011). Conceptualization of crisis situation in a company. *Journal of Business Economics and Management*, 12(2): 317-331, doi:10.3846/16111699.2011.575192

- Ward, S. and Chapman, C. (2003) Transforming Project Risk Management into Project Uncertainty Management, *International Journal of Project Management*, 21(2):97–105.
- Weigl, D. M., Lewis, D., Crawford, T., Knopke, I., & Page, K. R. (2017). On providing semantic alignment and unified access to music library metadata. *International Journal on Digital Libraries*, 20(1): 1-23. doi:10.1007/s00799-017-0223-9.
- Willett, A. (1901). *The Economic Theory of Risk and Insurance*. New York Chichester, West Sussex: Columbia University Press. <https://doi.org/10.7312/will93384>
- Williams, T. A., Gruber, D. A., Sutcliffe, K. M., Shepherd, D. A., & Zhao, E. Y. (2017). Organizational response to adversity: Fusing crisis management and resilience research streams. *Academy of Management Annals*, 11(2): 733-769, doi:10.5465/annals.2015.0134
- Yang, S. O., Hsu, C., Sarker, S., & Lee, A. S. (2017). Enabling effective operational risk management in a financial institution: An action research study. *Journal of Management Information Systems*, 34(3): 727-753. doi:10.1080/07421222.2017.1373006
- Yee, C. W., Chan, P., and Hu, G. (2001). *Construction Insurance and Risk Management: A Practical Guide for Construction Professionals*, the Singapore Contractors Association Ltd., Singapore.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th edition). Thousand Oaks, CA: Sage
- Zaccaro, S. J., Rittman, A. L., & Marks, M. A. (2001). Team leadership. *The Leadership Quarterly*, 12(4): 451-483. doi:10.1016/S1048-9843(01)00093-5.

Annex 1: List of interviews referred to in this article:

1. Interview **SLM-1 PMD**: Senior Level Management from the Project Management Department of Ethiopian Airlines, 05 March 2021.
2. Interview **SLM-2 RMS**: Senior Level Management from the Risk Management Department of Ethiopian Airlines, 07 March 2021.
3. Interview **JLM-1 RMS**: Junior Level Management from the Risk Management Department of Ethiopian Airlines, 08 March 2021.
4. Interview **JLM-2 PMD**: Junior Level Management from the Project Management Department of Ethiopian Airlines, 09 March 2021.
5. Interview **JLM-3 PMD**: Junior Level Management from the Project Management Department of Ethiopian Airlines, 10 March 2021.

6. Interview **JLM-4 RMS**: Junior Level Management from the Risk Management Department of Ethiopian Airlines, 11 March 2021.