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**Risk Consultants**

## Research Note

# Disappearance of Malaysian Airlines Flight MH 370

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**Abstract:** The disappearance of Malaysian Airlines Flight MH 370 captured the attention of the world, becoming a mystery that created more questions than answers. This research note discusses some of the social and political issues surrounding the disappearance and what takeaways can be gleaned from the tragedy to better understand similar incidents in the future.

## Introduction

The disappearance of Malaysian Airlines flight MH370 traveling from Kuala Lumpur to Beijing was not only tragic but also a baffling mystery that captured attention around the world. An intense search was launched, with resources from as many as twelve nations, but as this paper goes to publication not many promising clues or leads have been found.

What many people find surprising is the fact that a plane can disappear amidst all the satellite and communications technologies covering almost the entire earth. However, keep in mind that there is limited coverage in the remote southern part of the Indian Ocean. This disappearance is first of its kind in a long time where authorities are finding it hard to locate the plane or any of its debris. When Air France flight 447 crashed into the Atlantic in 2009, authorities were able to locate the wreckage despite of not being able to find the black box for two more years<sup>1</sup>. While the incidents are not comparable, the task of locating wreckage deep in the ocean with weak satellite and communication signals does seem to link the two incidents. Chances of aerial disappearances are low but not impossible, and given the sophistication of today's technology it seems it should be possible to have the general location of the plane, even if reaching the zone take time.

While the mystery surrounding the disappearance makes an interesting topic for public discussions, the families at the center of these tragedies

are left helpless. At the least, what they want is to be able to locate their loved ones and find some closure. The information dissemination by the media and government in particular should be handled in a sensitive and respectful manner. This research note discusses the events surrounding the airplane's disappearance, and how to better prepare for dealing with other unforeseen tragedies going forward.

## **Complex Role and Stakes for Government**

The search and rescue operation for the Malaysian airplane began as a more complex affair because while the airline is Malaysian, the majority of the passengers on board were from China. This changed the stakes for each nation involved. While both nations want the missing plane to be found, the involvement of both sides created a lot of confusion and infighting. The Malaysian government was accused of not being transparent and not sharing information while China ramped up its rescue efforts. The Malaysian government made the announcement that the plane had crashed into the South Indian Ocean without providing any evidence or satellite data, angering the Chinese government and creating a lot of mistrust and a diplomatic rift between the two governments. The fallout from this could potentially have long-term economic and political implications<sup>2</sup>. Some travel agents in China have reported that bookings between China and Malaysia have already fallen and that Chinese citizens are cancelling trips “amid anger at the perceived lack of

information provided by the Malaysian government to passengers' families.”<sup>3</sup>

Unfortunately, this fallout is typical for an international aerial tragedy, since the origin and destination of an airplane are in different countries with many nationalities represented in the passenger manifest.

Therefore multiple countries have interest and responsibilities in an incident, some by authority of operating the airline, others by having citizens onboard. Consequentially, it is important for governments to handle these types of incidents with transparency and clarity, not only for the sake of passengers' families but also to avoid a diplomatic divide and any resulting long-term consequences.

## **Cost of Search and International Cooperation**

Experts already expect that the hunt for Malaysian Airlines Flight MH370 will be the most costly search in aviation history<sup>4</sup>. A truly international search, some 26 countries have contributed resources, including planes, ships, submarines, and satellites to help in the rescue process. Reuters estimates that the search has already cost around \$44 million just accounting for funds spent by the U.S., China, Australia, and Vietnam. The news agency expects that by the time the search is over - and once the money from the other 22 countries is counted - the total cost may reach hundreds of millions of dollars.<sup>5</sup>

Countries are invested in this operation, not only for the families seeking answers and closure, but also for trying to answer the question how a high-tech Boeing 777 airplane can vanish into seemingly thin air amid all the satellite tracking. The peculiarity of this incident has made the story resonate with people across the world, and everyone wants answers as soon as possible. Racing against the clock, authorities must locate the plane's black box before the batteries run out. The black box is likely the only source for finding answers to questions that will otherwise never be known - particularly for learning why the plane flew off course. The bottom line is that the cost of the search operation is immensely high, but it is important from all perspectives to know what happened to MH 370 to help prevent such tragedies in the future.

Despite the diplomatic tensions between Malaysia and China over information sharing, the event has resulted in countries with long history of disputes to set aside differences for aiding in the rescue effort. China and Japan, for example, have sparred for months over the occupation of islands in East China Sea but are now working jointly with the U.S. and New Zealand. India and China have a long historic rivalry going back to the 1960s but are now sharing a military base to conduct searches in the Indian Ocean. In all there have been 26 countries taking part in the search, working against the clock and facing the unpredictable and sometimes severe weather in the Southern Indian Ocean. The harsh weather conditions not only undermine the operation's efforts, but also can put the lives of rescue crews in severe danger. According to John

Blaxland, an expert on Asia-Pacific defense and security issues at Australian National University, "we're seeing a level of collaboration that's pretty much unprecedented."<sup>6</sup>

## **Role of Media**

The crash has highlighted the growing role of social media as a global platform where people generate and share theories about possible causes for incidents like the missing plane. Information from official sources has been scarce, and many feel disappointed by perceived and real lack of government transparency. People around the world have created and speculated on a wide range of theories, some bordering, and then crossing the line into the ridiculous. Speculative theories about the cause of the disappearance have ranged from terrorism and meteors to black holes and aliens. While this kind of speculation is the norm on social media sites, some mainstream news media sources have also participated in propagating wildly speculative theories, showing a lack of apathy for affected families and the victims of the crash. The 24/7 content model and the rising demand for instant updates online has created a fixation on bolstering ratings around the clock, but in particular mainstream news media outlets should be careful coverage does not come at the expense of personal lives and grief. Reuters reports that some in Malaysia have been offended about the rampant coverage of conspiracy theories, which they say have only aggravated the pain and suffering of the affected families.<sup>7</sup>

## Other Takeaways

The peculiar disappearance of MH 370 has generated many theories, and the answers are greatly outnumbered by the number of questions that have arisen. While this particular international incident will not necessarily trigger any changes for U.S. airlines or the American aviation industry, there are still a few takeaways that can be gleaned from this tragedy to keep in mind during future incidents.

When the news of the disappearance first surfaced many news outlets were quick to jump to the conclusion it might be a hijacking or terrorist attack. However, statistically these are not the most likely cause of fatal crashes. According to a database compiled at PlaneCrashInfo.com<sup>8</sup> that collects and examines data on airplane crashes, between 2000 and 2010 all types of pilot error accounted for 54 percent of 1,085 fatal accidents involving commercial aircraft worldwide. The second most common cause of these crashes was mechanical failures (24 percent), then sabotage (9 percent), and finally weather (8 percent). Keeping this data in mind, investigations must remain open to all possibilities, while fact-less speculation is kept to a minimum.

The job of an airline pilot is undoubtedly a stressful job, owing to the irregular time schedules, long hours, and extended time away from their families. During the MH 370 investigation, the Flight Captain's role has been heavily assessed and many discussions have arisen about his state of mind. Speculation has included dissecting his personality, professional

life, and personal life – wondering if he was under a lot of stress or fatigued. News agencies and experts alike have tried to determine whether his behavior in the preceding weeks was abnormal or questionable, and if there were other possible reasons that that may have led him to deliberately divert the airplane’s flight path.

While the world may never know the answers about the MH370 pilot, it is important for the aviation industry to continue to support the regular evaluation of airline pilots to assess if they are fit for flying. Pilots should be well rested and in a positive frame of mind when on board; they are often the only ones on board with the skills required for flying, and are charged with the safe transportation of the passengers on board. Since pilot error causes the largest number of fatal airline crashes, the value of these evaluations cannot be underestimated.

Another important facet during international incidents such as the MH 370 flight search is determining who is in charge of the situation. There is a lot depending on aviation authorities and governments cooperating between different countries. Guidelines from the International Civil Aviation Organization, a United Nations agency, recommend that during incidents the airplane’s manufacturer’s country participate in the operations.<sup>9</sup> Therefore, since the MH 370 airplane was an American-built Boeing 777, the U.S.-based National Transportation Safety Board (NTSB) has been involved in the search. Additionally, the country from where the airline took off also needs a lot of information from NTSB to make

informed decisions and provide information. Miscommunications or a lack in information between agencies can create a lot of confusion and inefficiencies. Therefore, in wake of such disasters it is critical for investigations to have accurate and timely information flow between all involved parties, a difficult undertaking particularly in an international setting.

The disappearance of MH 370 also raises the question of whether or not there is too much dependency on the recovery of an airplane's "black box" after a crash. The "black box" - which in reality consists of two orange boxes containing the cockpit voice recorder and digital flight data recorder - is designed to survive catastrophic conditions. While often recovered, these devices are not always found, sometimes because of severe damage or due to the batteries dying after the average 30 days. Moreover, even if it is found, the data recorded may not provide all the answers to the many complex questions that arise during and after an investigation. These limitations have prompted industry observers like the NTSB to propose upgrading the technologies required in airplanes, including a "crash-protected image recorders in cockpits to give investigators more information to solve complex accidents."<sup>10</sup> Others have suggested replacing the "black box" with systems that can transmit data continuously and in real time, but like many technological improvements that would aid in investigations, cost is a factor.

## Conclusion

Tragedies like the disappearance of flight MH 370 are a painful reminder that no matter how much technology is developed, such incidents can occur anytime and anywhere. Therefore, lessons from these tragedies should be extracted and changes implemented in order to mitigate future risks, no matter how small or insignificant the change seems to be. There are times when the incentive to change might not seem significant enough but for the sake of human lives, nothing should be taken for granted. With this, we hope the families of the passengers on Malaysian Airlines MH 370 receive closure about their loved ones.

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