

Data Science

About Me



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Is Air Travel Safe?

Overview

When we think about safety when traveling on road versus air travel, most of the time people think Air travel is riskier. After all, an air crash is catastrophic, with more loss of life, injury, and property damage than a car accident. I did some search on fatalities and accidents that happened in past and statistical results showed air travel is safer than road travel. In this article, I am sharing my research which clearly shows travel through airlines is safer than the automobile.

Fatalities & Crashes

When I checked the National Highway Traffic Safety Administration compiled data against statistical data from the Bureau of Aircraft Accident Archives. It clearly shows air fatalities ranges in the range of one to two hundred with maximum fatalities in 1995 which was 266 but when we look at road accidents, numbers are always greater than 29 thousand and maximum fatalities happened in 2005, more than 39 thousand fatalities. Even though fatalities occurred are less in air travel we can also see in the below chart that fatalities count reduced more than 50% in 2000-14 as compared to numbers in 1985-99.



Also when we look at the above chart which shows fatal accidents during 1985-99 & 2000-14. We can observe that there were 67% fewer fatal accidents in 2000-14. This shows the airline industry has done a good job at taking steps for better safety measures.

We can also see in the below chart that accidents with airlines reducing consistently year over year which is not the same when we look at accidents happening every year with automobiles. It clearly shows that automobile crashes continued to increase until 2005 and then started reducing until 2012 and then it again started increasing but when we look at airline graph is it every smooth and we can see accidents are reducing consistently.

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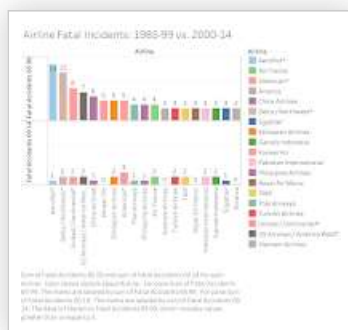
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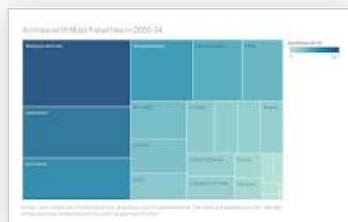


Fatal Incidents by Airlines

When we look at fatal incidents by different airlines, we can easily see that, all the airlines had less number of incidents in 2000-14 as compared to 1985-99. Airlines work with technology companies a lot to make sure that air travel becomes more affordable, reliable safe, and convenient. As technology advancing, airline companies work a lot to make sure air travel becomes the safest way to travel.



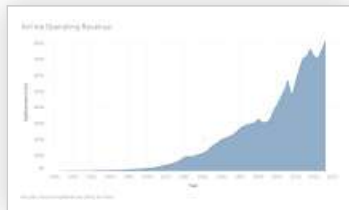
Also, the below charts show airlines with the most fatalities in 2000-14. Malaysia Airlines had maximum fatalities. American*, Air France, Kenya Airways, and China Airlines are among the top 5 airlines with the most fatalities. According to Business Insider, the safest airlines in 2018 were Delta and American Airlines. For a complete list, airlineratings.com features the safety record records for over 435 carriers around the world. Using a seven-star rating system, the site shows whether the airline has passed the safety standards of the international air transport association and if they are free of fatalities in the last 10 years.



Airline Business Revenue

The below chart shows airlines operating revenue, we can easily visualize that revenue is increasing year over year with some exceptions. When during recession time, the airline industry doesn't seem to be much impacted. Based on

this it seems like more air traveling happening and as a result airline are earning more year over year.



Conclusion

In purely statistical terms, air travel is far safer than road travel. However, it feels more dangerous because risk perception is based on more than facts. Driving affords more personal control, making it feel safer. Besides, plane crashes are catastrophic, killing more people at once, which grabs more attention and makes people more sensitive to them. A car accident happens every day across the U.S., but many of them are minor with little to no injury, making their combined effects less noticeable.

Supporting Data sources:

<http://web.mit.edu/airlinedata/www/Traffic&Capacity.html>

<https://github.com/fivethirtyeight/data/tree/master/airline-safety>

<https://www-fars.nhtsa.dot.gov/Trends/TrendsGeneral.aspx>

<http://www.baaa-acro.com/statistics>

<https://github.com/fivethirtyeight/data/tree/master/airline-safety>

<https://www.metropolitanshuttle.com/articles/road-vs-air-travel-pros-and-cons/>

Posted by [Gourav Verma](#) at [09:44](#)

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