



Airline Safety

Shashi Bhushan

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Agenda

Introduction
Data Selection
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Introduction

- Media is promoting statistics highlighting air as not a safe travel mode vis-à-vis automobile
- Objective - To debunk the media theory using airline and automobile travel data





Data Selection

Data Selection

- Airline Safety, Link: [data/airline-safety at master · fivethirtyeight/data · GitHub](#)
 - Utilized number of fatal accidents, incidents, & fatalities data over the years
- Accidents and Fatalities per year, Link: [Accidents and fatalities per year - Google Sheets](#)
 - Utilized airline accidents by year data from 1946 onwards
- Supplemental Data, Link: [FARS Encyclopedia: Trends - General \(dot.gov\)](#)
 - Utilized road fatalities per year and per 100 million vehicles miles traveled per year



Methods Used

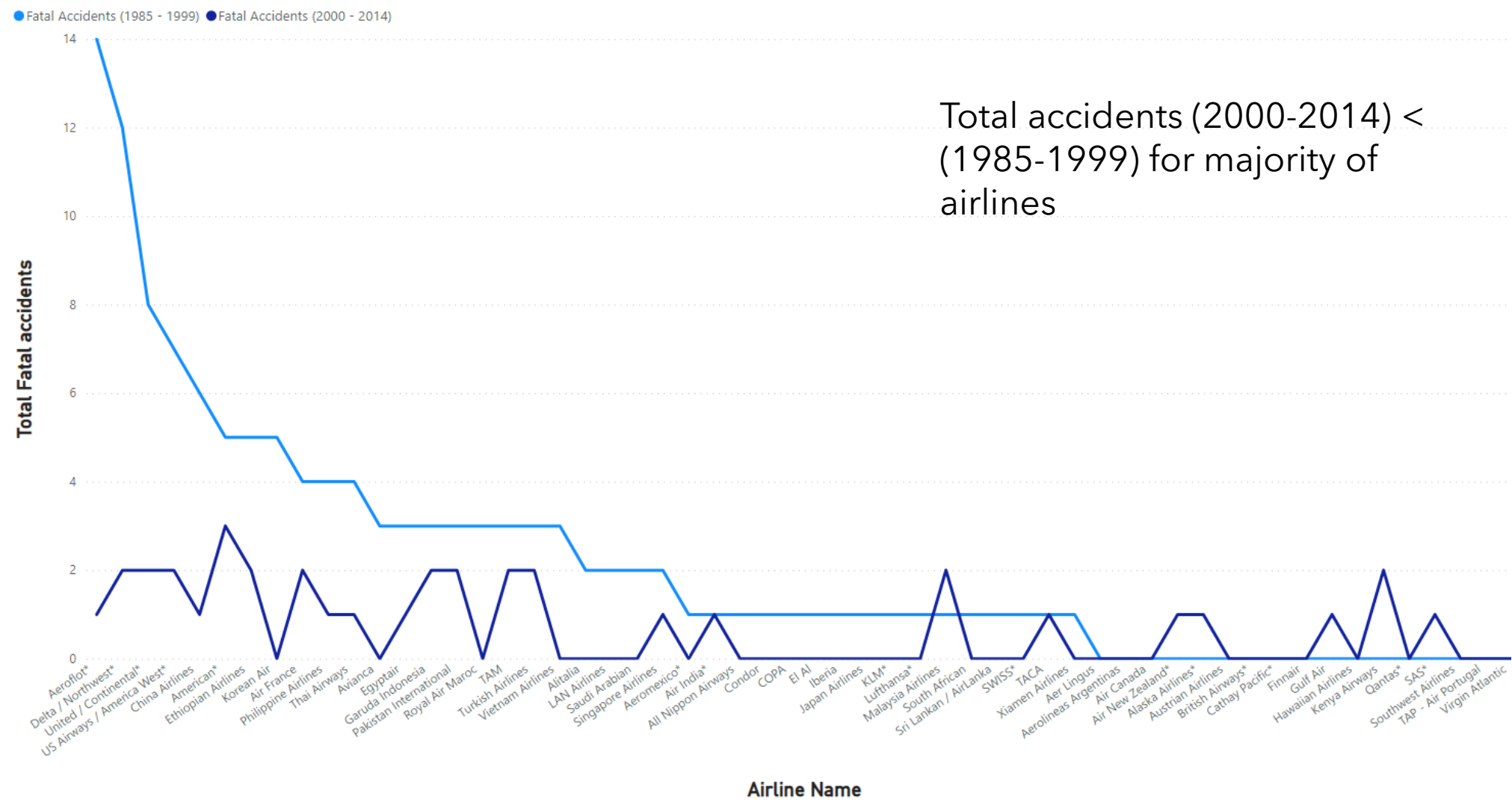
Visualizations

- Utilized airline safety travel data available in two timeframes (1985-1999 and 2000-2014) to check:
 - If air travel got better with time based on number of incidents, fatal accidents and average fatalities in those timeframes
- Used airline accidents data from 1046 onwards to check increasing or decreasing trend
- US road fatalities data per year and 100 M vehicle miles traveled to check increasing or decreasing trend

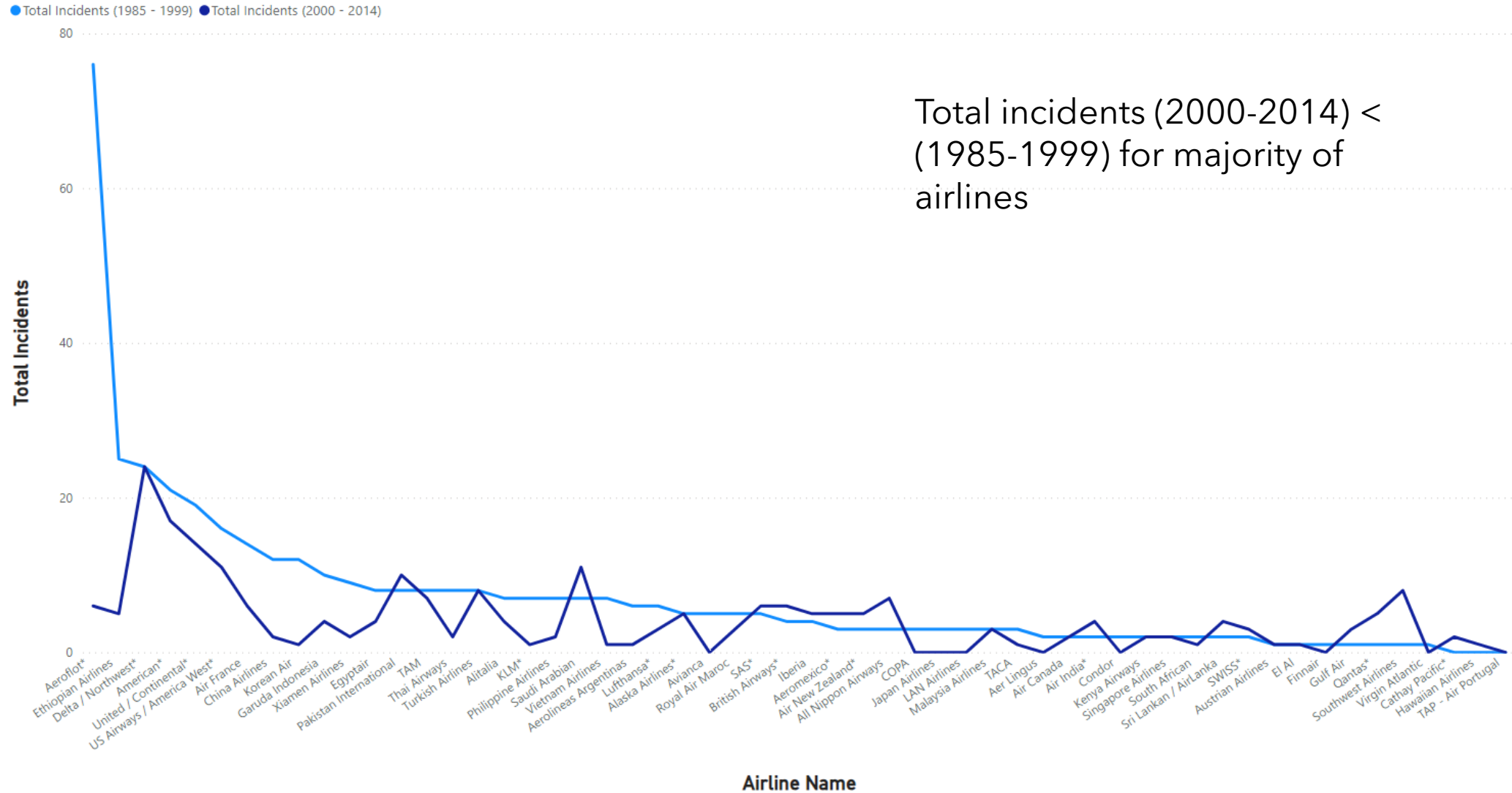


Visualizations

Total Fatal Accidents Per Airline

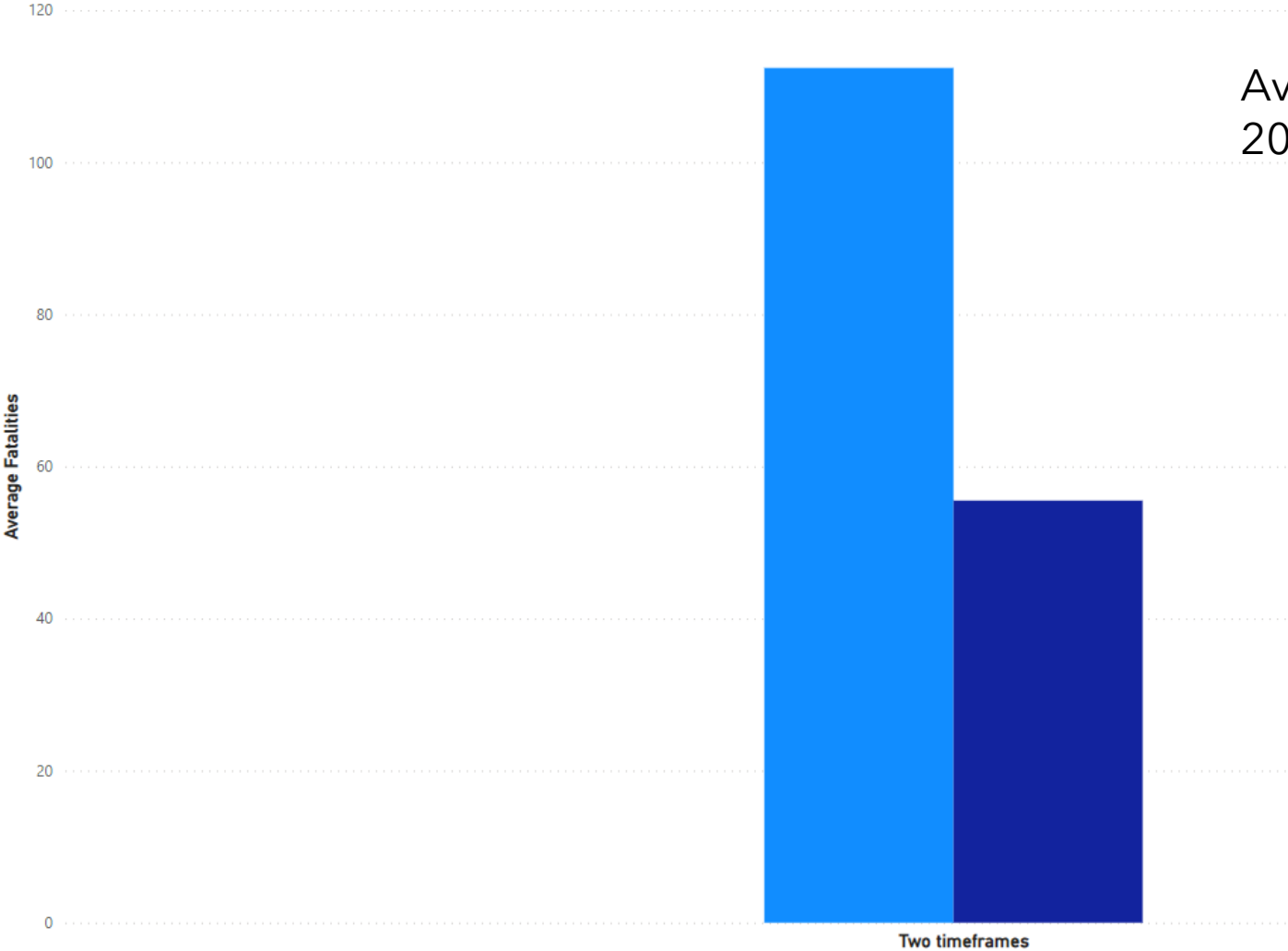


Total Incidents Per Airline

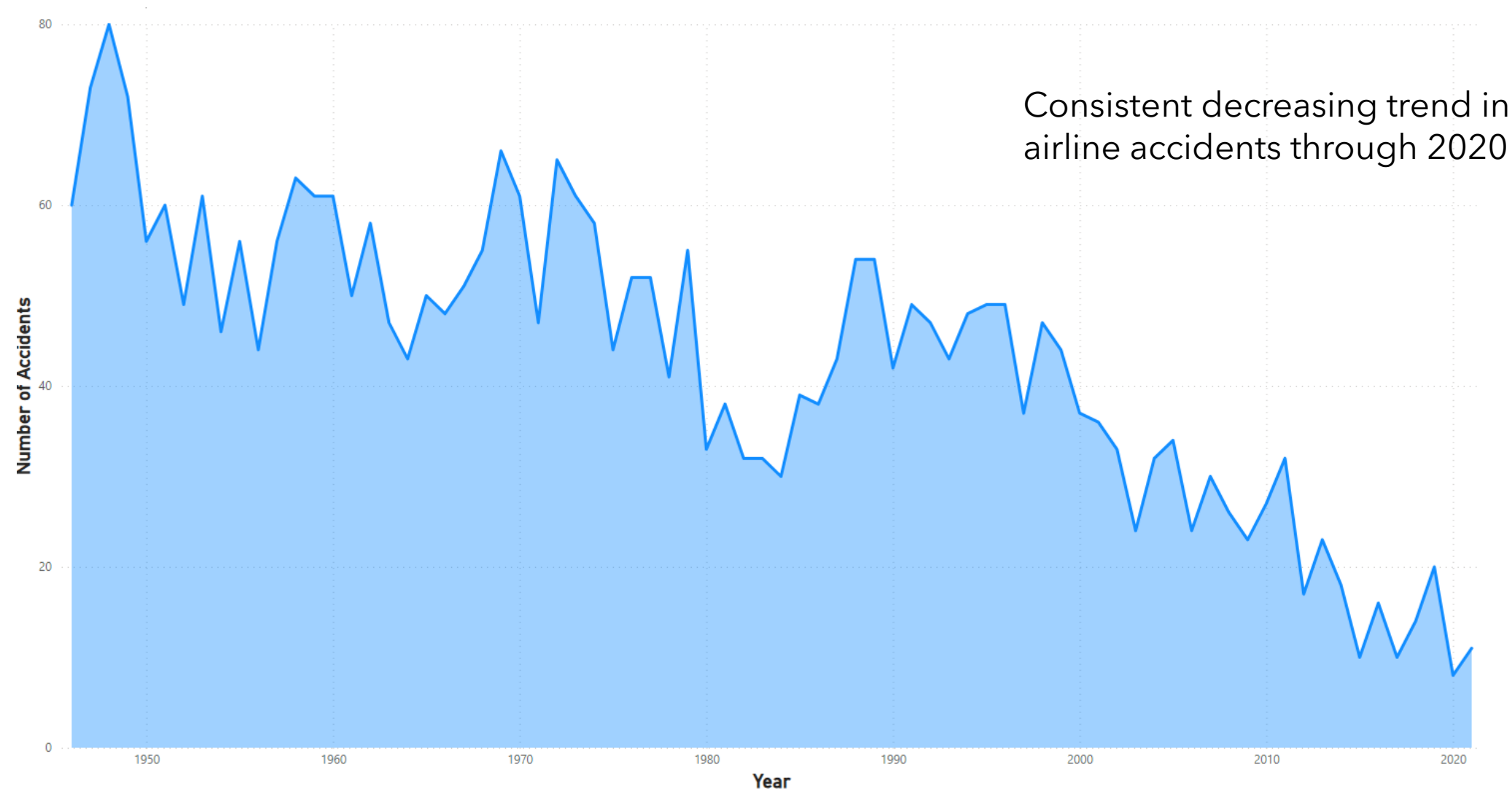


Average Fatalities Per Airline

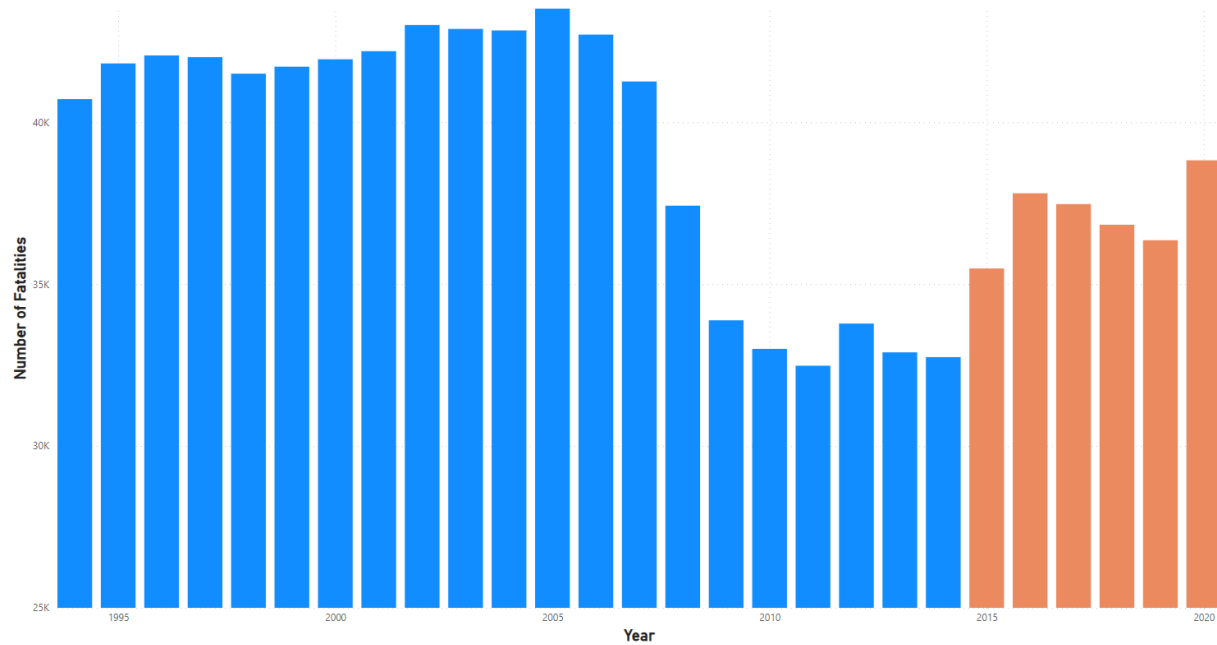
● Average Fatalities (1985-1999) ● Average Fatalities (2000 - 2014)



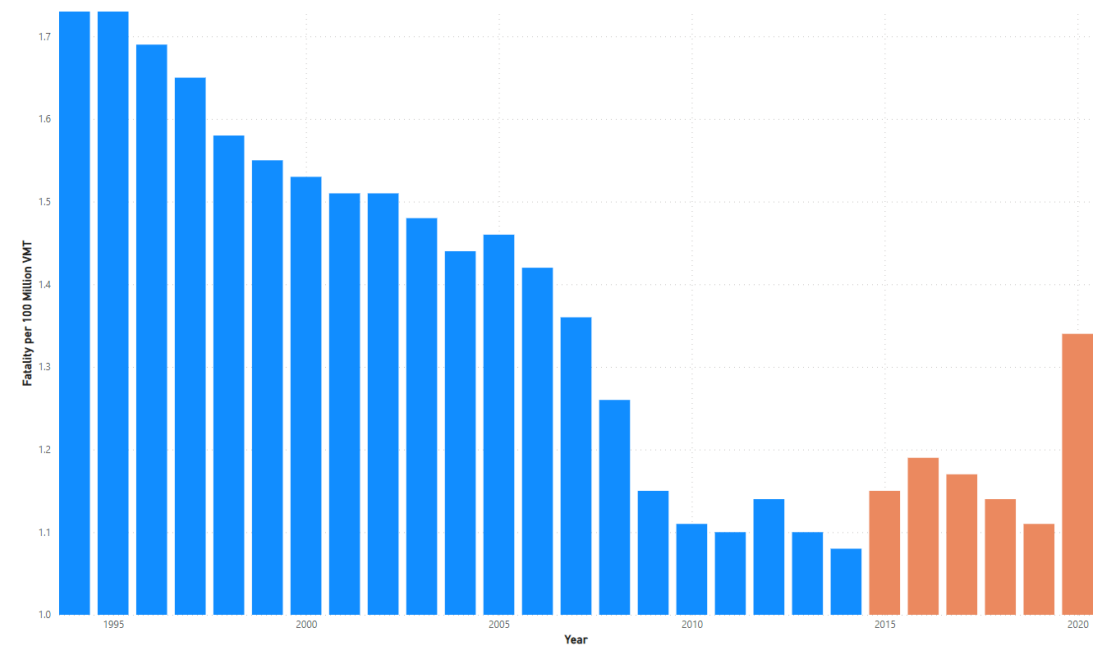
Airline Accidents Per Year



Road Fatalities per Year



Can observe a rising trend starting 2015 in the U.S (orange bars)



Conclusion

- Airline safety parameters in later time frame (2000-2014) far better than 1985-1999 timeframe implying improvement in air travel safety with time.
- Airline accidents have reduced consistently since 1946.
- Road fatalities show an increasing trend since 2015.
- The above results debunk media theory that air travel safety has reduced.





Ethical Considerations

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- Road travel data is for U.S. only while air travel is for global.
 - Different parameters in other countries may put a question mark to the U.S. data usage as population sample.
- Like for like comparison with global road data may be utilized for the analysis to be ethically unquestioned.



Thank you

Shashi Bhushan

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