

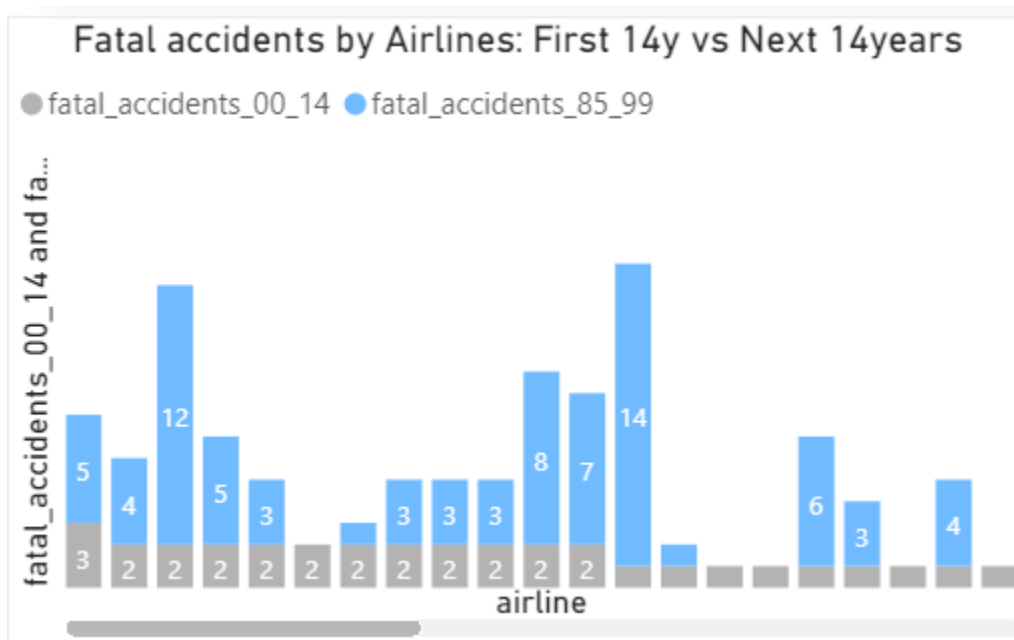
Week 3-4 Dashboard analysis

To understand if Airlines is still the safest mode of travel, I pulled in motor vehicle fatalities and start comparing them against the airline's fatalities for the same period of 2000-2014. Below is the key metrics with average fatalities of airlines vs motor vehicle along with number of incidents.

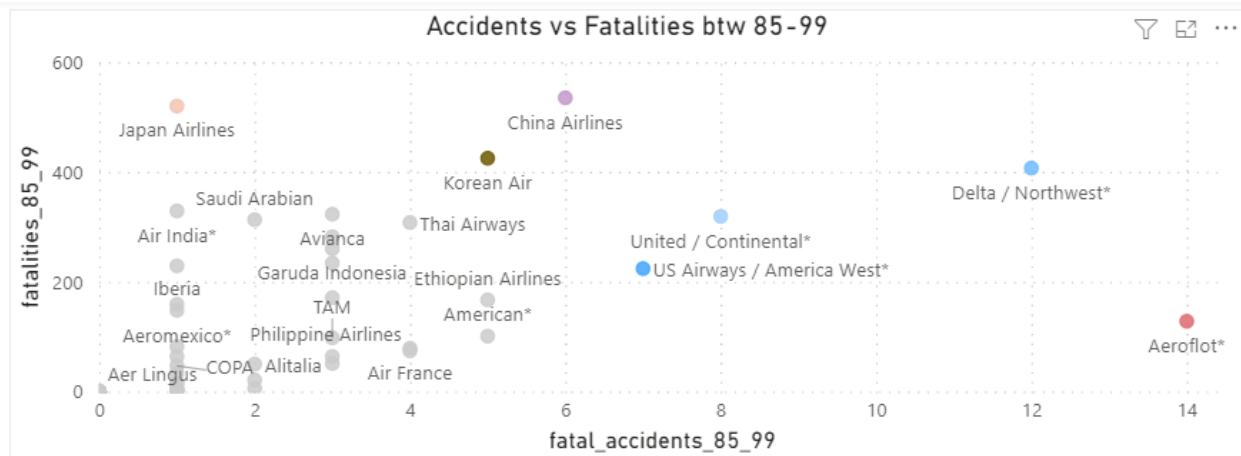
2000 to 2014 Key Fatalities Metrics			
55.52	231	38,436.40	576,546
Avg airline fatalities per year	Total Airlines incidents	Avg Motor Vehicle Fatalities per year	Total Motor vehicle fatalities

To understand the two sets of data that is there for first 14years (1985-199) and next 14years(2000-2001) created a stacked graph to show if there is any merit on the argument that, 'airlines fatalities are increasing and is not safe'.

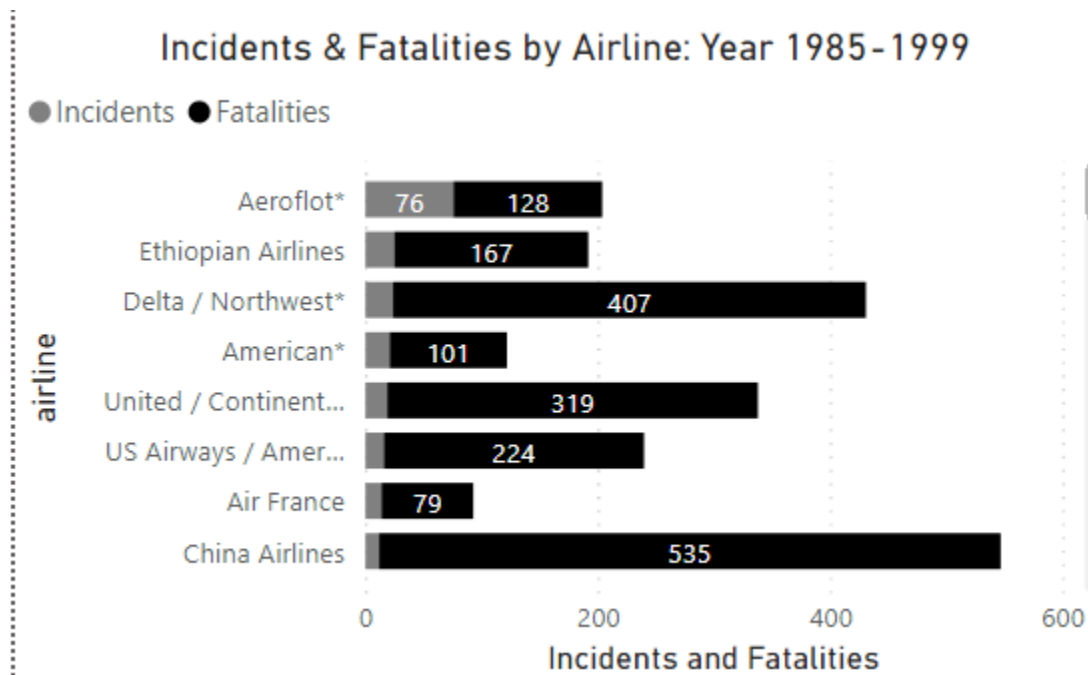
Below graph show that for all the airlines, the later part of the 14years is considerably lower compared to the first 14years. Color blue is for first 14y and gray is for later 14years.



To understand if number of accidents directly relates to fatalities, created this scatter plot on fatalities against accidents. Surprisingly, Japan Airlines has just one accident but has 520 fatalities, while Aeroflot has the highest number of accidents and relatively low, 128 fatalities during the same time period. This implies that fatalities are directly related to the size of the aircrafts and not necessarily related to the number of accidents. Highlighted the colors of such airlines to show the relation below.

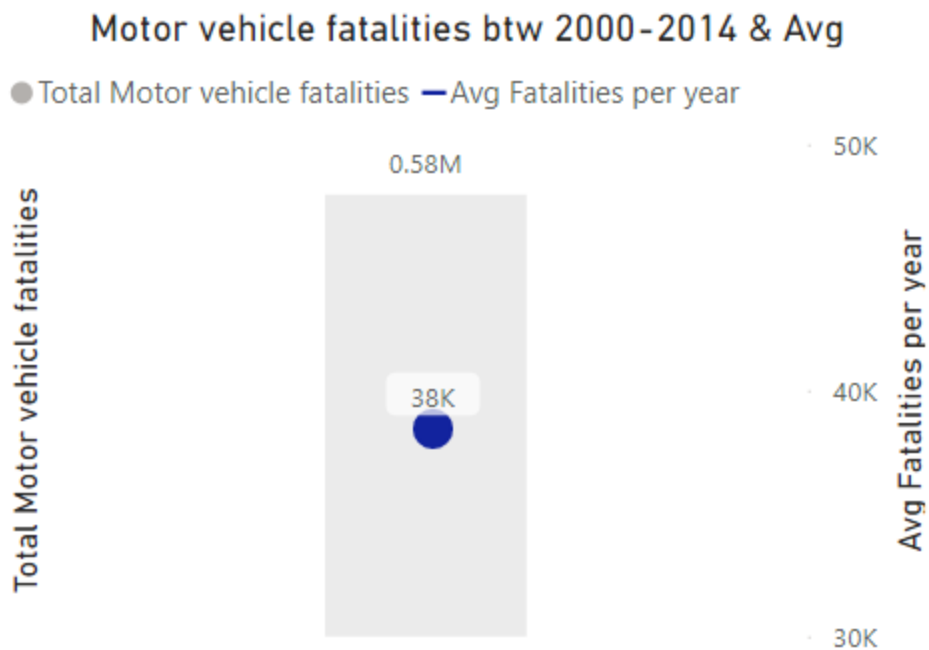


Also evident from this chart below that, Incidents and fatalities are not directly related. And in spite of having very low incident rates (Chines airlines), the fatalities are high and vice versa(Delta and Aeroflot)



To showcase the airlines are still the safest mode of transportation, created two graph one for airlines total fatalities with average fatalities per year and the same for motor vehicles with avg fatalities per year for 2000 to 2014 year.

It is evident that airlines 56 fatalities vs 38k fatalities is evident, that airlines is by far the safest compared to other forms of travel.



Sources:

NHTSA for vehicle fatalities: <https://www-fars.nhtsa.dot.gov/Main/index.aspx>

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