**Airline Industry Analysis**

**Executive Summary**

**Evelyn Cates**

The current media portrayal of the airline industry has created a negative shadow over flying. This negative attention could impact the industry for longer than the news is around and make it harder to increase sales. To understand the current situation, this presentation looks at the current state of airline safety, revenue, and future projections. For this analysis, three datasets were used, airline- safety.csv, all\_airlines\_ all\_airports.csv (this dataset covers revenue and passenger data) and annual-growth-of-revenue-ton-miles.

First, we begin with airline safety. The media shows the unsafe side of flying; however, airplanes do not rank high as a dangerous form of transportation. Comparing other modes of transportation such as vehicles, ferryboats, trains and bus, airplanes are at the end of the list (Armstrong, 2019). Using the dataset airline safety, we analyze which airlines had the highest number of accidents and compare accidents for US airlines between 1985-1999 and 2000-2014. There is a drastic decrease in accidents, showing a downward trend. These charts show how each year airline safety is increasing and accidents are not a common event. Passengers also realize traveling is a safe form of transportation because as we will see from revenue, each year there is growth.

Airline revenue has increased year over year. Another insight from the data gathered is the increase in international travel has surpassed domestic revenue by approximately $51 million. This was rather surprising and another demonstration of passengers trusting airplanes and traveling further each year. Even after the 2008/2009 recession, domestic revenue increased 2.5% and has continued to grow. International travel which tends to cost more is the leader in generating revenue. During this period, an average of 650 million passengers are travelling domestically and about 160 million internationally. These are strong numbers, showing passengers are not currently affected by the news attention. To see if there are lingering effects of the news attention on the air travel, we turn to future revenue projections.

Revenue projections made until 2040 are consistent with current revenue. Domestic travel is projected to grow approximately 2% and international revenue once again surpassing domestic travel and growing at a rate of 4%. Even though, these are projections not considering anomaly types of events they are consistent with the airline revenue growth.

Overall, while the media is sharing poor light on airline safety to receive attention because of the rarity of these events passengers know it is one of the safest forms of transportation. Now that we have done an industry analysis, our goal is to use the knowledge we have gained about passenger preference to improve their flying experience.

Sources:

Armstrong, Martin, and Felix Richter. “Infographic: The Most Dangerous Ways to Travel in the U.S.” *Statista Infographics*, 4 June 2019, [www.statista.com/chart/18264/the-most-dangerous-ways-to-travel-in-the-us/](http://www.statista.com/chart/18264/the-most-dangerous-ways-to-travel-in-the-us/).

**Global Fatal Accidents from 1985-2014 & Total Incidents Per Airline from 2000-2014**

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

**Revenue per Passenger 2002-2016**

<https://www.kaggle.com/shellshock1911/us-commercial-aviation-industry-metrics?select=all_airlines_all_airports.csv>

**Revenue and Projected Revenue until 2040:**

https://www.statista.com/statistics/194368/growth-of-rtms-of-us-commercial-air-carriers/

**GitHub**

**https://github.com/evelyntc/DSC640\_Projects**