

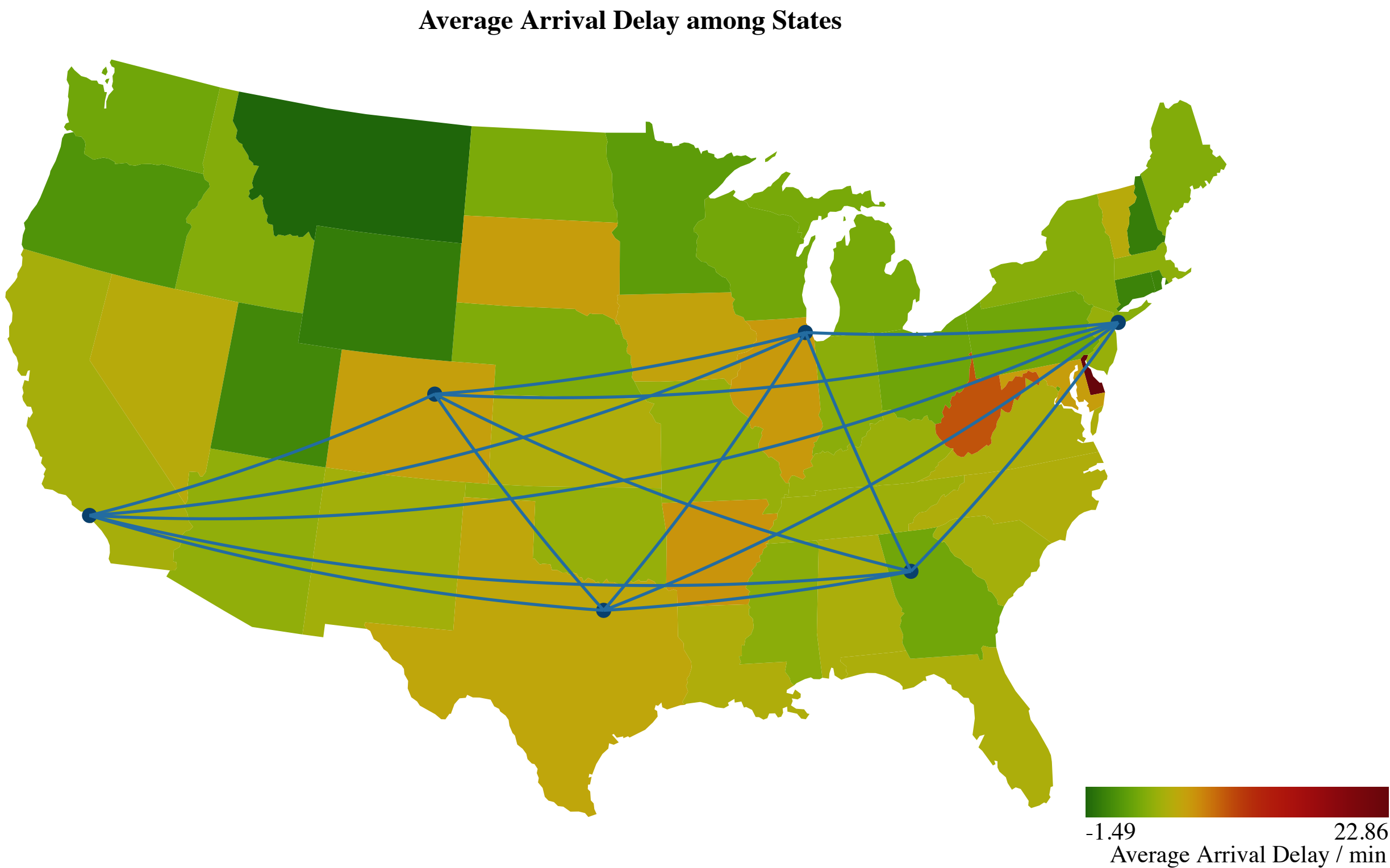
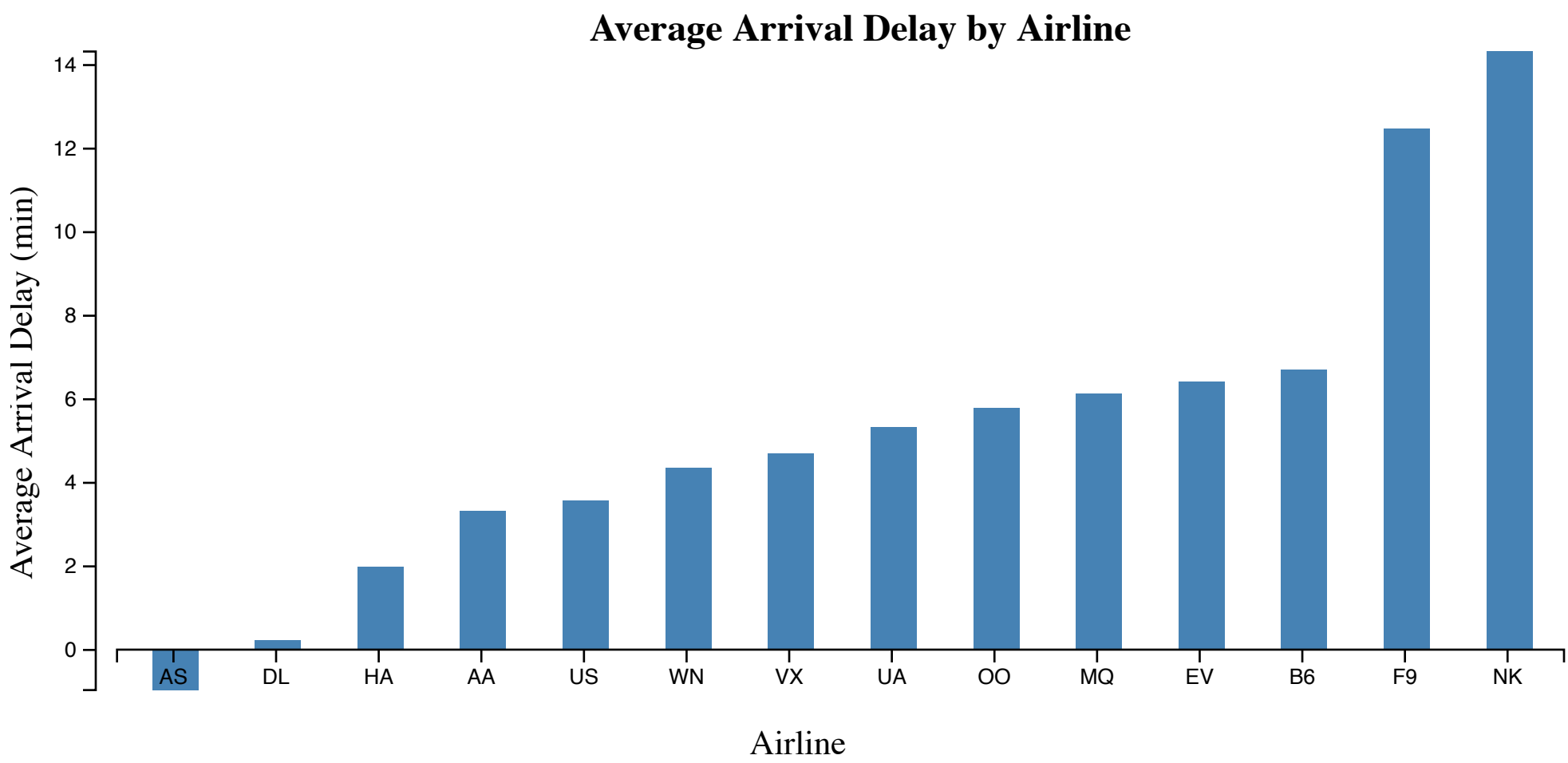
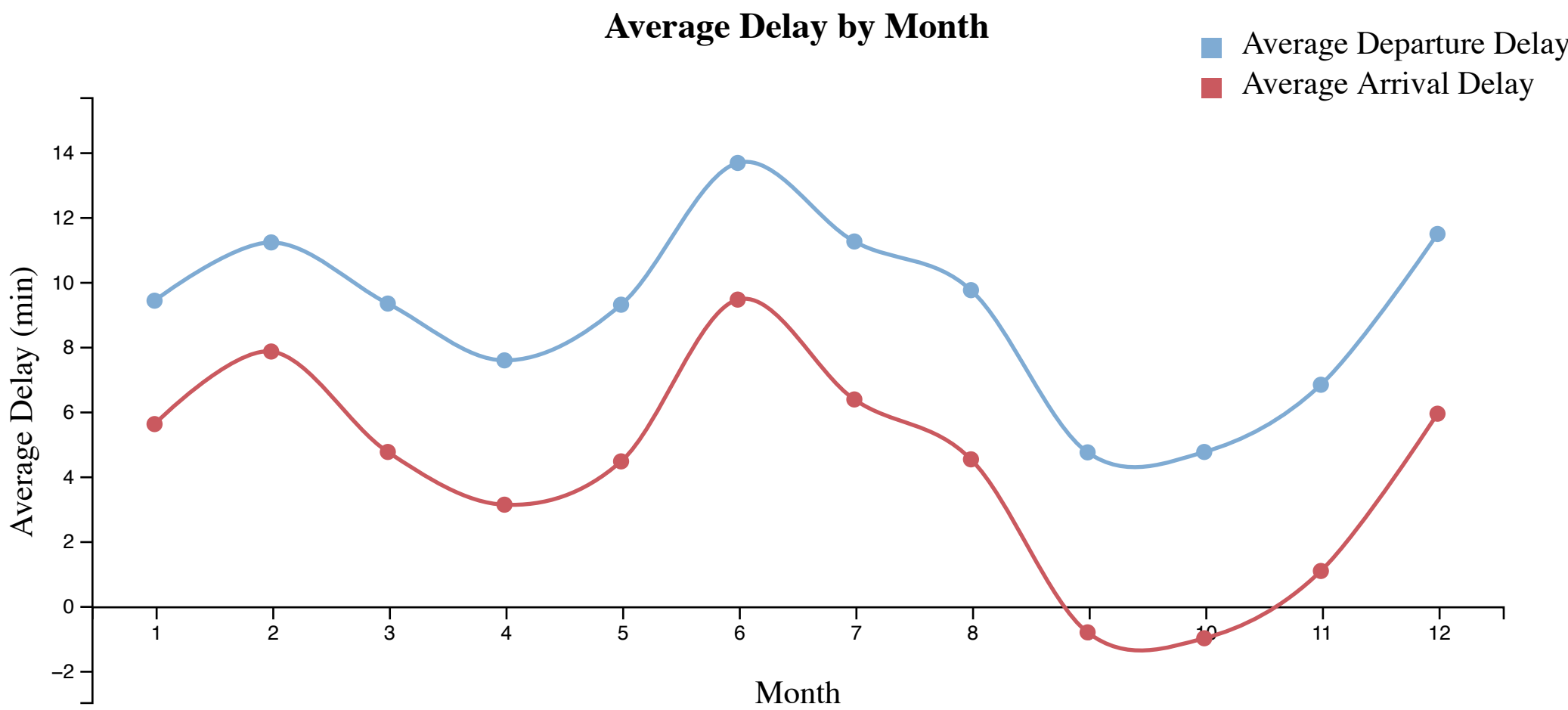
# Why Are Flights Delayed?

## Data Analysis and Visualization on US Domestic Flights in 2015

### Background

The United States is the country that operates the most flights, but the delays are also massive! In 2015, among the approximately 5.8 million domestic flights in the US, 36% of them were delayed.

In fact, the delays has correlation with the time of the year, airline, and the origin state.



### Summary

In this project, I visualized the flight delays and multiple factors that may affect them. My dataset contains detailed information of 5,819,079 US domestic flights in 2015. Also, I used a dataset with the location information of the airports.

The line plot visualizes both the average departure and arrival delay of all domestic flights in 2015, from January to December. There is a clear pattern that the delay time increase in June and December, which are popular time for holiday.

The bar plot visualizes both the average arrival delay time of each airline, sorted in ascending order. Alaska Airlines is most punctual, whereas Spirit Airlines has the longest average delay time.

The map visualizes the average arrival delay time of the flights departed from each state by using different colors. Also, it also visualizes the routes connecting the six busiest US airports in 2015, and the delays of each route.

### References

[https://figshare.com/articles/dataset/flights\\_csv/9820139/1](https://figshare.com/articles/dataset/flights_csv/9820139/1)

<https://ourairports.com/countries/US/airports.hxl>

[https://www.transtats.bts.gov/DL\\_SelectFields.aspx?gnoyr\\_VQ=FGJ&QO\\_fu146\\_anzr=b0-gvzr](https://www.transtats.bts.gov/DL_SelectFields.aspx?gnoyr_VQ=FGJ&QO_fu146_anzr=b0-gvzr)