

# US commercial flights analysis

Davide Masticci



# Dataset

Research and Innovation Technology Administration

- 22 years of data [1987 - 2008]
- 123 M of observations
- 29 different variables

# Data Management

**Before**

**After**

22 CSV

1 SQLite table

Hard to read, join and filter

Easy to read, join and filter

Same reading and retrieving data speed

Faster reading and retrieving data speed on  
some field (Indices)

# First Insights

**Distance (miles)**

**Origin**

**Dest**

6

Spokane Intl  
(Washington)

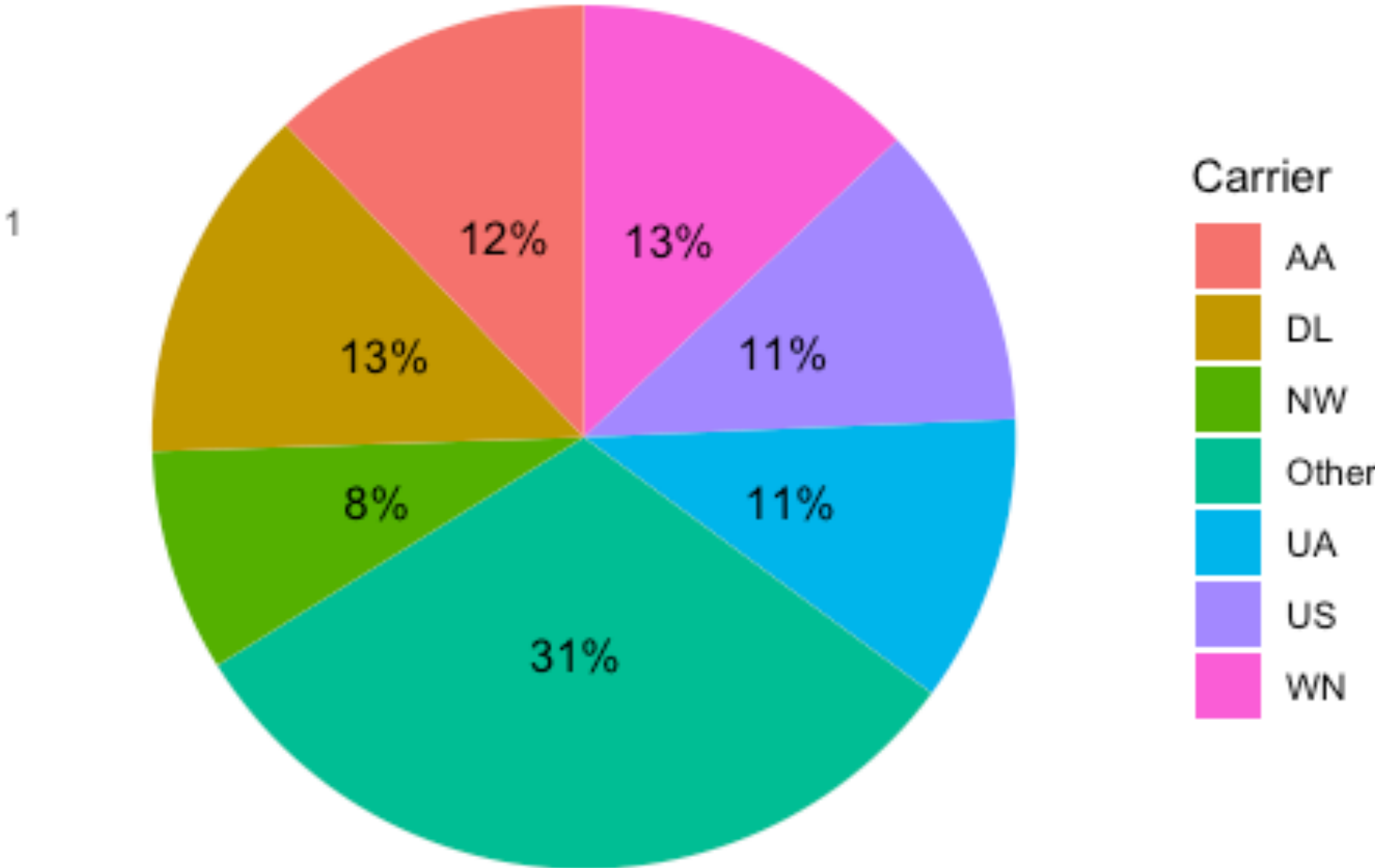
Fairchild AFB  
(Washington)

4983

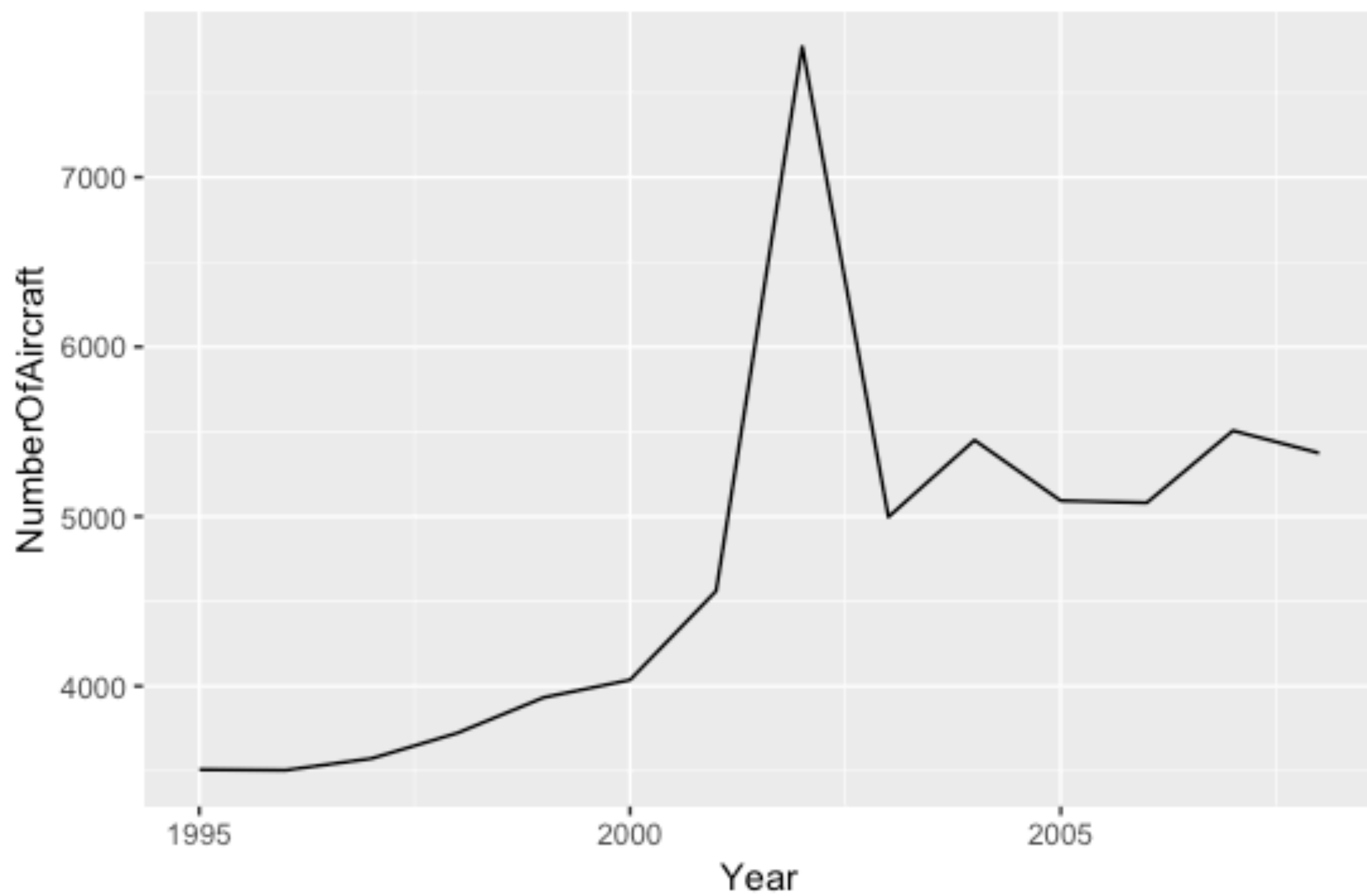
John F. Kennedy Intl.  
(New York)

Honolulu Intl.  
(Hawaii)

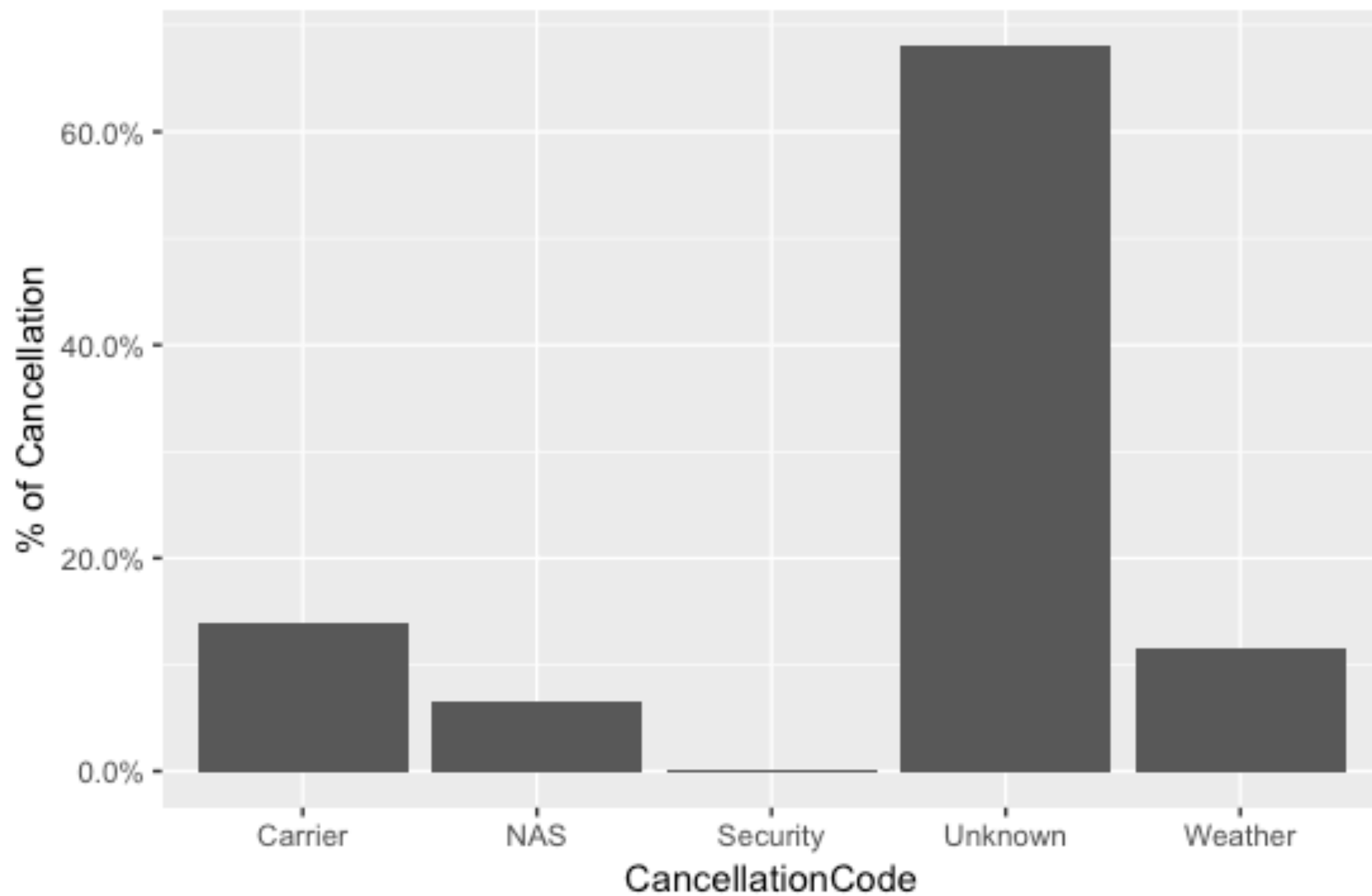
# Carrier Distribution



Number of aircraft per year



Causes of cancellations

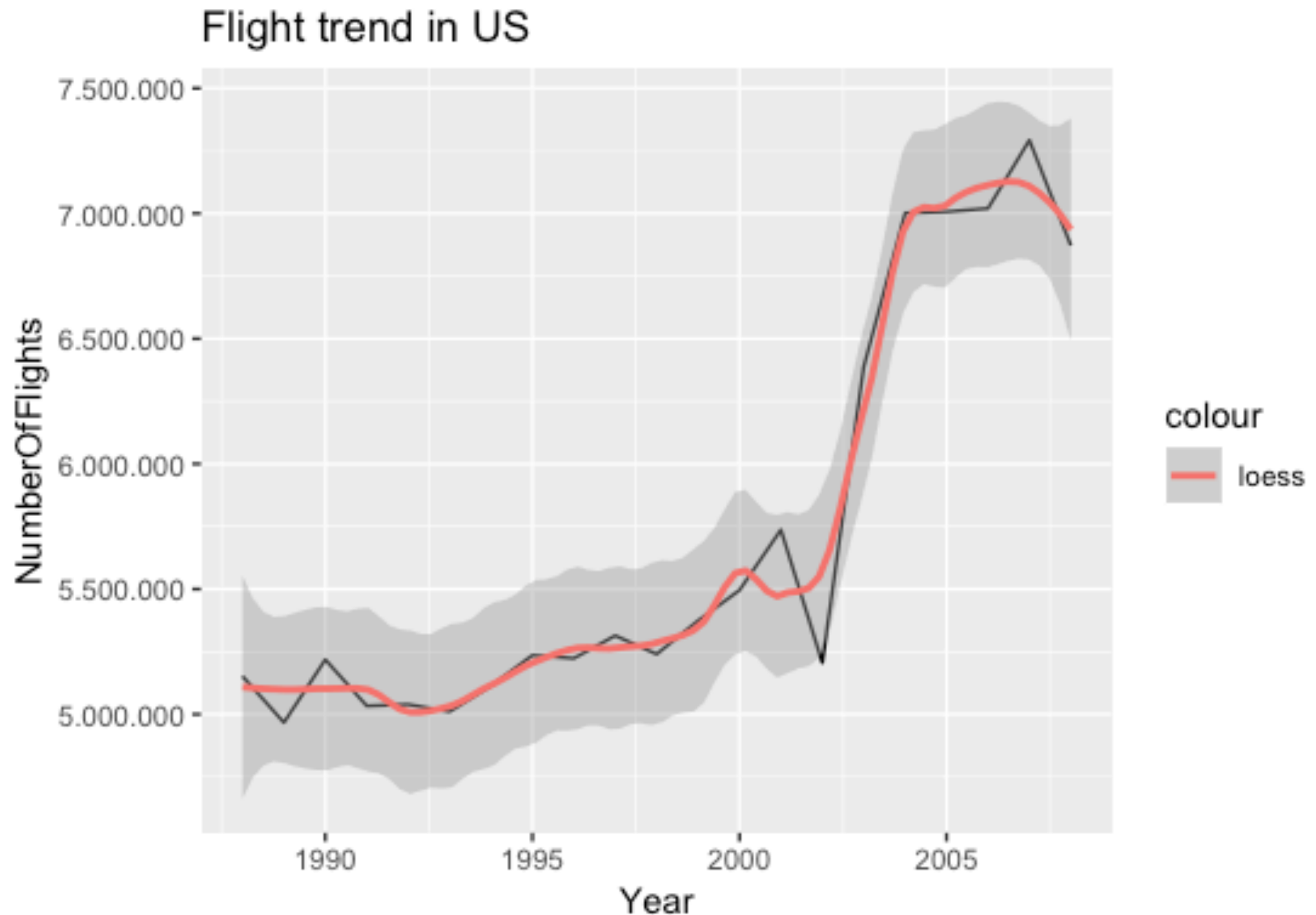


# Analysis

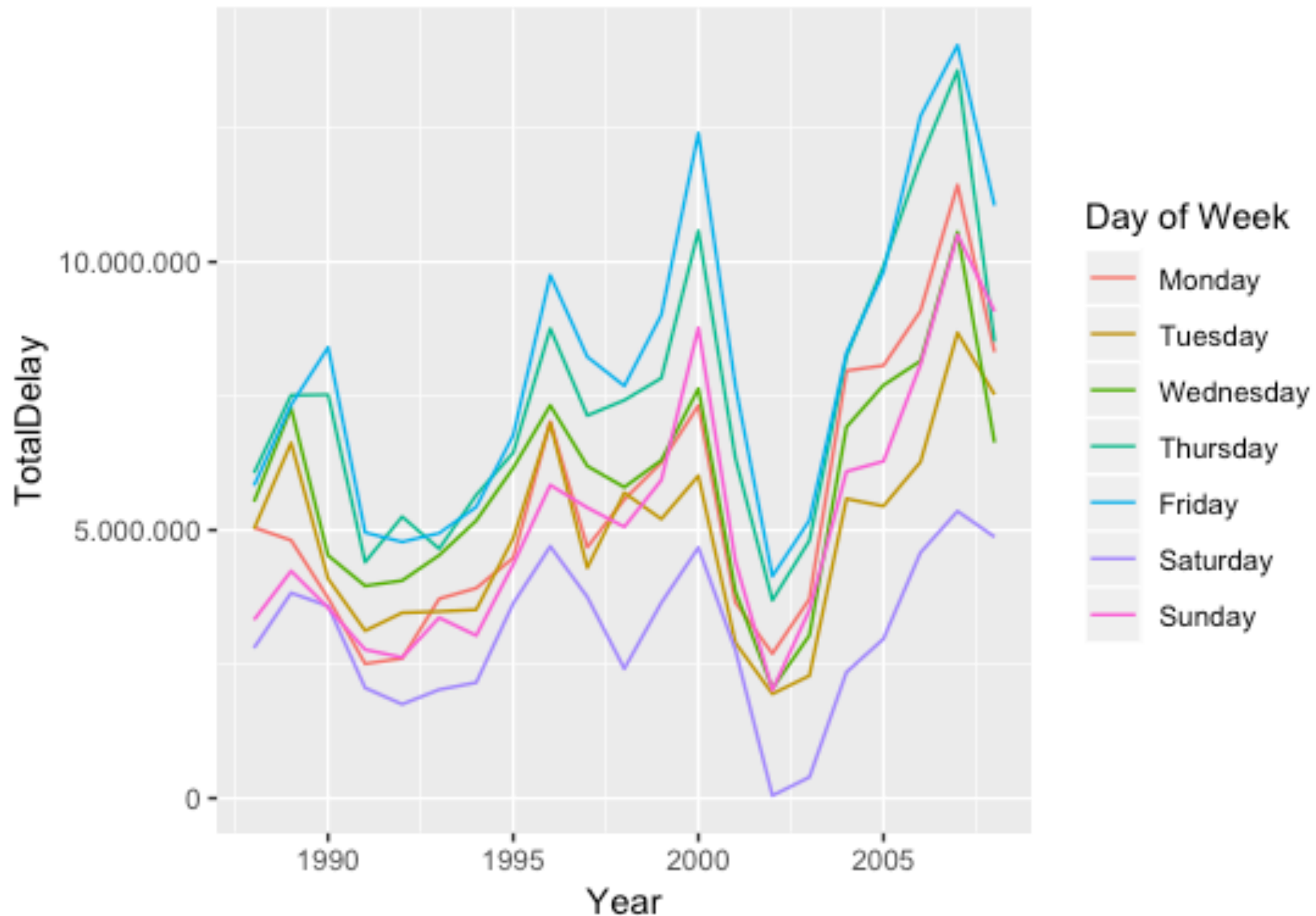
1. How is the trend of commercial flights in the US?
2. Which is the best (worst) day of the week to take a flight?
3. Which is the best (worst) season to flight in terms of delay?



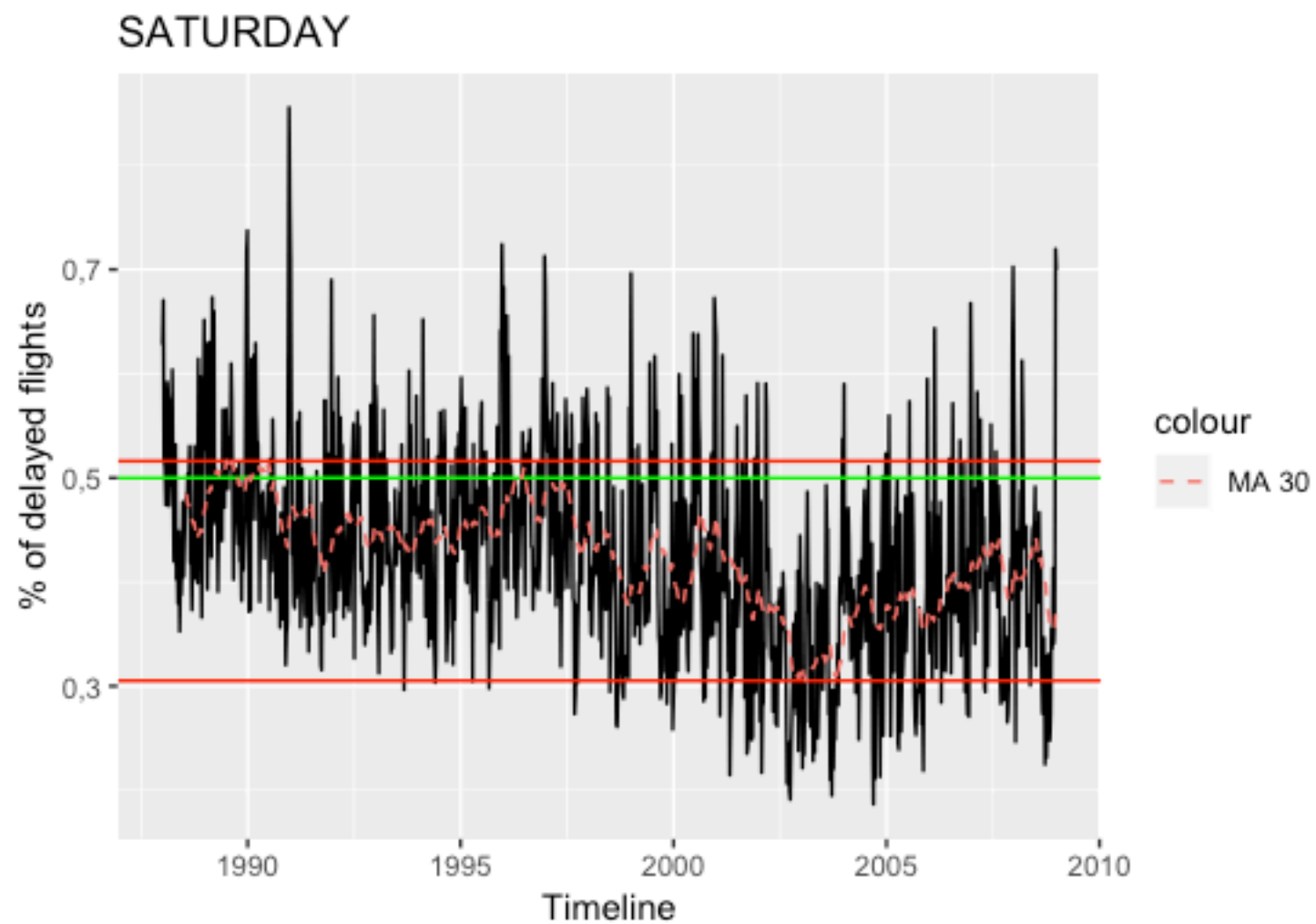
# How is the trend of commercial flights in the US?



# Which is the best (worst) day of the week to take a flight ?

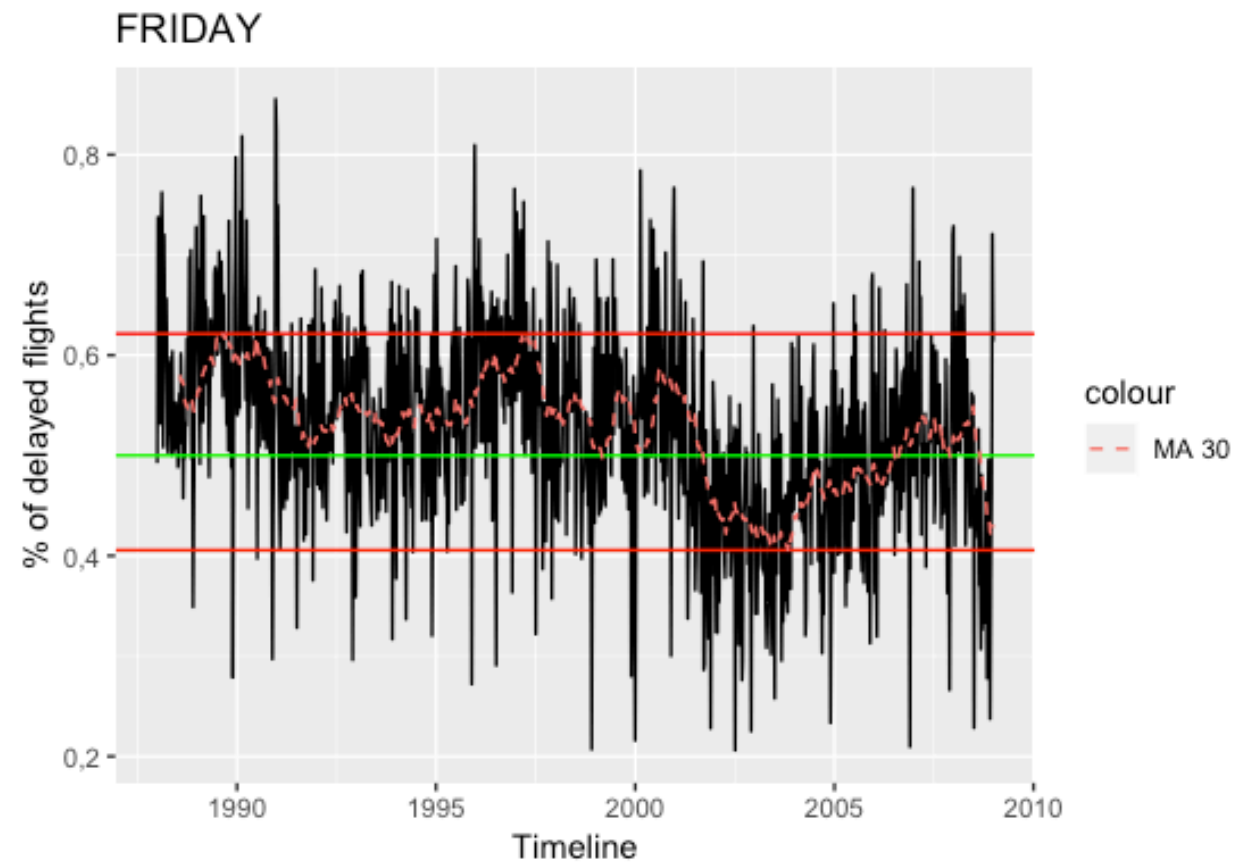


# Best Day

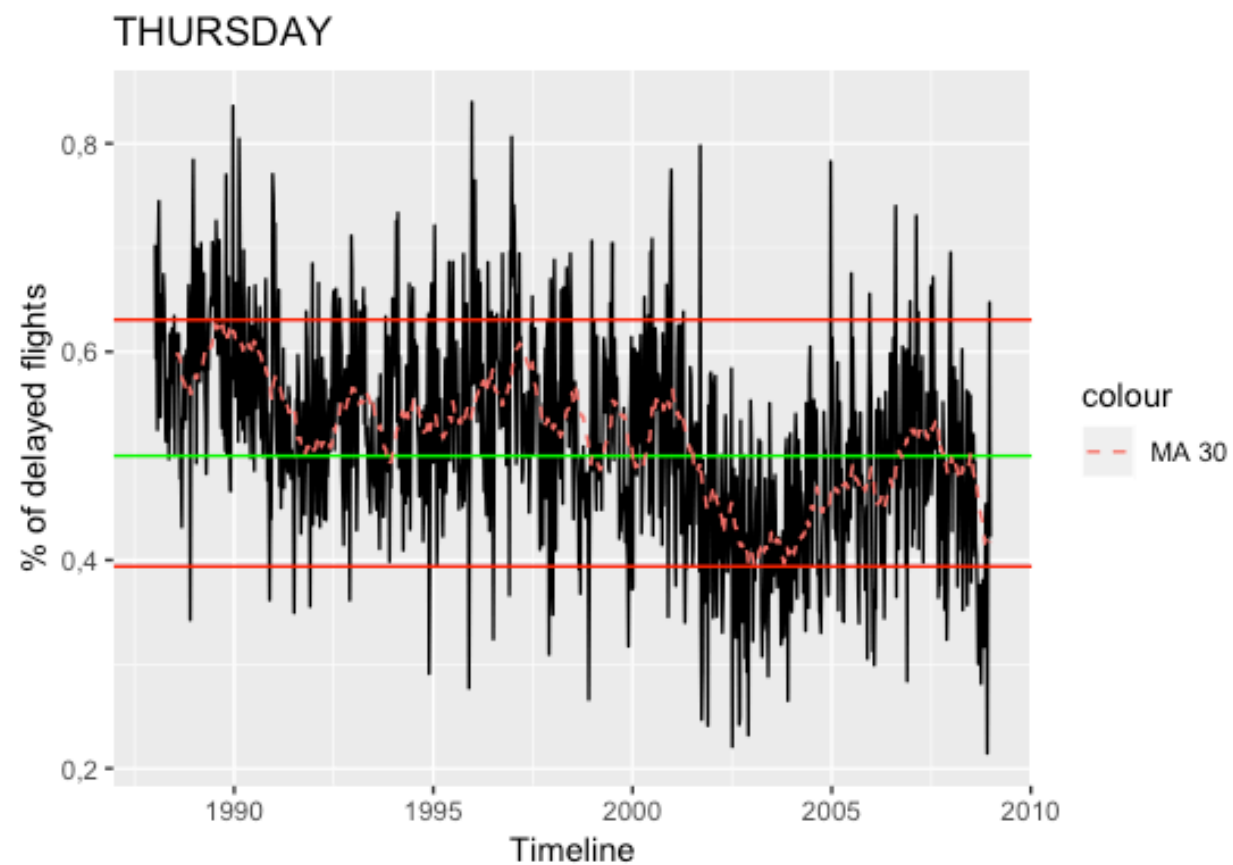


**MA fall into [30% ; 52%]**

# Worst Days

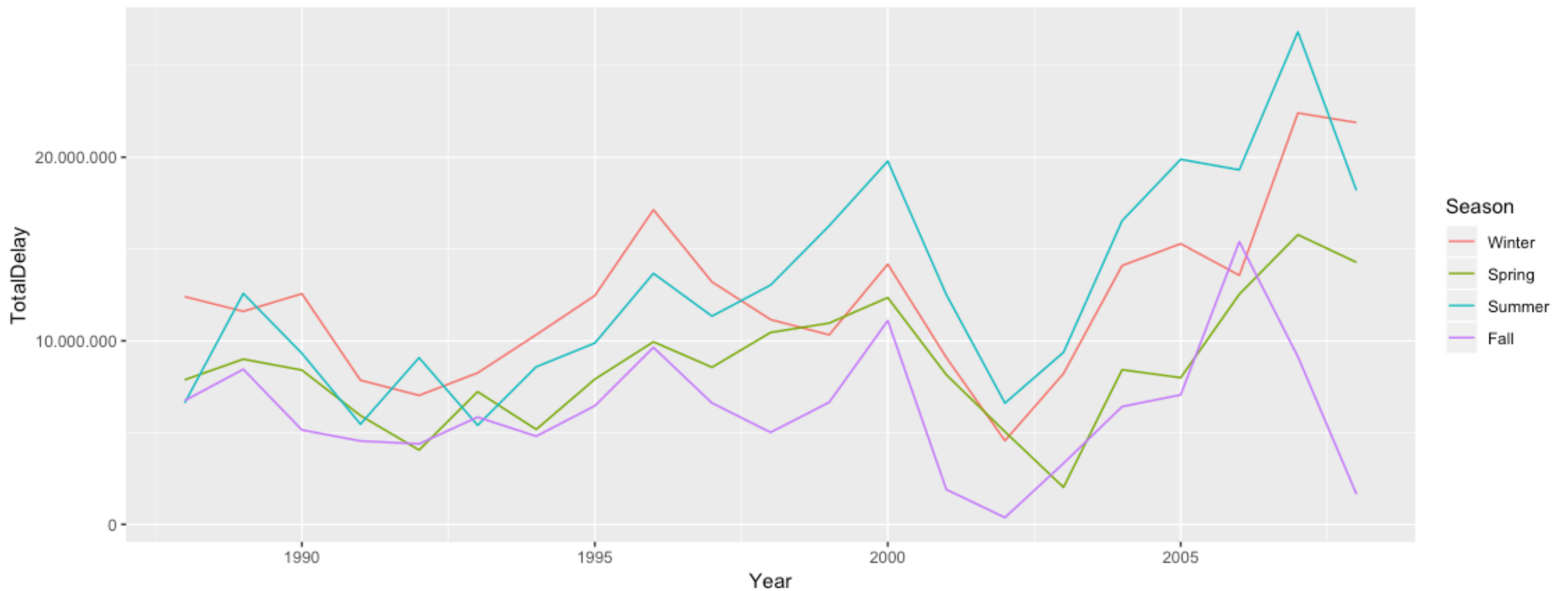


**MA fall into [40% ; 63%]**

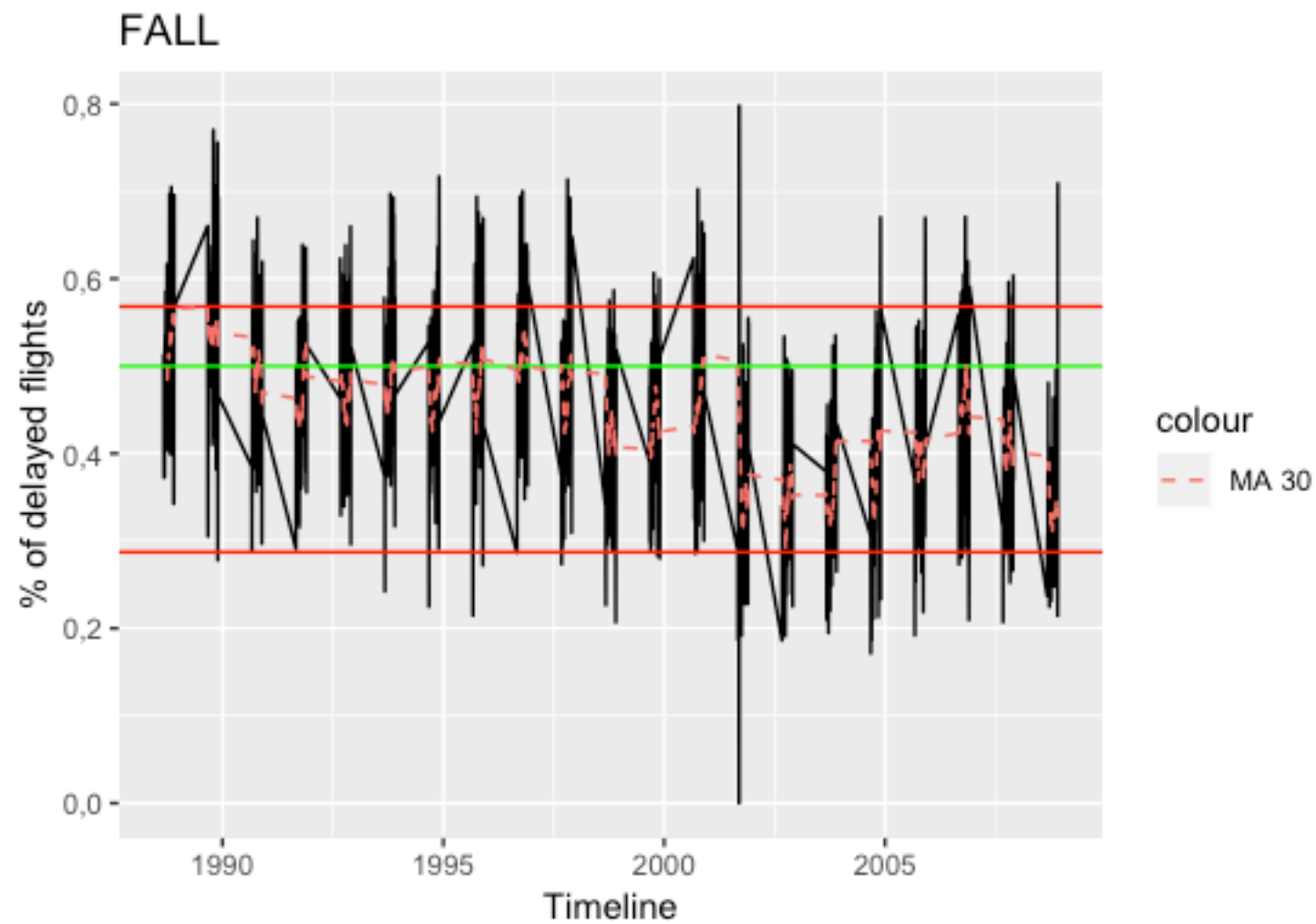


**MA fall into [39% ; 63%]**

# Which is the best (worst) season to fly in terms of delay ?

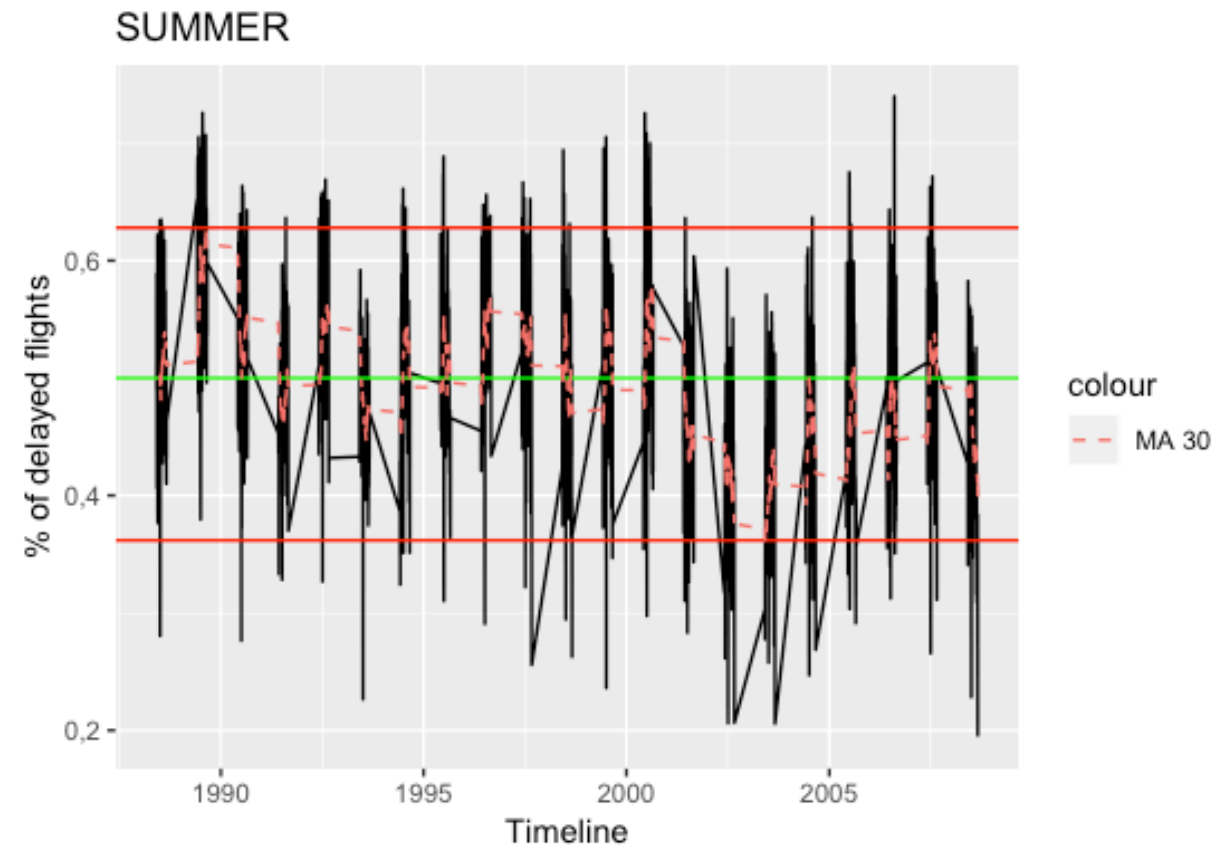


# Best Season

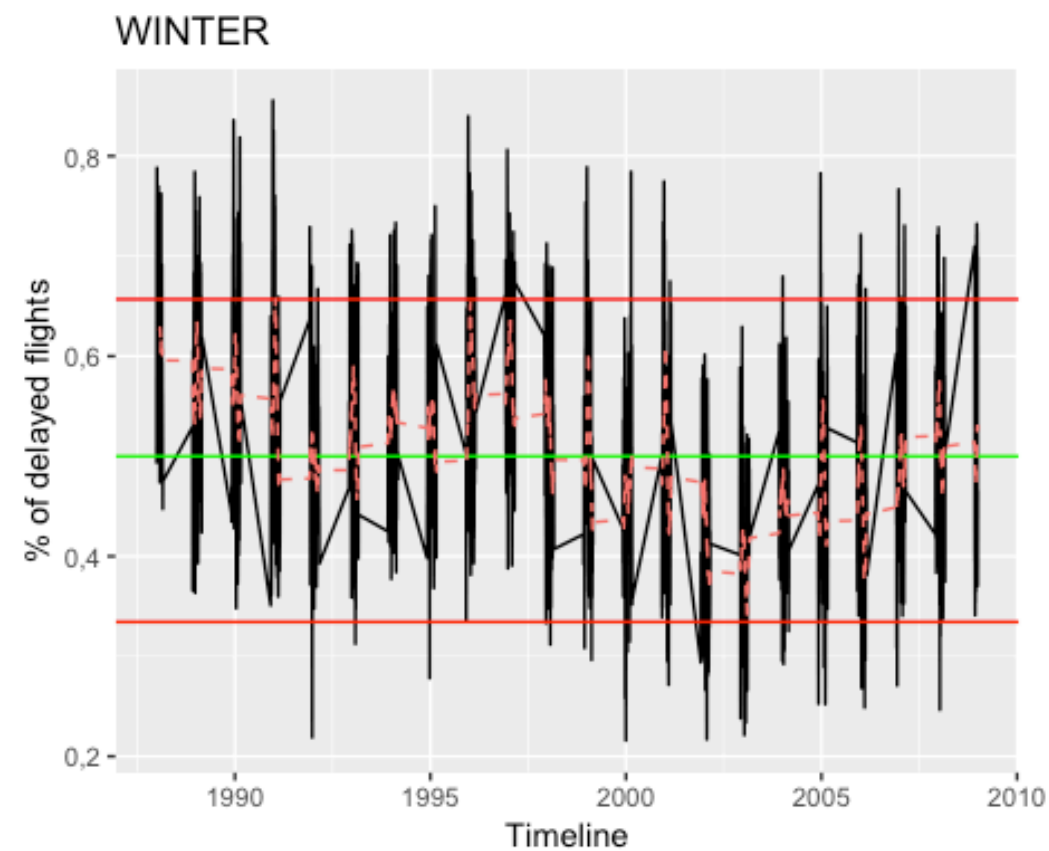


**MA fall into [29% ; 57%]**

# Worst Seasons



**MA fall into [36% ; 63%]**



**MA fall into [33% ; 66%]**

# Analisisys summary

- Good news for the carriers' wallet because the number of flights seem to increase over the year
- If you want to reduce the probability of having a delay, travel on Saturday and avoid Friday and Thursdays
- Do you want to have less problem during your holidays ? Plan them during the Fall and avoid Summer and Winter



**“Viaggiare e analizzare i dati sono correlati dal fatto che alla fine si è sempre imparato qualcosa.”**

*–Davide Mastricci*