

Airline Talk

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Introduction

Around 1.73 million passengers fly every day in the United States. This demand is collectively met by both the budget and the non-budget(legacy) airlines. The airline sector has undergone a lot of consolidation over the last decade.

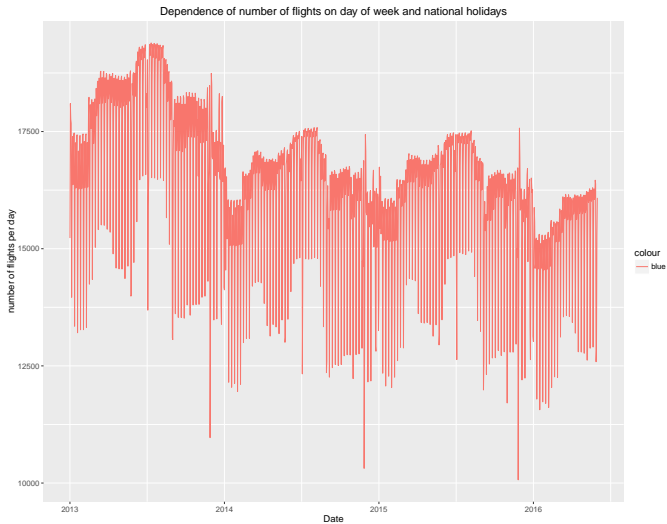
The Bureau of Transportation Statistics has made available detailed data and statistics on airline flights like, on time flight performance, airfare cost, market capitalization, etc.

Problems

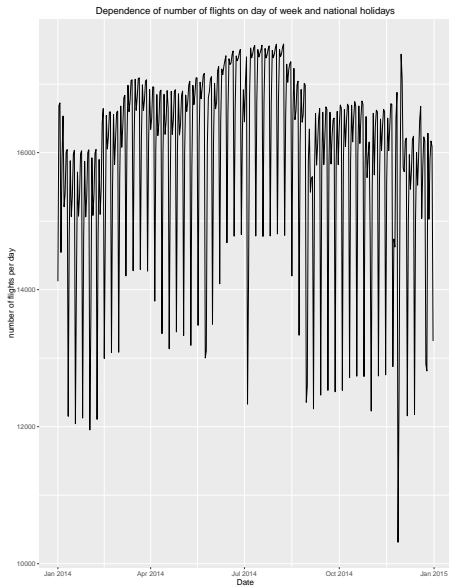
For my project I plan to analyze this data set along the following themes:

- ▶ Gather insight on flight delay patterns based on airline, date, time, airport, weather, etc.
- ▶ Compare the performance of budget airlines with non-budget airlines.
- ▶ Study the impact of mergers on routes and airfare.
- ▶ Predict airline on time performance using weather data using time series (ARIMA models, etc.)

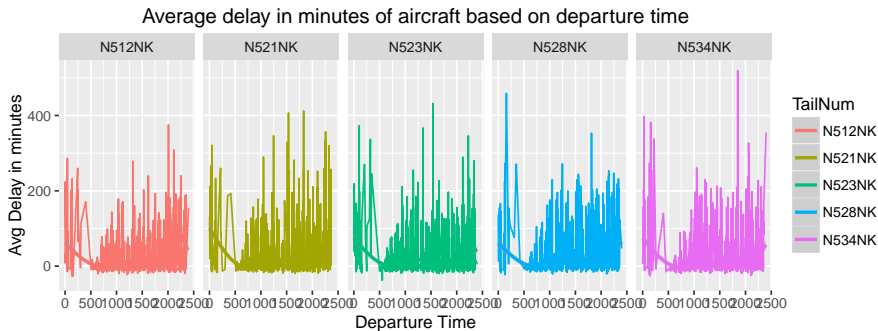
Can you detect some of the national holidays?



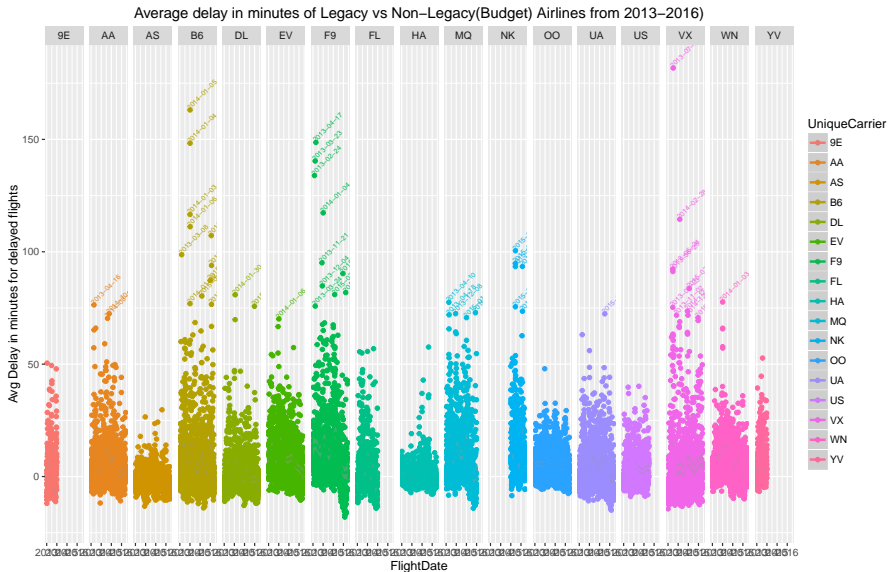
Which days are more popular for flying?



Flights delays get progressively worse as the day progresses. of an average day?



Average delay in minutes across a spectrum of airlines



Budget Airlines

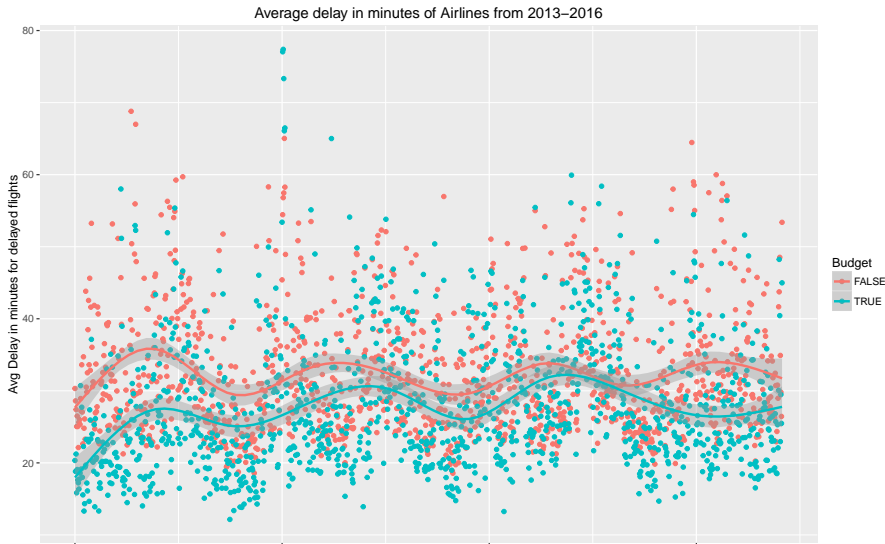
UA	United	DL	Delta
US	US Airways	AA	American Airlines
AS	Alaska	HA	Hawaiian Airlines
B6*	Jet Blue	F9*	Frontier
FL*	Air Tran	VX*	Virgin America
NK*	Spirit	EV**	Express Jet
YV**	Mesa	OO**	SkyWest
9E**	Endeavor Air	MQ**	Envoy Air

* - budget airlines

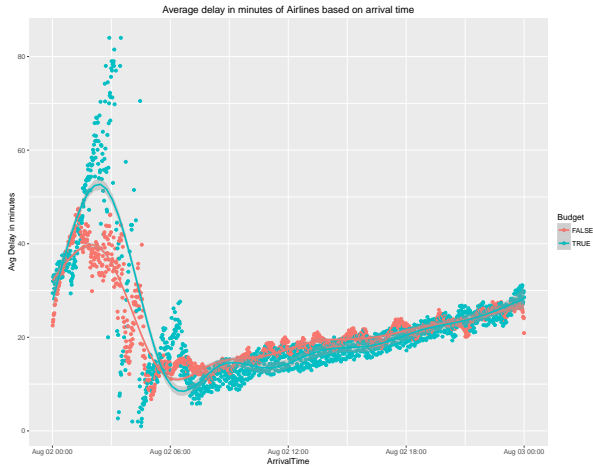
** - contract airlines

Budget airlines - performance comparison

Budget airlines have a smaller average delay than non-budget airlines.



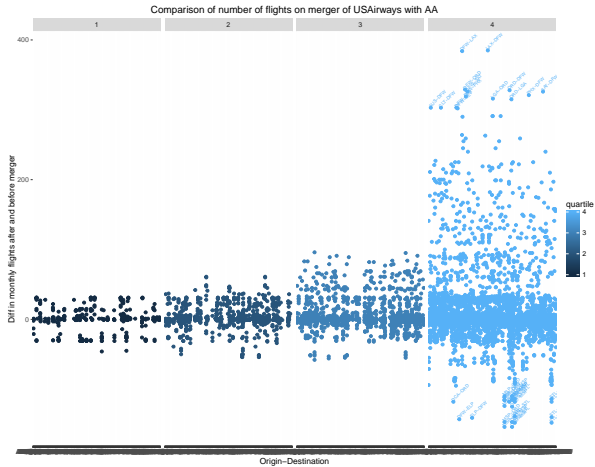
Budget airlines - performance comparison



Recent Mergers

Airline	Airline(also final entity)	Date of merger
US Airways	American Airlines	12/09/2013
AirTran Airways	Southwest Airlines	05/02/2011
Continental Airlines	United Airlines	10/01/2010
⋮	⋮	⋮
Piedmont Airlines	US Airways	08/04/1989

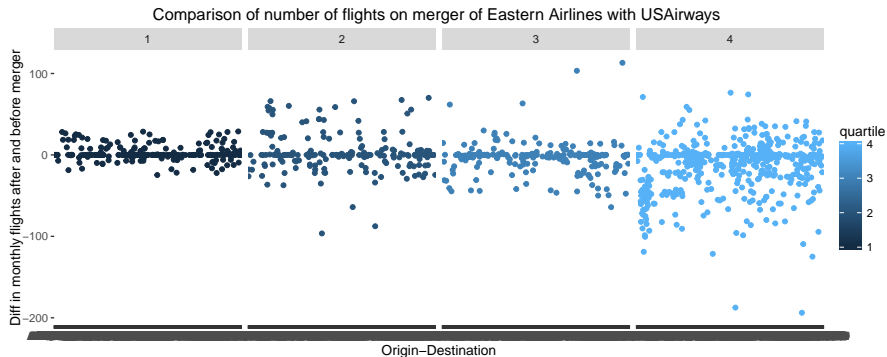
Airline mergers



Airline mergers

Merger of AA and US Airways. We decompose the airports into quartiles based on the number of flights in and out of the airport over a period of one year before and one year after the merger. This merger led to an increase in the overall number of flights and most of the activity was focused on the larger airports and even smaller airports benefited on average.

Airline mergers



frametitleSummary

- ▶ If all you care about is reaching on time, budget airlines are not a bad option!
- ▶ Large airline mergers, do not always lead to streamlining but may rather provide more options to the consumer.