

# US Border Apprehensions Data Analysis

Nanfang Hong, Jiajian Guo

2/9/2018

# Background

## **US-Mexico border apprehensions hit 17-year lows**

(Washington, CNN) Apprehensions at the US-Mexico border reached historic lows in April, continuing a downward slide in the first few months of the Trump administration.

# Background

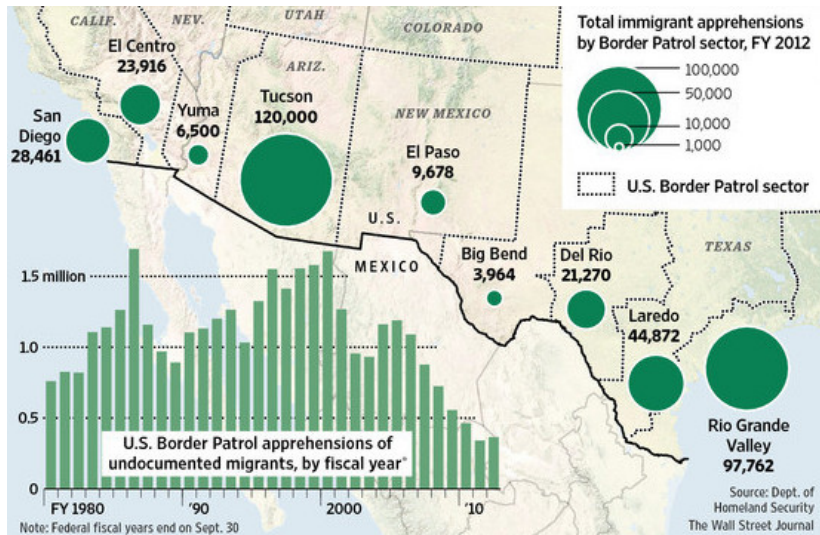
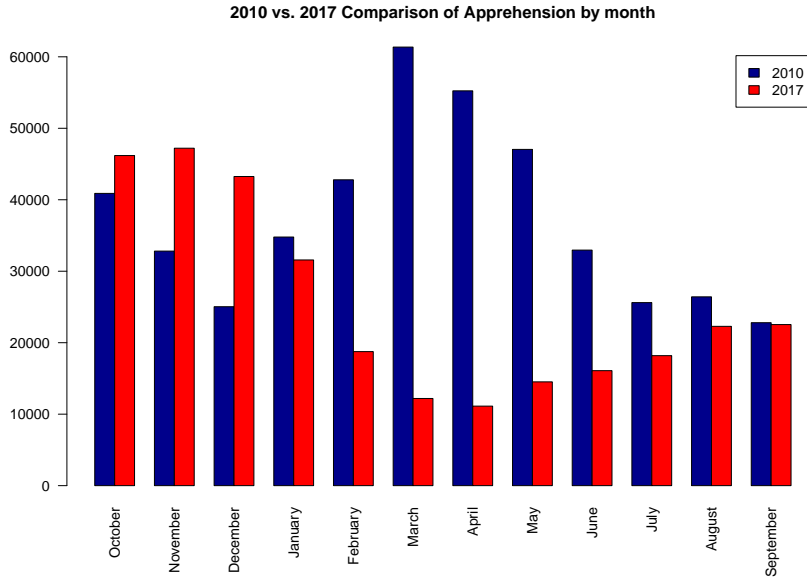


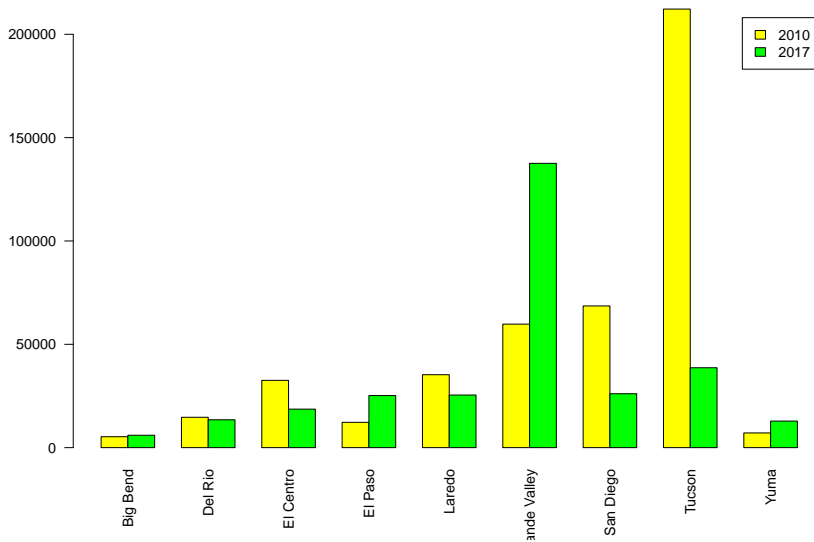
Figure 1:

# Data Visualization



# Data Visualization

2010 vs. 2017 Comparison of Apprehension by sector



# Questions

- ▶ Has there been a change in the sector with the most apprehensions for 2010 and with the sector with the most apprehensions in 2017?
- ▶ 3 month periods with the most apprehensions in 2010 and 2017?

# Statistical Analysis

- ▶ The sector with the most apprehensions for 2010 is Tucson.
- ▶ The sector with the most apprehensions for 2017 is Rio Grande Valley.
- ▶ Then we do a two-sample Welch t-test. As a result, the p-value is 0.06346, showing no significant change in the maximum.

# Statistical Analysis

- ▶ 3 month period for 2010 and the most is March-April-May
- ▶ 3 month period for 2017 and the most is October-November-December
- ▶ Then we do a two-sample Welch t-test again on 3 month periods with the most apprehensions in 2010 and 2017. As a result, the p-value is 0.4042, showing no significant change in the maximum 3 consecutive monthly apprehensions.



# Historical Data

Historical Apprehension data from 2000 to 2017

