

HW3__Tradewar

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The following portion of HW__3 is contributed by Longhao Chen.

Data (how you generated it)

The method I generate the data is to first find the raw data from this website

<https://www.census.gov/foreign-trade/index.html>

Then, I registered an account and selected the data that most interests me. Then I downloaded the data into my local computer and load it into RStudio. After some manipulation, I subset the data to a smaller size and name them liveanimalchina and aluminum.

Visualization and Discussion

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse
```

```
## √ ggplot2 3.0.0      √ purrr  0.2.5
## √ tibble  1.4.2      √ dplyr  0.7.6
## √ tidyr   0.8.1      √ stringr 1.3.1
## √ readr   1.1.1      √ forcats 0.3.0
```

```
## Warning: package 'dplyr' was built under R version 3.5.1
```

```
## -- Conflicts ----- tidyverse_conflicts__
```

```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(readxl)
```

```
war <- read_xlsx("usaimport.xlsx")
```

```
colnames(war)<-c("Commodity","Country","Time","Money")
```

```
liveanimalchina<-filter(.data = war, Country == "China") %>%
  filter(str_detect(Commodity , "Live Animals")) %>%
  filter(Money>20000000)
```

```
b<-rbind(liveanimalchina, c("01 Live Animals","China","Predicted 2018",(22919535*12)/7))
```

```
b$Money=as.numeric((b$Money))
```

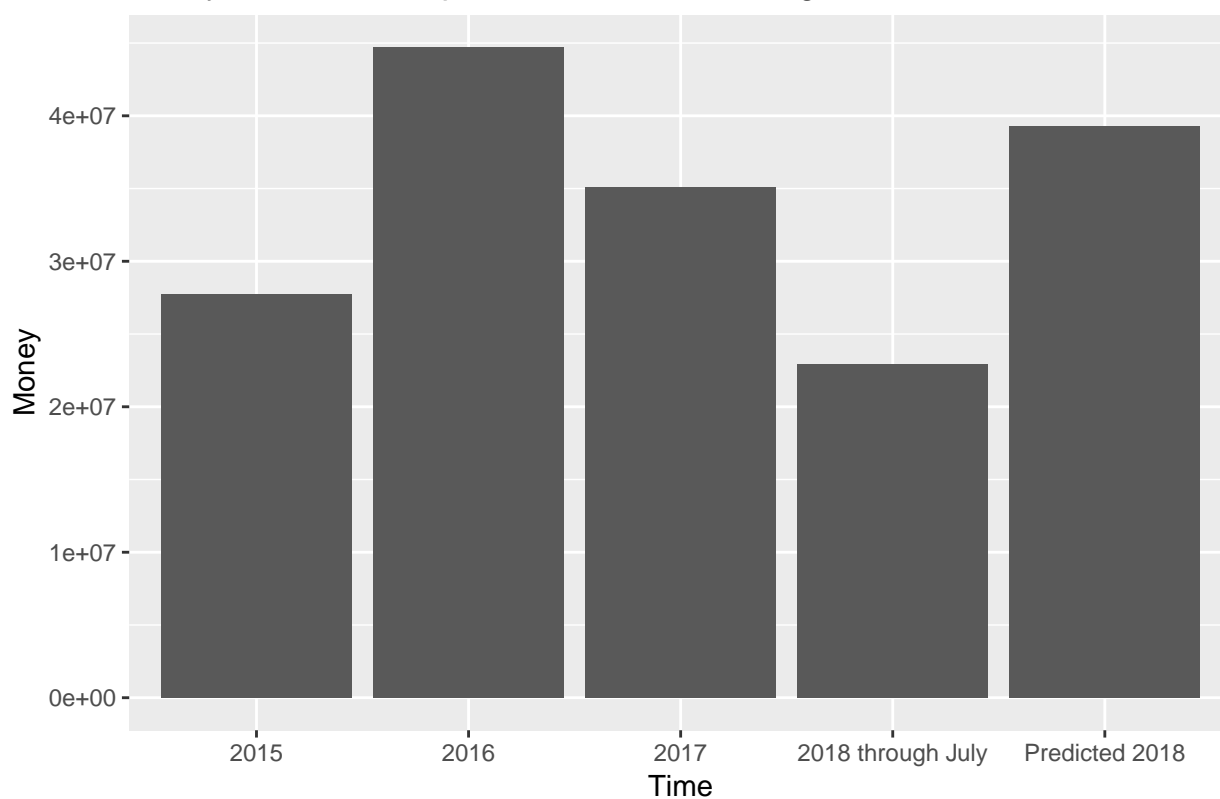
```
ggplot(data = b, aes(x = Time, y = Money)) +
```

```
geom_bar(stat = "identity") +
```

```
labs(title = "Yearly live animal imported from China_Longhao Chen") +
```

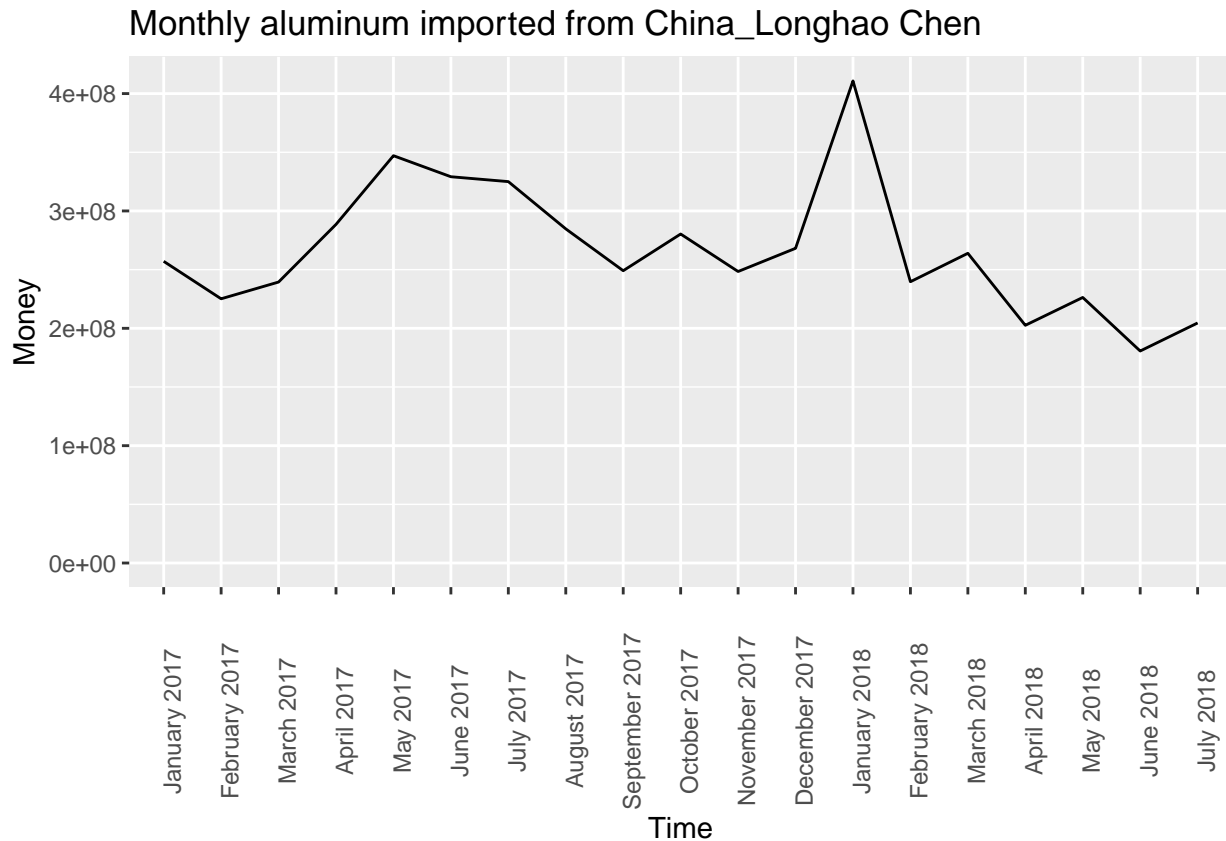
```
scale_y_continuous(limits=c(0,NA))
```

Yearly live animal imported from China_Longhao Chen



```
aluminum<-filter(.data = war, Country == "China") %>%
  filter(str_detect(Commodity, "Aluminum")) %>%
  filter(Money < 1000000000)
aluminum$Time <- factor(aluminum$Time, levels = aluminum$Time)

ggplot(data = aluminum, aes(x=Time, y = Money)) +
  geom_line(group = 1) +
  labs(title="Monthly aluminum imported from China_Longhao Chen") +
  theme(axis.text.x=element_text(angle=90,margin = margin(5, unit = "mm"),vjust =1)) +
  scale_y_continuous(limits=c(0,NA))
```



I am personally interested the impact of tariffs between China and U.S.A so I take two commodities, one is live animal and another one aluminum as examples. The first plot reveals the imported live animal in dollars from 2015 to 2018 until July. Notice that I add another bar called predicted 2018, which is generated by value of 2018 through July * 12/7. This is based on an assumption that whole year around value of aluminum is spreaded out on each month.

What we can see from this graph is there is not huge impact on live animal based on the value of predicted 2018. However, it is likely that U.S.A will not import much live animal in the winter of 2018, which will causes the actual value to NOT match the predicted value.

The second graph zooms in for the monthly imported value of alluminum from Jan 2017 to July 2018. From this graph, we do see a decreasing value of imported alluminum in June 2018 and July 2018 compared to June 2017 and July 2017. This could be an indication of the tariffs.

Conslusion The impact of tariffs towards the imported commodities China is starting to accumulate. However, it has different impacts towards different commodities. For aluminum, tariffs definately changes the trade between China and U.S.A. However, it is too not eacy to predict the impact on live animal.