

US_Economy.R

```
library(ggplot2)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##   filter, lag
```

```
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(scales)
```

```
# GDP data
```

```
us <- read.csv("usgdp.csv")
```

```
world <- read.csv("worldgdp.csv")
```

```
View(us)
```

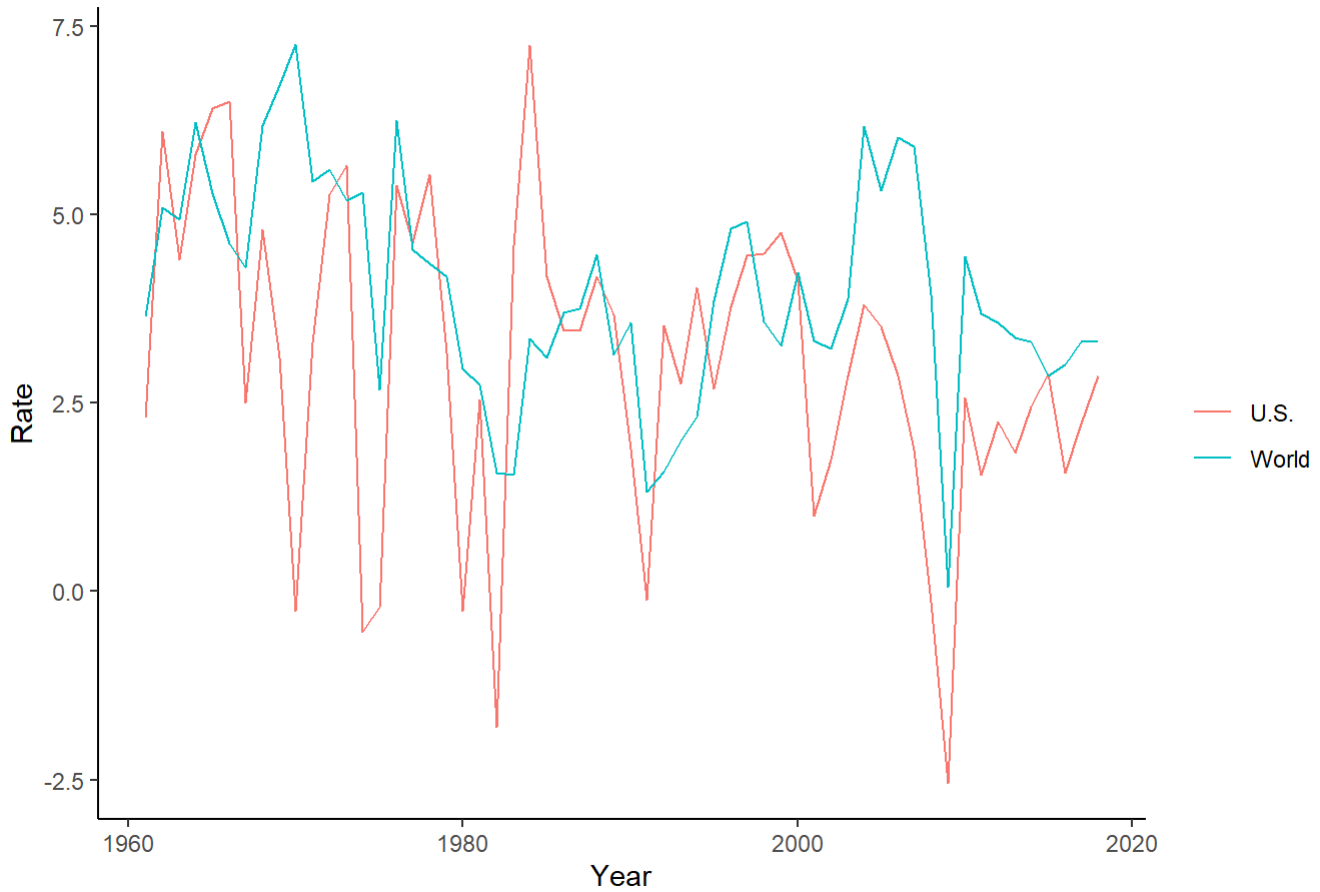
```
View(world)
```

```
# Line chart with US gdp and World gdp
```

```
p = ggplot() +
  geom_line(data = us, aes(x = Year, y = US, color = "blue")) +
  geom_line(data = world, aes(x = Year, y = World, color = "red")) +
  xlab('Year') +
  ylab('Rate') +
  theme_classic() +
  ggtitle("GDP Growth Rate") +
  scale_color_discrete(name = "", labels = c("U.S.", "World"))
```

```
print(p)
```

GDP Growth Rate

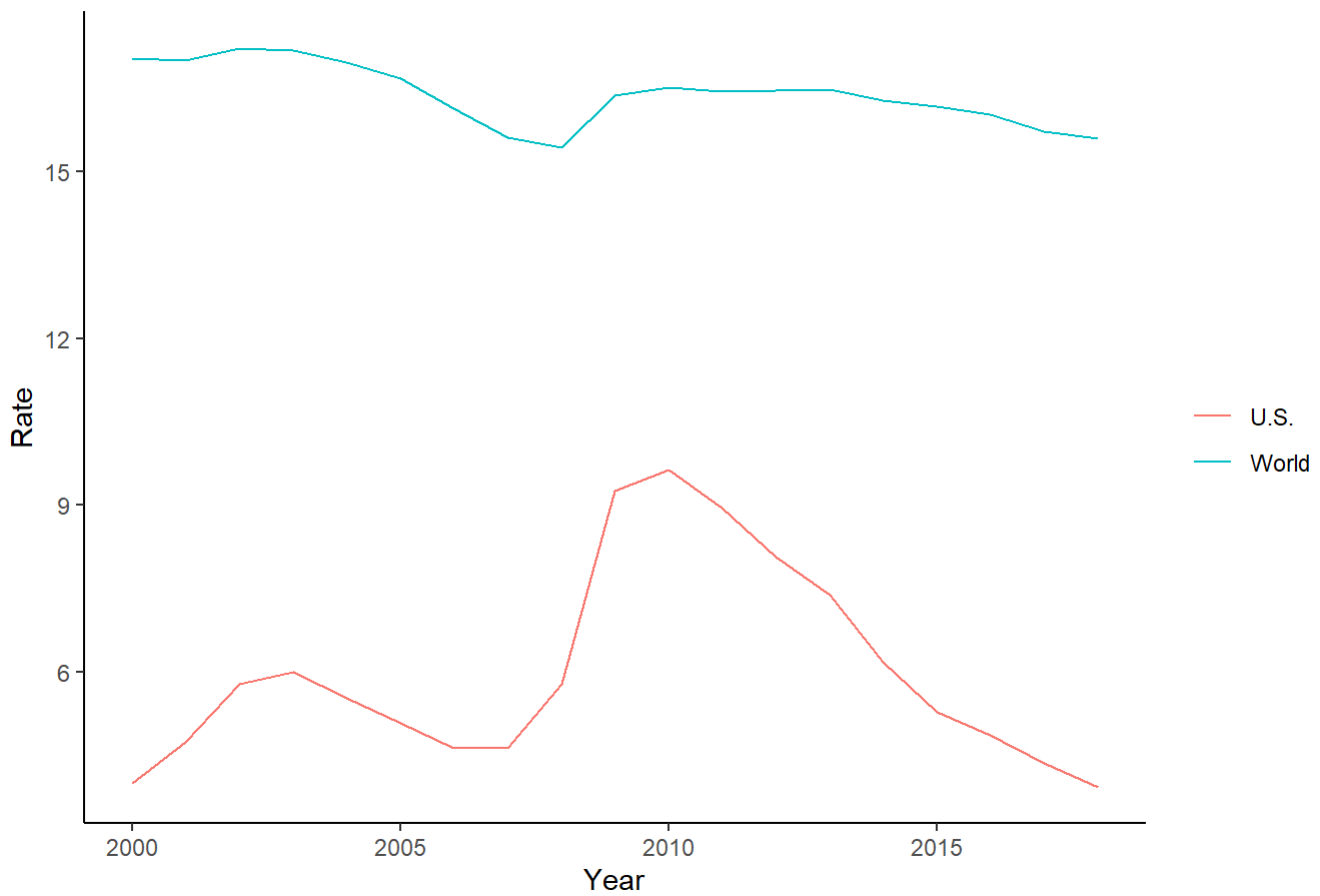


```
# Unemployment Rate data
unemp <- read.csv("unemp.csv")
View(unemp)

names(unemp)[1]<-"Year"

# Unemployment Line chart
ggplot() +
  geom_line(data = unemp, aes(x = Year, y = US, color = "blue")) +
  geom_line(data = unemp, aes(x = Year, y = World, color = "red")) +
  xlab('Year') +
  ylab('Rate') +
  theme_classic() +
  ggtitle("Unemployment Rate") +
  scale_color_discrete(name = "", labels = c("U.S.", "World"))
```

Unemployment Rate

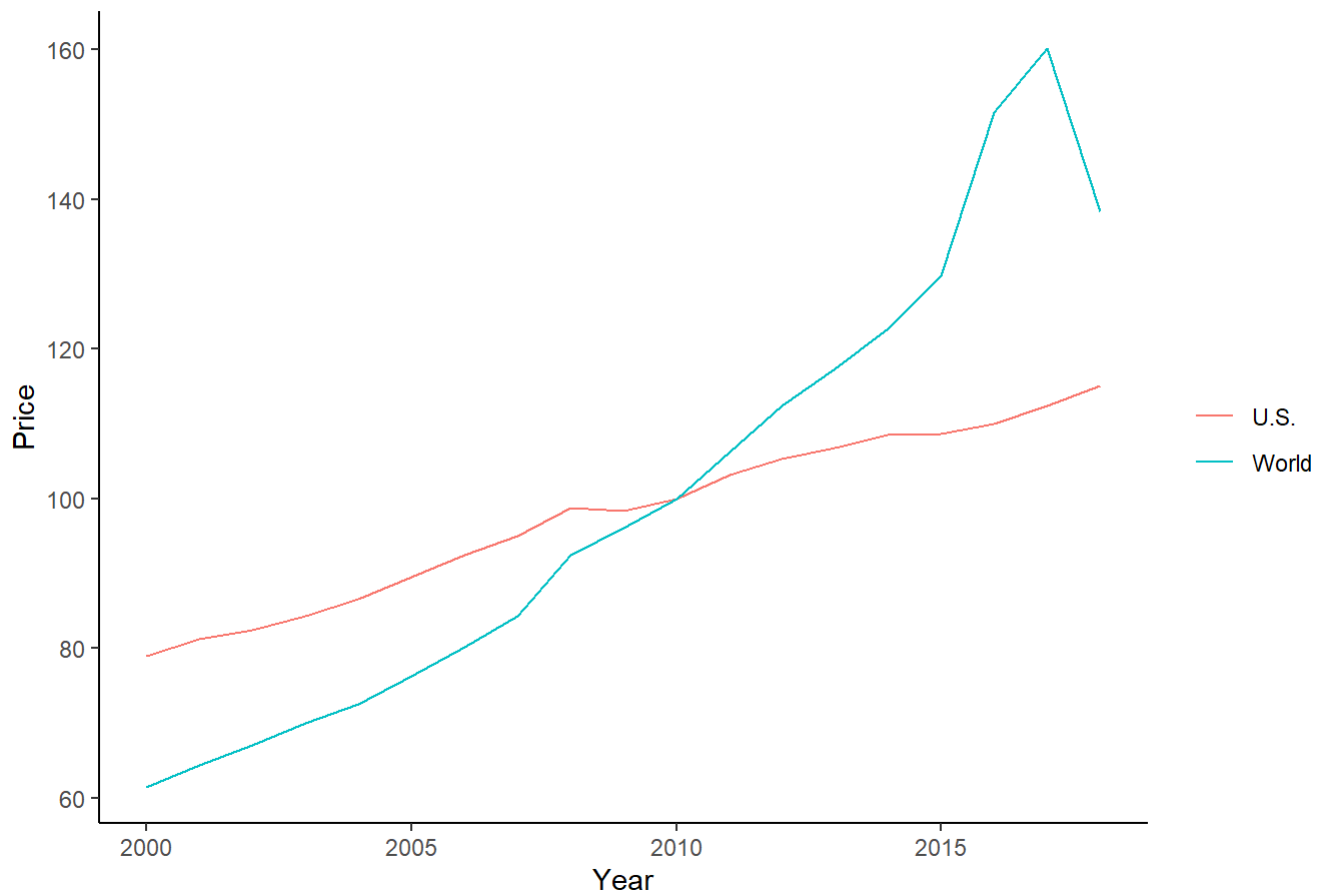


```
# Consumer Price Index data
cpi <- read.csv("cpi.csv")
View(cpi)

names(cpi)[1]<-"Year"

# Consumer Price Index Line chart
ggplot() +
  geom_line(data = cpi, aes(x = Year, y = US, color = "blue")) +
  geom_line(data = cpi, aes(x = Year, y = World, color = "red")) +
  xlab('Year') +
  ylab('Price') +
  theme_classic() +
  ggtitle("Consumer Price Index") +
  scale_color_discrete(name = "", labels = c("U.S.", "World"))
```

Consumer Price Index

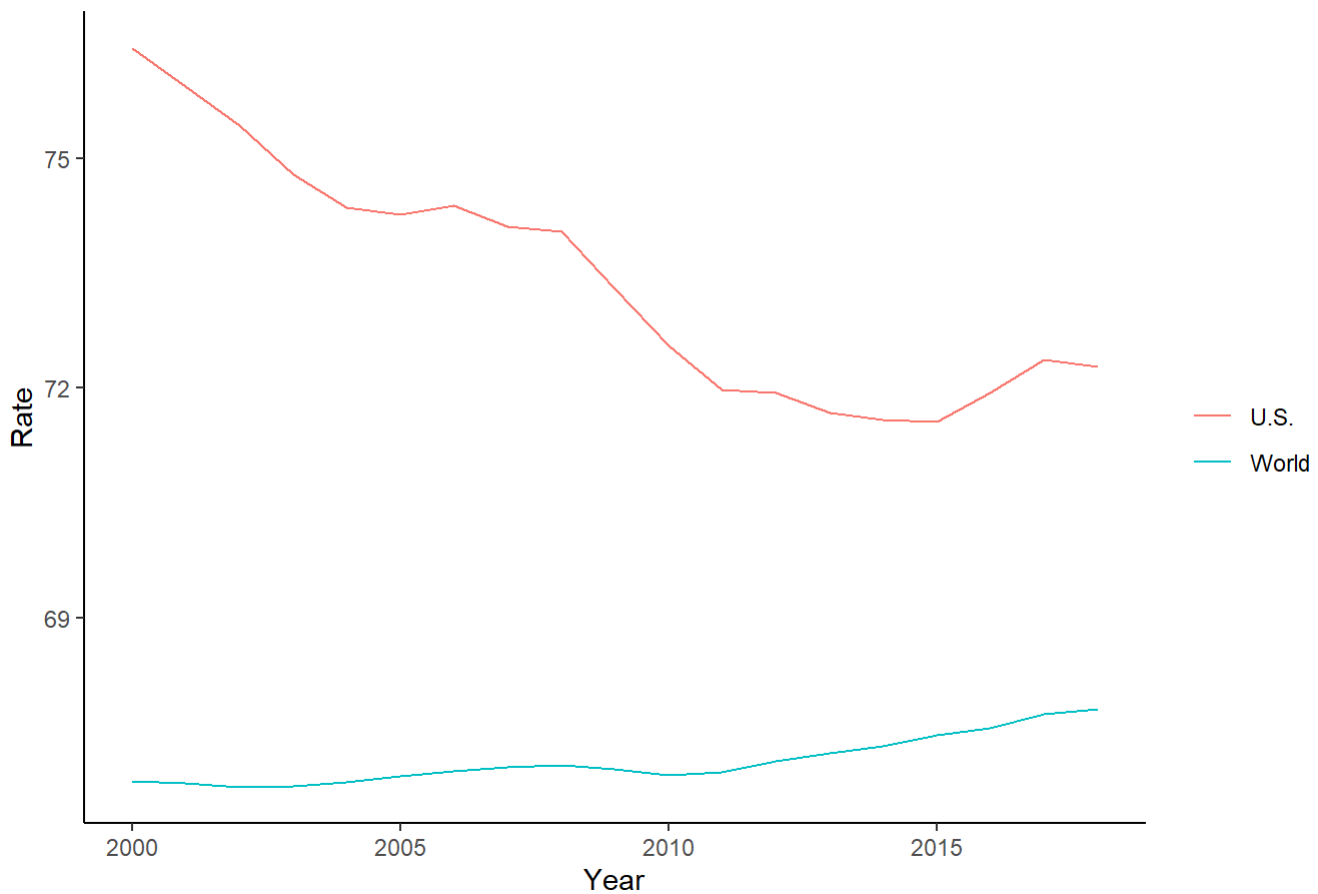


```
# Labor force participation rate data
lpr <- read.csv("laborpr.csv")
View(lpr)

names(lpr)[1]<-"Year"

# LFPR line chart
ggplot() +
  geom_line(data = lpr, aes(x = Year, y = US, color = "blue")) +
  geom_line(data = lpr, aes(x = Year, y = World, color = "red")) +
  xlab('Year') +
  ylab('Rate') +
  theme_classic() +
  ggtitle("Labor Force Participation Rate (% of total population ages 15-64)") +
  scale_color_discrete(name = "", labels = c("U.S.", "World"))
```

Labor Force Participation Rate (% of total population ages 15-64)



```
# Import/Export Price Indexes (MXP) data
epi <- read.csv("epi.csv")
ipi <- read.csv("ipi.csv")
View(epi)
View(ipi)

# Line chart with export and import indexes
ggplot() +
  geom_line(data = epi, aes(x = Year, y = ExportPriceIndex, color = "Red")) +
  geom_line(data = ipi, aes(x = Year, y = ImportPriceIndex, color = "Blue")) +
  xlab('Year') +
  ylab('Price') +
  theme_classic() +
  ggtitle("US Import/Export Price Indexes (MXP)") +
  scale_color_discrete(name = "", labels = c("Import", "Export")) +
  scale_x_continuous(breaks= pretty_breaks())
```

US Import/Export Price Indexes (MXP)



```
library(plotly)
```

```
##  
## Attaching package: 'plotly'
```

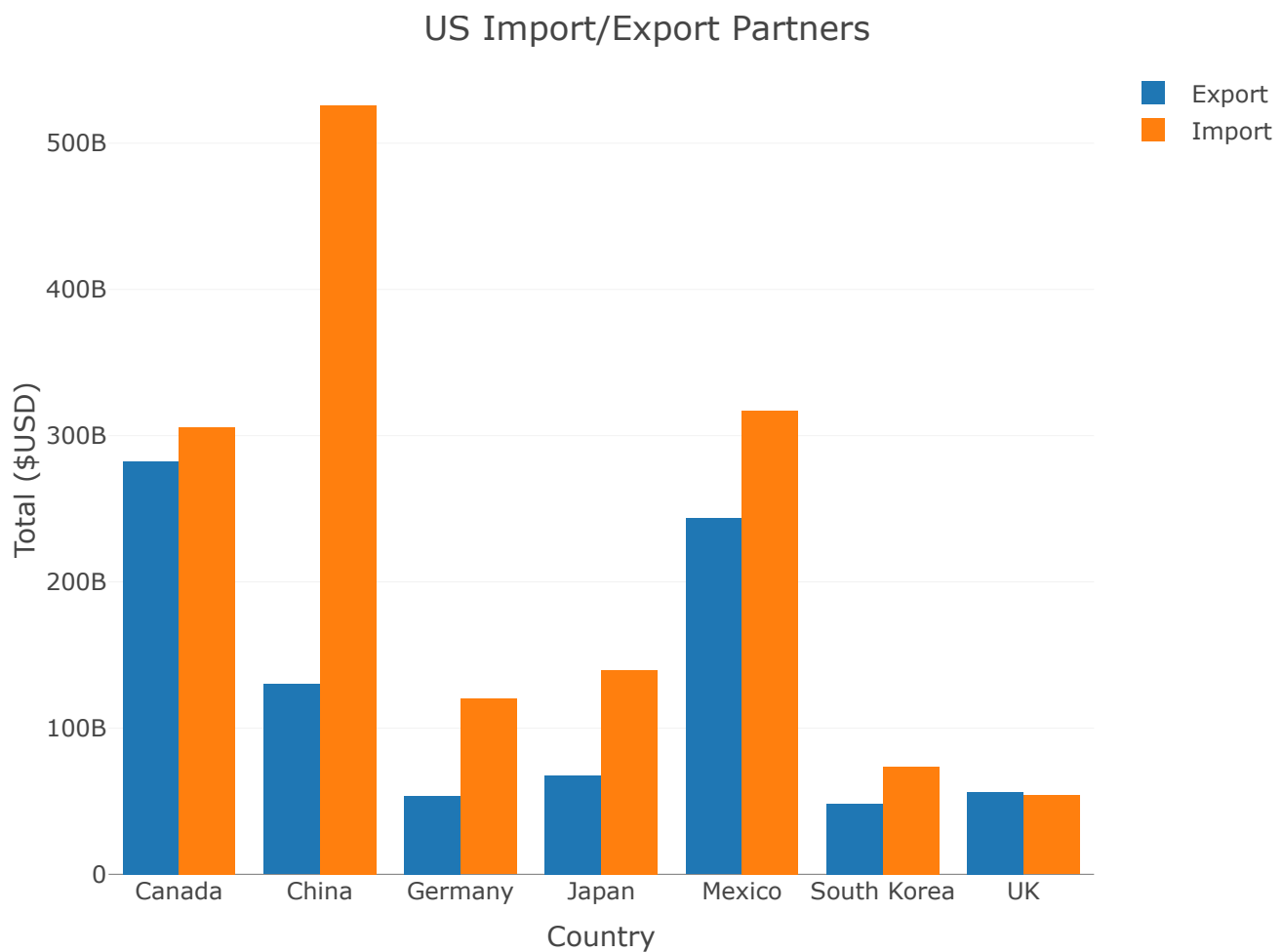
```
## The following object is masked from 'package:ggplot2':  
##  
##   last_plot
```

```
## The following object is masked from 'package:stats':  
##  
##   filter
```

```
## The following object is masked from 'package:graphics':  
##  
##   layout
```

```
# Create export and import partners data set
Country <- c("Canada", "Mexico", "China", "Japan", "UK", "Germany", "South Korea")
Export <- c(282242783021, 243314383193, 129893514886, 67602396570, 56243524085, 53497508196, 48326087662)
Import <- c(305878828303, 317207180158, 526022307970, 139797020593, 53950438183, 119991393155, 73448658005)
data <- data.frame(Country, Export, Import)

# Grouped bar plot with export and import partners
plot_ly(data, x = ~Country, y = ~Export, type = 'bar', name = 'Export') %>%
  add_trace(y = ~Import, name = 'Import') %>%
  layout(yaxis = list(title = 'Total ($USD)'), title = 'US Import/Export Partners', barmode = 'group')
```



```
# #Another way by importing data through csv file
# exandim <- read.csv("ex-im.csv")
# View(exandim)

# plot_ly(exandim, x = ~Country, y = ~Export, type = 'bar', name = 'Export') %>%
# add_trace(y = ~Import, name = 'Import') %>%
# layout(yaxis = list(title = 'Total ($USD)'), barmode = 'group')

# Create export and import goodsdata set
Good <- c("Industrial Machinery","Electrical Machinery","Oil & Mineral Fuels","Aircraft","Motor
Vehicles & Parts","Precision Instruments","Plastics","Precious Stones & Metals","Pharmaceutical
s","Items nesoi")
Export <- c(202035662651,174424000525,139025423812,131143849163,130179115971,83637978332,6189262
6784,59589535207,44935704396,42436580208)
Import <- c(349027417006,356673459274,204018187723,20234676457,294555395962,86126615956,54851794
483,58792694075,96585973544,91141510466)
data <- data.frame(Good, Export, Import)

# Grouped bar plot with export and import goods
plot_ly(data, x = ~Good, y = ~Export, type = 'bar', name = 'Export') %>%
  add_trace(y = ~Import, name = 'Import') %>%
  layout(yaxis = list(title = 'Total ($USD)'), title= 'US Import/Export Goods', barmode = 'grou
p')
```

