

# Economist\_plot

2024-02-16

```
library(data.table)
library(ggplot2)
library(tidyr)
library(readr)
library(ggthemes)
df <- fread('/Users/mac/Desktop/Economist_Assignment_Data.csv',drop = 1)

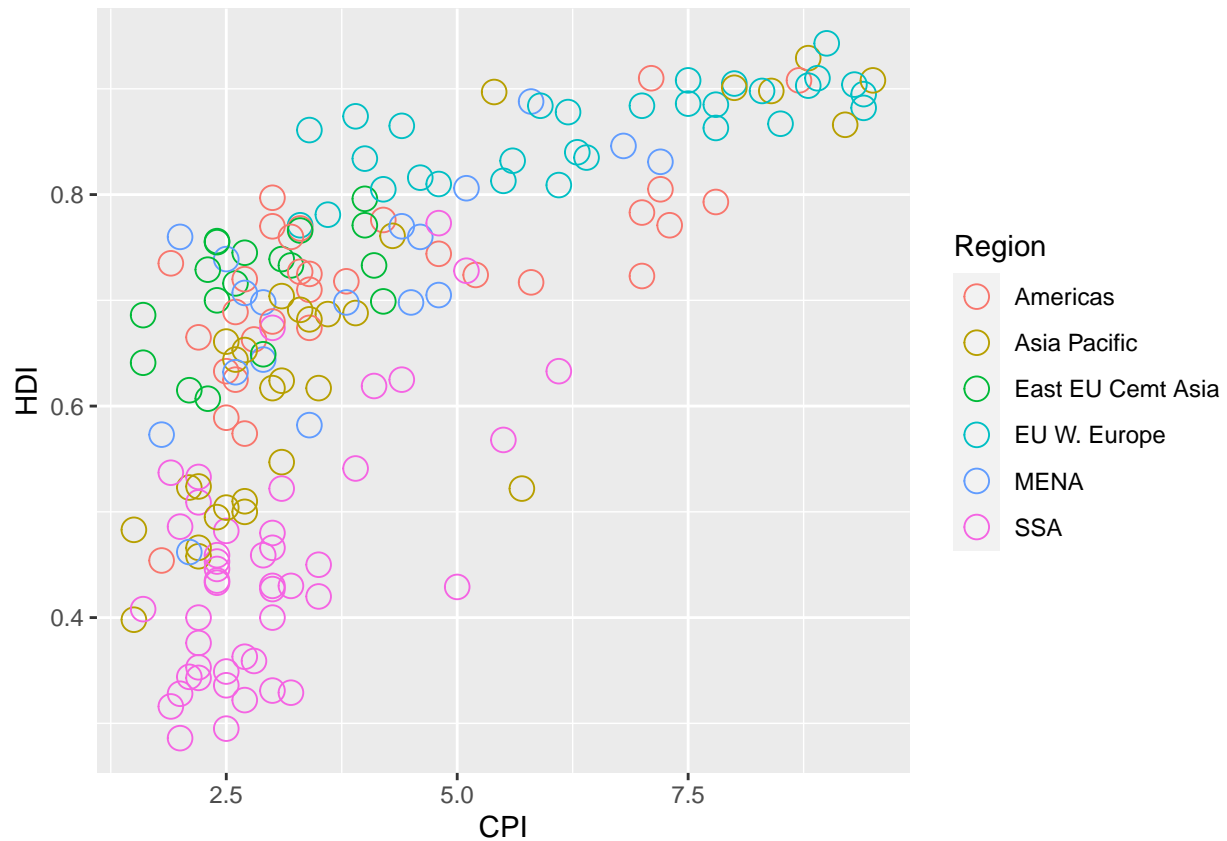
head(df)
```

**Purpose:** Recreating the plot of “Corruption and Human Development” from The Economist by ggplot2

##	Country	HDI.Rank	HDI	CPI	Region
## 1:	Afghanistan	172	0.398	1.5	Asia Pacific
## 2:	Albania	70	0.739	3.1	East EU Cemt Asia
## 3:	Algeria	96	0.698	2.9	MENA
## 4:	Angola	148	0.486	2.0	SSA
## 5:	Argentina	45	0.797	3.0	Americas
## 6:	Armenia	86	0.716	2.6	East EU Cemt Asia

1. Create a scatter plot of CPI vs HDI, change the shape of points and add a trend line

```
pl <- ggplot(df, aes(x = CPI, y = HDI)) +
  geom_point(aes(color = Region),shape = 1, size = 4)
print(pl)
```



2. Add a trend line

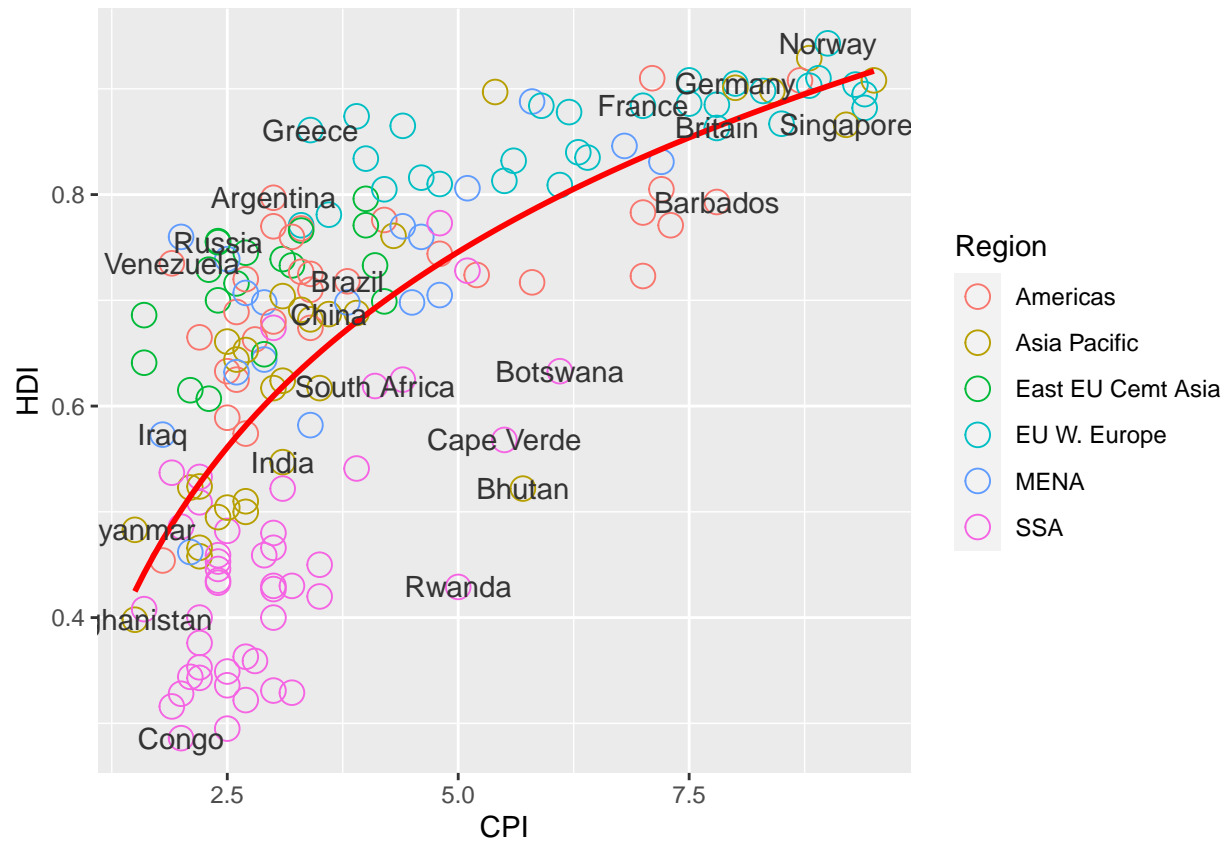
```
#se : significant interval
pl2<- pl1 + geom_smooth(aes(group = 1),method = 'lm',formula = y ~ log(x), se = FALSE,color = 'red')
```

3. Change each point on plot to its corresponding country

```
pointsToLabel <- c("Russia", "Venezuela", "Iraq", "Myanmar", "Sudan",
  "Afghanistan", "Congo", "Greece", "Argentina", "Brazil",
  "India", "Italy", "China", "South Africa", "Spaine",
  "Botswana", "Cape Verde", "Bhutan", "Rwanda", "France",
  "United States", "Germany", "Britain", "Barbados", "Norway", "Japan",
  "New Zealand", "Singapore")

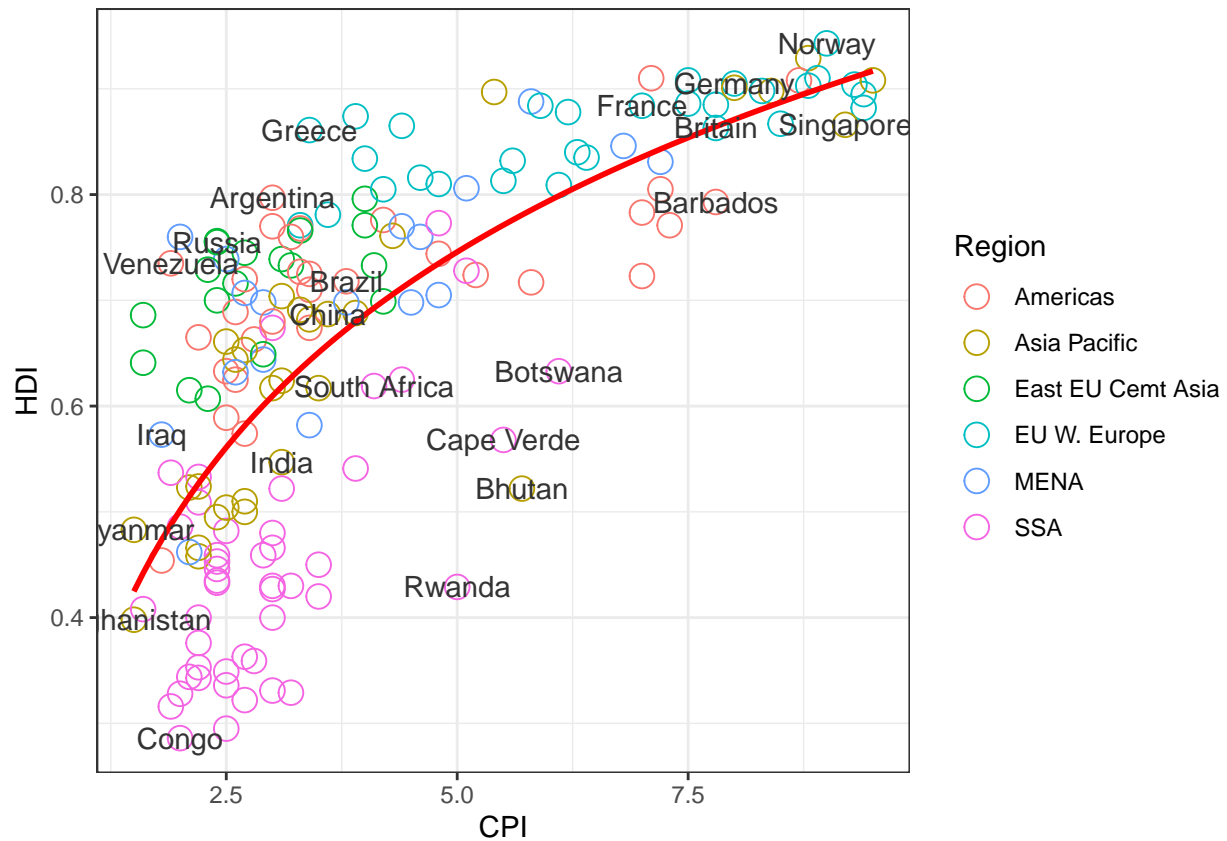
pl3 <- pl2 + geom_text(aes(label=Country), color = "gray20",
  data = subset(df, Country %in% pointsToLabel),check_overlap = TRUE)

print(pl3)
```



4. Change the grid to white

```
p14 <- p13 + theme_bw()
print(p14)
```



5. Improve aesthetic of x axis and y axis, add title, and change the theme

```
# scale_x_continuous() and scale_y_continuous() are the default scales for
#continuous x and y aesthetics.

pl5 <- pl4 + scale_x_continuous(name = "Corruption Perceptions Index, 2011 (10=least corrupt)",
                                limits = c(.9, 10.5),breaks=1:10)

pl6 <- pl5 + scale_y_continuous(name = "Human Development Index, 2011 (1=Best)",
                                limits = c(0.2, 1.0))
pl6 + ggtitle("Corruption and Human development") + theme_economist_white()
```

## Corruption and Human development

