```
setwd("C:/Users/nwelpulw/Desktop/Udemy/Projects/Corruption and Human developement")
library(ggplot2)
library(data.table)
```

Warning: package 'data.table' was built under R version 3.4.2

```
df <- fread('Economist_Assignment_Data.csv',drop=1)  # drop=1 to skip 1st column
```
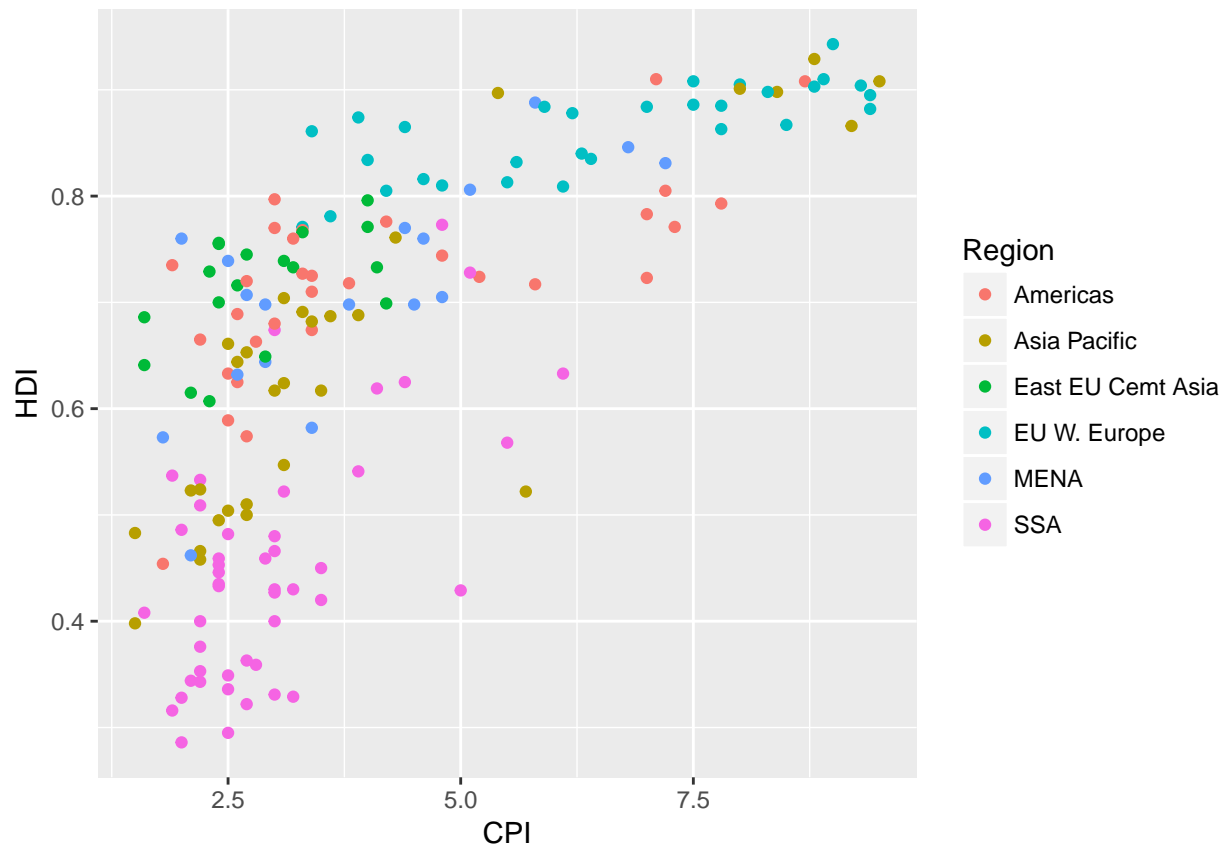
check head of df

```
head(df)
```

```
##          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
```
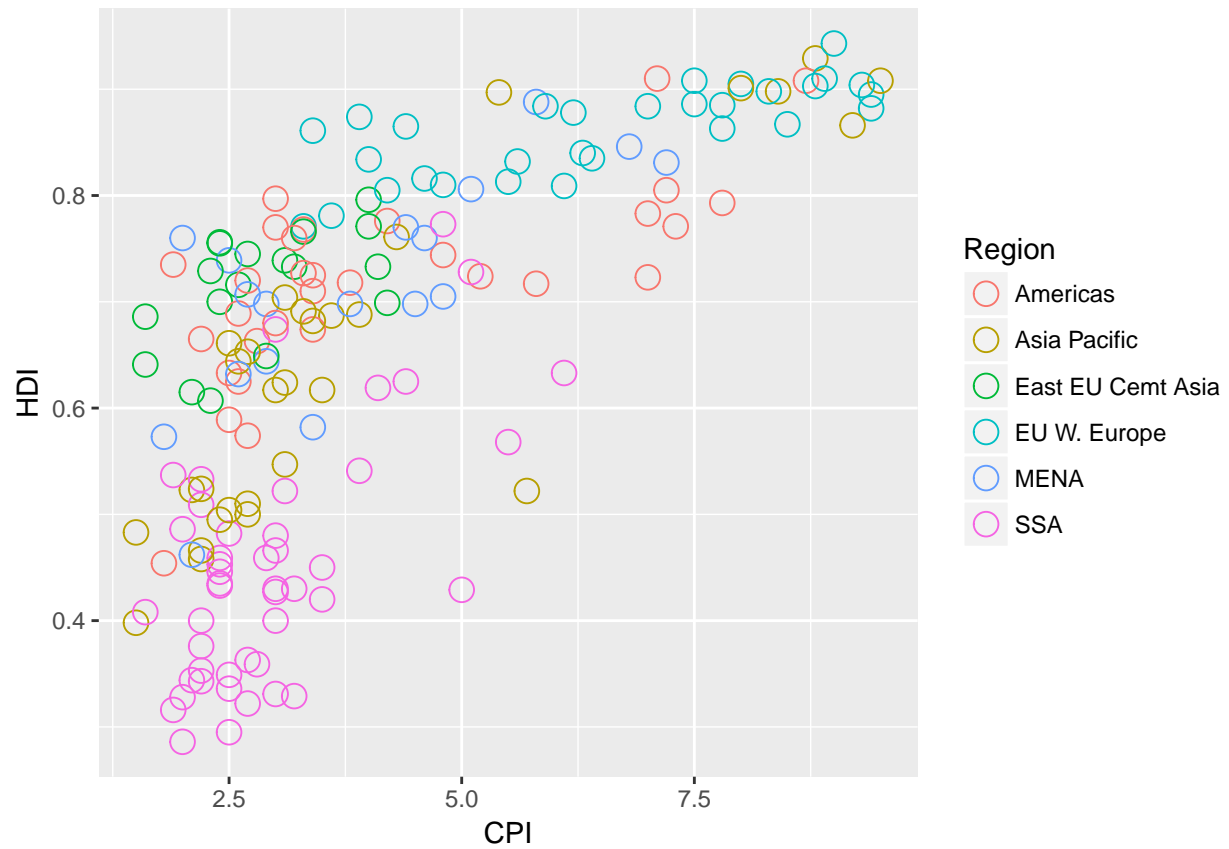
create a scatter plot.

```
pl <- ggplot(df,aes(x=CPI,y=HDI,color=Region)) + geom_point()
pl
```
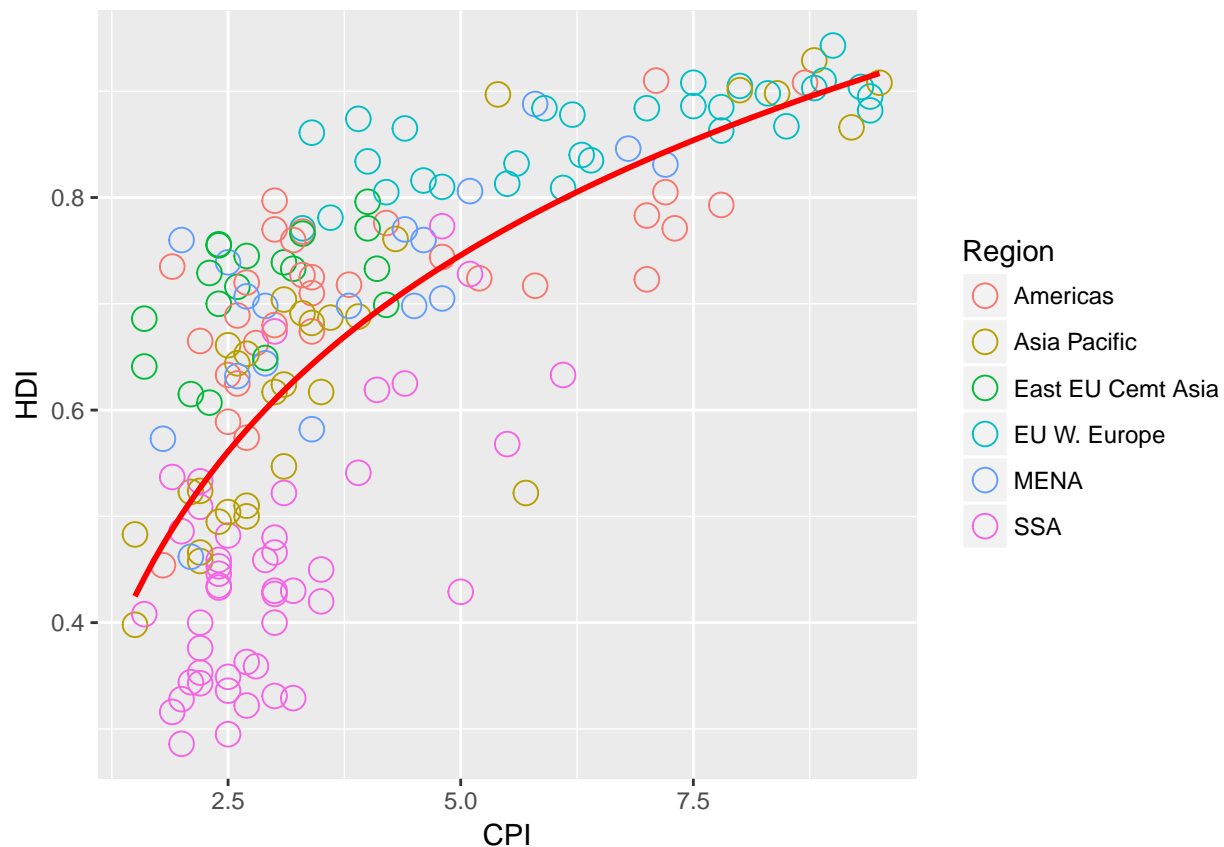

Change the points to be larger empty circles.

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

Add a trend line.

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

Add text to the points.
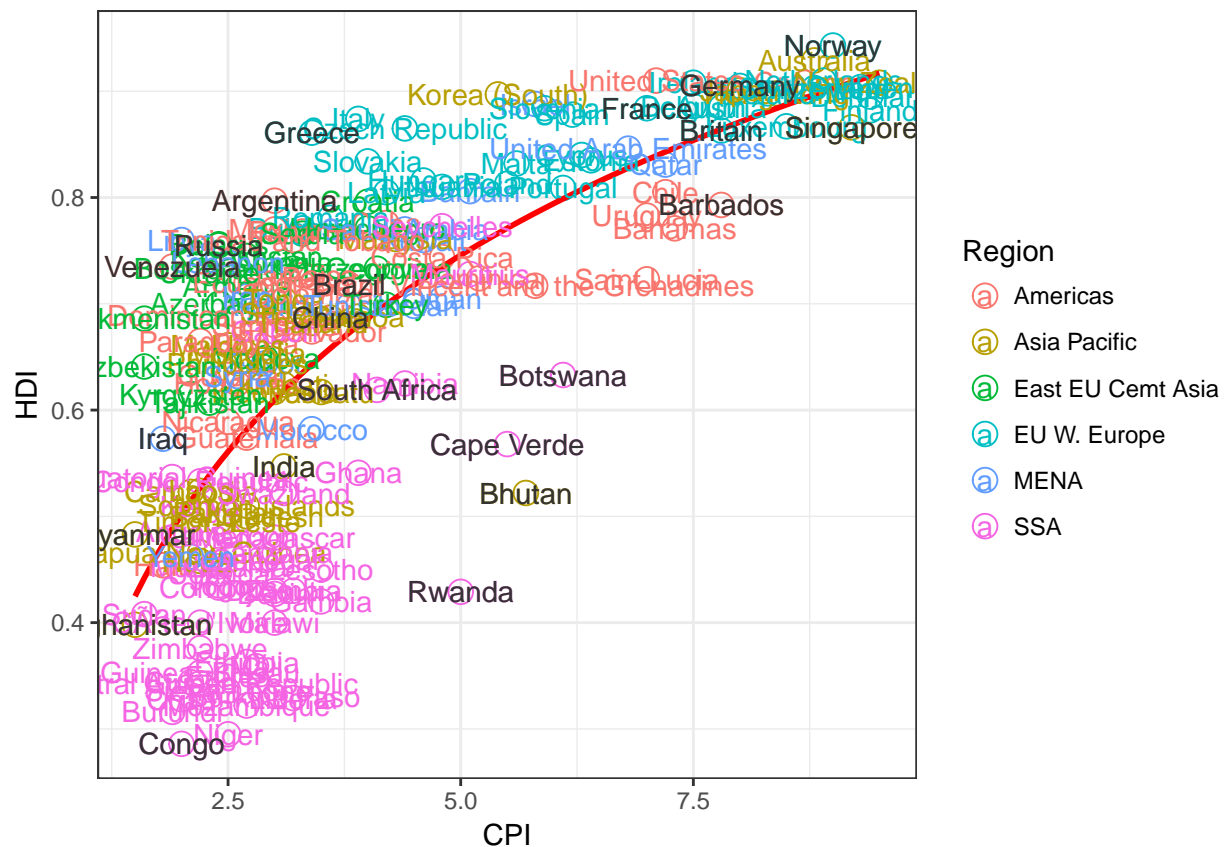
```r
pl2<-pl2 + geom_text(aes(label=Country))
```

selecting the subset of countries we want to label!

```r
pointsToLabel <- c("Russia", "Venezuela", "Iraq", "Myanmar", "Sudan",
                   "Afghanistan", "Congo", "Greece", "Argentina", "Brazil",
                   "India", "Italy", "China", "South Africa", "Spane",
                   "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) +theme_bw()

pl3
```
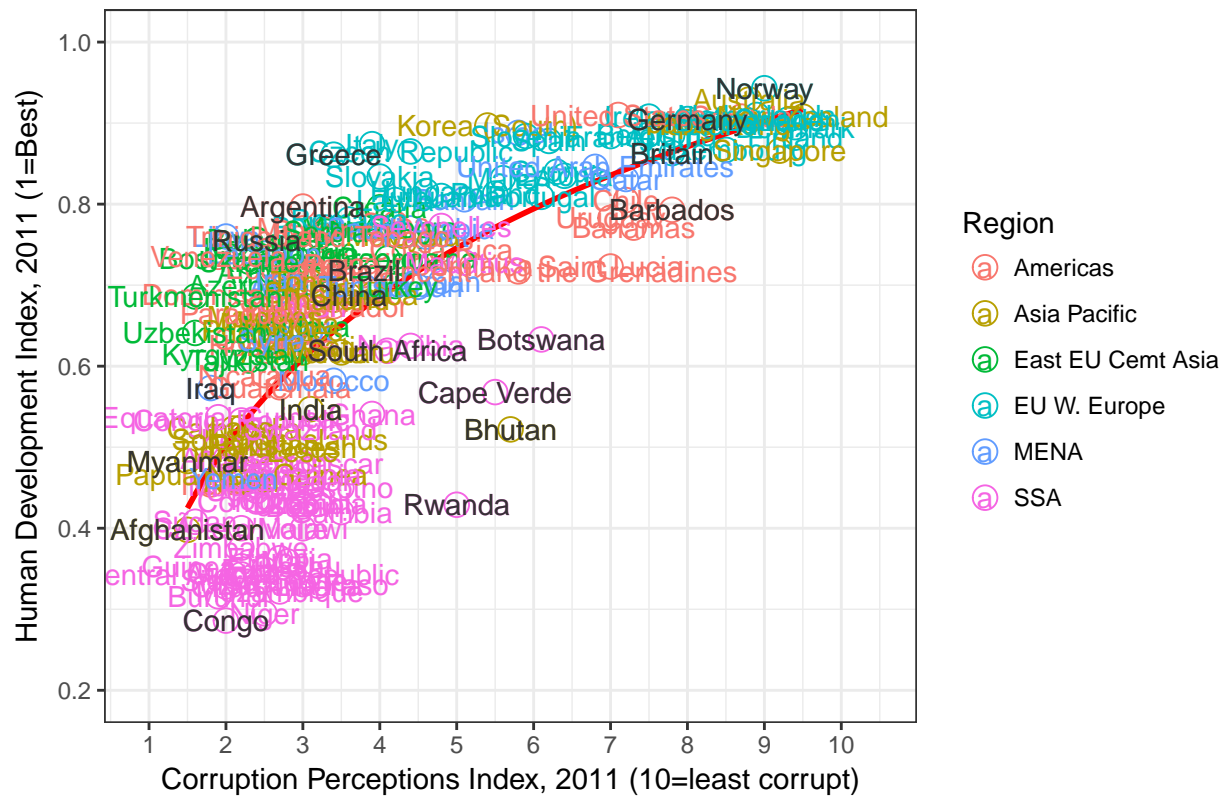
Adjusting x axis and y axis.

```
pl3 <- pl3 + scale_x_continuous(name = "Corruption Perceptions Index, 2011 (10=least corrupt)",
                limits = c(.9, 10.5),breaks=1:10) +scale_y_continuous(name = "Human Development Ind
                limits = c(0.2, 1.0))+ ggtitle("Corruption and Human development")
pl3
```

Corruption and Human development

Adding Theme.

```
#install.packages('ggthemes')
library(ggthemes)
```

```
## Warning: package 'ggthemes' was built under R version 3.4.2
```

```
pl3 + theme_economist_white()
```

Corruption and Human development