

```
link='https://github.com/SamHenkels47/samhenkels2/raw/main/dataproject2.xlsx'
mydata=rio::import(link)
mydata
```

```
##           Description  ten fifteen twenty
## 1 Computer And Electronic Products 7767    8966  12176
## 2      Machinery, Except Electrical 1509    2515   3444
## 3      Transportation Equipment    826    1176   1594
## 4      Agricultural Products 2295    1627   1825
## 5              Chemicals 1392    1671   2015
## 6      Other Industries 3891    4100   3817
```

```
library(reshape2)

melt(mydata,id.vars="Description")
```

```
##           Description variable value
## 1 Computer And Electronic Products      ten 7767
## 2      Machinery, Except Electrical      ten 1509
## 3      Transportation Equipment          ten  826
## 4      Agricultural Products            ten 2295
## 5              Chemicals                ten 1392
## 6      Other Industries                  ten 3891
## 7 Computer And Electronic Products    fifteen 8966
## 8      Machinery, Except Electrical    fifteen 2515
## 9      Transportation Equipment        fifteen 1176
## 10     Agricultural Products           fifteen 1627
## 11              Chemicals              fifteen 1671
## 12     Other Industries                 fifteen 4100
## 13 Computer And Electronic Products    twenty 12176
## 14      Machinery, Except Electrical    twenty 3444
## 15      Transportation Equipment        twenty 1594
## 16      Agricultural Products           twenty 1825
## 17              Chemicals              twenty 2015
## 18     Other Industries                 twenty 3817
```

```
mydataLong=melt(mydata,id.vars="Description")
names(mydataLong)[2]="year" #renaming second name
# year as an ordinal factor!
mydataLong$year=factor(mydataLong$year,
                       levels = c("ten","fifteen","twenty"),
                       ordered = TRUE)
```

Now to ggplot!

```
library(ggplot2)
base=ggplot(data=mydataLong,
            aes(x=year,
                y=value,
                fill=Description))+ scale_x_discrete(labels = c('2010','2015','2020'))
base + geom_bar(stat="identity")
```



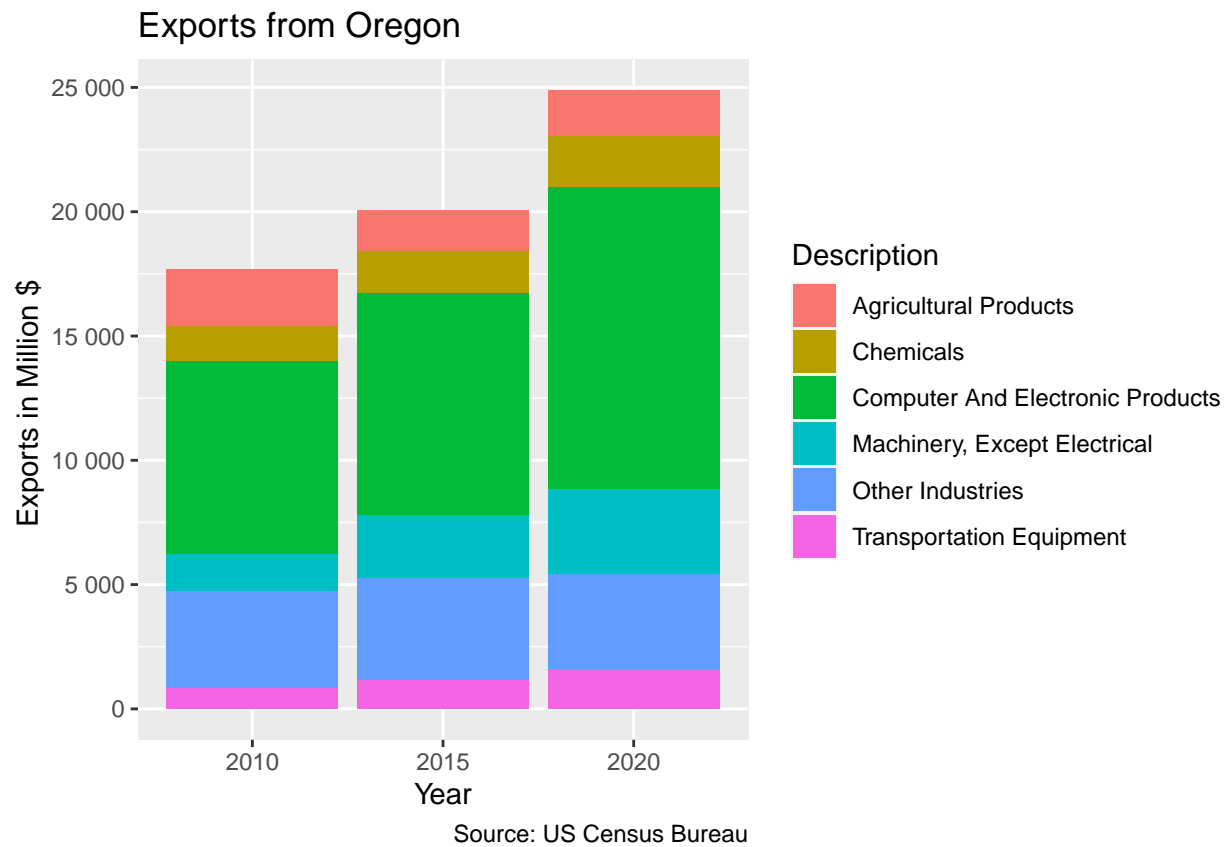
just in case:

```
plot1=base + geom_bar(stat="identity") +
  scale_y_continuous(labels = scales::number) # requires library "scales"
```

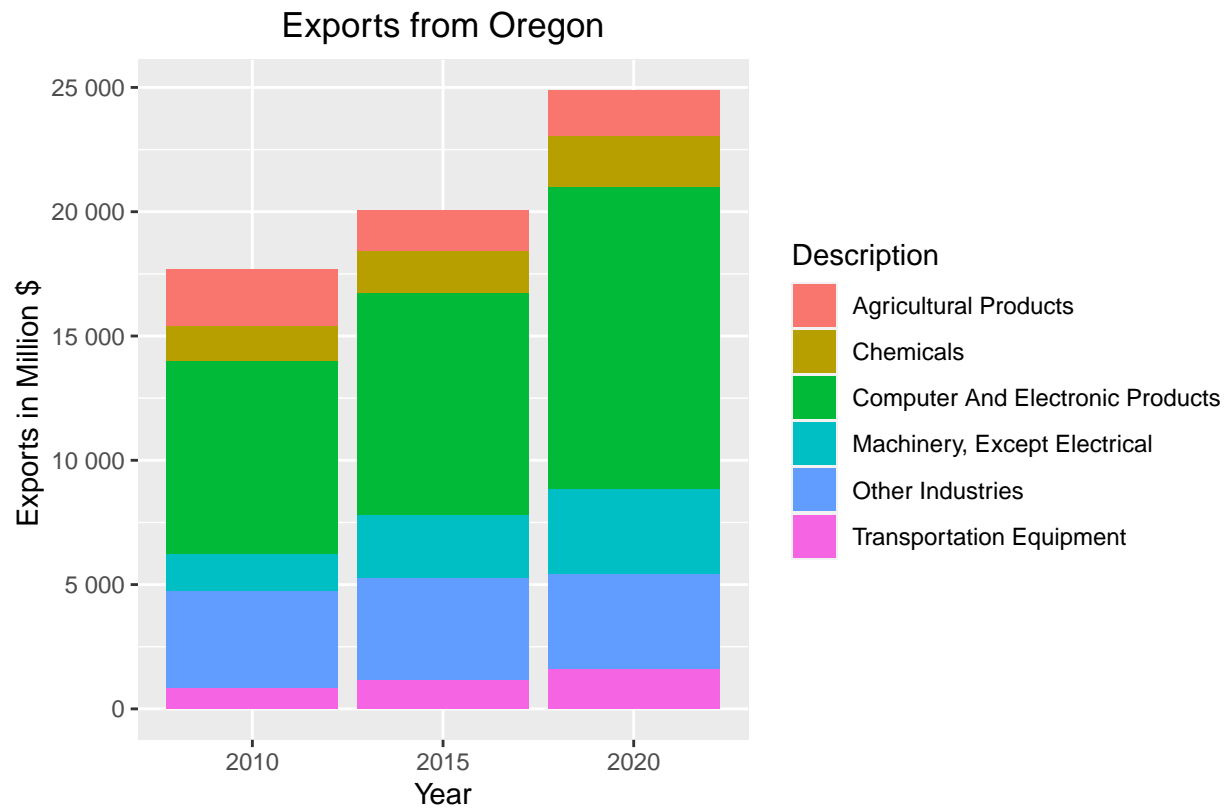
```
titleText='Exports from Oregon'
sourceText='Source: US Census Bureau'
descriptionText='Export Clasification'

plot2 = plot1 + labs(title=titleText,
  x ="Year",
  y = "Exports in Million $ ",
  caption = sourceText)
```

```
plot2
```



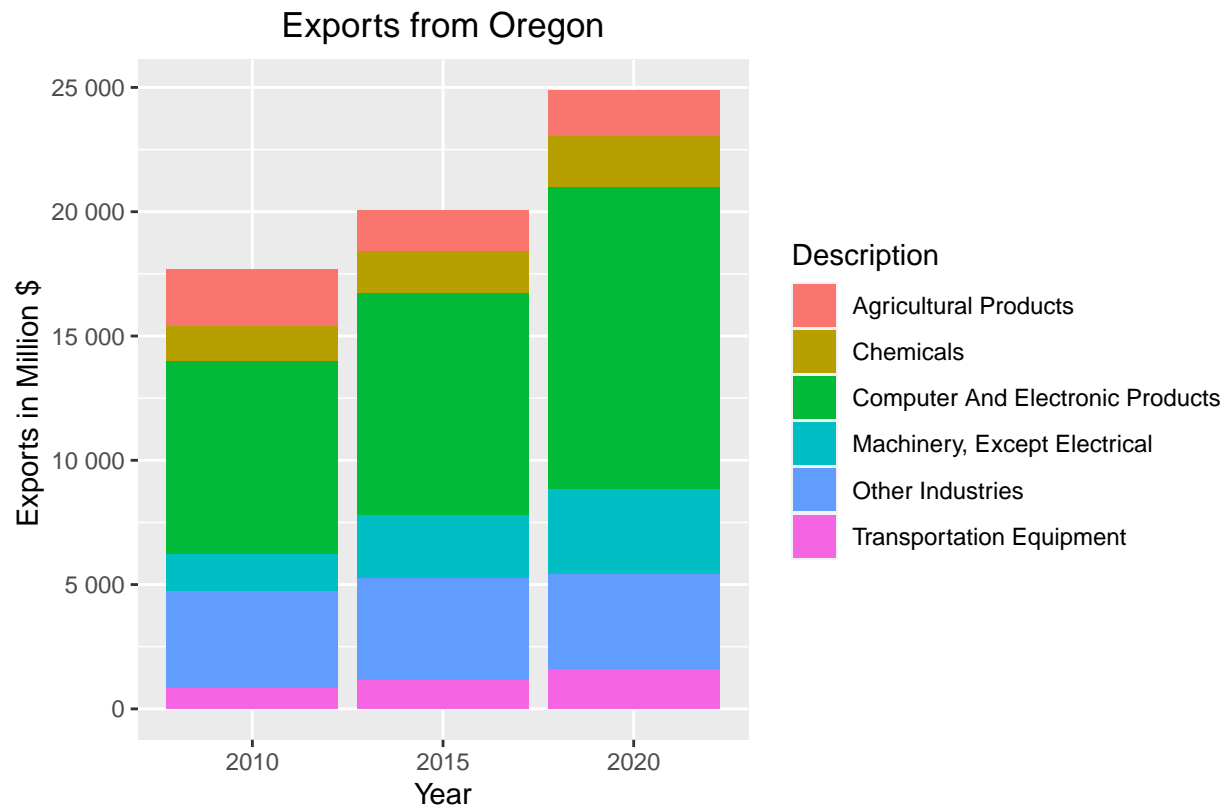
```
plot3 = plot2 + theme(plot.caption = element_text(hjust = 0),  
                      plot.title = element_text(hjust = 0.5))  
plot3
```



```
plot4 = plot3 + scale_x_discrete("Year", labels = c ("ten" = "2010", "fifteen"= "2015", "twenty" = "2020"))
```

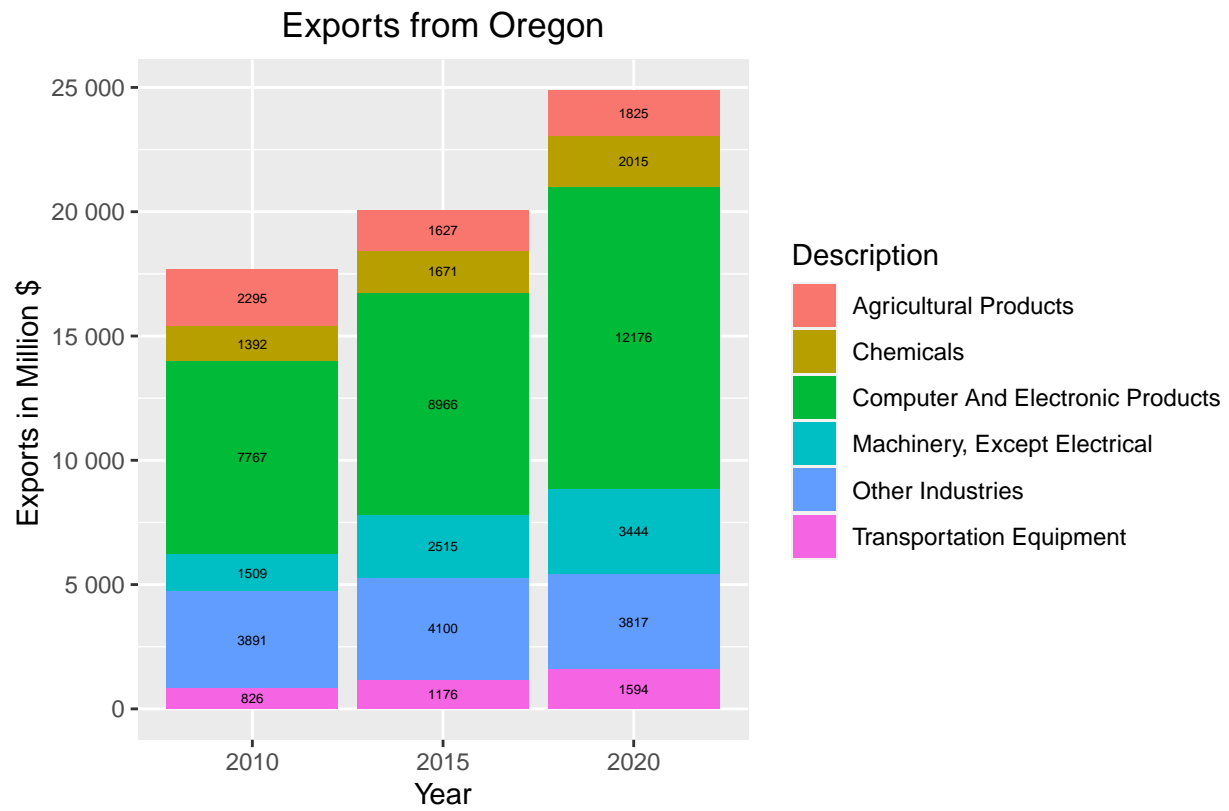
```
## Scale for 'x' is already present. Adding another scale for 'x', which will
## replace the existing scale.
```

```
plot4
```



Source: US Census Bureau

```
plot5 = plot4 +   geom_text(aes(label = value),position = position_stack(vjust = 0.5,)), size = 1.6)
plot5
```



Source: US Census Bureau

```
saveRDS(plot5,file = 'chart2.rds')  
saveRDS(plot5,file='chart2.rds')
```