

Exercise: Weeks 1 & 2 - Charts

```
library(ggplot2)
library(ggplot2)
library(readxl)
library(lessR)

##
## lessR 4.3.0                                feedback: gerbing@pdx.edu
## -----
## > d <- Read("")    Read text, Excel, SPSS, SAS, or R data file
## d is default data frame, data= in analysis routines optional
##
## Learn about reading, writing, and manipulating data, graphics,
## testing means and proportions, regression, factor analysis,
## customization, and descriptive statistics from pivot tables
## Enter: browseVignettes("lessR")
##
## View changes in this and recent versions of lessR
## Enter: news(package="lessR")
##
## Interactive data analysis
## Enter: interact()

library(dplyr)

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:lessR':
##
##   recode, rename

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

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

library(tidyr)

## SETTING WORKING DIRECTORY.
setwd("~/Users/aaronbrown/Documents/Classwork/DSC 640 - Data Presentation and Visualization/")

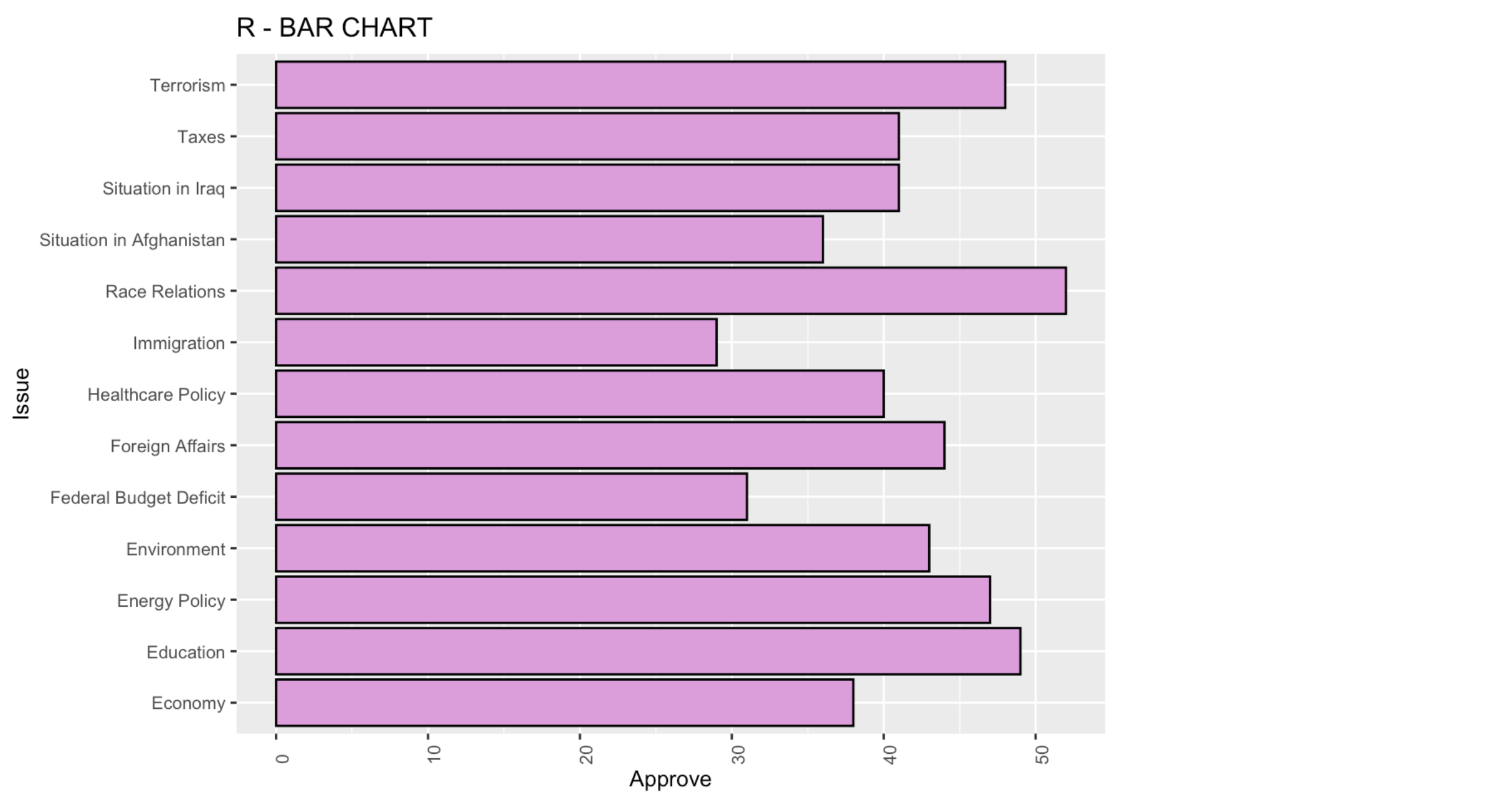
## LOADING DATA.
obama_df <- read_excel("data/obama-approval-ratings.xls")
print(obama_df)

## # A tibble: 13 × 4
##   Issue                Approve Disapprove  None
##   <chr>                <dbl>    <dbl> <dbl>
## 1 Race Relations      52         38    10
## 2 Education           49         40    11
## 3 Terrorism           48         45     7
## 4 Energy Policy       47         42    11
## 5 Foreign Affairs     44         48     8
## 6 Environment         43         51     6
## 7 Situation in Iraq   41         53     6
## 8 Taxes               41         54     5
## 9 Healthcare Policy   40         57     3
## 10 Economy            38         59     3
## 11 Situation in Afghanistan 36         57     7
## 12 Federal Budget Deficit 31         64     5
## 13 Immigration        29         62     9

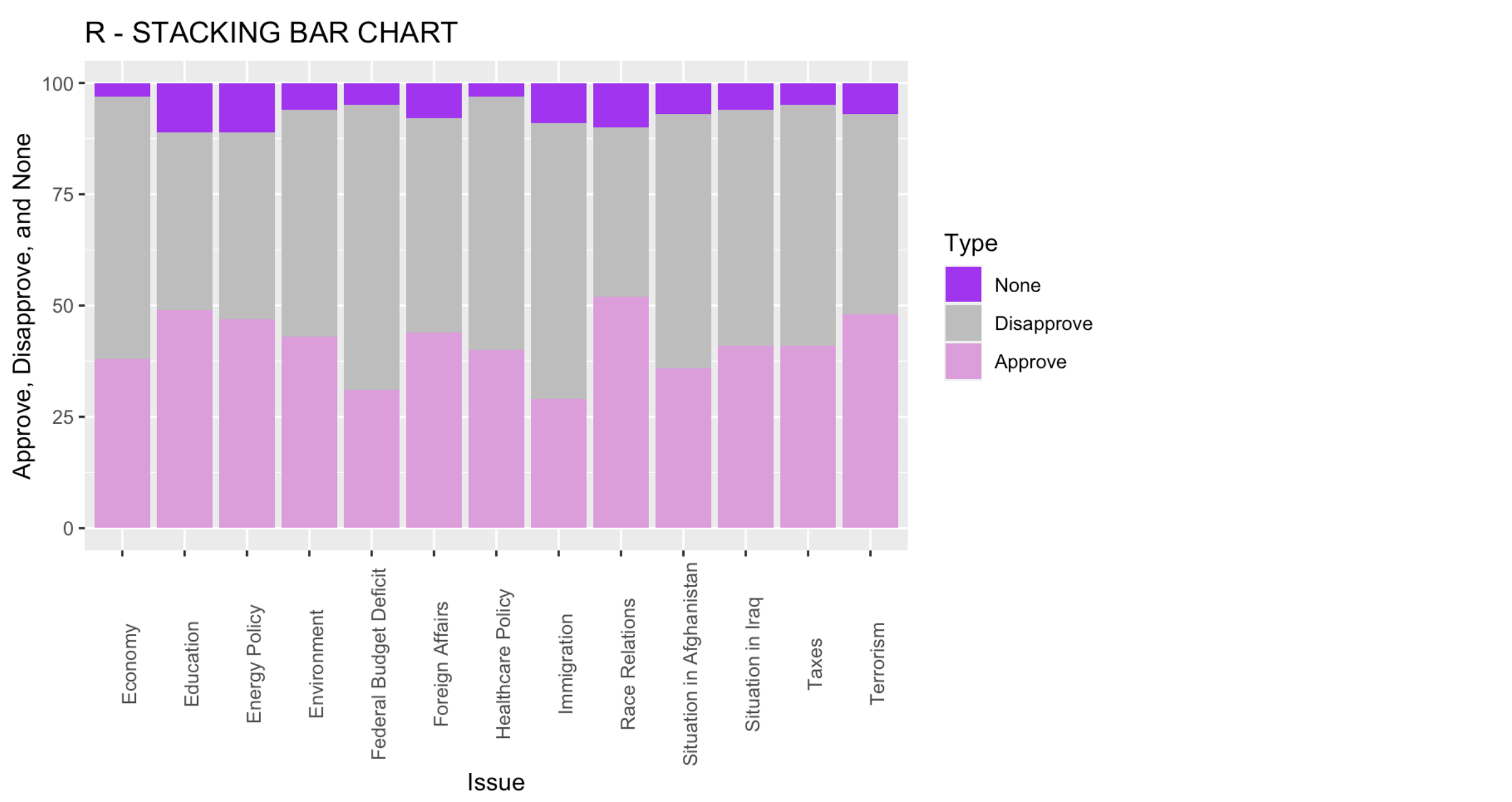
obama_data <- gather(obama_df, Type, value, Approve=None, factor_key=TRUE)

obama_data$Type <- factor(obama_data$Type, levels = c('None', 'Disapprove', 'Approve'))
Type <- c('Approve', 'Disapprove', 'None')

# R - CREATING BAR PLOT.
ggplot(data=obama_df, aes(x=Issue, y=Approve)) + geom_bar(stat="identity", color="black", fill="plum") + theme(
  element_text(size=10), axis.text.x = element_text(angle=90, hjust=.1)) + coord_flip() + ggtitle("R - BAR CHART")
```



```
# R - CREATING STACKED BAR PLOT.
ggplot(obama_data, aes(fill=Type, y=value, x=Issue)) +
  geom_bar(position="stack", stat="identity") +
  ggtitle("R - STACKING BAR CHART") + xlab("Issue") + ylab("Approve, Disapprove, and None") + scale_fill_manual(
    values = c("purple", "gray", "plum")) + theme(axis.text.x = element_text(angle = 90))
```

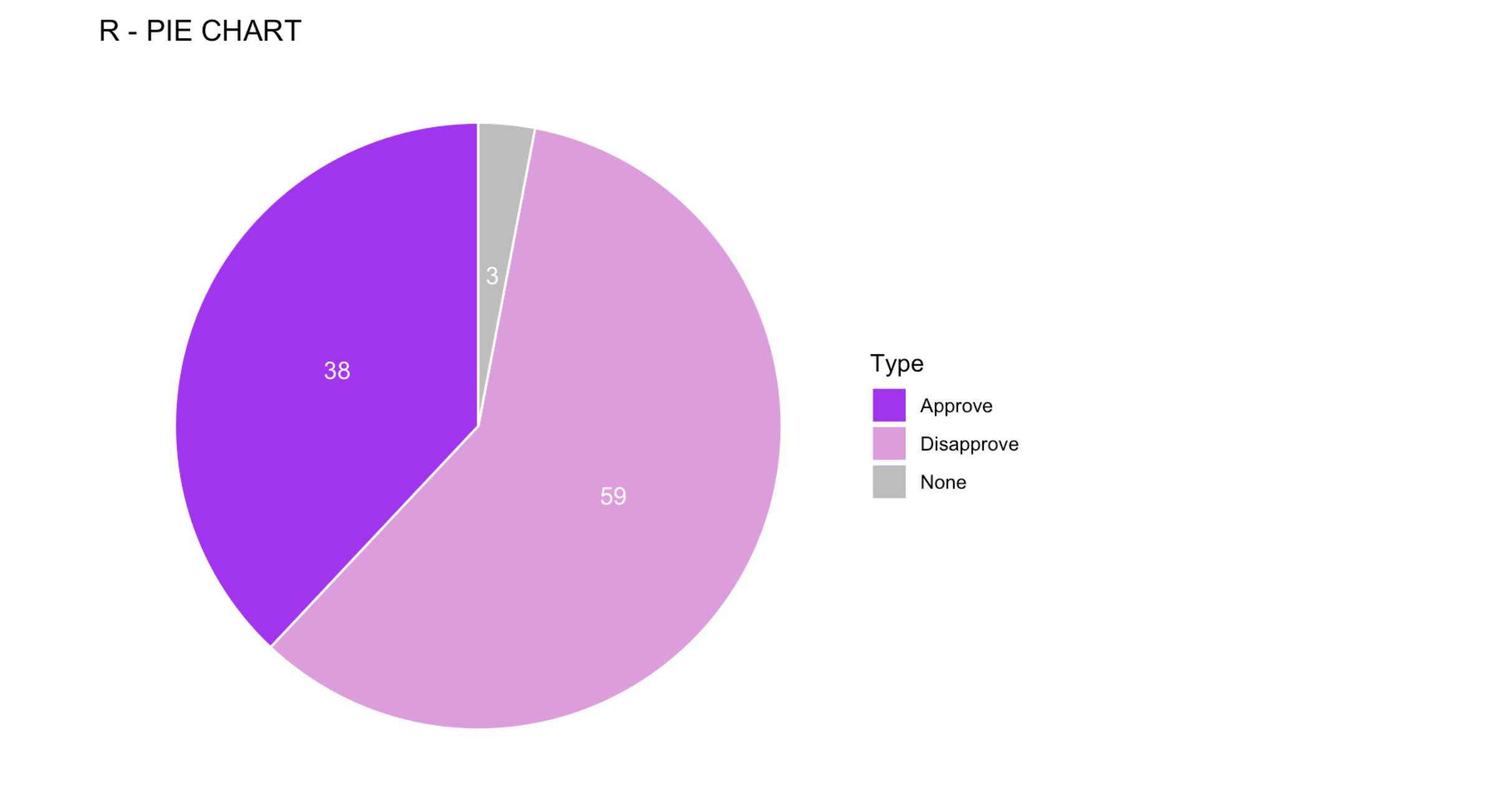


```
rating <- c(obama_df$Approve[10], obama_df$Disapprove[10], obama_df$None[10])
type <- c('Approve', 'Disapprove', 'None')

data <- data.frame(group=type, value=rating)
```

R - CREATING PIE PLOT.

```
# R - CREATING PIE PLOT.
ggplot(data, aes(x="", y=rating, fill=Type))+
  geom_bar(stat="identity", width=1, color="white") +
  coord_polar("y", start=0) + theme_void() +
  ggtitle("R - PIE CHART") + geom_text(aes(label = value), color = "white", position = position_stack(vjust = 0.5)) + scale_fill_manual(values=c("purple", "plum", "gray"))
```



```
rating <- c(obama_df$Approve[8], obama_df$Disapprove[8], obama_df$None[8])
type <- c('Approve', 'Disapprove', 'None')

obama_data2 <- data.frame(group=type, value=rating)
```

```
hsize <- 2

ggplot(obama_data2, aes(x=hsize, y=rating, fill=Type))+geom_col() +coord_polar(theta = "y") +xlim(c(0.2, hsize + 0.5)) +
  ggtitle("R - DONUT CHART") + xlab("") + ylab("") + geom_text(aes(label = value), color = "white", position = position_stack(vjust = 0.5)) + scale_fill_manual(values=c("purple", "plum", "gray"))
```

