PSTAT 10 Worksheet 9

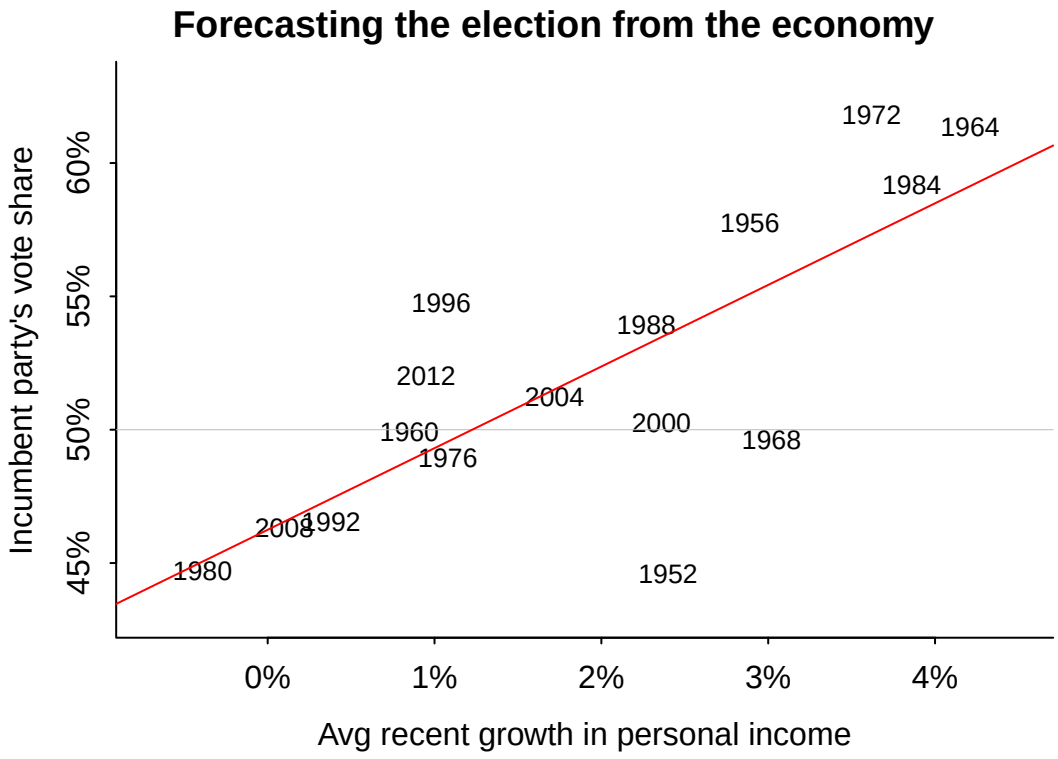
Due 7/26/22

For this worksheet, we need `tidyverse` package as well as the hibbs data from week 4.

```
library(tidyverse)
hibbs <- as_tibble(read.csv("../Lec11_files/hibbs.dat", sep = ""))
```

Problem 1: Hibbs

In lecture 11, we created the following base R plot that modeled, for a US presidential election, the incumbent's vote share as a linear function of the average growth in Americans' personal income.



Recreate this plot in `ggplot`. My output is shown. See if you can get the axis labels to exactly match; explore with `scale_x_continuous` and `scale_y_continuous`.

Compared to the base R plot, this plot has a lot less parameters to tune.

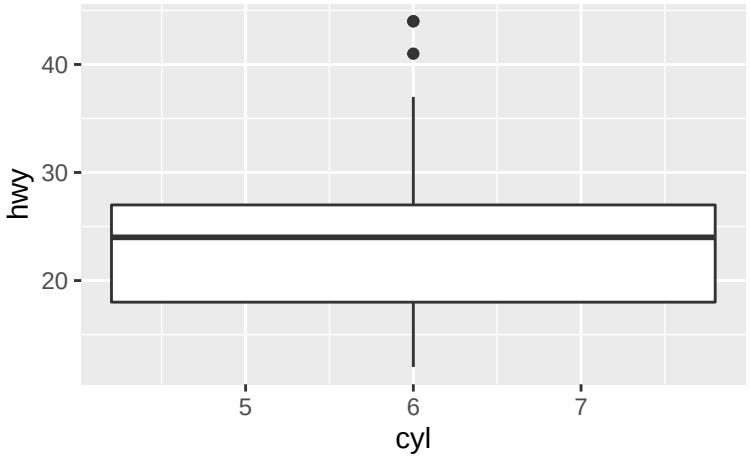
Problem 2: mpg

For this problem we will use the `mpg` tibble that is in the `ggplot` package. Remember to view the data set information with `?mpg`.

We wish to create a boxplot of the highway miles per gallon (`hwy`) for each number of cylinders `cyl`.

The attempt below fails with a warning message. Fix it to show a boxplot for each value of `cyl`.

```
p <- ggplot(mpg, mapping = aes(x = cyl, y = hwy))
p + geom_boxplot()
```



Problem 3: babynames

Install and load the `babynames` package.

```
library(babynames)
```

1. Create a tibble containing only the name "Robin". First few entries are shown.

```
head(robin, 4)
```

```
## # A tibble: 4 x 5
##    year sex   name      n      prop
##   <dbl> <chr> <chr> <int>     <dbl>
## 1  1881 M     Robin     5 0.0000462
## 2  1887 M     Robin     5 0.0000457
## 3  1888 M     Robin     6 0.0000462
## 4  1889 M     Robin     6 0.0000504
```

2. Create the following plot of the number of babies named Robin.