

# PS1\_Part1

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## Problem Set 1

### Part 1: Write a data section for your assigned data set

#### Data

The data used in this study, data from the Current Population Survey (CPS), was accessed directly from the National Bureau of Economic Research website [[http://nber.org/data/cps\\_basic.html](http://nber.org/data/cps_basic.html)]. It can be accessed there, under the Data tab. The original source comes from the U.S. Bureau of Labor Statistics (BLS), which jointly sponsors the CPS with the U.S. Census Bureau. The BLS maintains a CPS home page [<https://www.census.gov/programs-surveys/cps.html>], where the data can be accessed as well. It is maintained and curated there, and can be accessed in many forms. A list of variable information can be found here: [http://nber.org/cps-basic/January\\_2017\\_Record\\_Layout.txt](http://nber.org/cps-basic/January_2017_Record_Layout.txt). For the purpose of this study, the June 2017 csv file of the CPS data was used; many formats can be accessed here: [http://thedataweb.rm.census.gov/ftp/cps\\_ftp.html](http://thedataweb.rm.census.gov/ftp/cps_ftp.html).

The CPS database has been utilized by several key papers, ranging in topic from health, income equality, poverty rates, and same-sex marriage (Burkhauser et al., 2011; Davis et al., 2015; Edwards & Lindstrom, 2017).

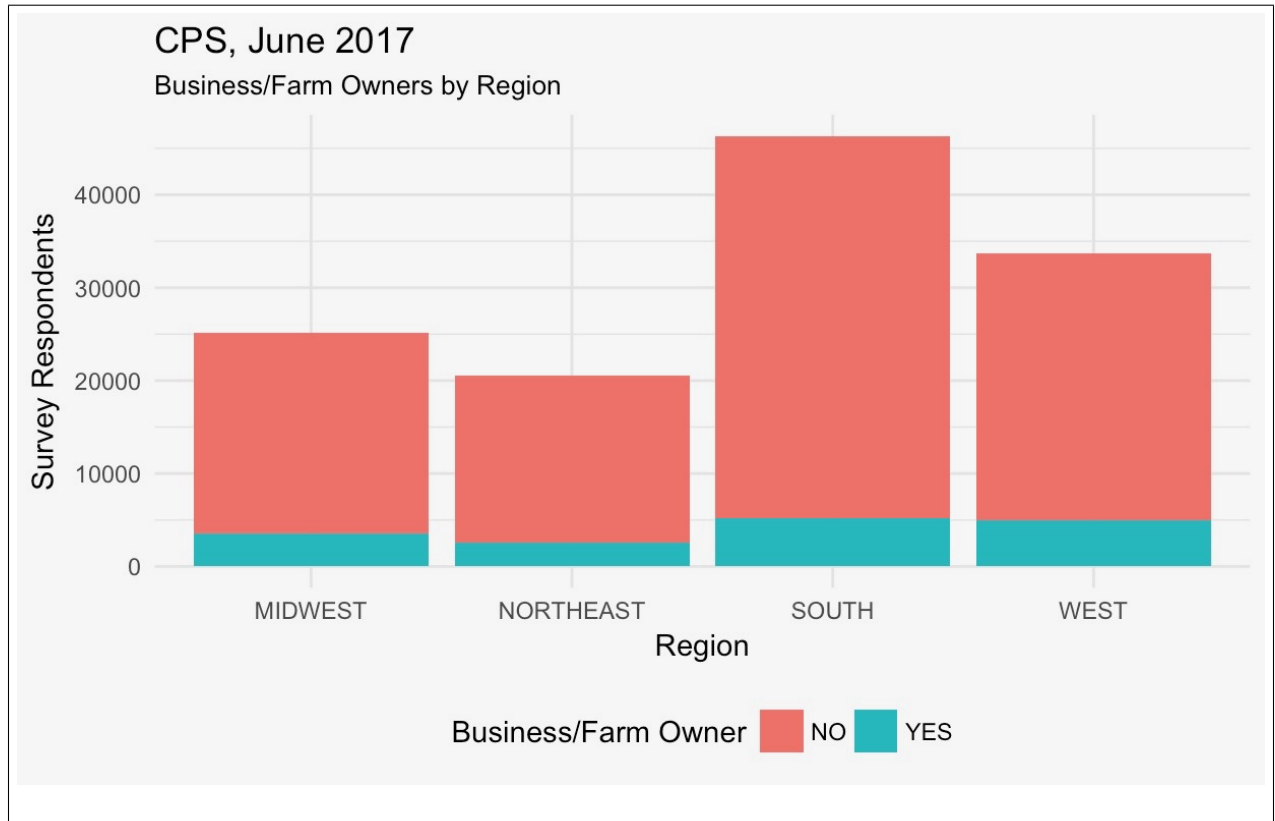
The CPS is conducted by collecting data on a monthly basis using a probability sample of about 60,000 occupied households. It is administered as a completely computerized document that is administered by field representatives, through personal and telephone interviews.

Table 1 (Figure 1) includes descriptives statistics highlighting eight key features of the CPS data set. These features include overall family income, highest level of school completed or degree received, race, number of own children < 18 years of age, total number of people living in the household, household type, whether or not the respondent owns a business/farm, and region.

|                     | Family<br>Income | Education<br>Level | Race   | # Of<br>Children | # In<br>Household | Household<br>Type | Business/Farm<br>Owner | Region |
|---------------------|------------------|--------------------|--------|------------------|-------------------|-------------------|------------------------|--------|
| <b>Median</b>       | 8                | 11                 | 23     | 11               | 3                 | 6                 | 4                      | 3      |
| <b>Mean</b>         | 8.28             | 8.624              | 17.335 | 10.0357          | 2.8585            | 6.2111            | 3.6633                 | 2.7019 |
| <b>SE.mean</b>      | 0.014            | 0.016              | 0.023  | 0.0045           | 0.0049            | 0.0066            | 0.003                  | 0.0028 |
| <b>CI.Mean.0.95</b> | 0.027            | 0.031              | 0.045  | 0.0088           | 0.0095            | 0.013             | 0.0059                 | 0.0054 |
| <b>Var</b>          | 27.433           | 35.86              | 79.18  | 3.0175           | 3.5094            | 6.5342            | 1.328                  | 1.1289 |
| <b>Std.dev</b>      | 5.238            | 5.988              | 8.898  | 1.7371           | 1.8734            | 2.5562            | 1.1524                 | 1.0625 |
| <b>Coef.var</b>     | 0.633            | 0.694              | 0.513  | 0.1731           | 0.6554            | 0.4116            | 0.3146                 | 0.3932 |

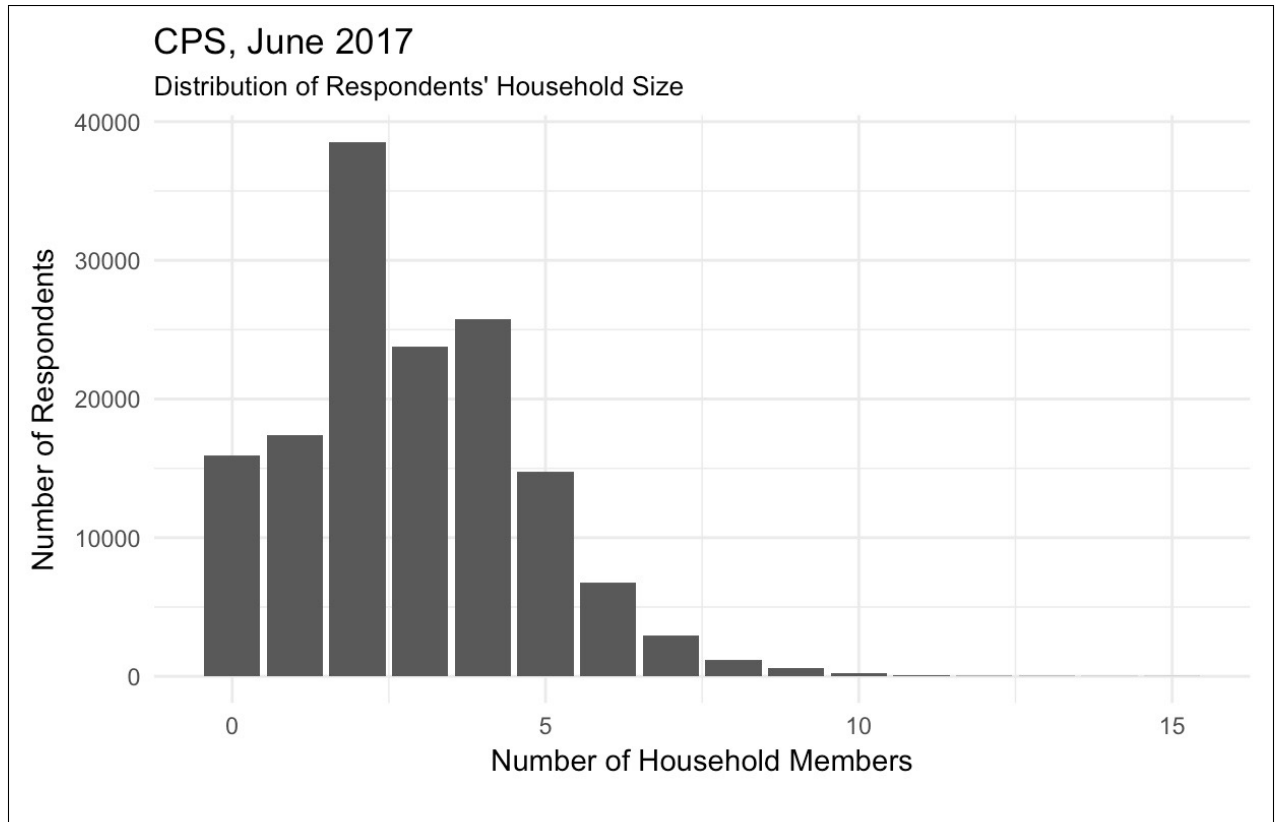
Figure 1: Table 1

Focusing on region and business / farm ownership, Figure 2 shows the distribution of samples from four regions of the US - the midwest, south, northeast and west. Within that, Figure 1 shows the distribution amongst those regions of individuals who either do not own or own either a farm or a business. We can see that most respondents in June of 2017 were from the south, and the least respondents were from the northwest. Further, the overwhelming majority of respondents do not own either a farm or a business, in all four regions.



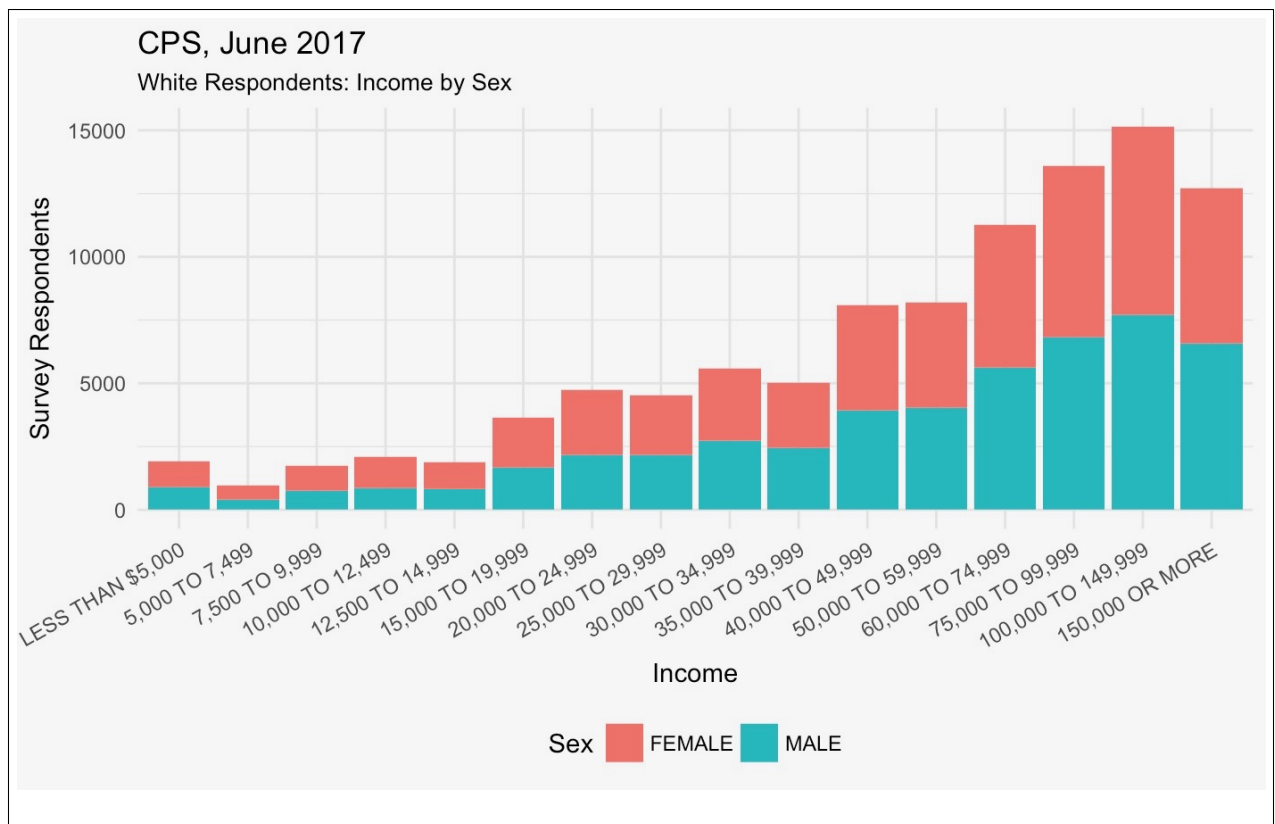
**Figure 2:** Region / Business and Farm Ownership

Figure 3 shows the distribution of household sizes amongst survey respondents in June of 2017. The majority of households contain three individuals, and household sizes dramatically taper off after 5 or 6 total members.

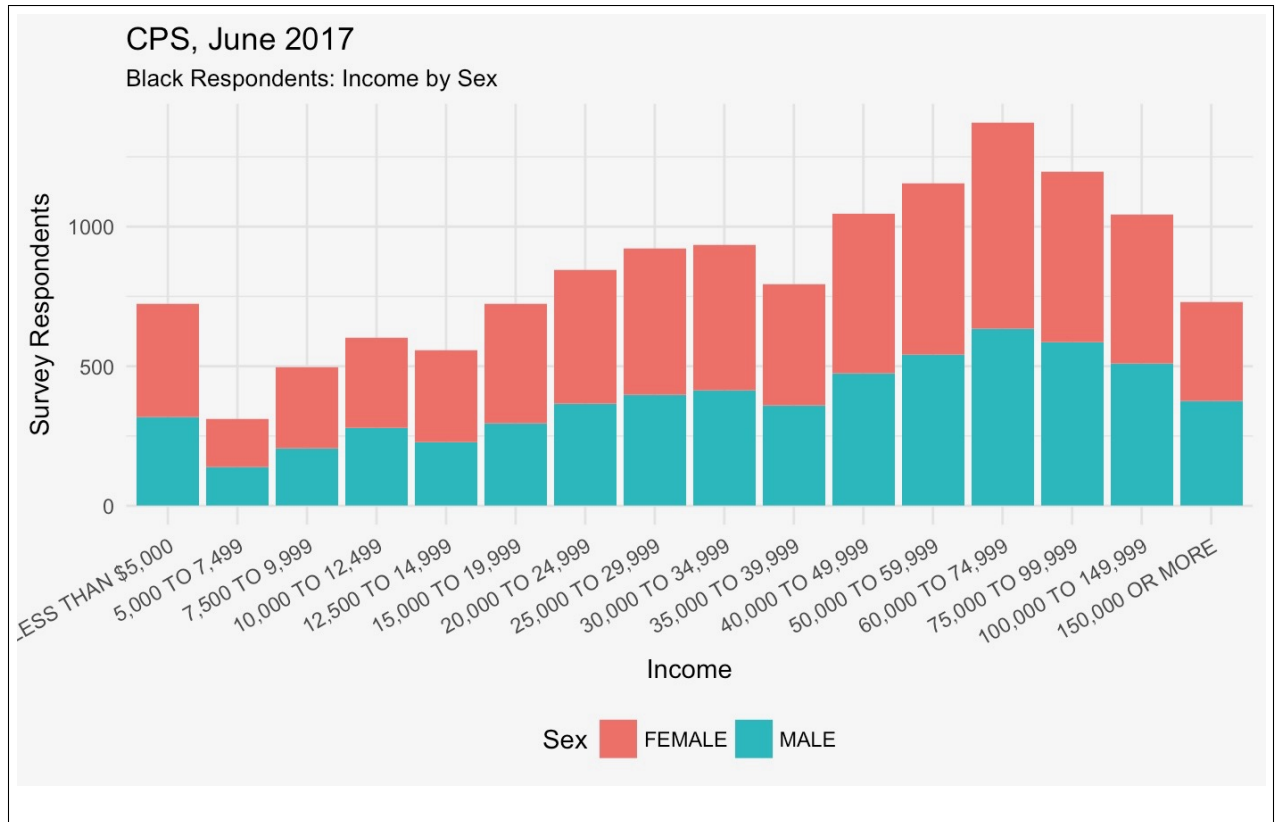


**Figure 3:** Distribution of Household Sizes

Finally, we can take a look at two conditional slices of the data - observing sex and income of survey respondents, separately for white respondents and for black respondents. Figure 4 shows the distribution of income for white respondents, and how that distribution is made up by sex of respondents. Figure 5 shows the same thing for black respondents only. For white respondents, we see a more dramatic increase in income, with many respondents making over 60,000. For black respondents, we see a more gradual increase, with less of a dramatic difference overall. Between the two groups, there are many more white than black respondents, and males and females don't dramatically differ in the make up of income distribution.



**Figure 4:** Distribution of Income amongst White Respondents



**Figure 5:** Distribution of Income amongst Black Respondents

## References

- Burkhauser, R. V., Feng, S., Jenkins, S. P., & Larrimore, J. (2011). Estimating trends in US income inequality using the Current Population Survey: the importance of controlling for censoring. *The Journal of Economic Inequality*, 9(3), 393-415.
- Davis, W. W., Hartman, A. M., & Gibson, J. T. (2015). Trends in smoking prevalence by race based on the Tobacco Use Supplement to the Current Population Survey.
- Edwards, A., & Lindstrom, R. (2017). Measuring the presence and impact of same-sex married couples on poverty rates in the Current Population Survey (No. 2017-01). SEHSD Working Paper.