**Project Instructions**

*Please exchange with your group by noon on Tuesday August 4th.*

*Please turn in a revised draft to me on Sakai by 11:59 pm on Thursday August 6th.*

*Assignment Details*

For your final project, you will analyze your dataset in R and discuss your results. Specifically, you will run a linear regression model (or several) to test expectations you make about the patterns you expect to observe in the data. Then, after conducting the analyses in R, you will discuss your findings. You should include an RMD file with the code you use to run the models and a Word document with your project write-up. It is important to write in a manner that is clear, concise, and statistically correct. We will spend time in class discussing best practices for statistical writing.

Your project write-up should include:

* An introduction where you introduce your topic to the reader (estimate: approx. 300-400 words- these may vary; 5 points)
* A short summary of previous research on the topic. (approx. 300-400 words; 5 points)
* A brief discussion of your expectations based upon that research. (approx. 250-300 words, 5 points)
* A discussion and visualization of your variables of interest. (approx. 200-250 words, plus plots, 10 points)
  + Discuss measures of central tendency and spread for your main dependent and independent variables (5 points).
  + Construct at least three plots in R that visualize your data effectively for the reader. These can be any of the plots we have learned in class or others (not pie charts) that you believe effectively visualize the data for the reader (5 points).
* Conduct a simple hypothesis test (e.g., difference of means test). Discuss and interpret your results. (approx. 200-250 words, 5 points.)
* Discuss the control variables you will include in your regression model. You should include at least three control variables beyond the focal independent variable(s) in the model. (approx. 300 words, 5 points)
* Tell the reader what evidence you need to support your expectations. (approx. 200 words, 5 points)
* Discuss your results. Did you find evidence in support of your expectations? In discussing your results, please interpret the coefficients and p-values and discuss your R-squared value. Also, please discuss whether there are any influential points or collinear predictors. (approx. 500-600 words, 15 points)
* Write a conclusion where you discuss the implications of the results and any next steps you would take in the analysis. (approx. 300 words, 5 points)

You should also include (15 points):

* An RMD file with all the code you used to conduct the analysis and plenty of comments so that the replicator can see what you did.
* Please also include your data as an Excel file or CSV when you upload on Sakai.

*Logistics*

Your final draft section should:

* incorporate the feedback from the proposal
* be between 2600 and 2800 words long (hard cap at 3000 words); please also include a works cited page
* be well-written; [here](https://www1.cmc.edu/pages/faculty/JPitney/writing.htm) is a link to a guide to writing that Professor Jack Pitney of Claremont McKenna College designed.
* use twelve-point Times New Roman Font with one-inch margins
* use a consistent citation style of your choice throughout

*Rationale*

This assignment will bring together the statistical concepts that we have learned over the course of the semester and give you practice honing your statistical writing skills. You will also have the opportunity to revise your project based on my feedback on your proposal and your group’s suggestions on the project.

*Rubric*

* 60 points: Project write-up sections (point breakdown above).
* 20 points: Writing quality and the overall readability and flow of the project.
* 15 points: Having a complete RMD file that allows me to replicate your research.
* 5 points: Following of other above logistics.