Homework #1

POSC 3410 - Quantitative Methods in Political Science

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This homework assignment will refer to the `1-sc-primary-2016.R` script I wrote and made available on my GitHub (see footnote).[1] It contains county-level information about the share of the vote that Cruz, Rubio, and Trump got in the 2016 Republican primary, the share of the vote that Clinton and Sanders got in the 2016 Democratic primary, as well as other demographic/background information that might explain some of these vote shares.[2] Answer the following questions in two to three *complete* sentences.

1. Get the mean of the percentage of the vote Trump got in the primary. Get the median. What does this suggest in terms of skew of the variable?
2. Get a density plot of the Trump share variable. What does this suggest about the distribution of this variable?
3. Look at the mean of the population variable and then look at the median. What does this suggest in terms of skew of the variable?
4. Why do you think the population variable has this distribution?
5. Take a natural logarithm of the population variable and then get the mean and median again. Get a density plot too. What do you see?

Extra Credit

6. Run the regression that seeks a minimal model to explain the county-level vote share for Trump in the Republican primary. What do you think these results suggest? *Be mindful of ecological fallacies*.

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[1] https://github.com/svmiller/posc3410/blob/master/homeworks/hw1/1-sc-primary-2016.R

[2] An older version of this script, along with all supporting information, is available here: https://github.com/svmiller/sc-primary-2016