**Quantitative Methods in Political Science**
University of Mannheim
Fall 2017
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# Homework 1

**Due: 14 September 2017**

In our first lab-session we solved similar tasks in `R`, so you should be familiar with all the concepts.

Your write-up should include graphs, tables and full sentence answers to the questions. Please, also include all the `R`-code you wrote to answer a question in the write-up. Additionally, attach your whole script in the Appendix. Choose an appropriate form to present your answers, graphs, tables and code. Also remember to structure your code according to Google's R Style Guide and don't forget to add comments.

Please indicate how much each group member contributed to the final write up. (Indicate it in percent next to your names. E.g. Name 1 (20 %), Name 2 (30 %) & Name 3 (50 %).)

Your write up should not exceed 15 pages including all.

If you are doing the exercises on your own computer, you should first install `R`. Follow the instructions on http://www.r-project.org/. Additionally, you should also install Rstudio (http://www.rstudio.org/download/desktop) which includes a lot of helpful features that allow you to work more efficiently with `R`.

1. Download the US Presidential Elections data set `uspresidentialelections.dta` from the course ILIAS site. Load the data set in `R`.
2. Describe the dataset. What variables does it contain? How many observations are there? What time span does it cover?
3. Compute measures of central tendency and variability of the variables `vote` and `growth` using `R`. Use the numerical measures of central tendency and variability discussed in class. Describe them in your own words and make a nice table. Plot the distribution of both variables using a boxplot and histogram. Make sure to make your plots as nice-looking as possible. Especially, include a title and label the axes.
4. Make a bar plot of the party affiliation of incumbent presidential candidates.
5. During the presidential campaign in 1992, Bill Clinton's campaign coined the phrase "It's the economy, stupid!" Let's investigate the relationship between the economy and electoral success. Generate a nice-looking scatterplot of economic growth and vote share. Label the data points with the year of the election. Describe the pattern that you see in your own words.