

## Research Methods in Political Science I – Homework Assignment 4

**Due:** 9am on 4 November 2015

**How to submit:** Send as an email attachment

**Email subject:** Research Methods 1, Assignment 4

**File name:** hw04-YourName.xxx (xxx is either html or pdf)

### Assignment

Do the following five tasks. If you answered that you could not explain how OLS works in Homework Assignment 1, you are allowed to skip 3 and 4. You are expected to create beautiful tables and figures, where "beautiful" means that your readers can easily understand what your tables and figures tell. Turn in an HTML file created from an R markdown file or a PDF file.

For this assignment, use the data set `hr96-09.csv` (Asano and Yanai 2013), which is available at

<http://www2.kobe-u.ac.jp/~yyanai/jp/quant-methods-stata/data/hr96-09.csv>.

1. From the data set, extract the 2005 election and make two cross tables with variables of your choice.
2. Transform one of your cross tables into a mosaic plot. (You do not have to use `ggplot2`.)
3. Run a regression (linear regression, logit, probit, etc. It doesn't have to be a "correct" model) and report the result in a table.
4. Report the result of the regression by a caterpillar plot (Again, you do not have to use `ggplot2`).
5. Compare your figures with your tables, and discuss the pros and cons of figures and tables.

**Tips**

- Each of your tables and figures must have a caption. Write a caption so that your readers can understand what the table (figure) is created for. A table caption should be placed on top of the table, and a figure caption at the bottom.
- Give each of tables and figures a serial number. Tables and figures should be numbered independently (i.e., both Table 1 and Figure 1 should exist if you have at least one table and one figure) in the sequence in which you refer to them in the text. (Numbering is automatically done in  $\text{\LaTeX}$ . It is one of many reasons you should use  $\text{\LaTeX}$ .) If you submit your results by an HTML file created from R Markdown file, you can ignore this tip for now.
- Don't forget to add meaningful axis labels to figures.
- You should specify the size (width and height) of the figure when you make it in R. If you created a huge (tiny) figure in R and reduced (enlarged) it afterward, the font size of characters in the figure would be too small (big).