Essay

Exercise 1. In the ESS dataset there are certain variables such as *netusoft*, trstprl, *gndr*, and *agea.* Identify these variables and their labels. Which type of variables are they? Show the appropriate statistics for each one of the variables (means, frequencies). Choose the most appropriate graph in order to illustrate the content of each of the variables in question.

Exercise 2. Are there differences in opinion with regards to gender in the issue of Government action against income inequality? If so, are these differences statistically significant? Interpret your results. (Note: variables *gndr* and *gincdif*).

Exercise 3. We intend to examine the possibility of gender differences (and in the case that they exist, whether these differences are statistically significant) with respect to trust in politicians. Which statistical technique should be used in order examine such a matter? Show the results of any analysis conducted and interpret the output (note: variables *gndr* and *trstplt*). Moreover, we are interested to examine any potential differences in terms of trust in politicians among individuals with higher or lower levels of interest in politics. Which statistical technique would provide you with the most appropriate means to address such a research question? Analyze the results and illustrate them using a graph. (Note: variables *trstplt* and *polintr*)

Exercise 4. Through the use of appropriate graphs, illustrate the relationship between Co2 emissions (variable: *Co2_2003*), GDP per capita of a country (variable: *GDP2005*) and exportations (variable: *Export2002*). In your analysis of the various relationships between the variables in question, do you identify any outliers? If so, which country is it?

Exercise 5. Through the use of the same variables used in the previous exercise (*Co2_2003, GDP2005* and *Export2002*), show and describe the correlation between Co2_2003 and GDP2005 and between Co2_2003 and Export2002. If a correlation analysis between the three variables is conducted, would you observe any changes? If so, what caused them? Is the relationship between the variables statistically significant? (show all of the steps that you follow)