PO3110: Research Methods for Political Science A

HOMEWORK Assignment 4

(due Monday, November 26, 11:59PM)

Question 1 (16 points, 3 each)

In each of the following cases, would you use a paired samples t-test or an independent samples t-test? Explain.

a. Comparing the mean political knowledge for Catholics and non-Catholics.
b. Comparing people's anxiety responses to two pictures shown to them: one of a spider and one of a cuddly toy.
c. Comparing mean sympathy towards Gerry Adams between SF-voters and others.
d. Comparing mean sympathy towards Fine Gael and Fianna Fall (among all voters).
e. Assessing how 'populist' articles in the Irish Times and the Irish Daily Star are, where you use a content analysis technique to obtain a measurement of populism (where only a sample of articles have been analysed).
f. Observing the mean number of political protests per country in 2012 and 2013 to see whether there has been a change (where we only have data on a random sample of countries).

Question 2 (30 points)

Catherine is interested in the public policy of water charges. In particular, she wants to find out if water metering would have an effect of the overall water usage of households. She wants to design a field experiment to test whether water metering (i.e. households paying water charges based on actual usage versus paying a fixed charge) results in lower water usage. Luckily, Catherine is well-connected and has secured cooperation of the authorities in conducting her experiment. Catherine lives in a country where there are currently no water charges (but not in Ireland, so do not focus on the specific details of the water charges here).

a. Explain the difference between a field experiment and a quasi-experimental research design. (4 points)
b. How could Catherine set up her experiment if cooperation of the relevant authorities would be secured? (10 points)
c. What ethical considerations would come into play *with regard to the experiment* (not water charges in general)? (4 points)
d. How might Catherine be able to test the hypothesized relationship using a quasi-experimental research design? Discuss both *including control variables* and *time series* approaches. (12 points)

Question 3 (22 points)

The website of the Irish National Election Study provides the codebook and data for the 2002-2007 election studies (http://www.tcd.ie/ines/).

a. Explain, in your own words, what is meant by the different 'waves' of the survey. (3 points)

Download the 'Long datafile in SPSS file format' from the INES website and open it in SPSS.

b. Select only the observations from the 2007 study. What syntax do you use? (4 points)
c. Two of the variables in the INES dataset are labeled 'INTERNET – TRUST' and 'NATIONAL RADIO NEWS – TRUST'. Is the relationship between these two variables statistically significant? How strong is this relationship? Use SPSS to answer these questions. Show the syntax used. Provide a properly formatted cross table and present the results from the statistical tests and measures you use according to the guidelines given in Field. Provide a detailed interpretation of the results. Note: you may discard any issues related to low expected counts. (15 points)

Question 4 (15 points)

Using Norris' Democracy cross-national indicator (2009) dataset, available as **Norris.sav**, construct, in SPSS, a bar plot that displays the mean percentage of women in the lower house of parliament in 2008 (according to the IPU) in democracies and in dictatorships (using Cheibub's binary classification of the type of regime in 2000). Include a 95% confidence interval of the mean. Use the SPSS graph builder and include the syntax in your answer. Make sure to present the graph in a way that would be suitable for inclusion in an academic article. Provide a very short interpretation of the graph.

Question 4 (15 points)

A researcher is interested in the difference in political interest between men and women. She conducts a survey among 413 randomly selected individuals. The cross-tabulated results for the sex of the respondent and his subjective political interest are displayed in table 1.

Table 1. Cross-table of sex and political interest (counts)

		Sex	
		Female	Male
Political interest	Very interested	42	22
	Interested	69	50
	Not very interested	101	100
	Not at all interested	15	14

	Total	227	186

a. Provide a properly formatted cross-table with percentages instead of counts. Give an interpretation of the relationship between sex and political interest. (5 pt)
b. Calculate and provide an interpretation of the statistical significance of the relationship between the two variables. Use manual calculations (do not use SPSS), showing equations and calculation steps[1]. (10 pt)

Total: 100 points.

[1] When repetitive similar calculations are involved (i.e. for calculating expected frequencies), it suffices to show just one example and only the result of the other calculations.