

SOC20260
Quantitative Research Methods
Trimester 1, 2020

Assignment 2

Assignment 2 (2500 words): Research Report (60%)

Due: Friday 18th December 2020 (tbc), 3pm

What to do

This assignment will test your knowledge of data analysis and reporting. There are four components:

1. From the following lists of variables, choose **one** dependent variable from column one, and **three** independent variables from column two. Justify your choices (See Table 1).
2. Provide graphs, and descriptive statistics with a brief commentary, for each of your chosen variables.
3. Specify three hypotheses to be tested using your chosen variables.
4. Explore, or test your hypotheses using any of the following techniques covered in the module: t-test for comparison of means, correlation, or bivariate regression.

Table 1: List of Variables

Column 1: Dependent Variables			Column 2: Independent Variables		
trstplc	<i>(ordinal/scale)</i>	Trust in the police	gndr	<i>(nominal)</i>	Gender
imbgeco	<i>(ordinal/scale)</i>	Immigration bad or good for country's economy	agea	<i>(scale)</i>	Age of respondent
rlgdgr	<i>(ordinal/scale)</i>	How religious are you	maritalb	<i>(nominal)</i>	Legal marital status

Column 1: Dependent Variables			Column 2: Independent Variables		
happy	(ordinal/scale)	How happy are you	eduyrs	(scale)	Years of full-time education completed
dosprt	(scale)	How many of last 7 days do sports or other physical activity	brncntr	(nominal)	Born in country
wkhtot	(scale)	Total hours normally worked per week in main job	hhmmb	(scale)	Number of people living regularly as members of household
cgtsday	(scale)	How many cigarettes smoke on a typical day	chldhm	(nominal)	Children living at home or not
<u>Important Note:</u> Where a variable is listed as 'ordinal/scale', these are special cases of ordinal variables that can be treated as scale variables for analysis. This means, that for these types of variable, because they are measured on a 0-10 scale, we can 'cheat' and treat them as scale. Therefore, for all of the variables which are listed as 'ordinal/scale' it is acceptable to report the mean and standard deviation.			pdwrk	(nominal)	Doing last 7 days: paid work
			ipfrule	(ordinal)	Important to do what is told and follow rules
			fltdpr	(ordinal)	Felt depressed, how often past week
			wkdcorga	(ordinal)	Allowed to decide how daily work is organised

	Column 2: Independent Variables		
	hlpfmly	<i>(nominal)</i>	Looking after...family
	dshltgp	<i>(nominal)</i>	Discussed health last 12 months with general practitioner
	hlthhmp	<i>(ordinal)</i>	Hampered in daily activities by illness/disability...
	stflife	<i>(ordinal/scale)</i>	How satisfied with life as a whole
	lrscale	<i>(ordinal/scale)</i>	Placement on left right scale
	vote	<i>(nominal)</i>	Voted in last national election
	edlvdie	<i>(ordinal)</i>	Highest level of education

Dataset

The data for this assignment is from the European Social Survey dataset you have been working with in tutorials this year. The **assignment2data.sav** file contains all of the variables mentioned above. Please do not use any other dataset for this assignment.

General Guidelines

1. SPSS

You must use SPSS to analyse the data. Graphs, descriptive statistics and results and any other tables or charts you wish to use must be generated through SPSS. Start your assignment early, do not depend on software at the last minute. This goes for SPSS, Word, or any programme for any other module.

2. Word Count

The word count for this assignment is 2500 words, excluding your bibliography/list of references. The word count may be 10% under or 10% over the word count; which means that assignments between 2250 – 2750 words will be accepted.

3. Referencing

Please use the Harvard referencing system for this assignment. The Harvard guide is available from the library website and on Brightspace. All sources used must be cited. The in-text citations must match the list of references in your Bibliography and vice versa.

4. Submission

Upload your assignment in a single file to Brightspace by **3pm Fri 18th of December 2020**. All assignments must be submitted online, and no paper submissions will be accepted.

Please familiarise yourself with departmental late policy, and policies on extensions. All extension requests must go through the school office – extension request form is available on Brightspace. All extension requests must be submitted before the deadline and no extensions will not be granted via email. Supporting documents e.g. medical certificates are required and can be uploaded with the extension request form. Please direct administrative questions at sociology@ucd.ie

How to do it

1. From the following lists of variables, choose one dependent variable from column one, and three independent variables from column two. Justify your choices.

The variable you choose as your dependent variable will largely decide the subject of your assignment. For example, if you choose *trstplc*, then your assignment will focus on analysing factors associated with different levels of trust in the police. This will make selecting readings, choosing variables, and reporting the research easier. Treat the assignment as telling a short story through a preliminary research report, with the course dataset.

Your three independent variables are variables which you think may be related to or may explain variation in your outcome (dependent variable). For example, levels of happiness (*happy*) may be influenced by whether someone has reported feelings of depression (*fltdpr*), or marital status (*maritalb*). Some of the independent variables can be used to explain a number of dependent variables: *age* may be related to levels of happiness (*happy*), or to religiosity (*rlgdgr*), and so on.

There is no single way, or no 'correct' choice of variables to match from column one to two, they can be combined in many different ways. Your choices of variables, should, however, be justified. 'Justify your choices' means state why your three chosen independent variables may be related to your dependent variable – use literature and empirical evidence for justification.

2. Provide graphs, and descriptive statistics with a brief commentary, for each of your chosen variables.

For each of your chosen variables, give a graphical summary (a bar chart, histogram, boxplot etc.) Be creative. If you wish – split the results of a bar chart by categories or limit your selection of cases in a histogram. Pay attention to the level of measurement of the variable – certain types of chart are only appropriate for certain kinds of variables.

Provide appropriate descriptive statistics for your variables with a short discussion of the results – you may wish to report the mean, median, mode, range, or standard deviation, depending on the level of measurement of the variable. You could also use frequency tables. Some points you may wish to consider: what concepts are your variables measuring? Are you satisfied that they are valid or reliable? Do the averages seem high or low? What is the general pattern of responses in the variable?

You can provide descriptive statistics in the form of tables for ordinal/nominal variables and summary statistics (mean, median, standard deviation) for scale/ratio variables.

3. Specify three hypotheses to be tested using your chosen variables.

Formulate some testable hypotheses about the associations/correlations/relationships under study. This should be largely based on prior empirical knowledge and/or theoretical considerations. Please cite articles on these topics when you deduce the hypotheses.

Each of your three hypotheses should specify a relationship between your dependent variable, and one of your independent variables. For example, let's say you have chosen *rlgdgr* as your dependent, and *agea* as one of your independents. Your hypothesis could be constructed as follows:

Ha: there is a statistically significant, relationship between religiosity and age

Ho: there is no statistically significant relationship between religiosity and age

4. Test your hypotheses using any of the following techniques covered in the module: t-test for comparison of means, correlation, or bivariate regression.

It is then up to you to select an appropriate way to test your hypotheses. For example, for the hypotheses stated below:

Ha: There is a statistically significant, positive relationship between religiosity and age.

Ho: There is no statistically significant relationship between religiosity and age.

You might use the Pearson correlation (to be covered in week 8) between religiosity and age. To complete your assignment, you would then decide on appropriate tests for your remaining two independent variables. Remember to pay attention to the type of variables you have chosen, particularly their level of measurement. This will determine the kind of analysis you can use.

Layout

These word counts are a general guide, and not absolute requirements. It is fine to go a little over or under word count across various sections. The stated word count should give you some idea

of the relative important, and level of detail required of, the different sections. You should format your assignment in sections using the following section headings (which is the layout followed by many research reports).

Fig 1: Research Report Layout and Sections

Research Report Layout	
1.	Introduction to the research topic (400 words)
2.	Hypotheses (400 words)
3.	Descriptive statistics and graphs (600 words)
4.	Results (900 words)
5.	Conclusion (200)
	References

1. Introduction to the research topic (400 words)

Use this section to outline your choice of variables, and to state the overall subject of your assignment, based on your choice of dependent variable (trust, health, religion etc.)

2. Hypotheses (400 words)

State your three hypotheses as illustrated above, and comment on why you might expect to find such an effect, association, or relationship

3. Descriptive statistics and graphs (600 words)

In this section, include your summary statistics and graphs, and your interpretation of the summary statistics.

4. Results (900 words)

Provide the results of your tests or analyses here, and report your findings, as suggested above. You may wish to consider some of the following:

- Were your findings statistically significant?
- Why do you think there was a strong/negative/weak/no association between your independent and dependent variables?

- Remember to pay attention to the conventions of reporting and refer to lecture notes and readings to make sure you have provided the necessary information (p-value, and test statistics, or slope/coefficient if using regression).

5. Conclusion (200 words)

Summarize your main findings and what we can learn from them. You may point to some limitations of your analysis.

References

Include a final list of all material cited in the assignment. At a minimum, we expect evidence that you have read some of the core course materials and set readings. Additional background reading is always encouraged. You should include references to literature you used to form your hypotheses and/or on the subject represented by your dependent variable. You could use some of the journals recommended for assignment 1 to look for relevant articles.

Timeline for completion

The best way to approach this assignment is to decide, as early as possible, what your variables will be, and to use your tutorials as a way of getting started with your analysis.

As the assignment is due 11th of December, we want you to be close to completion the week before, with the final days given over to final write-up.

You already have enough information to complete sections one and two, along with the knowledge your reading so far has given regarding interpretation of descriptive statistics. Over the next few weeks we will cover various data analysis techniques which will enable you to complete sections 3 and 4. The last few tutorials will focus specifically on working on your assignments.

What if I have questions about this assignment?

If you run into difficulties or have questions about this assignment, please do the following:

1. Check Week slides
2. Check the Assignment 2 Guidelines (available on Brightspace)
3. Post a question through the assignment 2 discussion forum.

Please note that all questions related to this assignment should be posted through the forum and not in personal emails to me or the tutors.

4. Ask your tutors during your tutorial
5. Arrange a meeting with me during office hours (after the lectures).