Module 1 A: SPSS

Complete a successful regression model and show the steps performed. For example, first run a regression model with variables that are **not rated**. Then run a model with the variables being rated AND where other issues have been corrected (skewness and kurtosis). In other words, run additional models if needed to address other issues that will surface. Remember to benchmark improvements in your model. For example, if you rate the variables how much did the r square increase or decrease.

There are two variables that one can use to rate the variables. You can use total population of the province or total employment in the labour force since the variables are employment based. For sake of consistency, rate all your variables using total population.

Second, some variables do not need to be rated, such as unemployment rate and average or personal per capita income.

Also, only your final output or final model needs to be submitted. Print your final model and on the output you can write clearly or type the important findings in the output. Changes from your earlier models can be typed on your output or typed at the beginning of your module. For example, you can report that your r square was .74 in the first model unrated, .78 when rated, and .79 when rated and variables were corrected for skewness and kurtosis. You do not need to hand in three models.

To run your regression models use Ontario census division boundary data. The data can be found on the Z drive, CEH, TEACHING, 8903, PROVINCIAL DATA. There are 106 census divisions in Ontario. Data is provided with census data in the folder.

In your analyses, use the following variables:

Use Row variable #34 as the dependent (Average Family Income) and variables #57, 72, 79, 61, and 63 as the independents.

The following should be your dependent variables for 2006: 34 Average Family Income

Note that you do not have to rate average family income.

Based on the procedures shown in class perform the necessary steps to produce the best regression model possible. You will be graded on identifying all aspects of the output that are important for analysis. The can include, for example, durbin Watson value, correlation or pairwise correlation table, significant values, use of Beta value, plots, etc.

20 Marks

Module 1: Part B & C

Map your results (residuals). There are no shape files in the PROVINCE DATA FOLDER, BUT you might be able to find them in the folders entitled PROVINCE SHAPEFILES OR CENSUS DIVISION SHAPEFILES. You will be graded on producing a proper cartographic map that displays residual value data.

10 Marks for a properly created Map that is optimal and easy to interpret.

15 Marks for full interpretation and explanation of map patterns.