503/650 2016: Assignment 4 – Linear regression Points missed:

**Your name: Name of TA:**

1. \_\_\_ of 5: Based on Assignment 3, chose a dataset, one dependent variable, and six to eight independent variables Carefully study the comments you received on Assignment 3 before proceeding! The dependent variable must have a clear metric; if you are not sure about your variables, ask. Include output that verifies that the data are clean. This should be short, clear, and convincing. Later assignments will simply say “verify that your variables are clean.”

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1. \_\_\_ of 5: Construct a table appropriate for a published article describing the variables, including descriptive statistics. See *CDAiu 2015 workflow requirements for assignments* for requirements on tables.

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1. \_\_\_ of 5: Y is the dependent variable, C is continuous, F is a factor variable, and X represents all other IVs (independent variables). Regress Y on C, F, and X. Compute the standardized coefficients using listcoef, help. If C and F are not significant, you must find other variables. These variables could be already in the model you fit (i.e., one of your X variables) or you might need to go back to your dataset for find other variables.

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1. \_\_\_ of 10: Create a professional-looking table with the results of the regression. Only include appropriate coefficients (e.g., do not include X-standardized coefficients for binary variables), but include *all* coefficients that can be interpreted. Include a title and footnotes (if needed) to explain the coding of binary variables.

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The remaining questions involve interpreting standardized coefficients, unstandardized coefficients, and significance tests. Decide which coefficients are appropriate for interpretation. Write the results as though they are part of a journal article. There are several ways to figure out what this means. Read a published article that uses regression effectively. Look at the examples of interpretation in the text, lecture notes, or lab guide. Think about what substantive information you want to convey and how you can best convey it. Remember to include information on significance in your interpretation. For all results that you use in your answers **you must highlight their source in the Stata output** that accompanies your answer (ask in lab if you have questions on how this should be done). Each interpretation for questions 5-9 should only require one sentence.

1. \_\_\_ of 5: Interpret the unstandardized coefficient for the effect of C on Y.

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1. \_\_\_ of 5: Interpret the appropriate standardized coefficient(s) for the effect of C on Y.

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1. \_\_\_ of 5: Interpret the unstandardized coefficient for the effect of F on Y.

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1. \_\_\_ of 5: Interpret the appropriate standardized coefficient(s) for the effect of F on Y.

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1. \_\_\_ of 5: Formally interpret the t-tests for one significant IV and one non-significant IV (if any).

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1. \_\_\_ of 40: Write a paragraph **telling the story** of your results. This should be short, which is not easy to do. The paragraph should read as if it were part of a journal article and should be a maximum of one page, double-spaced. *Use information from prior questions and other results as well*. Simply stringing together the sentences from the earlier questions or using all of the results from prior questions will not be effective. Don’t let the statistical details get in the way of presenting the substance.

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1. \_\_\_ of 10: Assessment of the overall effectiveness of your answers.

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