

Assignment #8: Regression Analysis (Rough Draft of Final Paper)

Your final paper should include the following (incorporated into one paper):

- Abstract (on title page)
- I. Introduction
- II. Literature Review
- III. Economic Model
- IV. Empirical Methodology
- V. Results
- VI. Conclusions/Extensions
- VII. Data Appendix
- VIII. Annotated Bibliography

For this assignment, you need to have everything but the abstract and Section VI completed (as work you do later might change how you approach your conclusion). However, you should include a working version of this section in order to get feedback on your conclusion. To make it easier for the reader, you should have headers for each section (you can have them number or unnumbered), but the pagination should be continuous (don't begin each section on a new page, continue on the old one).

As stated on previous assignments, some of these sections may be combined. This is perfectly acceptable – the important thing is that you cover all of these key topics in some way. Also, the order is not fixed. You may find it makes more sense to discuss the model before the literature review, for example. So, your numbering and ordering may not match the one above – this is given as a general guideline to make sure that you have incorporated all of the sections needed for your paper. The order given above, however, is the most common in economics research papers. For example, it wouldn't make sense to discuss your empirical methodology before you've reviewed the literature on earlier approaches to your topic. Similarly, it wouldn't make sense to explain your methodology after you've reported your regression results, but it might make sense to do so before your preliminary data analysis. It really depends on the individual topic.

Note that your introduction should have a final paragraph that restates your research question, an explanation of how you answered your research question using economic theory and empirical methodology, and a description of your general findings.

Please carefully review the handout on how to present data analysis and regression results *before* submitting the final draft of this assignment. Part of your grade is based not only on your findings, but how you present them and explain them to the reader. For templates on how to explain regression results, you should look to the papers you've read through for your literature review and the sample ECON 145 papers posted online.

As this is the last draft before submitting your final draft for a grade, you will be heavily penalized for typos, style mistakes, and poor writing (in both the rough draft and final draft of this assignment). I have been relatively lenient on past assignments and have worked with you individually to resolve these errors, so I expect to see your rough draft (especially in Sections II-V) well polished. This is your last opportunity to get feedback before turning in your final paper. This assignment must be handed in via hard copy AND electronically for credit.

Rough Draft: Regression Results

The work below will fall under the “Results” section of your paper. For the rough draft, you DO NOT need to format the regression tables. You will need to use this formatting for the final draft though, so you may want to take the time to format the tables now.

Complete the following (you will complete at least three regressions):

Regression #1

- Answer each of the questions under #3 on the handout “Steps in Regression Analysis” for a regression that includes only your dependent variable and no more than two explanatory variables. Make one of these explanatory variables one of those that is of direct interest for your research question and include only one “control” variable.
- Now, with these regression results, check for common problems. You should be able to identify/discuss at least two potential problems with the regression above. For example, since I’ve asked that you only include two explanatory variables, you may have an omitted variable problem. Explain the nature of each problem and how it would influence your coefficient estimates and interpretation

Regression #2

- Answer each of the questions under #3 for one other regression that includes all of the explanatory variables you believe are potentially important in explaining your dependent variable. This is sometimes called a “kitchen sink” regression. Answer each of the questions under #3 on the handout “Steps in Regression Analysis” for this regression.
- Now, with these regression results, check for common problems. You should be able to identify/discuss at least two potential problems with the regression above. For example, one common problem in kitchen sink regressions is the irrelevant variable problem. Also, you may use one of the other problems you cited in Regression #1 (besides the omitted variable problem).
- For each of the two problems cited above, explain how you intend to address each of them in your regression analysis.

Regression #3

- Consider the regressions you’ve completed above and the problems you’ve cited in your regression. Using the techniques discussed under Regression #2, address/correct the problems you identified. Run a regression that addresses these problems.
- Answer each of the questions under #3 for this regression.

Further Analysis

- Compare your findings with those from your literature review. Compare the findings in terms of statistical significance (which explanatory variables are important for explaining the dependent variable) and the signs/magnitudes of the coefficient estimates.
- Are there any other problems with your regression analysis? Consider at least one following:
 - Based on your research question, how well does your dependent variable measure the economic phenomenon you are trying to explain?
 - Are there any omitted variables that you were unable to obtain? Is this because they are not observable? If they are observable, were the data simply not available? How might one go about collecting these data?
 - Are there alternative methodologies you would have used to answer your research question, given more time? Explain.

Final Draft: Rough Draft of Final Paper

Write up the results for Regressions #2 and #3 under “Results” and write a working version of your “Conclusions” section.