Research Project

Econometrics 265

ECON 265 Prof. Anderton

Spring 2020

The instructions for carrying out your research project are given in this handout. Your assignment is to carry out an econometric study based on single-equation multiple regression analysis. The study will consist of selecting a research question with one or more testable hypotheses, formulating an econometric model, collecting data, estimating the model using STATA software, interpreting the results, and communicating the study results by means of a carefully written research paper.

**Important Dates: (upload all on Moodle)**

**Thursday, February 20: Project Proposal**

**Thursday, March 12: Literature Review**

**Tuesday, March 31: Data Sets due**

**April 20: PowerPoint slides**

**April 21 - 23: Project Presentations (Poster of PowerPoint slides)**

**Monday, April 27: Project and final data set due**

**There are several steps to follow to get your research project done.**

1. **Proposal.** You must submit a one-page statement of your research question and plan plus a Pdf copy of the published papers upon which your project will be based, by no later than February 20. For more details on how to select a suitable research question see below. Look at the data used by the paper and start thinking about what type of data you will require and roughly where it can be located.

Select a suitable research question. Read Chapter 19 (Carrying Out an Empirical Project) from textbook. This is the most important and perhaps difficult phase of the process. To make the assignment manageable within the course schedule I am requiring that your project be explicitly tied to at least one econometric study already published in a scholarly source. Hence, selecting a topic entails locating one or more published articles upon which you will base your study. You can do this in one of two ways, roughly speaking:

1. Choose a general topic of interest to you, and then search for a suitable article on that topic. You may look through your current and past economic texts. Once you have a general topic, use the periodical indexes and computer searches at the library. The *Social Science Citation Index* is a good source. Don’t hesitate to ask a reference librarian for help. From the indexes or searches, compile a list of relevant articles in scholarly journals (not popular magazines); locate the articles; identify and skim through those that involve econometric analysis and look promising; pay attention to the bibliographies for leads on earlier published work; and hope something interests you.
2. Alternatively, don’t worry about a general topic; just search directly for a suitable article. This approach is less systematic, but it can work because for most of you it will be the process rather than the specific topic that dominates your interest and motivation in this assignment. Begin by browsing through scholarly journals.

Here is a list of some periodicals that may be used for this assignment:

*American Economist, American Journal of Economics and Sociology, American Political Science Review, Economic Journal, Journal of Economics, Journal of Labor Research, Journal of Money, Credit, and Banking, Public Choice, Quarterly Review of Economics and business, Review of Social Economy, and Southern Economic Journal.* Other top journals may be used (such as *American Economic Review)* but usually are too advanced to be helpful in this assignment.

As you continue in your research keep the following considerations in mind. Econometric studies are carried out at all levels of sophistication and complexity and are based on a wide range of data sources. Be realistic. Look for studies that are within your reach in terms of the modeling and econometric analysis. Older studies tend to be simpler. Don’t hesitate to look at articles published during the 1970s and early 1980s. Remember that the assignment requires a **single-equation model** as distinct from a simultaneous-equations model. Hence, your selected article should use ordinary least squares, not two-stage least squares estimation. Concerning data, you will need at least forty to fifty observations in order to use the various large sample properties and methods introduced in the course. **Use only cross-sectional data** rather than time series data, because autocorrelation (an important econometric concern when using time-series data) is covered only at the end of the course. Also, make sure you have access to the necessary data sources, at the library or at the computer lab in the department. You may use the Web for data sources, as long as you include in your paper the relevant URL addresses. Talk with me and/or the TA about your prospective topic in the earlier stages so we can give you feedback.

1. **Literature Review.** The following step is to write a summary or review of the literature. You should have 3 or more references in the topic you have selected so that you can apply economic theory to your own question(s). Upload on Moodle the word file with the literature review and the Pdf copies of the reference articles you are using. The deadline is March 12.
2. **Data Set.** Upload the Data Set on Moodle. Make sure it is a **cross-sectional data** (not time series). It should be in STATA format. Deadline is March 31. The following week I will be meeting with each student to talk briefly about the data set and variables.
3. **Regressions.** Do the econometrics. If you are following the work in the course it should be the easy part of the project, even though it may take some time if you are using a lot of data. When you get your results, think about what they mean. Look at the signs and magnitudes of the estimated parameters; pay attention to and use correctly the relevant regression statistics. Explicitly connect your regression results with your research question and hypotheses. Correctly conduct your formal hypothesis test(s).
4. **Class Presentations.** During the last week of the semester you need to present your results in class to obtain feedback from your fellow students. It should take no longer than 10 minutes. It should be a **poster presentation** with your main question, model, brief description of the data (**Table**) and a **Table with some regression results**. You should have **at least 4 regressions**. Make a PowerPoint presentation and print the pages on a poster board for the poster presentation. Use the comments received in the presentation to update your project before submitting the final version of your project. If necessary, you may run some additional regressions. Upload your PowerPoint slides on Moodle by Monday, April 20.
5. **Final Paper.** Present your research in a carefully written paper. It should be typed and double spaced paper. In a general way it should have an introduction, including a clear statement of the research question, motivation, review of previous research; model, variables, data sources; results and analysis; and conclusion. Use language that is understandable to you and your reader – someone with a basic understanding of econometrics. Use Wyrick’s Research and Writing Guide. It should be around 10 to 15 pages. Upload your paper in Word format on Moodle by April 27. You must submit the paper with a **title** **page, text, references, endnotes (if needed), and tables (in the text or at the end), plus an appendix with a copy of your STATA output (Pdf file)**. You also must post on Moodle the final data set used in STATA format. The STATA output should not be part of the paper, rather a way for me to check the results you have. **All the regression results that you want to present must be in the text in a table.**

**Academic Integrity:**

**[\*\*language taken from Academic Advising website]**

“Academic integrity is a basic value for all higher learning. Simply expressed, it requires that work presented must be wholly one's own and unique to that course. All direct quotations must be identified by source. Academic integrity can be violated in many ways: for example, by submitting someone else's paper as one's own; cheating on an exam; submitting one paper to more than one class; copying a computer program; altering data in an experiment; or quoting published material without proper citation of references or sources. Attempts to alter an official academic record will also be treated as violations of academic integrity.

To ensure academic integrity and safeguard students' rights, all suspected violations of academic integrity are reported to the College Board. Such reports must be carefully documented, and students accused of the infraction are notified of the charge. In the case of proven academic dishonesty, the student will receive a sanction, which may range from an F in the assignment or course to suspension or expulsion from the University.”

The complete academic integrity policy is available with Academic Advising at <https://web.clarku.edu/policies/detailpolicy.cfm?pid=43>