

ECO 620 Final Project Guidelines and Grading Guide

Overview

The final project for this course is the creation of an **econometric analysis**. The final project is designed to guide you through the process of applying the key components of econometrics as introduced in this course. It is important to move beyond a general discussion of the effects of an event, a policy, or an action. As an economist, you will be called on to provide precise numeric estimates and analyses. In order to practice this skill, you will prepare an econometric analysis of a business, a policy, or an economic issue. You should choose a topic of personal or professional interest to you. You will first define the issue that you will analyze. You will then conduct a literature review of peer-reviewed publications in order to familiarize yourself with possible ways to address the issue empirically. You will build an empirical model to analyze the issue and use the data to conduct an econometric analysis. Finally, you will explain your findings to both technical and nontechnical audiences.

The final project is divided into **two milestones**, which will be submitted at various points throughout the course to scaffold learning and ensure quality final submissions. These milestones will be submitted in **Modules Two and Six**.

This assignment will assess your mastery with respect to the following course outcomes:

- Develop testable hypotheses from research questions that address business issues, supported by empirical strategies and available data
- Transform theoretical models to econometric models that enable empirical approaches to answer research questions
- Use statistical software to execute appropriate diagnostic and adjustment processes that avoid common problems in econometric techniques
- Interpret limitations of econometric models for their effects on the validity of research results
- Provide actionable insights based on statistical and economic significance of results
- Communicate empirical processes and results to technical and nontechnical audiences, in order to inform future actions

Prompt

The final project requires you to prepare an econometric analysis of a business, a policy, or an economic issue of your choice. The guidelines listed below reflect the work you did for the milestones, but you will also complete the final step of the analysis. Specifically, the following critical elements must be addressed:

I. Description

- A. What issue are you addressing? Why is your research question **relevant**?
- B. Identify the **target audience(s)** for your paper. Is each audience technical or nontechnical? For example, are they general readers, managers, or political decision makers? Why would your research be relevant for this audience?

II. Literature Review

- A. What economic **methods and techniques** have been used to study this or a similar issue? How has the issue been addressed econometrically? Were these methods and techniques the most appropriate for this study? Why or why not?
- B. What are the **hypotheses** you plan to test? How do they translate into empirical models?

III. Data

- A. What data will you use in your empirical work? What is the **source** of your data? Why is this particular data set appropriate for the study?
- B. What type of data (summary statistics, scatter plots, etc.) was utilized in your study? What **relationships** can be gleaned by simple data screening? What are the implications of these relationships?
- C. What **limitations** could your data impose on the choice of empirical method? What are the effects of these limitations?

IV. Empirical Approach

- A. What empirical **method(s)** do you propose and why? Explain why it is appropriate to use the method(s).
- B. What are the **limitations** of your proposed empirical method? What possible alternative methods can be used? Be sure to address causes for these limitations, such as problems with the data or with interactions between variables.
- C. What is your model **specification**? What functional form of data do you use and why?

V. Results and Robustness Check

- A. What are your **preliminary results** from initial runs in the statistical software? What is their relationship with the original hypotheses and research questions?
- B. Which **violations** of ordinary least squares (OLS) assumptions do you anticipate? Which diagnostic tests will you employ to check for the presence of violations of OLS assumptions?
- C. What are your **secondary results** from your test run through the statistical software? Interpret these test results and determine the presence or absence of problems.
- D. Are your results **affected** by the corrections? Are they affected in a significant way? (For example, is there a change of coefficient signs, a change in statistical significance, and so on?)

- E. In your conclusion, it is important to report on the results based on the statistical **significance**. Are your results statistically significant? Are they economically significant? Are some variables more significant than others? How does this relate to the original hypotheses and research questions? Discuss.

VI. Conclusion

- A. What are the **actionable insights** or recommendations based on your results?
B. What are the overall **results** of your study? Address any limitations, caveats, and possibilities for further actions. Be sure to keep nontechnical audiences in mind.

Milestones

Milestone One: Research Question, Literature Review, and Data

In **Module Two**, you will submit a paper on the research question, the literature review, and the data you will use for your final project. This milestone will be graded with the **Milestone One Rubric**.

Milestone Two: Data Limitations, Approach, and Results

In **Module Six**, you will submit a paper that discusses how you will address the data limitations, empirical approach, and results for your final project. This milestone will be graded with the **Milestone Two Rubric**.

Final Project Submission: Econometric Analysis

In **Module Nine**, you will submit your final econometric analysis. The submission should be a complete, polished artifact containing all of the main elements of the final product. It should reflect the incorporation of feedback gained throughout the course. This submission will be graded with the **Final Product Rubric**.