ECON 5900

Major Assignment 2: Methodology

This assignment is due on October 14 at 5pm. You *must* submit your proposal in Microsoft Word format so that we can use ``track changes'' to provide comments. Submit your proposal by email to the course TA.

Remember: This is one of three major assignments that must be submitted on time. A late assignment will result in a reduction of your course grade by one letter grade; no exceptions. You must discuss any modifications to the due date with us well in advance.

Details

Your methodology should be no less than 750 words, and must include the following sections:

- Title
- Proposed Topic and Research Question
- Relationship to the Literature
- Research Method
- Data
- Issues and Obstacles
- References

You should notice that most of the sections above were already in the research proposal you submitted a few weeks ago. The goal here is to expand on two of those sections: Research Method and Data. Of course, you would be well advised to review the other sections and see if they can be improved based on what you've learned. In any event, the goal is to be working toward a draft of the full thesis, so make sure all sections are included.

In the Research Method section, we expect you to introduce and describe the econometric analysis you intend to conduct. Specifically, you need to

- write an equation or equations describing the model you plan to estimate, taking care to define variables, use appropriate notation, etc.
- describe how the parameters of that model are related to the question you are trying to answer, and in particular how you will interpret them as providing answers to your question.
- In almost all of your cases, this will be a description of a basic ``natural experiment'' or ``difference-in-differences'' model.

A very good strategy for writing down an econometric model is to emulate the model used in a paper that you think is very close to your own. Start with someone else's model and tailor it to your situation. If you are stuck on how to set it up, talk to the TA, the Analytics lab, or discuss on Slack.

By this point *you should already have identified and be working with some data*. For your data section, describe what you know about the data you are working with and how you are processing it prior to estimating your model. You should be able to tell us:

- How many observations are in the data
- What is the unit of observation? I.e., what does each row of your dataset capture?
- What are the main variables you will analyze?
- Basic descriptive statistics: i.e. include a table of means and standard deviations of the important variables. The more detail the better.

Your project may involve merging two data sets together, constructing new variables from the raw data, or selecting specific groups of observations. Your ultimate goal is to explain enough about your data that we can understand exactly what is available for your project and what you need to do to work with it. Explain your data processing in sufficient detail that another researcher with access to the same data, would be able to repeat what you did and get the same results. If you can include a table of descriptive statistics at this stage, that would be ideal. If not, you should be getting very close to that point.

For both of these sections, you might think about writing a "Robot" version. That is, don't worry about writing beautiful and persuasive prose. Write very concise and clear descriptions of what you've done (or will do) as though you were a robot. You'll have a chance later to rewrite everything for humans.

Your research methodology and data description may contain mistakes. That's fine. We're not grading you on accuracy (yet). Do your best and we will help make it better.