

## Econ 7670

### Research Proposal Instructions

#### Overview

You will be required to develop a research proposal, write an introduction, and present your proposal in class at the end of the semester. Students must come up with an **original and feasible** research question and empirical strategy indicating how they would go about answering the question using available data.

The question must involve theoretical and/or empirical analysis of a public policy related to topics broadly covered in Economics 7670 and 7680: taxation, transfer programs, social insurance, externalities, public goods, political economy, law and economics, etc. (but NOT regulation of competition, international trade policy, or macroeconomic fiscal policy). Beyond that, I am quite flexible about the topic. Students may pursue topics that involve not just public economics but also labor economics, development, health, education or possibly other fields. The proposal can complement but not duplicate work that is being or has been done for an assignment in another class.

The research proposal process will be completed in stages. You will submit the following:

1. Initial research questions (submit 2, continue with 1)
2. Research update on available data
3. Research update on your identification and empirical strategies
4. A first draft of your introduction
5. A revised draft of your introduction after receiving feedback
6. Research update on your results
7. Final proposal presentation slides

## **Two Research Ideas**

You will submit 2 potential research ideas (no more than 1 written page per idea). **The goal of these write-ups is to quickly determine the feasibility and contribution of the projects.**

As a general suggestion, think about questions that analyze the impact of policy on behavior, not on welfare. It is very difficult to observe welfare but much easier to observe many behaviors, and behavioral responses are an ingredient in careful welfare analysis that may be undertaken later. Another way to think about this is that you should consider positive analysis, not normative analysis.

You should include:

1. Clearly defined research question
  - a. Should be between 1 to 3 sentences
  - b. Should be well-defined and have economic content
  - c. If the question cannot be phrased as a yes or no question, it is probably overly descriptive
2. Potential data sources
  - a. Think about the ideal dataset first
  - b. Then consider the limitations of the data you can obtain
  - c. Do the data you can obtain still allow you to answer the question?
3. Identifying variation
  - a. What features of your economic context allow you to identify the treatment effect?
  - b. Remember: Identification is not a property of your statistical approach. Just because you can run a regression and estimate a coefficient does not mean the treatment effect is identified

## **Research Updates**

You will submit 3 written research updates about your main research project:

February 16: Update about available data

March 2: Update about your identification and empirical strategies

April 13: Update about your analysis and results

**You will get out what you put into these updates.** If you provide very little detail or no update at all then it will be difficult for me to provide advice or comments. In general, you should assume that I have forgotten your research question and progress up to that point, so it will be useful to briefly remind me.

### **Update on Data**

Your update about available data should include the source(s) of the data and your progress in obtaining them. If there are multiple possible sources of data then you should also consider the advantages/disadvantages of each.

Commonly used economic datasets from the U.S. include, but are not limited to:

American Community Survey (ACS)\*

Current Population Survey (CPS)\*

National Longitudinal Survey of Youth (NLSY)

Panel Study of Income Dynamics (PSID)

Survey of Income and Program Participation (SIPP)

United States Decennial Census\*

National Health Interview Series (NHIS)\*

Medical Expenditure Panel Survey (MEPS)\*

Integrated Postsecondary Education Data System (IPEDS)

American Time Use Survey (ATUS)\*

\*: Datasets available through IPUMS.org

It is often necessary to combine data sources. For example, you could obtain yearly unemployment rates for each state from the U.S. Bureau of Labor Statistics and merge them into one of the above datasets.

You could also consider collecting your own data, if necessary, from other sources such as state or local budget reports, federal government websites or data portals, or from the IRS Statistics of Income.

### **Update on Identification and Empirical Strategies**

Your update about your identification and empirical strategies should include your sample definition, regression equation, and an identification argument (i.e., an argument for why the main coefficient in your regression is actually the unbiased treatment effect you're trying to

estimate). You should also define the outcome variable, main independent variable(s), and controls you use in your regression including their units (e.g., dollars, percentage points, etc.).

Remember, identification is not a property of your regression. Just because you can run a regression and estimate a coefficient does not mean the treatment effect is identified.

### Update on Analysis and Results

Your update about your analysis and results should include a summary statistics table, any regression results, and interpretations of both of these in words in addition to **brief** reminders of your sample definition, regression equation, and controls.

You should not simply copy/paste tables without context. You should spend time thinking about the interpretation of your summary statistics and coefficients in words. What do these statistics tell us about your sample? Does it look like your treatment and control groups are similar? How would you use [coefficient 1] in a sentence?

## **Introduction**

You will write a 3-6 page introduction for your project that incorporates a literature review. In general, the outline of the introduction should go:

1. Motivation, leading into your research question
2. Your economic context
3. What you do
4. Findings
5. Relate back to motivation

Friedberg and Isaac (2022), Chyn (2018), Jones (2012), Homonoff and Sommerville (2021), and Hastings and Washington (2010) provide good examples of introductions that are integrated with a literature review, and there are certainly others.

**Do not borrow sentences or wording, beyond the obvious, from the papers you are reviewing. Taking the words of others qualifies as plagiarism, and they put effort into choosing their wording optimally, which makes it part of their original work.**

Strive to condense, clarify, and organize your writing. The advice I received was to be a harsh self-editor: "If you can delete a word/sentence/paragraph and still get all the same points across, then delete it."

You must include citations when you refer to others' work. In-text citations and bibliographies should be in Chicago format. I highly recommend using a bibliography manager such as Zotero.

## **Peer Reviews and Resubmission**

In addition to submitting a first draft, you will act as a peer reviewer for another student's draft. I will also provide comments on the first and second drafts of each section. You will then revise your introduction, taking this feedback into account, and resubmit it.

## **Final Presentation**

The final proposal will be 20 minutes with PowerPoint/Beamer slides plus a 5 minute Question and Answer session.

**I strongly recommend that you practice in advance to make sure that you stay within the specified time limit.**

Prepare the presentation in PowerPoint or Beamer. On your slides, avoid writing out complete sentences, as it is impossible for your audience to both read from your slide and listen to you. The material on the slides should complement what you're saying. The best way for this to happen is to use road maps, bullet points, short phrases, equations with short definitions of key variables, and graphs with helpful information.

The presentation must include sufficient detail about the motivation, context, data, identification and empirical strategies, and results to stand alone so that the prospects for continuing to devote effort to the project may be assessed.

Below is a suggested structure of your research proposal presentation:

### 1. Motivation

- The basic question should be stated in 1-3 lines. It should be well-defined and have economic content. If the question cannot be phrased as a yes or no question, it is probably overly descriptive.
- Most empirical questions will be tests of a known hypothesis.
- Most theoretical questions will ask what happens if we apply a known type of economic logic to a new application.
- Except in unusual circumstances, this section should focus on the economic interest and policy relevance of the question.
- The logic, intuition, and *basic* theoretical underpinning of the question should be outlined here.
- You can integrate the most absolutely necessary papers into this section to provide context, but extensive references to previous literature should not ordinarily be necessary in this section.
- Make sure to highlight your project's contributions to the literature

### 2. Context

- Context consists of facts the reader should know if they are to judge where you have obtained appropriate data or modeled a situation realistically.
- For instance, the context of a tax reform (whether analyzed empirically or theoretically) would ordinarily contain information about the politics of the reform, the timing of the reform, events or policies that might be confounded with the reform, parties who have an interest in the reform, and so on.

### 3. Economic model (shorter for empirical ideas, longer for theoretical ideas)

- A straightforward economic model or economic intuition should be presented to explain the impact of the policy or policy changes that are being studied.
- This analysis may involve first-order conditions (if focusing on individual choice) or the determination of prices and quantities in the market equilibrium (if focusing on aggregate outcomes), each of which can generate comparative statics that illustrate policy effects.
- If you expand on an existing model from the literature, make clear what is taken from the work of others and what is original.

#### 4. Data

- Mention your data source, sample years, and sample definition
- If relevant, this section should mention the advantages and disadvantages of alternative data sources.
- This section outlines how the data will be used (sample selection, variable definition, etc.)
- You should make every effort to search for and obtain data that you can use for preliminary analysis in your research proposal.
- You can also present summary statistics in this section.

#### 5. Empirical Strategy

- You should describe your empirical strategy with a clear regression equation, description of left-hand side and right-hand side variables, identification argument, and relationship to appropriate theory.
- When you expand on existing work from the literature, either theoretical or empirical, make clear what is taken from the work of others and what is original.

#### 6. Results

- You should present tables of coefficient estimates, but do not simply copy/paste from a LaTeX or Word document. You should recreate the table specifically for the presentation to focus on the most important coefficients.
- One of my favorite questions to ask is “Can you use that coefficient in a sentence.” You should be able to do this with any coefficient.
- Relate your coefficients back to your original motivation. Make sure we know where we started and what your results tell us about that.

#### 7. Conclusion and Future Work

- What are the potential drawbacks to the proposed research strategy as it currently exists and what (if anything) can you do to address them?
- What pitfalls may arise if research on this question is pursued?
- What additional work or analysis do you plan to complete if you continue with this project and why?