

**Economics 120B-Honors
Honors Econometrics, Winter 2018
Prof. Dahl, UC San Diego**

Description:

This is a one credit course which will give you the chance to write up a short research paper based on an empirical analysis of economic data. The idea is to give you a chance to put into practice some of the tools and skills you have learned in your economic and econometric courses here at UCSD. A secondary goal is to give you a chance to develop your technical writing skills.

Instructor:

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(*email is the preferred contact method*)

Research Paper Topic and Data:

The general topic of this year's research project is earnings differences between men and women. You have likely heard that men earn more than women in the news. In your short research paper, you will explore whether this is true, and explain some of the factors which might be responsible for any observed gap in earnings.

Part of the assignment will be to work with a large dataset, the Current Population Survey (CPS). There are many ways to get CPS data, but perhaps the easiest is to use IPUMS (<https://cps.ipums.org/cps/>). It is up to you to decide how to prepare and clean up your dataset, including which variables and observations to include. I expect each of you to make these data choices independently, and anticipate that different students will end up with slightly different datasets in the end. Feel free to experiment; we will talk about what choices seem to matter most.

While the entire class will be using CPS data, how you choose to analyze earnings differences between men and women is up to you. My expectation is that each analysis will be somewhat unique. For example, one student might choose to focus on how conditioning on different covariates can reduce the male-female wage gap. Another student might hone in on changes in the male-female wage gap over the lifecycle. And another student might choose to concentrate their analysis on geographic variation in the male-female wage gap. You should tailor your dataset and analysis to be specific to your question.

Research Paper Structure:

While I expect each paper to be unique, please structure your paper to include the following 5 sections:

1. *Introduction:* Briefly state the question you address in your paper, and motivate why it is interesting. This should be no more than one paragraph.
2. *Discussion of relevant economic theory.* Briefly lay out an economic framework for how to think about the question you analyze. For example, you might discuss alternative theories which explain why women might earn less than men. This can be done in words, but equations are also fine. Find at least one study in the literature and describe how it relates to your project. This section should be brief; it should not exceed one page of text.
3. *Data description.* Provide details on the data you use, including how you clean up the data and any sample restrictions you make. You should refer to a table of summary statistics in this section, and possibly refer to a figure as well.
4. *Empirical results.* Start this section by introducing the basic regression equation you plan on estimating. You will then refer to regression results, which you will collect in one or more tables. A reader should be able to understand your tables without needing to refer to the text. Some of the keys for this are to have easily understood labels for variables, clear indications of what each column in the table is estimating, and a detailed table footnote. Your tables should present not only your preferred estimates, but also some robustness checks. You might also refer to a figure if you have one for this section.

The text of your paper should carefully, but succinctly, discuss the results found in the tables. Make sure to interpret the coefficient estimates and comment on both their economic and statistical significance. If you present results in a table, there should be some discussion of them in the text. You do not need to discuss each coefficient estimate, but you should describe what is learned from each regression appearing in a table.

An important part of this section is a discussion of potential threats to validity. Make sure to talk about why your estimates may not be capturing a causal effect, including a discussion of what omitted variables might be biasing your results.

5. *Conclusion.* Provide a summary of your key empirical findings, and what you conclude based on your analysis. Include a concise statement of what you think are the most important limitations to your analysis.

Clarity and precision will be rewarded. The entire text of the paper should not exceed 7 pages of double-spaced text, and it is perfectly fine to turn in a paper that is only 4 pages long. All graphs and figures should appear at the end of the paper, and do not count in this page limit. You must include a summary statistics table, at least one regression results table, and at least one figure.

The paper will be graded mostly on content, but also on exposition. For help with writing, I encourage you to get feedback from the writing+critical expression hub (<http://commons.ucsd.edu/students/writing/index.html>).

Assignments:

Completed paper. The final draft of your paper is due on the last day of class, March 15, at 2 pm. You need to hand in a hard copy of your paper when we meet as a class that day.

There are two intermediate assignments leading up to your final draft.

Table of summary statistics & one paragraph proposal. For this intermediate assignment, you need to create a table of summary statistics for the main variables you plan on using in your analysis. To create this table, you will need to first download CPS data and clean up your extract. You will also need to write up a one paragraph proposal for the specific question you plan to address with the dataset you have created. This is due on February 1 at the beginning of class.

Rough draft of paper & participation in peer review. You should complete a rough draft of your paper and bring it to class with you on March 1. During this class period, you will exchange papers with another classmate to enable peer review. You need to both turn in a rough draft, and complete a peer review, to get credit for this assignment.

Software:

Your research project will require you to use statistical software to analyze your data. I would encourage you to use *Stata*, a software package which is also used in ECO 120B and ECO 120C. You can access *Stata* in a physical lab, a virtual lab, or purchase your own copy.

1. Students have physical access to *Stata* in ECON 100.
2. You can set up remote virtual access following the directions at:
<http://acms.ucsd.edu/students/govirtual/index.html>
3. Individual copies of *Intercooled Stata* (i.e., *Stata/IC*) can be leased for six months for \$45 from:
<http://www.stata.com/order/new/edu/gradplans/student-pricing/>

If you would like a book to help you learn *Stata*, a good suggestion is *A Gentle Introduction to Stata, Fifth Edition*, by Acock. However, this book is not required for the course. There are also many online sites devoted to helping individuals learn *Stata*. For a list, see:

<https://www.stata.com/links/resources-for-learning-stata/>

Tests:

There will not be any tests, and there is no final exam.

Grades:

The following weights will be used to determine your course grade:

Intermediate assignments: 15% for each of the two

Completed paper: 70%

Cheating:

Cheating will not be tolerated in this class. In the context of this class, this primarily means that you cannot plagiarize someone else's work and pass it off as your own. One possible penalty for cheating is a failing grade in my class.

Miscellaneous:

Disabilities will be accommodated; contact the office of undergraduate student affairs in Sequoyah Hall 245. For all matters regarding dropping or adding the course, waitlists, etc., please contact the office of student affairs or use the online resources provided by the university.

If you have any further questions please feel welcome to email gdahl@ucsd.edu or come talk during office hours.