ECON 191 - Fall 2012

Paper Guidelines and FAQs

Writing a good economics paper is both an exciting and a nontrivial task. It requires a sustained effort in identifying an important question and in developing a credible model to think about that question or a testable hypothesis to answer it. In some cases it may require collecting data that gives the opportunity to test an hypothesis. Consider your interests, strengths, and available time when deciding the type and topic of your paper.

1 Paper Guidelines and Advice by Section

You are encouraged to structure your paper in five parts: introduction, literature review, model outline [or data description], model results [or data analysis], and conclusion. In addition, a very brief abstract of no more than 100 words should precede your paper. A Works Cited section, written in MLA, Chicago, or any format that allows the GSIs to quick find any publications you reference, should immediately follow the paper. Any appendices should be clearly numbered, labeled and titled, and placed at the very end of the document.

1.1 Introduction

Identifying an important research question is the most crucial part of the research process, and often the most difficult, too. A good research question has to be concise (remember, you have to write a 20-25 page paper, not a book), feasible and important. Choosing a research question requires balancing importance and feasibility. Feasibility involves tractability for theoretical research and data availability for empirical research. Whenever you come up with an idea for a research question, always try to think about a critic sitting in front of you asking: “Why should I care about this?” Consider this question to be a first filter for your research question.

Identify a well-defined research question. The introduction is where you (1) present the research question, (2) motivate why it is important and briefly outline (3) how you go about answering it, and (4) what your key results are. Be sure to clarify why the existing literature may not answer the question adequately, and, if applicable, how your research question relates to material learned in Econ 191. To write a successful introduction, you will need to have read and understood previous academic work by economists (or other social scientists) that relates to your research question, and you will need to be clear about the limitations of this literature. You should also be clear on what you can contribute.
1.2 Literature Review

The literature review consists of outlining relevant work by other researchers. The word “relevant” is key. A literature review is not a laundry list, and you should mention only the most relevant work. Avoid mentioning all papers that you have encountered. A good way of identifying the relevant literature is to read a good survey article which summarizes the current literature, as well as research questions that need more attention (look for example at the Journal of Economic Literature or the Journal of Economic Perspectives). Be sure to search the EconLit database for relevant literature, too.

You are encouraged to look at the review of the literature in the articles on the syllabus to get some sense of the length and amount of detail needed. A summary of a long list of previous works rarely constitutes a good literature review. A successful literature review synthesizes and organizes the existing literature around themes and conclusions that are relevant to one’s research question. Throughout the literature review, keep your research question in mind and keep your readers focused on it.

1.3 Body

This section is where you present the meat of your research. Here, we ask you to think like a researcher and propose an extension to the existing literature that addresses the limitations you identified in your literature review. The extension could consist of a theoretical model that explains some observed phenomenon, e.g. an item of interest you may have observed in the New York Times. It could also be an adaptation of an existing model, preferably providing an interesting twist. Alternatively, your extension could be an empirical test of an economic hypothesis. Both theoretical and empirical work is important!

While we do not expect a full fledged research paper - i.e. you may not be able to solve your model completely or to perfectly conduct the empirical test you suggest - we do expect to see a genuine effort at putting together an original contribution, and the grading will reflect this.

1.3.1 Theoretical papers

Theoretical papers typically introduce models that help gain insight into economic phenomena. While economic models do not necessarily have to be mathematical, it has become the norm since the 1950’s and 1960’s that they should be developed mathematically. Doing so ensures that they are self-consistent.\(^1\)

The author of a theoretical paper has much latitude when setting up the model. Typically, mathematical arguments are used to derive results from a set of assumptions, most often by “solving” for an equilibrium of some sort, or a steady state. The author may be interested to know how changes in the values of various parameters affect certain variables. In other cases, the author\(^1\)

\(^1\)Paul Krugman argues in favor of mathematical modeling in the following piece: http://web.mit.edu/krugman/www/dishpan.html.
may be interested to know how the system behaves in the long run. Regardless of the author's goals, the solution can be found in the body of the paper; or, particularly when the model has several cases or hypotheses, the solution can be deferred to the Results section.

1.3.2 Empirical papers

If you decide to write an empirical paper, the body should include a brief theoretical model motivating the hypothesis you intend to test. As your contribution is empirical, the model does not have to be original and can be adapted from existing models in the literature (with proper citation, of course).

The second component of an empirical paper’s body is discussion of the nature of the data you will be using to test your hypothesis. Provide a data appendix where you discuss in sufficient detail (1) what type of data are used, (2) where it was obtained and (3) any complications regarding its collection. Any lab or natural experimentation should be mentioned and described here. Data shortcomings and any issues regarding reliability of the data should follow.

The final component of an empirical paper’s body is a detailed discussion of your empirical process. Clearly define the variables used and categorize them as endogenous or exogenous. Can you clearly state what variation in the data is used to identify any measured effects? Identification issues are key in empirical work and should be discussed in detail. Any assumptions made for identification should be stated clearly. Moreover, how will you use variation in the data to identify these effects? For example, students using linear regression to argue for a relationship between two variables in a natural experiment would specify, define, and justify their regression specification here. Finally, if endogeneity or other issues arise from your chosen method of data analysis, explain how they are addressed (e.g. via instrumental variables).

1.4 Results

1.4.1 Theoretical papers

The Results section of a theoretical paper can either solve the model outlined in the body of the paper, or, if the model is solved in the body of the paper, discuss the solution’s implications. Often an author will solve for variables’ equilibrium values in the body of the paper, and will save comparative statics or other highly relevant extensions for the Results section.

A good theoretical model will capture some aspect of reality, even if it does not describe it precisely (a model can almost never be a perfect description). The value of a model is in the insights it affords us, which tends to hinge on the plausibility of the underlying assumptions. After revealing the entirety of your mathematical results, reflect on the following questions: Are your assumptions plausible? What insight can we gain from your model? Be sure to discuss the context in which your model is applicable, i.e. when and where are the insights you draw from your model applicable? Would you take your own advice if you were a policymaker?
1.4.2 Empirical papers

The Results section of an empirical paper often begins by succinctly reminding the reader of the research question posed originally, as well as the regression(s) or other data analysis specified in the body of the paper. Then, for each regression or sub-hypothesis specified in the body, describe the related empirical results. A table of results, e.g. a regression table, often appears very early on in each such discussion, followed by the author’s highlighting of the table’s most important results. The discussion then transitions to interpretations, implications, and comparisons of these results.

Concluding the results section, you may find it useful to list the potential problems that a critic might pose about selection or endogeneity and try to answer them carefully, while openly pointing out the limitations of your study. If relevant, detail the robustness checks you have performed. For example, how do you know that your results do not disappear when you omit some arbitrary control you happened to include in your regressions?

Finally, taking into consideration the limitations of your work, what conclusions do you draw from your empirical results? Try to think whether there are alternative explanations of that may be driving your results. Are these alternatives more or less plausible than your own conclusions? Have you come to the right conclusions?

1.5 Conclusion

Conclude your paper with a neat summary of your results. In addition, briefly state directions for further research and, if applicable, try to explain the policy relevance of your findings.
2 Research paper FAQs

2.1 Research paper topic

Q: Can I attend more than one GSI office hour appointment before the research paper question/hypothesis due date on Oct. 2, 2012?

A: You may only sign up for one 15-minute GSI office hour appointment before Oct. 2, 2012, but empty or missed slots will be distributed to the first student waiting in line outside the designated office hour room.

Q: Can I change my paper topic after I’ve already turned in one research question/hypothesis?

A: Yes, but you must submit a new, complete two-page statement of research question/hypothesis along with the next due assignment.

2.2 Research paper

Q: How should I turn my assignments in?

A: FIRST, clearly write your name, date, and GSI at the top, and indicate which assignment you are turning in (e.g. research question, data section, etc.).

SECOND, email each assignment to Owen and Dawn at owenzi-dargsi@gmail.com and kdpowers.gsi@gmail.com, AND bring a hard copy to the beginning of the lecture in which it is due.

Q: When I turn my assignments in, should I attach any documents I reference in that assignment?

A: Only attach supplementary documents you yourself have authored (e.g. data appendix, charts, etc.). However, always make sure to attach such documents to the assignment, even if you have turned the supplementary documents in with a previous assignment.

Q: Can I turn any assignments in late?

A: No, with one exception: a University-approved excused absence. You must provide evidence of the event to your GSI in order to earn credit. If you are sick, you must show that you have visited the Tang Center or other medical clinic. For fairness’ sake, we cannot make exceptions to this requirement.
When your event has passed or you are feeling better, you must email your completed assignment ASAP to your GSI, or face negative consequences to your grade. The length of your event or sickness determines the length of your extension. Hard copies may be turned in the following week with an explanatory note. Evidence may be submitted however you prefer.

Q: Can I redo any past assignment for credit?
A: No.

Q: Can I get any feedback from the GSIs on rough drafts before the due date, or assignments retooled after the due date?
A: GSIs will be happy to read drafts during office hour appointments, but comments on the graded assignment are the GSIs’ primary form of feedback.

Q: Do appendices, graphs, tables, etc. count in the 20-25 page count?
A: Yes.

Q: How can I get feedback on my final paper?
A: Students at Cal for the Spring 2013 semester may pick up their final papers 4-6 weeks after the beginning of the spring semester. Students returning to their home countries, cities, etc. may request the GSI to mail or email their feedback 4-6 weeks after the beginning of the spring semester. However, note that the mobility of graduate students may prevent this outcome from being achieved.
3 Other Resources

In addition to technical resources, some professors provide useful advice for their PhD students to get started with their dissertations. You may find both types of resources useful:

3.1 Overview

- *Doing Economics: A Guide to Understanding and Carrying Out Economic Research* by Steven Greenlaw goes through each component of an economics research paper, though does not delve deep into the technical aspects of modeling, data analysis, etc.

3.2 Getting started

- Steve Pischke also advises his students on how to get started: [http://econ.lse.ac.uk/staff/spischke/phds/get_started.pdf](http://econ.lse.ac.uk/staff/spischke/phds/get_started.pdf)
- David Levine provides some advice on finding a research topic: [http://faculty.haas.berkeley.edu/levine/cheap_advice.html#dissertation](http://faculty.haas.berkeley.edu/levine/cheap_advice.html#dissertation)

3.3 Models

- A good beginner’s introduction to modeling is Jaccard and Jacoby’s textbook, *Theory Construction and Model – Building Skills: A Practical Guide for Social Scientists*. Students interested in modeling may also want to take or sit in on David Ahn’s ECON C103 class, Introduction to Mathematical Economics.
- Hal Varian offers some good advice on how to build an economic model in your spare time: [http://people.ischool.berkeley.edu/~hal/Papers/how.pdf](http://people.ischool.berkeley.edu/~hal/Papers/how.pdf)
- The majority of Econ 191 students interested in theory will want to pursue simpler static models. For the very advanced student, however, dynamic modeling may be an option. Textbooks on this topic include: *Introduction to Dynamic Economic Models* by Ferguson and Lim, *Economic Dynamics* by Gandolfo, and *Economic Dynamics: Theory and Computation* by Stachurski.
3.4 Empirical Work

- Amy Finkelstein has written two Powerpoint guides on how to conduct empirical economics research, as well as lessons learned at:
  http://econ.lse.ac.uk/staff/spischke/phds/Amy%20Finkelstein%20IAP%20talk%202006.ppt
  and
  http://econ.lse.ac.uk/staff/spischke/phds/Amy%20Finkelstein%20IAP%20talk%2007.ppt.

- “How to Do Empirical Economics” by Kamarz et al. is another article discussing how empirical research should be conducted by economists.


- A good introduction to econometrics, which most empirical papers in Econ 191 will utilize, is Wooldridge's Introductory Econometrics: A Modern Approach. Try to get an edition (3rd or above) that includes data sets, as well as a six-month license for the STATA/IC or Small Stata statistical packages, so that you can practice data analysis. You can purchase the license at http://www.stata.com/order/new/edu/gradplans/us-pickup/, or use STATA in the DataLab in Doe Library, room 189.

- Students writing empirical papers may also want to start attending ECON 140: Econometrics class as soon as possible.

- If you are interested in experimental economics and have the time to design and run an experiment before the semester is over, Experimental Methods: A Primer for Economists by Friedman and Sunder, and Economics Lab: An Intensive Course in Experimental Economics by Friedman and Cassar, give beginner and intermediate advice (respectively) on the process from start to finish.

3.5 Miscellaneous

- Michael Kremer has a nice checklist to follow when writing a paper (both empirical and theoretical):
  http://www.economics.harvard.edu/faculty/kremer/files/checklist.pdf

- Steven Medema’s textbook, “Foundations of Research in Economics: How Do Economists Do Economics?” consists of short essays written by academic economists on how economic research should be conducted.

- John Cochrane gives writing tips for economics/business Ph.D. students:
  http://faculty.chicagobooth.edu/john.cochrane/research/papers/phd_paper_writing.pdf