Tips for Writing a Research Paper in Economics

GholamReza Keshavarz-Haddad

Sharif University of Technology, GSME
G.K.Haddad@sharif.edu

July 1, 2017

Outline

General tips: Simple is better

- Most students think they have to dress up a paper to look impressive.
- The exact opposite is true: The less math used, the better. The simpler the estimation technique, the better.
- Use active tense, not passive.
- Not: "it is assumed that $\tau = 3$", Or "data were constructed as follows..."
  - **Instead:** "I(we) assume that $\tau = 3$" and "I(we) construct the data as follows..."
- **Present tense is usually best.**
  - You can say "**Fama and French 1993 find that**" even though 1993 was a while ago.
  - The same goes for your own paper; describe what you find in Table 5 not what you will find in Table 5.

Simple is better, Cont'd

- Most importantly, though, keep the tense consistent. Don?t start a paragraph in past tense and finish it in the future.
  - The three verb tenses are past, present, and future; make sure you don't switch back and forth between them without reason. ... This entire sentence should be written in the present tense because it discusses literature.
- Do not use adjectives to describe your work: "striking results", "very significant" coefficients.
- If you must use adjectives, do not use double adjectives. Results are never "very novel."

Revise, revise and revise

Simple is better, Cont'd

- Demonstrate the originality and significance of your contribution: show that what you did has not been done before and that your conclusions are not direct consequences of known results.
- Do not generalize; it is tempting to broaden the scope of the paper when in fact it only addresses a narrow research question.

Title

- Resist the temptation to have a popular or funny or witty or clever sounding title.
- Resist the temptation to have a very opaque or abstract or mathematical sounding title
- Resist the temptation to make the title very short
- Resist the temptation to make the title very long
- The title should simply describe what you are doing
- Make sure the title will be understood and is recognizable to people who work in your field.

Abstract

- Potential readers look at your abstract for appetizers; they will decide based on the abstract whether they will read the rest of the paper.
- The same holds for seminar or conference attenders
- Keep the abstract short, about 150 words (unfortunately, in reality you will find that many abstracts easily exceed this word count).
- **Dare to omit!** The abstract cannot offer a comprehensive summary of the paper; necessarily it must omit important things; **be brave!**

Introduction

- Introduction draws the reader into your paper and **should address the Big 5:**
  1. What: Precisely state the research question(s) of the paper
     - You will be measured against your promise to answer that research question; do you actually answer it? Do you answer a different question?
  2. Why: Say why answering the research question is interesting.
     - Maybe you are able to come up with a precise research question, but if the answer to the question is not of importance then nobody will care about your paper.
     - Use as many as relevent facts and figures that you can, to Justify the importance of your research.

Inbtroduction

3. Spell out (make clear and explicit) deficiencies in previous work
   - Be gentle and kind with your evaluation of other people's work.
   - Nobody will like it if you are dismissive about other research
4. Gap: Establish the innovation/novelty, point out a niche you're occupying
   - Explain what you are doing better and **how are you doing it**
     - Note on type of data that you are using in the empirical part
     - Write briefly the theory and statistical method that you are using in the empirical analysis

Summary of the findings

5. Summarize your results upfront

literature review

- You or your supervisor may ask you to write a literature review as well
- The literature review could be either a subsection in the introduction or it could be its own freestanding section following the introduction
- If you do write a lit review, remember this:
  1. Do not merely enumerate articles; provide genuine discussions
  2. Take time and space to discuss papers that are closest in spirit
  3. Make sure you summarize these papers accurately
  4. The authors of these papers are likely to be your referees

literature review

- Decide how general or broad your opening should be.
  - Keep in mind that even a "big picture" opening needs to be clearly related to your topic.
- Try writing your introduction last. You may think that you have to write your introduction first, but that isn't necessarily true, and it isn't always the most effective way to craft a good introduction.
- The writing process can be an important way to organize your ideas, think through complicated issues, refine your thoughts, and develop a sophisticated argument.

literature review

- Do not be afraid to write a tentative introduction first and then change it later.
- Be straightforward and confident;
  - Believe in your own research and sell it that way (or otherwise I will not believe in your research)

Describing Your Data and Their Sources

- Usual structure of body are: Data; Model; Estimation Techniques; Findings
- In empirical economics papers, it is customary to describe the data one uses
- The best way to learn about writing a data section is to read several data sections in the literature on your topic and pay attention to the kinds of information they contain.
- Most data sections are short – a page or so. What you tell your readers about your data will depend in large part on the kind of analysis you are conducting.

Describing Your Data and Their Sources

- Your data section should do at least the following:
  1. Identify the data source. This means a sentence that explicitly says where your data come from (e.g., "This study uses data from the 1999 wave of the Panel Study of Income Dynamics.").

  2. Describe the data source. You should tell your readers such things as the number of observations, the population groups sampled, the time period during which the data were collected, the method of data collection, etc.

  3. State the strengths and weaknesses of the data source. How do your data compare with other data sources used in the literature? Does yours provide more observations, and/or more recent observations, than other sources? Was the data collected in a more reliable manner? Why is the data source particularly suited (or not) to your study?

Describing Your Data and Their Sources

- Note any features of the data that may affect your results. Were certain populations overrepresented or underrepresented? Is there attrition bias or selection bias? Did the method of data collection change?

- Explain any computations or adjustments you made. Sometimes, a data source does not give you something directly; you perhaps had to add/subtract/multiply/divide two given pieces of data to get a third. Describe how you constructed your sample. Did you have to eliminate certain kinds of observations, for instance?

A table for data discription

- Data sections often contain a table of descriptive statistics, statistics of relevance about the sample. These statistics usually include the mean (e.g., mean income, mean age, mean years of schooling, etc.), standard deviation, maximum and minimum of each covariates.

- Add a full detalied caption on the bottom part of the table.

Describing Your Model

- Economic analysis largely concerns the construction and testing of models.
  - What do we mean by a MODEL?
  - Models are abstract, simplified representations of an economy, of a function (such as a utility function), of a decision- making process, and so on; they are expressed in a combination of words and mathematics.
- It is customary in empirical economics papers to have a section devoted to describing your model.
  - Although the length of the description varies from paper to paper, a typical model section in an empirical paper will be four or five pages long.

Describing Your Model, Cont'd

- If the paper presents a simple regression, the model might simply be the regression equation
- More complicated papers might present notation, develop a basic model of economic behavior, report the first-order conditions necessary for agents' to optimally set prices or choose investment or whatever, and then interpret those conditions.
- In the model section, the writer takes the reader through the series of equations that constitute the model.
- The description should begin verbally.
- You should lay out all the assumptions you make in your model,

Describing Your Model, Cont'd

- Explain the intuition behind those assumptions
- In your models, the notation should either (a) follow the standard

Describing Your Estimation Methods and Techniques

- Models often contain constants or parameters whose values need to be estimated
- How will you estimate the parameters? What technique will you use?
- The length and detail with which you describe your methods will be determined by the complexity of your analysis.
- For example, if you are just doing OLS then there is no need to explain to the reader how OLS works (this can be assumed as known)
- The same is true for 2SLS or IV estimation, but try to clarify the instrument that you use, and discuss its validity.
- On the other hand, if you develop your own estimator then you need to be 100% transparent about how this works

Describing Your Estimation Methods and Techniques

- If you use somebody else's fancy estimation technique (of which you cannot assume that average readers will be familiar with) then you can refer to the paper from which you borrow that technique and, in addition, provide the basic mechanics/outline of how this particular technique works

Findings

- The results section of an empirical paper is usually the longest
- In an empirical economics paper, you test a model with data; in the results section, you report the outcome of that test.
- What are the answers to your research questions?
- What is the relationship between your dependent variable and the several independent variables you have chosen to examine?
- Does the model "fit" the observed data?
- In most cases, when you report the results of your analysis, you are at the same time referring the reader to a table in which the results are presented.

Two expectations that you need to fulfill

- When you present information in a table, there are at least two expectations that you need to fulfill.

1. Explicitly introduce the table Briefly indicate the table's general content.

Example

Table 1 shows the incomes earned by full-time workers in the United States,
OR
In table 1, I present the results of the three regressions that explore the relationship between income and education.

2. Identify the main points made by the data in the table, the points that most closely correspond to your research question.

3. The table cannot, and should not be expected to, "speak for itself." Tell the reader what the table says.

Example

Example: Table 1 reveals several significant characteristics of our sample that could affect our results: one-third of women in the sample had less than a high-school education; nearly two-thirds were unmarried; and exactly one-half had at least one child under 3, or As expected, the coefficient on education is, in every regression, significant and positive.

- Point out counterintuitive results
- Do not discuss each and every little aspect of the table
- You need to describe the contents of the table in the text
- You cannot simply refer to a table (or worse, not refer to it at all!) and leave it at that.

Conclusion

- Conclusions should be brief
- Do not simply restate (or copy and paste) from abstract and/or intro. (Rather don't bother writing a conclusion.)
- Basic things you can put in
  1. restate research question
  2. restate main findings (not too much detail!)
  3. discuss policy implications
  4. point out extensions and future research (without undermining your current paper)
- But a conclusion could be much more: it is your chance to concisely sum up your paper from a fresh angle;

Bibliography

- Make sure you include all citations from the paper in your references
- Do not include any references if they have not been mentioned in the paper
- Always use the most recent version of a paper available

General Tips: Presume that you do not know how to write a good referee report.

- Comment on the manuscript's originality, clarity, contribution to the literature, and relevance to real world problems.
- Make suggestions about its length, organization, tables, and figures.
- The bottom line is this: If there is an important idea in the paper, make constructive comments (e.g., how to streamline the arguments, what parts should be cut) and help the authors publish the paper.
- If not, say so frankly. There is no point in beating about the bush. If the paper is clearly below the journal standards, detailed comments are unnecessary.

General Tips: Presume that you do not know how to write a good referee report.

- Be careful with your negative reports. Do not demoralize the authors.
- Remember the Golden Rule: **Do unto others as you would have them do unto you.**
- Alternatively: Would you like to be at the receiving end of your own referee report?
- Your role is not in finding all the faults in the paper.
- Write something good, something bad.
- Mortals cannot write "perfect" papers. Even the best paper has some problems, and you can ask the author to make improvements.

General Tips: Presume that you do not know how to write a good referee report.

- You can recommend rejection for good reasons and still be kind to the author.
- Your evaluation should be based solely on the merit or ideas contained in the paper
- Avoid pointing out mathematical errors unless you are absolutely sure.
- Measure the paper against its own promises. Does it actually answer the research question that it asks? If not, you can reject the paper. If yes, you have to decisions to make:
  1. Is the research question interesting and important? (If the answer is no then you reject.)
  2. If it is important, then you need to ask whether the answer logically follows from the methods and techniques used inside the paper. Has it been thoroughly addressed?

Referee Report Writing Algorithm

- Read the title, the abstract, the introduction, and the conclusion of the paper. **Can you identify ALL 5 of the Big 5?**
- If **No**: you may reject the paper
- If **Yes**: Is the research question important? Is it new/innovative and does it add value to the literature?
- If No: you may reject the paper
  1. When you reject a paper on the above grounds, you need to explain this to the journal editor. You always need to provide careful and thoughtful reasoning.
  2. This may sound harsh, but before submitting, authors should work hard on the "sell" of their paper, i.e., on convincing the reader that the paper is worth their time.

Referee Report Writing Algorithm

- If Yes: you still may end up rejecting but there's a good chance that you also may not reject.
  1. Read the paper thoroughly, then write up your review. Do so in as much space as you need, and do not skip anything, even the tedium.
  2. A good review should start by summarizing the paper in one or two short paragraphs in your own words. Do not paraphrase the abstract!
  3. Offer two numbered lists:
     - 3.1 Major comments: non-negotiable, constructive comments that you consider to be potential deal breakers; that you absolutely require to be addressed for the paper to be published
     - 3.2 Minor comments: detailed and specific comments that are the small things you would like the authors to do in order to improve upon the paper

Referee Report Writing Algorithm

4. These two lists are a clear indication of what is negotiable or not, and numbered comments increase efficiency, the authors can refer to specific comments more easily when responding to your review.

5. Make sure you give the authors suggestions on how to address your non-negotiable comments.

6. If you think the authors cannot reasonably address your non-negotiable comments, you should recommend rejection so as to not waste anyone's time.

Referee Report Writing Algorithm

1. What is a constructive comment: a comment that can actually be dealt with given a reasonable amount of sweat, fear, effort and work.

2. Do not make impossible suggestions, for example: "Instead of using OLS, the author should pursue a structural discrete dynamic programming model to estimate the coefficients."

3. When in doubt as to whether a comment will be seen as demeaning, err on the side of being nicer.

4. As a referee, you are not a co-author. Do not push the authors to write the paper you would have written.

The Big 5 in presentation

- Start with a title slide, mentioning your topic title and your name
  1. What are you doing?
     In 25 words or less, and in plain English, what is the hypothesis or research question that you are investigating?
  2. Why is it important? There are usually many reasons for why your topic is important. Just point to most important ones.
  3. How is the existing literature different? Tell us about the gaps in the literature and how you are trying to fill them. Be gentle towards other papers
  4. What are you doing that?s better? What model are you using to answer the research question? What is your innovation/gap? New technique? Old technique in a new context? Little tweak?

The Big 5 in presentation

5. What did you find? Only provide main findings, first order effects
   For the purpose of presentation, tell us what you expect to find; the type of result that you are looking for (I don't mean that you should guess your results).
   Do not be too modest
   Do not be too aggressive
   Plan to have about 8 slides

Refrences

1. Cochrane, John H. Writing Tips for Ph. D. Students. University of Chicago, 2005.
2. Dudenhefer, Paul. "A Guide to Writing in Economics." Lupus. econ. duke. edu (2009).
3. Park, Chris. "In other (people's) words: Plagiarism by university students–literature and lessons." Assessment and evaluation in higher education 28, no. 5 (2003): 471-488.
4. http://emet8002.readthedocs.io/en/latest/tips paper writing.html general-tips
5. Nikolov, Plamen. "Writing tips for economics research papers." (2013).