Research Methods for Economics and Policy
Academic Writing

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Part of the material is based on the Economic Research Process Course at U Gothenburg

Useful references

- The Sense of Style, by Steven Pinker (general style manual)
- The Elements of Style, by William Strunk (succinct, albeit slightly outdated guide to polished writing)
- Four Steps to an Applied Micro Paper (Shapiro)

Recap: Structure of the Research Proposal

- The research proposal must be within 5 pages (excluding references and potential exhibits)
- Maximum 1.5-spaced. It should be titled, but you do not need to add an abstract at the beginning
- You should structure it in different sections:
  - Introduction: Outlining the Research Questions and Purpose2.3.Theoretical Framework4.5.Proposed analysis and a short discussion of potential results
  - Literature Review
  - Data description and collection
  - Identification and Methodology
  - Discussion and potential issues
- Any questions?

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- The aim is to present your research and make the reader understand:
  - Your research question
  - Why is it important?
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Aim of the Proposal (2)

- Motivate the research question using economic logic
- Critically assess previous literature and use it to support/motivate your argumentation/thesis (‘place’ your article at its logical place related to previous research (mainly economic))
- Formulate the research question as a clear, testable, hypothesis using economic/statistic conventions
- Describe how to test the research question using the most suitable statistical tests
- Communicate all this is an academic way (e.g., as opposed to political or journalistic. . .)

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$\Rightarrow$ You should come across as knowleadgeable

The Paper

- Audience: Your colleagues, fellow students, supervisors, professors in Grading Committee.
  - Think that a clever person with limited economic knowledge should understand what you do
- The thesis should present your research in a way that is easily accessible and makes the reader interested and convinced
- A piece of advice: “Write your papers such that a drunk, jetlagged, stressed and grumpy referee needs to spend max 15 minutes on it to get it. If 15 minutes is not enough, you still have work to do.”
- Your aim should be to make it as easy as possible for a busy reader to understand, and as hard as possible to misunderstand.

How to do that

- Read many (good) scientific papers – Read attentively. Think about how others present their research (structure, argumentation, formulations).
- Academic style is often very formalized (and thus “easy” to copy). Read enough to learn the “linguistic culture” and learn how to copy the recipe.

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- Only minimal repetition (if you find yourself needing to repeat, your structure is not in place)

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- “This report will explain how supervisors can use four planning strategies to improve employee productivity in the workplace.”
  - Critique: Very specific about what will be discussed (planning strategies), and what the outcome will be for the reader (how to improve employee productivity).

Think in paragraphs

- Base both the structure and argumentation on paragraphs
- Every paragraph makes one (new) point (and comprise all supporting arguments)
- Every sentence brings me forward (sometimes it takes time to find the right sentence.)
- Hold on (very) tight to the reader's hand. Essentially, leave no opportunities for misunderstandings, be exact, use the possibilities to remind the reader without explicit repetition. "Now that we have established A, we address B."
- Topic sentences introduce the main point of the paragraph, and are followed by supporting ideas, used to give examples, develop an argument or to compare and contrast
- Advice I got: the reader should be able to understand what you do by reading the first sentence of each paragraph of the introduction

Other general points

- As in presentations, only include information that are relevant to the point you are making
- Do not “overuse” footnotes
- Exchange papers and give each other comments
- Take the feedback seriously
- If somebody does not understand a paragraph (or, more generally, a concept/model/identification strategy/etc), assume that *you* did not do a good job when writing.
  - Ask yourself: How can I make that clearer?

Structure of Thesis/Paper

Introduction

- A good motivation is crucial
- The introduction motivates, explains, and describes your research question and often your results. It tells us why we should care
- It is a very important part of your thesis – many readers won't read more than that and this is the first impression the reader gets of you and your knowledge. Make it a stand-alone section.
- Make sure you present the big picture, why your research question is interesting. (Can you present some interesting facts about the economic relevance? Is there a puzzle or hole in previous literature? How can knowing the answer to your question increase welfare?)

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4. Paragraph 4(+): What do you find? Your most important results?
5. Paragraph 5(+): Contribution and policy relevance: What does your thesis contribute to the existing knowledge? What is novel about your approach?
6. Open up a bit and add a few necessary details about data and method, background information etc. Some like to also add a roadmap in terms of what section covers what (I do not)

   E.g. "Section 2 discusses the institutional setting. Section 3 described the data used. Etc"

Literature Review

- The literature review puts your research in its context. While providing an overview of the background, it should clarify the contribution of your paper
- It is part of your argumentation, **not** an un-structured list of all related studies. After the literature review it should be clear to the reader:
  - Where in the web of previous research your study fits
  - How and why it extends previous research
- Keep it short and very well structured – make a map of the articles you will refer to and make up your mind on how to organize them (e.g., topic, data, method)?
- The literature review can be part of the introduction or integrated in the intro
  - If in a stand-alone section, a reference to the Literature Review should still be made in the Introduction

Background section (if any)

- This section presents the institutional background of your study
- You should only present information that is necessary for the reader to understand - avoid adding irrelevant or tangential information
- If you study a policy: who/how was implemented the policy? When? Could it be anticipated? Etc
- Always assume the reader has no information whatsover about the context of you study.

Theoretical section (if any)

- This section presents the economic theory behind the problem you investigate
- You may have a theoretical model, which should help you:
  - Generate predictions wrt your results – what should happen empirically if your theory is right
  - Think of plausible channels explaining the results
  - Motivate your choice of question and analysis (question, hypothesis, context, data, analysis etc.) using economic logic
- Depending on your topic, you may write the theoretical model before or after you write the empirical model
- It is sometimes hard to separate this section from the section about methodology – if you are not sure talk to me and/or look at similar papers. Not all papers have a separate theory section in addition to methodology.

Data

- This section should include:
  - A description of the different data sources
  - Source of the data, quality of the data, overview of the variables/information available, time period covered, coverage (population, sample, numerosity...)
  - The main variables that are important for your analysis should be accurately described
- Highlight and discuss potential limitations and strengths
- Present descriptive statistics
- Make sure to highlight potential novelties of your data – e.g., did you collect the data/create a new dataset? Are you measuring some variable in a new way?

Empirical Methodology/Identification

- This section should formally discuss your empirical methodology/identification strategy
- This is where you write down the model(s) you estimate
- Discuss the assumptions behind it and whether/how you are going to test them
- Make sure you clearly define all variables you include, what they represents, how they are measured (if it's not self-evident)

Results (1)

- This section presents your empirical findings
- Make sure to present the results in a logical order
  - Think about the “hierarchy” of results? What is the most important result (the answer to your hypothesis)? In what order it is best to present them?
- Then, describe and evaluate the results:
  - Describe the results (starting with your main result
  - Discuss the statistical significance of the results
  - Discuss the economic significance of the results – i.e., discuss the (absolute and relative) magnitudes (What is statistically significant is not always of economic importance. Make sure you show your are aware of this distinction)

Results (2)

- Be focused when presenting the results
- Show (and discuss) only those that you think are central to the analysis
- Put additional/minor/tangential analysis in the appendix
- Make sure it is clear to the reader where each number presented comes from – e.g., refer to tables/figures, etc. Tables and figures should always be placed in the order they appear in the text
- Think about ways to increase the value of your results. If you have new data, can you use the data in additional ways to explore your question?
- Look at other manuscripts
- Once you have presented the results, you should interpret them – either here in the discussion Section
  - How do your results compare to your theoretical predictions?
  - How do your results compare to those reported by other studies?

Discussion and conclusions

- This section should start by briefly repeating the research question (but do notcopy and paste from the Introduction and Results sections) by emphasizing the results, i.e., the answer to your research question
- After discussing the results, this section may include:
  - Discussion of policy implications
  - Acknowledgement of limitations of the analysis
  - Future research/new or open questions
- Discuss your results as honestly and carefully as possible. It is much better to show that you understand the limits of your method/data than to make broad claims you cannot support
- In the Conclusions, my suggestion is to – (briefly) recap the topic/issue (1st par); discuss what you do (2nd par); then, take the chance to discuss broad implications of what you find, and potential gaps for future research

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Layout of tables and figures

- Tables and figures are very importantfor the reader to understand what you have done
- In principle, one should be able to understand what a table/figure means without reading the text
- Thus, tables/figures should be self-contained, with detailed captions and notes
- Do not use too many tables: combine results from different models or specifications into only one table (e.g. IV and OLS).
- DO NOT report the outcome of the software directly
  - Change the variables names in something understandable
  - Use only 2-3 digits for the coefficients and standard errors
- Advice: Take notes of good/bad points in layout when you read papers

Appendix

- Section (after References) where you can put additional results or robustness checks, more details on data collection, etc.
- Useful to (amongst others):
  - Describe in detail a specific dataset (e.g., some aspects of the coverage or the collection, etc)
  - Show robustness checks
  - Show results that are of “secondary nature”
  - Etc...
- However, be selective: don’t use the Appendix to simply “dump” any analysis that you have done