Guideline for Your Term Paper

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Term Paper Deadline: 7/1

- You should submit your term paper before 7/1

    - No late submission

    - Let me know if you want me to submit grade earlier

- Write your paper in English

Term Paper Deadline: 7/1

- Letter style: roughly 6-10 pages including tables, figures, footnotes, appendices, and references

    - See **Economics letters**

    - See **AER: Insight**

Guideline for Writing a Term Paper

- Use credible causal inference methods to answer an empirical question

    - Test economics (social science) theory

    - Estimate policy effect

    - Any interesting questions regarding to human behavior/social phenomenon

Guideline for Writing a Term Paper

- The Typical Structure of an Empirical Paper

1 **Introduction/Motivation**

2 Literature Review

3 Theoretical Framework

4 **Data and Sample**

5 **Empirical Method**

6 **Results**

7 **Discussion and Conclusion**

Guideline for Writing a Term Paper

1 Introduction/Motivation

- The question you are trying to address (stating the hypothesis to be tested directly is a good way to do this)

- Briefly state why we should care about this question
    - Is it an unproven theoretical result?
    - An important policy question or an interesting human behavior/social phenomenon?

- Briefly state how you answer this question
    - Empirical strategy you use to answer the question
    - What data you are using

- Briefly discuss your main findings and contributions

- **We usually finish "Introduction" in the end of project**

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2 Literature Review

- The first section should discuss previous research that is **directly relevant to your paper**

    - Not every single paper written on the topic

- The second section should explain your contribution in more detail

- You should discuss how your approach is different from what has been done before

    - Answer a question more broadly/specifically
    - Use different data
    - Use different empirical strategy
    - Comparing how you are improving on a previous paper is useful

- You can combine introduction with literature review when you mention your contributions.

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3 Theoretical Framework

- If your paper does not try to verify economics theory, you might not need this part

- Not every paper will require the development of a full theoretical model

- In the end, you need an empirical model, so the theoretical model you develop must lead somehow to what you are testing

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4 Data and Sample

- Describe the name and source of the data you are using and the period it covers

- Describe whether you have a panel, cross section or time series, what the unit of observation is and how many observations you have

- You may want to highlight the important limitations of this data

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4 Data and Sample

- The second section should present (relevant) descriptive statistics of the estimated sample

- You should have a couple of tables with means and standard deviations for the variables you will be using in the analysis

- You may want to present these descriptive statistics for different subgroups

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5 Empirical Method

- You should write down the basic econometric specification first and explain each of the variables and the parameters of interest

    - The model could be OLS, PDS, matching, IV, DID, RDD, SCM or others

    - Since IV, DID, RDD, and SCM can deal with unobserved confounding factors, these methods usually give us more credible results

- Discuss the identification assumption of your method.

- Discuss why this is the correct/best specification for the question you wish to address.

- Discuss why you want to control for certain variables

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6 Results

- You should present results in a way that develops your argument step-by-step

    - For example, 1. main results; 2. break those results down by subgroups; 3. perform robustness checks

- Any tables with parameter estimates should clearly state which outcome variable you are using

- You should let readers know which control variables are included in your empirical models (put this information in table notes)

- Just discuss the most interesting and important estimates in your discussion of the table: **estimated causal effects**

- Make sure you report standard errors with your estimates in the tables

- Just look at some economics journals for a good table format

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6 Results

- Interpret the magnitude of your parameter estimates in an economically meaningful way

    - For example, "we find that b=0.3, so that increasing X by one unit increases y by 0.3. The implied elasticity is..."

- **Graphical evidence is a very convincing way to show your reader that you have found something real**

    - Graphs are worth a thousand words

- Discuss whether the key estimates are statistically significant

    - Compare your results to what others have found

- **Don't worry if you don't find anything significant as long as your methods are credible and you have interpreted the results well**

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7 Discussion and Conclusion

- Briefly summarize your findings

- Discuss some limitations in this paper

- Discuss your future plan about this project if you have more time and data

Utilize AI as Your Research Assistant

Utilize AI as Your Research Assistant

- You should use the available AI tools to help you conduct research

- Utilizing these tools can substantially increase your productivity

Utilize AI as Your Research Assistant
Literature Review

- **ChatDOC**

    - https://chatdoc.com/

    - It can help you summarize the paper and answer any questions about the paper

    - You might still need to read the paper by yourself but this tool can help understand it better and save your time

Utilize AI as Your Research Assistant
Coding

- **ChatGPT**

    - https://chat.openai.com/auth/login

    - ChatGPT can help you draft the initial code

    - It will explain every line in details so that you actually can learn how to coding from it

    - It can also help you debug or optimize your code

Utilize AI as Your Research Assistant
Coding

- **ChatGPT**

    - https://res.cloudinary.com/dyd911kmh/image/upload/
      v1678453027/Marketing/Blog/ChatGPT_Cheat_Sheet.pdf

    - Whether ChatGPT can help you or not depends on how you ask it
      (give the informative prompts)

    - The above cheat sheet will show some good examples

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Polish Your Writing

- **ChatGPT**

    - You can use ChatGPT to polish your English writing

    - Rewrite or summarize your paragraph

    - It can also do a great job in translation

Utilize AI as Your Research Assistant
Polish Your Writing

- **DeepL**

  - `https://www.deepl.com/write`

  - DeepL is also good at polishing and proofreading English writing