Paper Structure

The final thesis should be 10-20 pages long. The paper should roughly follow the five to seven section outline listed after the style header and honor the page limit guidelines.

Aside: Style

Attention to good writing form is a critical component of conveying any message in your papers. Poor grammar and spelling, colloquialisms, and sloppy writing detract from the hard work you have done in putting together your paper, and, in extreme cases, makes your work completely unreadable. The following is a small list of guidelines for your academic writing:

- Include a cover page, but designs and pictures are discouraged.

- Avoid using first person, and never use second person. When discussing research you have actually conducted, first person is more acceptable in practice for economic papers.

- Avoid using language that turns controversial or testable ideas into fact, i.e. avoid "Obviously, X is true because it has happened in country Y five times."

- Put away your writing embellishments from English courses. Rhetorical questions and using three sentences to convey the idea that could be put into one detract from the research your paper is trying to emphasize.

- Paragraphs should be used to delineate one or a closely linked group of ideas.

- Introduce data sets before you use them, i.e. explain the source and what data you have available from the source. If you are using an "index" measure that aggregates several variables, you must discuss the components of that index and how it was constructed.

- Introduce new variables in regression equations or models before or immediately after the equation.

- Tables and figures should have enough information to be understood independently of the writing in your paper. Make sure to properly reference a table or figure when you use it in your writing.

- If you are doing regression analysis, never dump the results from your statistical package into the paper. Turn the results into a properly formatted table.

- Cite a source whenever you call upon a fact that is not general knowledge. When discussing academic papers, a satisfactory citation is "Author X and Author Y (Year of Publication) demonstrate/discuss [...]"

Introduction (2-3 pages)

This is the first and a very important section of your thesis. It sets the standard for the rest of your paper. This section should introduce your topic, provide some motivation for its importance, reveal some of your findings, and give a roadmap for the rest of the paper. Statistics used in this section

should only be used as part of your effort to sell why your topic is interesting or important. Formal analysis should be saved for later sections. You should make an effort to write this section well, and it is highly recommended that you write this section last. A great introduction can inform a hasty reader of many of the main points in your paper. An excellent introduction will encourage the hasty reader to complete the whole paper. A well written introduction has the following ingredients in the given order:

- Introduces the topic (the end of the first paragraph should include your thesis statement / testable claim);

- Provides motivational arguments and gives the reader some idea why the topic is important (briefly cite striking statistics, important previous studies, etc.);

- Briefly mentions the statistical method you are going to adopt to address the topic;

- Briefly mentions the major result or findings;

- Lays down the structure of the thesis. For example, "Section 2 presents a literature survey, section 3 [...]"

It is worth emphasizing again that you should provide a proper citation to every statistic or argument that is not your own finding. We take plagiarism very, very seriously. You risk failing your class if you make use of a "borrowed" idea or statement without properly citing it (wikipedia included). Remember we will be using software that can easily detect any lifted statements.

Literature Survey (1-2 pages)

You should read at least 2-3 academic papers (refereed, published work or reputable working papers; the Economist and popular magazines are not included among these sources) related to your topic and give a brief summary of those papers in this section. You should cite them properly using any standard citation method. You should also comment on how your analysis relates to theirs, including how your research differs or builds upon this previous work. The following are some examples of common linkages:

- You are quantitatively analyzing the topic whereas the paper uses a theoretical approach (e.g. a mathematical model) to do the same;

- You are considering different economic variables than the paper or measure these variables differently;

- You use the same methodology and data as a paper but your results differ for some reason that you should explore.

Theoretical Arguments and Regression/Statistical Analysis/Data Analysis (7-14 pages)

In this section(s) you have a bit of leniency in determining how to sell your idea and organize your paper. This part of your paper should include three components: data survey, theoretical analysis, and data analysis. While that order is not set in stone, most of you should find it to be the most

logical progression for your papers.

In the Data Survey section you have a chance to briefly show some interesting summary statistics of your data or simple correlations that demonstrate the patterns you are trying to explain with your theoretical arguments. This is the section in which to introduce your datasets and present well-labeled graphs and tables. This discussion should be approximately 1 to 2 pages.

The Theoretical Argument (or model) section is one of the most important in the paper. In this section you should present the sophisticated economic arguments you have been encouraged to develop throughout the writing process. At the very least it should justify your claims that your variables of interest should have an impact on long-term economic growth (and how they impact growth). Your theoretical arguments also inform what variables should be included in your empirical analysis and demonstrate your growing familiarity with growth economics literature. For example, many of you will be using extensions of the Solow model to make your arguments. This section should be approximately 3 to 4 pages.

If you use mathematical equations to describe your arguments—which is encouraged but not necessary—write these equations using LaTeX or Microsoft equation editor (or equivalent). As mentioned in the style guide, you should always introduce new variables before or immediately after an equation in which it appears.

The Regression/Data Analysis section is the most important part of an empirical paper. Most of you will be using regression analysis to test your theoretical arguments so the guidelines here relate to these papers. This section should include the following elements:

- Introduce the section with a regression equation related to your theoretical model or arguments

- Briefly discuss predictions for the coefficients of the regression equation based on the theoretical model. If you are not using regression analysis, this would be the place discuss expected correlations

- Present the results of the regression specifications and/or statistical tests in a nice table (or graph for the latter). It is imperative to discuss the results of the regression/analysis in the context of your model rather than dumping numbers. If the results contradict the preditions of your theoretical arguments, you should discuss why this might have happened.

- If appropriate (e.g. if you are using qualititative measurements of data), conduct robustness tests by changing how you measure key variables in your equation or changing the scope of your dataset. If your results change, discuss why your manipulation might have changed the results.

Conclusion (1-2 pages)

You conclude your paper with a restatement of your thesis and your major findings from the data analysis. The goal of this paper is not to come to a "right answer", but to give you a taste of research and to write and to think logically. Here we expect you to summarize the most important results from the previous section. If the results were unexpected, summarize reasons for what could

have gone wrong in your initial analysis and why your results are not meeting your expectations. Finally, discuss possible extensions of your research.

Grades will not be awarded for coming to some "RIGHT" answer but on the basis of your thought process and presentation. We want to know what "YOU" think about the given problem and whether your thoughts are organized in a logically coherent way. You should complete this paper feeling as though you could independently replicate the writing process of an academic in the field.

References/Bibliography (1-2 pages)

Document all your references here. Use a standard format, such as AMS or CMS.