

# How to write a Master's thesis (M.Sc.) at our chair

## 1. General information

- In most cases, writing a Master's thesis at the Chair of Economic Policy requires that you have previously participated in a Master Seminar at our chair. But if you have good reasons that you want to write your thesis at our chair, we can make an exception in some cases. In any case, if you want to write your Master's thesis at our chair, please contact us at least three weeks before you want to start your thesis so that we can discuss potential topics.
- The duration of the Master's thesis is **22 weeks**. Generally, you can choose the starting date of your thesis yourself (beginning typically on a Monday). **On the last day of your work period (again a Monday in most cases) you must hand in two hard copies of your Master's thesis before 12.00 noon at the ISC (Informations- and Service Center), not at the chair. If you hand in your thesis too late, you will have failed it!** In addition, you must send a .doc/.docx or .tex file to your advisor. If your Master's thesis includes empirical work you have carried out yourself, you must also hand in your data and the Stata do- and log-files.
- The Master's thesis should have between 80,000 and 120,000 characters including spaces. This corresponds to 40-60 pages with the recommended layout (see under 3.).
- On the first day of your thesis, you will receive an e-mail from your supervisor that includes the title of your thesis, references to start with and further comments that clarify how the thesis should be approached. It is your task to complement these initial references with further literature that you choose independently. As a rule, a total of four to six papers should be presented in more detail, with further literature complementing the discussion.
- After having worked on your thesis for about 2 weeks, you should set up a meeting with your supervisor. In this meeting you should present the additional literature that you have chosen, and a first outline of your Master's thesis. You will then get feedback on whether the literature you have chosen is fitting, and whether the overall concept for your thesis is sensible and doable.

## 2. The contents of your thesis

- You can think of your Master's thesis as proceeding in two steps, both about equally long and with equal weights for your grade. The first step of your thesis is to present different theoretical and empirical papers from the literature, relating them to each other as closely as possible. Special focus should be placed on your own interpretations of model results, the link between assumptions and results, and the comparison of (theoretical and empirical) results across different papers. This first part is thus similar in principle to what you have done in the term papers of your seminars, or probably in your Bachelor's thesis, but the scale is now somewhat larger.
- In a second step, you then carry out a simple modification or extension of one of the models that you have previously described in detail (if the focus of your thesis is theoretical), or you carry out some independent regressions (if the focus is empirical). In either case, this part is a very first step into doing independent research, for which you will receive extra guidance from your supervisor.

- No matter whether the focus of your thesis is theoretical or empirical, you should enter the second step only after you have largely completed the first. This has two important advantages. First, setbacks and dead-ends can never be avoided when doing independent research. Therefore it is an important reassurance for you to know that you have already written a large part of your thesis, before you enter “new territory”. Second, and equally important, adhering strictly to the recommended sequence will ensure that you base your own research on a good understanding of the literature. A further advantage is that a detailed presentation and comparison of models in the literature will help you to get ideas about possible extensions of one of these works (if your focus is theoretical), or help you derive the empirical hypotheses you want to test (if your focus is empirical).
- In the introduction and in the conclusion of the thesis you should work out the relevance of the subject under study for current policy discussions. The policy motivation raised in the introduction should be addressed again in the conclusions, in as detailed a way as possible, and based on the theoretical and empirical results of your thesis.
- Your thesis should provide a well-rounded discussion of your topic, but you may specify more precisely the overall topic we have given you. It is important that this topic runs through the thesis like a golden thread and that the different parts of your thesis work well together. It helps if you explain briefly, at the beginning of each chapter, what you are doing in this chapter and how it relates to the other chapters in your thesis. At the end of each chapter, a short summary of your main results is often helpful, but focus it on the important aspects.
- The introduction is an important part of your thesis. You should motivate your topic in the introduction (why is it important?) and you should link your topic to current or past developments in the real world. In addition, the introduction should explain how you proceed in your thesis and it should anticipate what your most important results are.
- In choosing further literature (in addition to the references given to you) you are fundamentally free to use those articles and cover these themes that you find most important or relevant for the topic of your thesis. It is often left to you how strongly you place the focus on theory, relative to empirical work. However, you should ensure that your additional references are from “high-quality” sources. The best way to guarantee this is to choose papers that have already been published in refereed international journals. If you want to use a Working Paper as a key source, make sure that it is included in a large Working Paper Series (such as NBER, CEPR, CESifo) and/or that it is from well-known authors that have already published successfully in good international journals. Make sure that the working paper has not yet been published (if it is published, you should use the published version).
- The central task in the first step of your thesis is to show that you can understand a complex, often abstract argumentation and reduce it to its key message in your own words, whilst writing precisely and clear. Importantly, you should provide a detailed intuitive explanation for the results that have been derived in the papers that you are using in your thesis. This is one of the best ways to show that you have understood the results thoroughly. Do not use too many equations to present the work of others. But some equations, as well as figures, are often helpful in presenting a complex argument. It can be much more difficult to understand a purely verbal description of a model, than a presentation that includes a sensible number of equations.
- In your review of the existing literature, a central part is to compare theoretical or empirical analyses with each other, or to link a theoretical analysis to an empirical one. This is typically not done in the original research papers that you present, and therefore is an important way for you to demonstrate your independent understanding of the existing literature. Therefore, it is advisable (but not necessary) to reserve a separate chapter of your thesis to such comparison, and do the comparison in as much detail as possible. Another way to demonstrate your

independent thinking about a model is to ask critical questions about it. But be cautious: the statement that some model assumptions simplify reality is **not** yet a useful critique. (A model has to be simplifying!). If you want to criticize a simplifying assumption, you have to substantiate why relaxing it could have important implications for the results of the model.

- In the second step of your thesis, where you are doing independent research, the rules are different. Here it is important that you document precisely, with all intermediate steps, what you have done. State clearly where you depart from the existing literature and what your own results are.
- If the second part of your thesis is empirical, we will point out potential data sources to you, or provide you with a dataset. You should focus on the formulation of your empirical research question, your identification strategy, the discussion of descriptive statistics and the interpretation of your results. These aspects are much more important than the significance of the results themselves! You will also have to hand in a copy of your Stata code (do- and log-files). Each step in the do-files should be clearly annotated.

### 3. The format of your thesis

- Your thesis should consist of the following parts: table of content, introduction, subdivided main part, conclusion, appendix, bibliography. Be aware that the subparts of the main part should not differ too much in their length. The numbering of sections and subsections should use only Arabic numerals (e.g.: 2.1.3). A threefold subdivision (three numerals) should be sufficient.
- Here is a proposal for the **layout** in the main text: Times New Roman, Cambria or Calibri 12pt or Arial 11pt; margins of about 3cm on all sides (left, right, top, bottom).
- Do not exceed the **maximum size** of your thesis, which is 120,000 characters (without references and appendices). If you exceed this limit substantially (by 10,000 characters or more), this will have a negative effect on your grade.
- Any thoughts taken from the literature must be **quoted** by giving the source of the thought, either in the text or in a footnote. It is not necessary, however, to repeatedly quote the same source as you present an analysis, as long as it is clear that you are following another person's thoughts. As a rule, when you only give the source of a thought, it is shorter to include the reference in a bracket in the main text. Standard knowledge from scripts or textbooks does not have to be backed by references.
- You must give reasons for **important statements**. It is not enough to give a reference to the literature, which includes the quoted view. The same holds for your introduction. Don't just quote different positions, but explain the most important arguments of each position.
- **Direct quotes** are usually redundant. In particular, direct quotes should not be used to replace your own effort to independently present results, develop an argument, or interpret a statement, as these are among the key skills that you should demonstrate in your thesis. Therefore you should use quotes very sparingly and only when an author has a very incisive opinion or has illustrated something in a particularly insightful way. In this case the quoted parts have to be in quotation marks.
- Do not plagiarize. If your text closely follows a text from the literature without citing it; or reproduces a text verbatim without quotation marks (even when giving a source!), this is plagiarism. Plagiarism implies that you fail the thesis. At the end of your thesis, you have to add a signed declaration that you have written the thesis independently (the ISC provides a template).
- For ensuring readability and fast reference your **footnotes** should be inserted at the bottom of each page.

- **Symbols, variables and abbreviations** must be clearly defined in your thesis. It must be possible to read and understand your presentation of an article in itself, without recourse to the original source.
- Generally all **graphs and tables** have to be backed with a source. If you have created or compiled a graphic or table yourself, you should label it with "Own illustration/calculation (based on...)"
- If you want to put some material (e.g. data) in the **appendix**, you have to refer to it in your main part. An appendix which is not mentioned in the main part is useless.
- The **bibliography** has to include all sources and material which the thesis refers to. Vice versa, you can only include those titles and sources in the references that are being quoted in your main text. For the bibliography, different formats can be used. What is essential is that, whatever format you use, you must use it **consistently**. Here are some examples:

**Books:**

Oates, W.E. (1972). *Fiscal Federalism*. New York: Harcourt Brace Jovanovich.

**Contributions in journals or in collective volumes:**

Boadway, R., M. Marchand and M. Vigneault (1998). The Consequences of Overlapping Tax Bases for Redistribution and Public Spending in a Federation, *Journal of Public Economics* 68, 453-478.

Persson, T. and G. Tabellini (1995). Double-Edged Incentives: Institutions and Policy Coordination. In: Grossman, G. and K. Rogoff (Eds.), *Handbook of International Economics*, Vol. III. Amsterdam: Elsevier.