

Guidelines: How to Write a Bachelor's Thesis in the Economics Department

1 Procedure

To be admitted for the Bachelor's thesis, you are required to have successfully taken the "pro-seminar". Furthermore, you are required to have previously participated in an elective or compulsory elective course at the chair where you wish to write your thesis. You should have passed the course at least with the grade 2.3. We will consider other students only in exceptional cases. We recommend you to take further courses at the chair where you wish to write your thesis or in the economics department in general.

You have two months to write your Bachelor's thesis. The length of the thesis should be between 50,000 and 60,000 characters. This corresponds to approximately 30 to 35 pages. You are allowed to write your thesis in English or German.

At your starting date, you will receive an e-mail that contains the title of your thesis, at least one paper as a starting point, further comments that clarify how you should approach the thesis as well as your advisor's name. Usually, the starting literature consists of empirical, experimental or theoretical articles. It is your task to complement these initial references with further literature that you choose independently. As a rule of thumb, two additional articles should be presented in more detail in your Bachelor's thesis. Alternatively, you can conduct your own theoretical or empirical analysis.

After having worked on your thesis for about ten days, 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 Bachelor's thesis. You will then get feedback on the literature you have chosen and whether the overall concept for your thesis is sensible and doable. After this meeting you are expected to continue working on your thesis mainly on your own, although further meetings can take place upon consultation.

On or before the last day of your work period you must hand in two hard copies of your thesis (hardback, immutable and machine-readable) at the examination office. In addition, please hand in your thesis on the same day via email to your advisor (.pdf **and** .doc/.docx/.tex).

2 General Guidelines

The main objective of a Bachelor's thesis is to demonstrate that you can work on a topic **independently and scientifically**. In your Bachelor's thesis, the context of your topic is of great importance. You are expected to cover your topic, or a specified aspect of your topic respectively, in a coherent and conclusive way. To achieve this, it is important that your thesis has a consistent line of argumentation.

At the start of the work on your thesis you should think about the topic in general. Why is it interesting? Why is it important? The answers to these questions should be the basis of your thesis and you should discuss them already in the introduction. Keep the central theme always in mind throughout the thesis. Every paragraph needs to be relevant for the discussion of your topic. You should abandon irrelevant topics, even though they might be near and dear to you.

Besides the content of your Bachelor's thesis, we will grade your use of appropriate language and correct spelling and punctuation. Keep in mind that you are writing an academic paper, i.e. choose a level of language that is appropriate for a scientific text. In general, it is helpful to ask someone else to read your text before handing it in. This is helpful even if (or especially if) the other person is not familiar with the subject. Finally, read the finished thesis several times over several days to improve the language and the writing.

Your Bachelor's thesis is your first longer academic work and therefore needs to meet academic standards (regarding citations, independency...). In case you do not feel sure about the handling of your sources or the appearance of your work, you can take the starting literature as guidance. The articles you receive from us will always meet the academic standards.

3 Structure and Length of the Thesis

Your thesis should have the following structure:

- Front Page
- Table of Contents
- Possibly: List of Abbreviations, List of Tables, List of Figures
- Main Text
- Directory of all used tools and acknowledgment
- List of References
- Appendix
- Declaration of Authorship

The **main part** of your thesis must have between **50,000 and 60,000** characters (with spaces; including footnotes; without appendix). Depending on the layout, number of formulas, tables, etc., the length of the thesis is approximately **30 to 35 pages**. If you exceed the number of characters substantially, we will lower your grade significantly.

Layout suggestion:

Font and Size:	Times New Roman (12pt), Arial (11pt), or similar. Footnotes should be placed at the end of the respective page (Times New Roman 10pt, Arial 9pt).
	Latex: Standard settings (apart from headlines and footnotes)
Spacing:	1.5 for the main text; full justification.
Margins:	3-3.5cm at all sides.

4 Guidelines on the Components of the Thesis

4.1 Front Page

The front page should include:

- Your name, date of birth, matriculation number
- Type of work: Bachelor's thesis
- Field of studies and semesters studied
- Title of your thesis in German and English (needs to be identical with the registration title)
- Catholic University of Eichstätt-Ingolstadt
- Department and chair
- Name of the professor supervising the thesis
- Date of submission

4.2 Table of Contents

At the beginning of the thesis there should be a table of contents with corresponding page numbers. The subdivision of sections should be in relation to the length of your thesis, i.e. two or three levels are usually enough. The headings of the sections and subsections are supposed to be meaningful and should represent the line of thinking of your Bachelor's thesis. If you divide a section, it needs to have at least two subsections (e.g., after 1.1 there is always 1.2). The headings of sections and subsections in the table of contents must be identical to the headings in the text. The table of contents should include the page number (right-aligned), referring to the page on which the section begins.

4.3 List of Abbreviations

Use abbreviations sparingly. A list of abbreviations is only necessary if you make use of abbreviations that are not listed in a dictionary. If you create a list of abbreviations, it must consist of all abbreviations not contained in a dictionary. You need not specify parameters and variables of economic or econometric models in the list of abbreviations.

4.4 List of Tables, List of Figures

You need to create a particular list if you use multiple tables or figures in the text. All tables and figures have to be listed with the same title as in the main text. All tables and figures have to be consecutively numbered and state their source explicitly (see section 5.2). The corresponding page numbers have to be right-aligned. In general, you have to use a new page per list.

4.5 Text

This section consists of the introduction, the main part and the conclusion.

Put special emphasis on your **introduction**. It should

- motivate the topic (Why is the specific topic important, interesting and attention-grabbing?).
- narrow down your topic (What does your thesis deal with? What does it not deal with?).
- provide a short overview of the relevant literature that goes beyond the few intensively discussed papers in the main part.
- summarize the most important findings of your thesis.
- explain the structure and central theme of your thesis.

The **main part** should provide a well-rounded discussion of your topic. In the course of this, you should present and discuss the main findings of your starting literature. It is important that the different parts of your thesis work well together. It helps to explain 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 may be helpful, but focus on the most important aspects.

In choosing further literature (in addition to the references given to you) you are mostly free to focus on those articles that you find most important or relevant for the topic of your thesis. 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 peer-reviewed 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. Check if the working paper has been published (if it is published, you should use the published version!). It is also possible to complement your starting literature with your own independent empirical or theoretical analysis.

Use your own words when explaining the argumentation of another author. The closer your explanation is to the argumentation of the original literature, the harder it is to document your own work. By reasonably **cutting down** your starting literature, you can show your understanding of the topic. Carefully weigh which of your findings are of no importance and thus not noteworthy, which findings are of low relevance and thus should only be introduced briefly and which findings play a central role.

Importantly, you should provide a **detailed intuitive explanation** for the results of the papers that you are using in your thesis. In addition, make sure to point out the **implications for economic policy**.

Furthermore, a critical examination of your findings is important. To do so, you need to be familiar with alternative approaches to your findings. Besides the literature discussed in detail, you need to present other important findings from the literature. This is also the reason why there is a minimal number of entries in a proper Bachelor's thesis (compare 4.7).

Summarize your findings in the **conclusion** and provide the reader with a short outlook. You can derive policy implications from your thesis or point out the need for further research on some specific questions. Your conclusion should not exceed two pages.

For all parts of your Bachelor's thesis, it holds that you have to base statements and assessments on arguments and not on simply referring to sources that advance this specific view.

4.6 Directory of all used tools and acknowledgment

At the end of the thesis, an acknowledgment of the individuals involved and a directory of all used tools must be included. In the first part, all individuals who contributed to the work must be listed, and the types of assistance provided (in addition to any expressed gratitude) must be explained. This includes, for example, all individuals who provided an introduction to the topic, explained the functioning of software, supplied data, and anyone who proofread the text and possibly contributed corrections. This listing is not exhaustive! In the second part, you must list all tools and software used and specify their respective purposes. This includes tools for spell-checking and grammar verification such as Grammarly, artificial intelligence like ChatGPT or similar, as well as used software such as R, Python, or Stata. Also, specify for each what the software was used for.

4.7 List of References

The list of references has to contain all references included in your paper. References not included in the text should not be included in the list of references. Generally, the list of references of a Bachelor's thesis should contain at least 10 entries. A good Bachelor's thesis' list of references usually contains 15 to 20 entries.

Order publications alphabetically by authors. If you used more than one publication by a single author, you have to list the publications chronologically according to the dates of publication. Should an author have more publications within the same year, distinguished them by small letters (e.g. Slemrod, 2006a, and Slemrod, 2006b). The key to a good list of references is consistency in design and complete presentation of all relevant information (all authors, complete title, year of publication, if applicable edition, volume number of the journal ...). Here are some examples:

■ Articles in an academic journal:

Chair of Economics, esp. Public Economics ▪ Prof. Langenmayr ▪ <https://www.ku.de/wfi/vwf>
 Chair of Economics, esp. Macroeconomics ▪ Prof. Wiederhold ▪ <https://www.ku.de/wfi/makro>
 Chair of Economics, esp. Microeconomics ▪ Prof. Danzer ▪ <https://www.ku.de/wfi/mikro>

Buettner, T., M. Overesch, U. Schreiber and G. Wamser (2012): The Impact of Thin-Capitalization Rules on the Capital Structure of Multinational Firms. *Journal of Public Economics* 96, 930-938.

■ **Working papers:**

Ruf, M., and A. Weichenrieder (2013): CFC Legislation, Passive Assets and the Impact of the ECJ's Cadbury-Schweppes Decision. CESifo Working Paper No. 4461

■ **Chapters in edited volumes:**

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

■ **Books:**

Slemrod, J. and C. Gillitzer (2014): *Tax Systems*. MIT Press, Cambridge (MA, USA).

■ **Web pages:**

Daniel Davies (2016): Gaps and holes: How the Swiss cheese was made. Published on April 8, 2016, <http://crookedtimber.org/2016/04/08/gaps-and-holes-how-the-swiss-cheese-was-made/>, last accessed on June 22, 2016

4.8 Appendix

Make sure to integrate calculations, tables, graphics, etc., necessary for the understanding of your paper in your main text. Only use an appendix for information that is not essential for the understanding of the text, but may be of interest for the reader. The appendices should be listed in the table of contents. You have to tell the reader when to refer to which appendix. To do this, include a reference to the appendix ("see Appendix 1") at the relevant place in the text. Scrutinize whether an appendix is really necessary. Your appendix should not exceed five pages.

4.9 Declaration of Authorship

Every thesis has to contain a declaration of authorship signed by the student. You could use the following phrasing:

I affirm that I wrote this master's thesis without any unauthorized third-party support. I indicated all used references and resources. I referenced all quotes and citations properly. I have not previously presented this work to another examination board and I have not yet published it.

5 Formalities

5.1 References

The **careful documentation of sources** is crucial for an academic paper. Whenever you draw on the work of another person or institution with new thoughts, you must document your source (try to cite the author who has expressed it first). You do not have to cite standard knowledge from textbooks or scripts. The relation between the reference and your own reasoning should be apparent from the context. Often this requires an additional explanation, for example, "A critical review of some of the most common empirical methods used to measure the magnitude of tax evasion can be found in Slemrod and Weber (2012)."

Use short citations, i.e. the Harvard citation system since this is standard practice in economics. In the text, refer simply to the last name of the author(s) followed by the year and, if necessary, the precise page number. Then there is no need for a footnote. For example:

- An alternative approach is discussed by Boadway et al. (1998). The authors show that ...
- ... (see Wolff 2010).
- The pioneering study by Feldstein (1976) found a...
- Whinston (1983, p. 16) shows that...

If you want to make **comments or add explanations** in addition to the reference, use a footnote. In particular, you can use footnotes to give an example to a general statement, or to point out a fundamentally different opinion, which is not further investigated. Your reader should understand the text without reading the footnotes. If a footnote refers to a word, place the footnote behind this word; if it refers to a sentence, place it after the full stop. If an entire paragraph is based on a reference, you can clarify this with a footnote at the end of the paragraph (e.g. "See Desai et al. (2004)."). Each footnote is a complete sentence.

Verbatim quotations are usually unnecessary and you should not use them to avoid formulating your own expression. Therefore, use verbatim quotations **very sparingly** and only where the author makes an especially memorable statement. Verbatim quotes are to be marked with quotation marks. If you remove or modify words in a quote, you have to label this change. Identify minor omissions by two points (one word) or three points (two or more words). If your thesis is in German, you do not have to translate English text when using verbatim quotations.

In the case of verbatim quotations, always specify the relevant page number within the source that you are citing. In the case of indirect quotations that relate to a specific part of the text also specify the page number. This is not necessary when summarizing the main findings of a source.

5.2 Figures, Tables and Equations

Number all **figures and tables** consecutively (e.g., Table 1, Table 2, Figure 1, ...). You have to refer to each figure or table in the text. Tables and graphs should be included in the body of the paper.

Do not use screenshots of tables (e.g., regression results) from the original article, but type them yourself. This allows you to only present the information that is relevant for your thesis. You can copy figures that contain specific data from the article (but quote the source!). If you have created a graph or table by yourself, then clarify it by "Source: own representation" or "Source: own

calculations" (possibly supplemented by "on the basis of ..."). State the data sources that you have used to compile graphics and tables.

Tables and figures should have a caption. Explain their content in the text. Think about appropriate units, e.g. use percentages (it is often easier to understand a number as 2.3 percent rather than 0.023).

Use a formula editor (integrated in all regular word processing programs) to write **equations** by yourself. Never use screenshots of equations from the article. All equations should be indented and numbered. Since your thesis should be understandable without reading the original article, you must clearly define all the **symbols and variables** that occur in the equations. Make sure that the reader can understand everything without looking at the original papers that you discuss in your thesis.

6 Literature Research

You must base your thesis on academic literature, which is mostly in English in the field of economics. To find relevant literature you can use for example Google Scholar or EconLit. Also, the list of references of your starting literature may help you to find further relevant articles.

Make sure that you use the most recent version of a paper. If you find an interesting working paper, check if it is already published (e.g., on <https://ideas.repec.org> or the author's homepage). You can find published articles in the "Electronic Journals Library" on <http://www.ku.de/bibliothek/>. Try to assess the quality of any work before using and citing it, for example by looking at journal rankings (e.g., Handelsblatt) or the impact factor.

We wish you every success with your Bachelor's thesis!

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