Chair of Public Economics

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# **Guidelines for Writing a Thesis Paper**

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#### 1. Introduction

In this guideline we will describe what a thesis paper should look like. These are some basic clues on writing term papers, bachelor, master or diploma theses. You should interpret them as a minimum requirement rather than an exhaustive manual. For more details on how to write good scientific papers you may want to consult one of the references given in chapter 8. Please make sure you use the most recent version of the guideline as indicated in the footer.

First of all, you should be aware of what the aim of the thesis paper is: You are supposed to show that you are able to choose, structure and develop an economic topic on your own. This requires you to search for and find the relevant literature as well as apply and extend your knowledge of economic concepts and methods.

Here we will make you acquainted with the knowledge you should have and the requirements you need to fulfil in order to write your thesis paper with the Chair of Public Economics. Then we will address content-related issues and formal requirements of a thesis paper. Also we will specify in this paper the organizational procedure of registration and will address questions of time management.

# 2. Personal Requirements

You should have acquired a basic knowledge of economic theory and methods regarding your topic before you register your thesis with us. Also you should be willing and able to fully commit to your topic for three to four months.

Please note that we may limit the number of thesis papers supervised by the chair in the case of too many applications.

Please make sure that you thoroughly familiarize yourself with citation managers like Citavi or Zotero BEFORE you start working on your thesis. Please also note that the University Library (Zentralbibliothek) offers courses regarding the search for literature, citation techniques and Citavi.

#### 3. Content-related issues

# Choosing a topic

Please keep in mind the core research areas of the chair when choosing a topic that you want to be supervised by the Chair of Public Economics. In general, we expect you to come to us with suggestions of possible topics. Narrowing down a topic can be done with your supervisor once the chair has agreed to supervise your thesis.

Choosing a topic is already a part of your accomplishment! It is also your opportunity to show that you can work on your own using a scientific approach and develop as well as relate scientific questions to one another. Choosing and developing a scientific question will take up some time, so make sure that you start working on your topic before you get in touch with the chair. On the other hand, you should be aware that working for seven months on a thesis that is laid out for a four months period will not lead to a better thesis paper.

We want to publish the topics and the students that write their thesis with us on the Chair's website. If you do not wish to be on this list please let us know when registering your thesis paper.

# **Finding Literature**

Finding literature for your thesis paper is a central aspect of your accomplishment. We expect you to find all the relevant literature regarding your topic. However, this does not mean that you have to cite and read *all papers in detail!* But you should be able to cite and explore in greater detail the most influential and relevant ones.

Start your search for literature using databases like *Business Source Premier I Econlit* which you can access via the website of the university library from the university network. Please note that these databases primarily serve the purpose of finding relevant papers but not every paper can be downloaded from the database. You will need to search for the actual paper (once you know the title, author, journal, etc.) in *JSTOR* or *Google scholar*. If no online version is available you can search for the printed version of a journal using the *EZB - Elektronische Zeitschriften* via the website of the university library.

You should primarily quote current academic literature. Newspapers and magazines are not considered appropriate literature but can in some cases represent a source of empirical data or public opinion. Periodicals and books addressing practitioners and encyclopedia or reference books are not considered appropriate literature either, except for selected definitions. Publications from associations and corporations, in particular those published on the web, need to be considered with care. Wikipedia entries and lecture notes are not considered academic references!

Be aware that you cannot read all the literature you find in detail. Focus on the most relevant titles that are closest to your topic and study them carefully and in detail. It is often sufficient to only read the introduction and conclusion of articles that are only indirectly related to your topic. While searching for literature please keep in mind that you are writing a scientific paper! Thus your literature should be scientific, too.

## Content of your thesis

When writing your thesis paper you are becoming a part of the academic discourse while using scientific literature and perhaps even making a contribution to it. Your paper should address a professional audience, i.e. people that have a university education in economics. Nevertheless, you should make sure that you carefully explain the theories and methods you are describing or using in your thesis paper. If you thesis will be an empirical paper, make sure to carefully and thoroughly document the methodology you use.

The minimum requirements for a thesis paper are to give an overview of the literature and to summarize and relate its arguments correctly.

A good thesis paper is also characterized by a coherent and interesting structure, by developing sub-questions, for example. In empirical papers the theory should be explained well and based on that theory a question/hypothesis is developed and tested. In theoretical thesis papers empirical implications and existing work should be addressed and summarized.

A very good thesis paper further makes a contribution to the literature, by, for example, estimating an existing model but with different data or by doing various robustness checks.

#### 4. Formal Requirements

MS Office Word is commonly available on all university computers and can be upgraded with special software, such as MathType, which allows you to type mathematical expressions. A more professional editing software is LaTeX. You are not required but strongly encouraged to make yourself familiar with LaTeX.

A thesis consists of the following elements, in the corresponding order:

#### Front cover

The front cover should contain the following information (see front cover of this paper):

- i. Complete title of the chair(s) supervising the thesis
- ii. Name of supervisor(s)
- iii. Title of the thesis
- iv. Name, address, phone number, email address, course of studies, university, student number, and number of semesters

Please note that there is *no page number* on the front cover!

#### Table of contents

The table of contents indicates all elements of the thesis, except the front cover, and all chapters, sections and subsections of the main body with the section number, the section heading, and the page where the section starts. In Microsoft Word you should use the automatic creation of the table of content. An example is given at the beginning of this paper. Please note that there is *no page number* on table of contents!

# List of abbreviations (optional)

The list of abbreviations includes all abbreviations used in the main body in alphabetical order (e.g. WTO – World Trade Organization). Commonly used abbreviations such as e.g., incl., etc. do not have to be included. Pages of the list of abbreviations are not part of the main body of the text. These pages are numbered with Roman numerals.

#### List of symbols (optional)

The list of symbols includes mathematical symbols or variables used in the main body with their respective definitions. Pages of the list of symbols are numbered with Roman numerals and indicated in the table of contents.

# List of figures (optional)

The list of figures includes all figures in the main body or appendix, indicating the number of the figure, the title, and the page on which they can be found. Pages of the list of figures are numbered with Roman numerals and indicated in the table of contents.

# List of tables (optional)

Like the list of figures, but for tables.

#### Main body of the thesis

The main body of the thesis is divided into chapters, sections, and subsections which have meaningful titles. The number of chapters and sections and the depth of the hierarchical structure should be proportionate to the length of the thesis. The length of each chapter should reflect its importance within the thesis.

The main body of the thesis starts with an introduction which motivates the topic and points out its relevance. It shortly addresses the current state of research and relates your topic to the existing literature. It gives a preview of the main insights, and briefly outlines the structure of the thesis. The subsequent chapters and sections present and discuss the main arguments in a logical and consistent order. The conclusion summarizes the key results. It gives a critical assessment of the content of the thesis and an outlook.

Throughout the thesis, make sure that the reader can follow your train of thoughts. Explain formulae, figures or tables in the main text. Provide economic intuition for your key results. Be clear and concise. Use professional technical terms and avoid colloquial expressions. Choose an appropriate style and use correct grammar and orthography. You may use either American or British English, but be consistent! Try to put yourself into the perspective of the reader.

A typical diploma thesis contains max. 40 pages (bachelor thesis 20 pages, master thesis 40 pages). This number refers only to the main body of the thesis, excluding the front cover, tables of content, appendices, references and the appendix. Large figures or tables in the main body do not count either, so if you include many figures, your diploma thesis may well exceed 40 pages. Choose font Times New Roman or Arial, font size 12pt, line spacing 1,5. For footnotes, choose font size 10pt, single-spaced. Set margins to 2.5 cm at the right, left, top and bottom. Please use justification and print the thesis one-sided.

Please use footnote ONLY for comments that would distract the reader from the main thoughts or flow of arguments. Important arguments are developed within the main body of the thesis, unimportant thoughts or arguments do not appear in the thesis at all. Do NOT CITE using footnotes!

#### Appendix (optional)

In the appendix, you can provide additional material, such as a detailed description of the data set which is used, further tables and figures, or detailed proofs of theorems and propositions. Anything that is not essential to understand your arguments in the main text, but nevertheless important enough to be mentioned, may be relegated to the appendix.

# References/List of Publications

The references indicate all sources cited in the main body or appendix, including the sources of figures or tables, in alphabetical order according to the surname of the author, and, if there are several sources of one author, in chronological order. If there are several sources of the same author in a given year, you can indicate this with small letters (e.g. 2001a, 2001b). The

references do not include literature that has not been cited. Different types of documents require different citation. Here is a list that should serve for orientation, following the *APA Style*, *6th Edition*:

#### i. Journal articles

Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity, *Econometrica*, *71*(6), 1695-1725.

#### ii. Articles in edited volumes

Chaloupka, F. J. & Warner, K. E. (2000). The economics of smoking. In: Cuyler, A. J. & Newhouse, J. P., editors, *Handbook of Health Economics*, 1539-1627. North-Holland, Elsevier Science B. V., New York.

#### iii. Monographs

Camerer, C. F., Loewenstein, G. & Rabin, M. (2004). *Advances in Behavioral Economics*. Princeton University Press, Princeton.

# iv. Working papers and unpublished manuscripts

Blum, B. S., Claro, S., & Horstmann, I. J. (2011). *Intermediation and the nature of trade costs: Theory and evidence*. Working paper, University of Toronto.

Mishkin, F. S. (1994). *Preventing Financial Crises: An International Perspective*. (NBER Work-ing Paper no. 4636.8).

# v. Resources from the internet

Food and Agriculture Organisation (2008). The nutrition transition and obesity. Retrieved March 8, 2017 from http://www.fao.org/focus/e/obesity/obes2.htm.

In your list of publications please do not order the publications by document type but only in alphabetical order as indicated above!

#### 5. Citation

Any use of foreign intellectual property must be indicated. The source of any argument or idea that is not your own must be clearly identifiable. Be aware that plagiarism is a serious issue and will have serious consequences.

Please quote within the text (Melitz, 2003, p. 3), <u>not in footnotes</u>, and be consistent throughout the thesis. We recommend using *APA Style*, *6th Edition* as citation format, but you are free to use any other format, as long as it incorporates all necessary resources and is consistent throughout the whole work.

If you cite work by more than two authors use the first author followed by "et al." (Blum et al., 2011).

If you only generally refer to a title you indicate the author and the year of publication. For example Haselmann (2007) shows that....

If you refer to a specific argument in a title (which should be so in most cases) you indicate the author, the year of publication and the page the argument was taken from. For example Hausman and Mariusz (2012, p. 32) conclude that....

Please do not rely on secondary quotations but always consult the original source!

For direct quotations, use quotation marks and indicate the exact page number of the quoted sentence, for instance "...the exposure to trade induces only the more productive firms to export while simultaneously forcing the least productive firms to exit." (Melitz, 2003, p. 1695). If direct quotes exceed a length of three lines you may additionally indent the quote. If a word is left out, this has to be indicated by two dots (..), if more than one word is omitted, this has to be indicated by three dots (...). If you insert additional text to the direct quote, this has to be indicated by placing it in [brackets]. Longer direct quotations should be indented and displayed in a separate paragraph. Use single quotation marks to set off material that was enclosed in double quotation marks in the original source (quotations 'within' a quotation). Only when the original text is not available, a secondary source should be quoted. In this case the reference to the source should also include the secondary source, which should be indicated with "quoted in...". Indicate if you have translated a quotation from a foreign language. Generally, you should use direct quotes sparingly. Rather, you should rephrase arguments taken from the literature in your own words, of course not forgetting to indicate the original sources.

If you borrow figures or tables from other sources, you must indicate the author, year and page below the title of the figure or table and include the source in the list of references. If you use data material to create your own graphs and tables you have to state the source of data. For example: World Bank, WDI

All titles you use in your thesis have to appear in the list of publications at the end of your thesis, but no others!

## 6. Schedule

The Chair of Pubic Economics supervises Master theses. If you consider writing your thesis at out chair, please make sure of the following:

- 1. Before submitting your application at our chair, make sure that you fulfill all requirements set out in the *Prüfungsordnung*.
- 2. Topics for theses are handed out or accepted every quarter. You can also apply with your own suggestion for a topic. The application procedure contains **two steps**.
- 3. In the **first step** you are required to submit your application by Email to the secretary of the chair (<u>ls\_schunk@uni-mainz.de</u>). It should include the following information: your degree course, the number of semester you have been studying, the courses you have taken at the chair (lectures and seminars), your area of interest, your suggested topic for your thesis (if you have one), an up to date extract of your grades, and a CV. The submission deadlines for the first step are Nov 1 (for theses starting in the first quarter of the following year), Feb 1 (for the second quarter of the year), May 1 (for the third quarter of the year), and Aug 1 (for the last quarter of the year).
- 4. If your application has been submitted on time, you will be contacted within two weeks after the deadline. We will either suggest you a topic or discuss your own suggested topic with you.
- 5. In the **second step** of the application procedure you are required to draft an Exposé based on the discussed topic. The submission deadlines for your Exposé are Dec 1 (for the first quarter of the following year), Mar 1 (for the second quarter), June 1 (for the third quarter), and Sep 1 (for the last quarter). Please hand in a printed version at the secretary of the chair and send an electronic version (PDF) to <u>ls schunk@unimainz.de</u>
- 6. After having received your Exposé you will be notified of the success of your application. Since chair receives many applications, we reserve the right to decline your application.
- 7. If you are accepted, you are required to start your thesis at the beginning of the quarter that you applied for.
- 8. Once you have registered your thesis you will be given a deadline. Please submit two bound printed versions of your thesis paper to the Prüfungsamt and an electronic version (MS Word <u>and</u> pdf format!) to the chair via <u>ls\_schunk@uni-mainz.de</u>. If your thesis includes an empirical part please also submit the relevant STATA-Do-Files, STATA-Log-Files, Excel-Dateien, MatLab-Code etc.
- 9. We strongly recommend that you make a written schedule of your work on the thesis project. This way it is easier for you to see when you should be done with the literature search, review, first draft, and so forth.
- 10. Please do not register an empirical thesis before you have a complete dataset!
- 11. The first month of your work on the thesis typically consist of reading, reading more and then reading a lot more. By the end of the first month you should have a clear

structure on paper and already some rough idea which arguments you will be discussing in which chapter. The time between the first and the last month you spend on getting deeper into the topic, developing your thoughts and arguments and maybe doing the empirical work. By the beginning of the last month of your work you should be ready to do the "fine tuning", i.e. writing out the last bullet points, proof reading, sending it to friends & family for proof reading, etc.

## 7. Seminar Papers

Seminar participants will be given a topic. Other content-related requirements remain the same, however, on a smaller scale. The formal requirements are the same as for thesis papers, except the length of your seminar paper, which will be announced in class.

# 8. Concluding remarks

In this paper we have explained what a good thesis paper should look like regarding content and formal requirements. If you any doubts on how to proceed with your paper consult one of the references below. If you still cannot find an answer to your question contact your supervisor with a precise question.

#### 9. References

Here are some further references on writing a thesis which you may find helpful:

- Eco & Umberto (2007). Wie man eine wissenschaftliche Abschlussarbeit schreibt: Doktor-, Diplom- und Magisterarbeit in den Geistes- und Sozialwissenschaften. *UTB Verlag*, Heidelberg.
- Franck, N. & Stary, J. (2006). Die Technik wissenschaftlichen Arbeitens. *Schöningh Verlage*, Paderborn.

Neugeboren, R. (2005). The student's guide to writing economics. Routledge, New York, NY.

McCloskey, D. N. (2000). Economical writing. Waveland Press, Long Grove, IL.

Rossig, W. E. and Prätsch, J. (2006). Wissenschaftliches Arbeiten. *Teamdruck*, Weye.

Sesink, W. (2007). Einführung in das wissenschaftliche Arbeiten. *Oldenbourg Verlag*, München.

Thomson, W. (2001). A guide for the young economist. MIT Press, Cambridge, MA.

Turabian, K. L.; Booth, Wayne C. (2011): A manual for writers of research papers, theses, and dissertations. Chicago style for students and researchers. 7. Ed., *Univ. of Chicago Press* (Chicago guides to writing, editing, and publishing), Chicago, Ill.

Theisen, M. R. (2006). Wissenschaftliches Arbeiten. Verlag Vahlen, München.