Master's Thesis Guide for the Master's Program "Political and Empirical Economics"

June 2016

This guide is based on the experience gathered in supervising Master's Theses in the field of economics at the University of Graz. Because economics comprises many different subfields using both theoretical and empirical methods, your supervisor may have additional or deviating expectations from the ones described below. Please clarify these expectations with your supervisor at the outset!

1. Aim and Topic of the Thesis

The thesis is an academic publication and should demonstrate that the student is able to independently analyze an economic problem by means of one or several economic methods. This entails to apply a theoretical or an empirical economic model to the problem or to provide a balanced review of the relevant literature. The thesis should also clarify how it contributes to the literature.

Thesis supervisors need to hold the degree of Habilitation in economics or a related field, the list of potential supervisors at Institute of Economics and Institute of Public Economics is available on the following website:
https://fachbereich-volkswirtschaftslehre.uni-graz.at/de/studieren/masterarbeiten/.

There is no legal right to a particular supervisor. Each faculty member will support students in finding a suitable supervisor for their thesis.

Depending on the supervisor, students can choose their topic freely or select from a list of topics. The current list of topics and links to completed master theses are also available on the master's thesis website.

Note that the thesis has to present new and original findings. It is not allowed that the candidates reuse text from e.g. seminar papers or previous thesis for which they obtained ECTS credits.

2. Structure of the Thesis

Length: max. 60-70 pages (18.000 – 21.000 words) for the main text; excluding cover page, abstract, table of contents, references, appendices (if applicable). Theses that entail the development of a mathematical model will tend to be shorter than those that use e.g. applied econometrics or descriptive statistics.

Suggestions for layout

There is no formal requirement on the layout of your master thesis, as long as clear readability is ensured. However, the following specifications have proven meeting this requirement;

Page format: DIN A4

Margins - if single sided: top: 2.5 cm, bottom: 3 cm, left: 4 cm, right: 2.5 cm

Margins - if double sided: top: 2.5 cm, bottom: 3 cm, inside: 4 cm, outside: 2.5 cm

Footer: 1.5 cm from the bottom

Page numbering: in the footer, on the right, page 1 starting with the Introduction =chapter 1

Font: Times New Roman 12pt or Arial 11pt

Spacing: running text in general 1.5

Paragraph alignment: justified

Footnotes: superscript numbers in the running text; footnote at the end of the page

Headings / sub-headings: differentiation through font size, bold, italics

Suggested General Structure of the Thesis

There is no formal requirement to follow the suggested structure, but it can serve as a starting point to accommodate to your specific needs.

Frontmatter (not numbered)
- Cover page (see template provided by SOWI website)
- Author's declaration
- Abstract (Englisch)
- Abstract (German)
- Acknowledgments *(optional)*
- Table of Contents

Main matter (numbered)
1. Introduction
   What is the problem which you address in your thesis?
   Why is this an important research question?
   How will you analyze this topic?
2. Literature review
   How has this topic been addressed in the literature?
   What are the findings in this literature?
   How can you identify a research gap which you intend to fill?
3. Methodology / Model description
   How do you examine this research topic?
4. Results
   What are the main findings of your research?
5. Discussion (can also be combined with the results section)
   In what ways do your findings modify/add to the existing literature?
6. Conclusions
   What are the theoretical or policy implications of these findings?
   Do you have ideas for future research directions on this topic?

Note: chapters 3-5 can be split in several chapters!

Backmatter:
- References
- Appendix *(optional)*
  e.g. description of datasets; robustness checks of econometric analysis; model code of your CGE model.

3. Quotation and Bibliography

Whenever you use work of others to support your argument, you need to provide a quotation directly afterwards, i.e. at the end of the sentence or the end of the paragraph, if the whole paragraph is based on one source.

In most instances, work of others is quoted in paraphrased form (not verbatim). This means that you need to summarize the findings in your own words, not just exchanging a single word of the original sentence or to change the order of words.

Sometimes, you will need to use direct quotation, for instance for definitions or if it is important to give the quote in the specific words of the author. In general, direct quotation is used more commonly in theses in the field History of Economic Thought than it is used in other fields of economics. For short direct quotations, italics are used as well as quotation marks ("…"). Direct quotations that are five lines or longer are set off the text and indented on both sides.

For each indirect quotation, the name(s) of the author(s) and the year of publication needs to follow the statement, usually in parentheses at the end of the sentence, e.g. (Smith 1767). For each direct quotation, the page number of the source needs to be provided in addition to the name of the author(s) and year of publication, e.g. (Smith 1767, 3).

In case of two authors, state both of the authors, e.g. (Pindyck and Rubinfeld 2015), for three and more authors use et al., e.g. (Krugman et al. 2015). If the same author has published several books or articles in a year, use lower-case letters after the year to distinguish between them, e.g. (Krugman et al. 2015a).

The complete reference for each source cited in the text needs to be provided in the bibliography. This includes books, journal articles, scientific reports, newspaper articles, internet texts. All references are ordered in alphabetical order. Each source in the bibliography must also be used at least once in the text. The bibliography style should follow the standards used in economic journals such as American Economic Review or Journal of Political Economy. We highly recommend to use library software such as CITAVI or ZOTERO to ensure consistency.

4. Timing and Deadlines

The master thesis should be completed within 6 months after agreement with your supervisor on the topic. Here is a tentative timeline.

Weeks	Description	Responsibility
Week 1 (3 weeks before start of the semester)	Meeting with potential supervisor, agreement on a topic	Register for master thesis colloquium
Week 4	Drafting of **thesis proposal** (see below for details), find agreement with your supervisor on it	Submit signed form "Antrag auf Genehmigung des Themas einer Masterarbeit bzw. der Betreuerin/des Betreuers" to SOWI Dekanat
Week 8	Preparation of **final thesis outline**, presentation of it in master thesis seminar	Presentation and discussion of outline in master thesis seminar
Week 12	Submission of key part of the thesis (e.g. modeling & results)	Feedback of supervisor within 2 weeks
Wee 16	Submission full draft version of the thesis (main part)	Feedback of supervisor within 2 weeks
Week 20	Submission of revised draft of the thesis, including introduction, conclusion, abstract	Feedback of supervisor within 2 weeks
Week 24	Submission of final version of the thesis	

Parallel to the **registration for the master thesis colloquium** which is usually open 3 weeks before the start of the semester, students must apply to their potential supervisor for a particular topic. Topics are available at https://fachbereich-volkswirtschaftslehre.uni-graz.at/de/studieren/ masterarbeiten/. Candidates can also draft their own proposal and discuss it with their potential supervisor. When contacting your potential supervisor(s), please provide a **list of your preferred topics and indicate which topic is your first, second and third choice**. At the end of the application period (=first week of the semester) the topics are allocated. This guarantees a smooth start and the best possible support by the master thesis colloquium.

After agreement with your supervisor on a topic, you will be asked to draft a thesis proposal. The **master's thesis proposal** is intended to have a scope of two to three pages and to clearly outline the planned thesis. It is not part of the thesis itself, but a separate exposition of the topic and the necessary procedure, including title, structure, subheadings, methods, key literature, and a roadmap (timeline). When your supervisor agrees to your thesis proposal, she/he will sign the form of approval for writing a master's

thesis (Antrag auf Genehmigung des Themas einer Masterarbeit bzw. der Betreuerin/des Betreuers).

The **final master's thesis outline** contains the title and subtitle of the thesis (as precise as possible), a concise statement of the central research question or hypothesis, the state of the art (description of the current knowledge in the field of your thesis), a description of the planned methodical approach, documentation of the available data and/or the data gathering procedure, a summary of the expected results, and a list of the most important literature used.

The master's thesis colloquium aims at supporting the writing of the master thesis. It is therefore essential, that students have submitted the "Bekanntgabe des Themas einer Masterarbeit" within the first four weeks of the semester. If you fail to do so, you will need to take the seminar in the subsequent semester. During the semester, students will present their final master's thesis outline in a 15-20 minutes presentation in the first half of the semester, and their draft or revised draft version of their master's thesis in the second half of the semester. It is highly recommended that supervisors are present during this presentation. Students are required to incorporate feedback they obtain in discussion in their thesis.

5. Further Readings

There is a wide range of literature on academic writing and economic modeling available, such as:

Andermann, U., Drees, M., Grätz, F. (2006) Duden – Wie verfasst man wissenschaftliche Arbeiten? Ein Leitfaden für das Studium und die Promotion, 3. Auflage, Bibliographisches Institut, Mannheim.

Bailey, S. (2014) Academic Writing: A Handbook for International Students, 4th ed., Routledge, Abingdon.

Kornmaier, Martin (2009) Wissenschaftlich Schreiben leicht gemacht für Bachelor, Master und Dissertation, 2. Aufl., Haupt Verlag UTB, Bern, Stuttgart, Wien.

McCloskey, D. (1985) Economical writing: An executive summary. Economic Inquiry 23(2), 187-222.

Thomson, W. (1999) The Young Person's Guide to Writing Economic Theory. Journal of Economic Literature 37(1), 157-183.

Thomson, W. (2011) A guide for the young economist, 2nd ed., MIT Press, Cambridge, MA.

Varian, H.R. (2009) How to build your own model in your spare time, http://people.ischool.berkeley.edu/~hal/Papers/how.pdf, accessed April 15, 2016.

Weiss, M., Newman, A.M. (2011) A guide to writing articles in energy science, Applied Energy 88(11), 3941-3948.

Whitehead, J. (2010) Economical Writing, Environmental Economics: The Cromulent Economics Blog, http://www.env-econ.net/2010/03/economical-writing.html , accessed Feb 13, 2015.

6. Evaluation Criteria for Master's Thesis

Grade	Criteria
Excellent / Sehr gut:	A master thesis graded „Sehr Gut" is significant in terms of originality, in its innovative character and displays a remarkable gain of knowledge. **Content:** The **research question / topic** is defined precisely and concretely and is innovative. The applied **methods** are state-of the art and all parts of the model are clearly described. The **analysis** is rigorous and the **results** are described in a replicable way. The thesis provides an **independent perspective and personal understanding**. The presented information is accurate, comprehensive and balanced. **Style, structure and quotation** comply with the standards of scientific writing.
Good / Gut:	A master thesis graded "Gut" is adequate in terms of its information value and displays a reasonable, yet confined, gain of new knowledge. Content: The research question/topic is accurately specified. The analysis of the topic provides a good overview and clearly exceeds a mere description and compilation of facts. A personal perspective on the topic is identifiable and appropriately argued.
Satisfactory / Befriedigend:	A thesis of this grading level provides an average and appropriate examination of a specific topic, however merely supplying an overview and lacking in-depth analysis and argumentation at large. The thesis stays vague at parts, a significant part of the results and conclusions is not sufficiently elaborated.
Sufficient / Genügend:	A thesis of this grading level basically consists of an overview and compilation of literature concerning a topic, yet not specifically reflected. The thesis lacks a clear focus in general, but attempts going in that direction can be identified. Relevant information is merely presented in some parts of the work. Only rarely a personal position is outlined, an argumentative examination is not provided.
Fail / Nicht genügend:	A thesis of this grading level does not meet the requirements and criteria mentioned above sufficiently. Plagiarism or deficiencies regarding formal citation also lead to this grade .