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FB 03: Faculty of Law, Management and Economics
Chair of Statistics and Econometrics
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Semester (winter semester/summer semester) year (YYYY)¹

Guidelines for Writing a Bachelor Thesis²

Bachelor Thesis in the Bachelor Seminar "Formal Requirements"³

Submitted on: DD.MM.YYYY

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¹ All passages written in red need to be adjusted to your bachelor thesis. Please use black font on the entire cover page.

² This cover page serves as an example. At this position, you should state the title of your thesis.

³ This cover page serves as an example. At this position, you should indicate the type of the submitted work (seminar paper/bachelor thesis etc.) and, if applicable, the course in the framework of which your work has been prepared.

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1. Introduction

These guidelines describe the fundamental framework of a bachelor thesis. Please regard these guidelines as a minimum requirement rather than a comprehensive manual. Please make sure you use the **most recent version of the guidelines** as indicated in the footer.

You should first consider the **purpose** of preparing a **bachelor thesis**: you are expected to demonstrate that you can define, structure and develop an economic topic on your own. This requires you to search for and compile the relevant scientific literature (potentially in a foreign language) as well as to apply and extend your knowledge of economic concepts and methods.

We will first describe the prerequisites needed to write a bachelor thesis at the Chair of Statistics and Econometrics. In a second step, we will address content-related issues and formal requirements. Finally, we will specify the organizational procedure for writing a bachelor thesis at our chair.

2. Prerequisites

Methodological knowledge is a recommended prerequisite for writing a bachelor thesis at our chair. In particular, we assume that you have a basic understanding of econometric methods and theories. We expect you to discuss in detail the methods that are relevant for your thesis. For empirical theses, basic knowledge in using statistical software such as STATA is indispensable. Moreover, you should be willing and able to commit fully to your topic for 8 weeks.

Please familiarize yourself thoroughly with a citation manager software such as Citavi or Zotero **before** you start working on your thesis. Please note that the university library (Zentralbibliothek) offers courses regarding the search for literature and citation techniques.

3. Content-related Issues

3.1. [Choosing a Topic](#)

Generally, the topic of your bachelor thesis is assigned through your bachelor seminar. We expect you to analyze and discuss the arguments of the **assigned article** in detail, include **additional relevant literature** and conduct **your own data analysis**.

3.2. [Finding Literature](#)

Finding and compiling the scientific literature that is relevant for your topic is a central aspect of writing your thesis. However, you **should not cite all articles** that you find. Instead, you have to identify the **most influential** and **relevant ones**. Make sure that you are only using scientific literature!

A typical starting point in the search for literature are databases such as *Econlit / Business Source Premier*, 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 articles, but not every paper can be downloaded from these databases. You will need to search for the actual paper in *JSTOR* or *Google Scholar*. If no online version is available, you can search the printed version of a journal using *EZB – Elektronische Zeitschriften* via the website of the university library and copy the article.

You should primarily cite **current academic/scientific literature**. Non-scientific newspapers and magazines are not considered appropriate literature, but they can serve as a source for empirical data or public opinion in some cases. Textbooks, books addressing practitioners as well as encyclopedias or reference books are also not appropriate literature, except for selected definitions. Publications from associations and corporations - in particular, those published on the internet – should be used with caution. **Wikipedia entries and lecture notes are not academic references!**

Be aware that you cannot read all the literature you find in detail. Focus on the most relevant articles that are closest to your topic and study these carefully. It is often sufficient to read only the introduction and conclusion of articles in order to decide whether the article is sufficiently relevant for your work.

3.3. [Content](#)

When you are writing your thesis, you are taking part in the academic discourse. This means that you are using scientific literature and are perhaps even making a small contribution. Your paper should **address a professional audience**, i.e. people with a university education in economics. Nevertheless, you should make sure to explain the theories and methods you are using in your thesis thoroughly. As you are writing an empirical paper, make sure to document the methodology you use carefully and thoroughly. Please attach the program files (such as the STATA Do-Files used to prepare the dataset and to conduct the analysis as well as the respective STATA Log-Files) to your thesis in the appendix.

The minimum requirements for a bachelor thesis are to address all of the assigned tasks thoroughly and to submit a coherent paper.

A good thesis paper is characterized by a well thought-out and interesting structure, in which the different parts of the work are well connected. In empirical theses, it is first necessary to describe the theoretical aspects from which you can then derive testable hypothesis.

A very good bachelor thesis additionally shows a sound understanding of the economic relevance of the topic as well as of the relevant theories. Furthermore, you demonstrate a very good understanding of the econometric methods. The model you introduce is thought through. Strengths and weaknesses are discussed in detail. The results of your own empirical research are discussed in the context of the relevant scientific literature.

4. Formal Requirements

MS Office Word is commonly available on all university computers and can be expanded upon with special software, such as MathType, allowing 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 or with a LaTeX based text editor such as LyX.

Your bachelor thesis should consist of **18 – 20 pages** and should not exceed 20 pages. The page count includes only the pages of the main part of your thesis, **without** the title page, table of contents, other lists, references and the appendix. Large figures and tables in the main part of your thesis are also not counted, so that your thesis may be longer than 20 pages, if you are including many large figures and tables. Please include only relevant figures and tables.

Please use font type **Arial or Calibri** in **font size 11** with **1.5 line spacing**. For **footnotes**, use **font size 9** with **single line spacing**. Set **margins to 2.5 cm** at the right, left, top and bottom. Use justification for the text alignment and add page numbers. The page numbers start on the first page of the main body of your thesis.

Footnotes are **only** used for **comments** that would distract the reader from the main thoughts or the flow of the text. Important arguments have to be developed within the main body of the thesis, while unimportant thoughts or arguments do not appear in the thesis at all. **Please do not cite using footnotes.**

Make sure to check your thesis for **spelling and grammar mistakes** and use the spell check function of your text editor.

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

4.1. [Cover Page](#)

The front cover should contain the following information (cf. template front cover of these guidelines):

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

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

4.2. [Table of Contents](#)

The table of contents includes all the elements of your work, with the exception of the cover page. As a rule, the outline can contain up to three levels (chapters, sections and subsections) and has to include the title, chapter/section number, and the page where the chapter/section starts. In Microsoft Word you can (and should) use the automatic creation of the table of contents – be sure to update the table of contents at the end. An example is given at the beginning of this paper.

Please note that there is **no page number** on the table of contents!

4.3. [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. These pages do not count toward your page requirement. For the page number you should use **Roman numerals**, which also need to be included in the table of contents.

4.4. [List of Symbols \(optional\)](#)

The list of symbols includes mathematical symbols or variables used in the main body with their respective definitions. These pages do not count toward your page requirement. Use **Roman numerals** for these pages as well and include it in the table of contents.

4.5. [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 it can be found. These pages do not count toward your page requirement. Use **Roman numerals** for these pages as well and include it in the table of contents.

4.6. [List of Tables \(optional\)](#)

Cf. list of Figures, but for tables.

4.7. [Main Body of the Thesis \(text\)](#)

The main body of the thesis is divided into chapters, sections, and subsections, which have **meaningful titles**. Your **main arguments** should be introduced and discussed in a **logical and consistent order**. 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.

Throughout the thesis, make sure that the reader can always follow your train of thoughts. Refrain from using very long paragraphs – a paragraph should only contain one thought. Explain formulae, figures and tables in the main text. Please remember to label figures and tables and indicate the meaning in case any symbols such as ** are included.

Be clear and concise. **Use scientific language** and **avoid colloquial expressions**. Choose an appropriate style and use correct grammar and spelling. You may use either American or British English, but be consistent! Always try to put yourself into the perspective of the reader.

The main body of your thesis should consist of the following chapters:

4.7.1. Introduction

The main body starts with an introduction, which motivates your **research question** and **explains** its relevance. Furthermore, it includes a short overview of current research and briefly sets the content of your thesis into the context of the current literature. The introduction ends by providing a short overview of the structure of the thesis.

4.7.2. Theoretical Background

The main part of your text should begin with an overview of the existing literature on your topic. In this chapter, you elaborate on the **current research** and provide relevant background for your topic, citing relevant scientific literature. You are expected to discuss the assigned **article from the bachelor seminar** in detail. Please be sure to explain the methods used as well as strengths and potential weaknesses of the article and previous research in general.

The most important technical terms and definitions are introduced in this chapter. The development of a theoretical background allows you to formulate the **hypotheses for your own research** and to place your model/analysis within the scientific discourse. Make sure that your hypotheses are formulated in a logical and concise way.

The theoretical background chapter can be divided into further sections and subsections.

4.7.3. Methods

After the introduction of the theoretical background, the focus shifts to the **methods** used in your bachelor thesis and introduces your **own model**. First, please describe the particularities of your dataset and explain how the data were collected. In a second step, explain the methods you will use in your own analysis and explain why these methods are justified. Please discuss potential limitations of the methods you decide to use. Finally, present your own model.

The methods chapter can be divided into further sections and subsections.

4.7.4. Results

In the results chapter you present your results. Make sure that you cover all aspects of the research question that you have developed in the preceding chapters of your thesis. Please present your results comprehensively and structure the results - tables and diagrams may be helpful. Describe your results; however do not evaluate them at this point (the evaluation and discussion is undertaken in the discussion chapter).

The results chapter can be divided into further sections and subsections.

4.7.5. Discussion

After the description of your results in the results chapter, you now evaluate and discuss the results. Make sure that your interpretation is methodologically correct and structured clearly. Critically discuss your results, also in respect to potential limitations. Provide economic intuition for your key results. Furthermore, your results should be placed within the current research, which was introduced in the theoretical background chapter.

The discussion chapter can be divided into further sections and subsections.

4.7.6. Conclusion

At the end of your thesis, the main results of your work as well as the existing literature (in particular the assigned article from the bachelor seminar) are briefly summarized. Focus on the most important aspects and critically reflect on them. Furthermore, conclusions can be drawn (if applicable) for practitioners such as policy makers, an outlook on the future development of the scientific discourse on your topic can be provided and open research questions can be pointed out.

4.8. [Appendix \(obligatory for empirical theses\)](#)

In the appendix, you can provide additional material, such as a detailed description of the used dataset, 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 is nevertheless important enough to be

mentioned, may be relegated to the appendix. Please make sure that all elements of your appendix are referred to in the main body of your thesis.

When writing an empirical bachelor thesis, please add the program files (such as the STATA Do-Files used to prepare the dataset and to conduct the analysis as well as the respective STATA Log-Files) to the appendix. These files do not need to be referred to in the main body of your thesis.

These pages do not count toward your page requirement.

4.9. [References](#)

The references include all sources cited in the main body or appendix, including the sources for figures and tables. The references should **ordered alphabetically** according to the last name of the (first) author. If there are several works by one author, list them 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 any literature that has not been cited in the main body. Different types of documents require different citation. Please adhere to the citation style that we present in the following and use it consistently throughout your entire list of references.

i. Academic Journal Articles

Surname, First Name (Initial followed by a point) (Year). Title. *Name of the Academic Journal*, Volume(Issue), page numbers.

Multiple Authors:

Almond, D., Mazumder, B. & Van Ewijk, R. (2015). In utero Ramadan exposure and children's academic performance. *The Economic Journal*, 125(589), 1501-1533.

Two Authors:

Van Ewijk, R. & Slegers, P. (2010). The effect of peer socioeconomic status on student achievement: A meta-analysis. *Educational Research Review*, 5(2), 134-150.

Single Author:

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

Surname, First Name (Initial followed by a point) (Year). Title. In: Names of the editors (Format: Surname, First Name – Initial followed by a point) (Eds.), *Title of the edited volume, edition (if applicable)*, page numbers. Place of Publishing: Publisher.

Chaloupka, F. J. & Warner, K. E. (2000). The economics of smoking. In: Cuyler, A. J. & Newhouse, J. P. (Eds.), *Handbook of Health Economics*, 1B, 1539-1627. Amsterdam: Elsevier.

iii. Monographs

Surname, First Name (Initial followed by a point) (Year). *Title of the Monograph, edition (if applicable)*, Place of Publishing: Publisher.

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

iv. Working papers and unpublished manuscripts

Surname, First Name (Initial followed by a point) (Year). *Title*. Exact description of the document, institution providing the document.

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

Black, S. E., Bütikofer, A., Devereux, P. J., & Salvanes, K. G. (2013). *This is Only a Test? Long-Run Impacts of Prenatal Exposure to Radioactive Fallout*. NBER Working Paper No. 18987, National Bureau of Economic Research.

Unpublished literature should be used only in exceptional cases and must be justified!

v. Resources from the internet

Author (Surname, First Name / the institution providing the information) (Year). Title of the Document. entire URL last retrieved on Date (DD.MM.YYYY).

Food and Agriculture Organisation (2008). The nutrition transition and obesity. <http://www.fao.org/focus/e/obesity/obes2.htm> last retrieved on 16.12.2016.

Please be cautious when using information from the internet!

Please do not order the publications by document type in your thesis, but only in alphabetical order as indicated above!

4.10. [Statutory Declaration](#)

Please attach the following statutory declaration to your bachelor thesis (signed!):

Ich versichere, dass ich die Arbeit selbstständig und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Alle Stellen, die wörtlich oder sinngemäß aus Veröffentlichungen oder anderen Quellen (auch Internet) entnommen sind, habe ich als solche eindeutig kenntlich gemacht. Von der Ordnung zur Sicherung guter wissenschaftlicher Praxis in Forschung und Lehre und zum Verfahren zum Umgang mit wissenschaftlichem Fehlverhalten habe ich Kenntnis genommen. Die Arbeit ist noch nicht veröffentlicht und noch nicht als Studienleistung zur Anerkennung oder Bewertung vorgelegt worden. Mir ist bekannt, dass Verstöße gegen diese Anforderungen zur Bewertung der Arbeit mit der Note „Nicht ausreichend“ führen sowie die Nichterteilung des angestrebten Leistungsnachweises zur Folge haben.

Ort, Datum

Unterschrift des Verfassers

5. In-Text Citation

Intellectual property of other authors must be identified as such, including thoughts, arguments, tables, figures and images. The source of any argument or idea that is not your own must be cited correctly. Be aware that plagiarism is a crime and will have serious consequences. Please do not rely on secondary quotations, but consult the original source (when possible) instead!

Please quote **within the text** (Melitz, 2003), **not in footnotes**. Be consistent all throughout the thesis. When citing works from two authors, please indicate the names of both authors (Van Ewijk & Slegers, 2010). If you cite work by more than two authors use the first author followed by “et al.” (Blum et al., 2011).

If you generally refer to a source, use **the author and the year of publication**. For example: Melitz (2007) shows that....

Please use **direct quotes sparingly**. You should rephrase arguments taken from the literature using your own words, always remembering to indicate the original source. In case you include a direct quote, 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). A secondary source can be quoted only when the original text is not available. If this is the case, the reference to the source should also include the secondary source, which needs to be indicated with “quoted in...”. Indicate if you have translated a quotation from a foreign language.

If you use 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 to create your own graphs and tables, you have to state the source of data. For example: World Bank, WDI.

All references referred to in your thesis have to appear in the **list of references** at the end of your thesis!

6. Time Schedule

If you are attending the bachelor seminar at the Chair of Statistics and Econometrics, please be aware of the following steps:

- i. Before enrolling in the bachelor seminar, make sure that you fulfil all requirements of the examination rules (Prüfungsordnung) for the admission to writing a bachelor thesis.
- ii. Fulfil the requirements of the bachelor seminar (exposé and presentation).
- iii. Now you can register your bachelor thesis at the Examinations Office. The digital procedure for registration should take place in the following sequence:
 - a. Fill in your personal data in the form “Formblatt Vergabe Bachelorarbeit WiWi” (retrievable via the Downloadcenter of the Examinations Office) – you do not need to indicate the title of your thesis as well as the start and end dates at this point. Sign the form and send it digitally to the Examinations office (via email from your student email account). In case that you are not able to submit the form via email, you can also send it to the Examinations Office by post.
 - b. The Examinations Office checks if you fulfil all requirements for the admission to writing a bachelor thesis, signs and stamps the form and sends it back to you via email.

- c. Please send the form to our chair (via email from your student email account). After our chair has filled in all necessary information in coordination with you (start and end dates, topic), we send the form back to the Examinations Office. The Examinations Office enters all information in JOGU-StINE. You do not need to register your bachelor thesis via JOGU-StINE.
- d. Please note that the form “Formblatt Vergabe Bachelorarbeit WiWi” must be submitted to our chair before the start date. From this point in time, you have 8 weeks to finalize your thesis.
- iv. During the bachelor seminar, you already completed preparatory work for your thesis. Build upon your previous work and consider your supervisor’s feedback.
- v. We strongly recommend that you set up a timeline for your thesis (from the registration up to the submission of your thesis). By checking your work plan, you can make sure that you are always on time.
- vi. Submission of your bachelor thesis:
 - a. your bachelor thesis can be handed in electronically. In order to hand in our bachelor thesis, send an **e-mail from your students account** to studienbuero-fb03@uni-mainz.de. It must arrive at the registrar’s office at the latest at 23:59h at the day of the deadline. The thesis has to be in **PDF format**. Furthermore, the **statutory declaration** has to be attached in PDF format with a personal signature (digital signatures are accepted). The statutory declaration and the thesis have to be attached to the same e-mail. The registrar’s office will not ask for any printed versions. If you write an empirical thesis, make sure to also **attach all files or documents (STATA-Do-files, STATA-Log-files, Excel-files, MatLab-Code etc.)** in addition to the thesis. The study office will forward the e-mails unchanged with all attachments to your supervisor after checking that they have been submitted in due form and time.

Please note: Do not forget to take the guidelines of the **examination rules** (Prüfungsordnung) into account! If the bachelor thesis was written in English, a **German summary** (max. 1 page) must be included in the thesis.
 - b. The hand-in date is the date the e-mail is received. Once you sent the email, the hand-in is complete. There is no way you can change your thesis anymore (i.e. if you find a mistake after handing it in, you cannot send a new version on the same day).

7. Additional Remarks

When critically analyzing an article, always assume that the reader has not read the article or does not have a copy of the article at hand. Include important graphs and tables in your thesis, if their discussion is paramount to your thesis (remember to cite correctly). However, you should not include more than one or two tables or figures from an article. Your bachelor thesis is **not a summary** of an article, therefore avoid too many replications.

Please also note the following:

- i. Arrange your tables clearly (round numbers – do not use more than three decimals). Screenshots of STATA Output (or similar) will not be accepted.
- ii. (Long, complicated) Names of variables in STATA should not be used in your text nor in tables. You should assign those variables clear names so that the reader can directly grasp their meaning.⁴

8. Conclusion

These guidelines explain what a good thesis should look like regarding content and formal requirements. If you have 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, U. (2007). *Wie man eine wissenschaftliche Abschlussarbeit schreibt: Doktor-, Diplom- und Magisterarbeit in den Geistes- und Sozialwissenschaften*. Heidelberg: UTB Verlag.
- Franck, N. & Stary, J. (2011). *Die Technik wissenschaftlichen Arbeitens*, 16. Paderborn: Schöningh Verlag.
- Neugeboren, R. (2005). *The student's guide to writing economics*. New York, NY: Routledge.
- McCloskey, D. N. (2000). *Economical writing*. Long Grove, IL: Waveland Press.
- Rossig, W. E. & Prätsch, J. (2006). *Wissenschaftliches Arbeiten*. Weye: Teamdruck.

⁴ For example: For your analysis in STATA you called the control variable for body length BODY_L_CM. When reading this name, the reader does not directly understand what you are referring to. In your thesis, you could for example call this variable "body length".

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

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

Turabian, K. L. & Booth, W. C. (2011). *A manual for writers of research papers, theses, and dissertations. Chicago style for students and researchers*, 7. Chicago, IL: Univ. of Chicago Press.

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

We thank Prof. Daniel Schunk for an earlier version of these guidelines based on which the present document was developed.