Faculty of Management and Economics

Chair of Public and Regional Economics
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GUIDELINES FOR WRITING STUDENT SEMINAR PAPERS AND THESES

Seminar papers and theses are scientific texts and are, therefore, subject to certain requirements regarding format and content. These guidelines provide you with basic rules concerning scientific writing. For additional legal and formal information, please visit the service pages of the examination office of the Faculty of Management and Economics.

I. General remarks

The length of *seminar papers* should not exceed 20 pages (Master) and 15 pages (Bachelor, respectively. A *Master Thesis* is should be around 60 pages. The length of a *Bachelor Thesis* is 25 pages or less. The specified limits encompass all components of the paper, including tables, figures, appendices, and the table of contents. These limits may be adjusted upwards following consultation with your supervisor.

Submission of a seminar paper: Should be submitted to the chair electronically. This will be typically either through Moodle or per E-mail. The specific procedure will be communicated to the students at the latest shortly before the deadline for the submission.

Submission of master or bachelor theses: Should be submitted to the examination office (Prüfungsamt). The specific procedure is determined by the examination office.[1]

II. Formal Requirements

1. Formal structure and layout of the text

Structure:

- Cover page (templates on website)
- Contents
- Variables
- Abbreviations
- List of figures
- List of tables
- Text
- References
- Appendix
- "Declaration of honour regarding the independent preparation of theses and seminar papers"(only for seminar theses, template on website)

[1] Authoritative for the submission of theses are the prevailing rules of examination (Prüfungsordnung). Please read them carefully.

Use a proportional font (12 pt.) with one and a half spacing. Footnotes are flush-left, single-spaced with font size 10pt. Use one-sided printing, 4 cm left margin, 1.5 cm right margin, 2 cm top and bottom margin.

Number all pages, except the front page, consecutively. The table of contents has to be placed before the main text; the list of references has to be placed after the main text. Two alternatives are available: (i) all pages are numbered consecutively Arabic or (ii) the table of contents, list of symbols, abbreviations, figures and tables are numbered Roman followed by the main text, appendices and references numbered Arabic.

2. Table of Contents and Outline

The table of contents or outline of your paper or thesis is an important part of your effort and should clearly demonstrate in which way the topic is comprehended and processed. It represents the logical structure of your work. This implies that the items are titled in an understandable and meaningful way – representing the contents or the respective part of the text shortly but exactly. Furthermore keep in mind the following rules:

- The items in your table of contents have to match the exact titles of chapters/sections/subsections in the text and include the page numbers.
- There is no need for transitional text between the section and subsection titles.
- Items follow in a logical order and do not merely constitute a random enumeration of aspects relevant to the main topic.
- Employing finer subdivisions of text, e.g. using subsections in a section, makes only sense if for instance 1.1 is followed by 1.2.
- Titles of subsections should not be an exact copy of the previous section title.
- Chapters, sections, subsections within a higher-ranking item should be equally weighted regarding content and length.
- The contents (i.e. the structure) should be outlined directly following the title page. It should contain the headings of all sections and subsections.
- A clearly arranged layout of the table of contents, e.g. by indention, simplifies reading. Avoid a too deep subdivision of text in order to allow for clarity.

Possible classifications of items:

Decade Classification

1. ...

1.1. ...

1.1.1. ...

1.1.2. ...

1.2. ...

2. ...

Mixed Classification

A. ...

I. ...

1. ...

2. ...

a. ...

aa. ...

ab. ...

b. ...

If necessary, it is recommended to clearly separate major topics or lines of thought, e.g. by subdivision in sections or chapters, and to repeat the scheme of classification for each part in order to create a parallel structure.

3. Figures and Tables

Number figures and tables consecutively. The content has to be specified clearly in the heading. Pay special attention to the exact description of time, place and object.

EXAMPLE:	Fig. 1: Figure denomination

Position additional or cited comments, short explanations of used symbols[2] and references directly below the figure or table. Do start with "Source: …" and end with a full stop.[3]

EXAMPLE:	Source: Own calculations based on data of Thomas (2007).

Place figures and tables appropriately in the text, not too far from the position where you refer to it and never directly below a heading. Every figure or table included has to be mentioned in the text and whenever the text makes reference to a figure or table the respective number has to be specified. The list of figures and the list of tables have to tabulate all included figures or tables - their number, title and page. More extensive material like large tables, long derivations or legislative text has to be put in the appendix.

4. Abbreviations

Avoid abbreviations in the running text. Accepted are common abbreviations as e.g. or etc. as well as technical abbreviations (e.g. GDP). The latter (the former) are (not) to be included in the list of abbreviations. The names designated by technical abbreviations are to be written in full length followed by the abbreviations in parenthesis the first time that they are used. Abbreviations for the sake of convenience (e.g. econ) are not allowed.

Abbreviations to put in the list of abbreviations (sorted alphabetically) are, for example:

BPO	Business Process Outsourcing

[2] You will still have to provide an elaborated explanation in the text.
[3] Cf. 8.3 f).

GDP	Gross Domestic Product
ICT	Information and Communication Technology
IMF	International Monetary Fund

Abbreviations that are used in citations or references only, are not to be included in the list of abbreviations:

Vol.	Volume
p.	Page
No.	Number
cf.	Latin: confer, "compare"

5. Variables and Equations

Variables and equations have to be explained in the text when they are used for the first time. Equations have to be numerated (right-adjusted).

EXAMPLE:

text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text text

$$\frac{dU_i(q_i)}{dq_i} \geq 0 \quad \left(i \in I, q_i \geq 0\right) \tag{1}$$

where I refers to the index of consumers, and q_i and U_i are the demand respectively the utility of consumer i.

The list of variables has to comprise all variables used. Please use an equation editor and make sure that a variable has only one meaning. Stick to a single variable structure throughout the entire work. If variables from other works are used, they have to be adjusted to your own framework – except for verbatim citations.

6. Footnotes

Footnotes may contain references or factual statements of the author. These notes contain further information that is not necessary for the understanding of the text but is also not trivial. Only use them if really necessary. Try to restrict the extent of your footnotes. An excessive use of footnotes may indicate a flawed structuring. Footnotes have to be separated clearly from the running text by the use of a line and are numbered consecutively Arabic. Footnotes may continue on the following page if absolutely necessary (this time also separated by the use of a horizontal line but without additional numbering). Each footnote is completed by a dot.[4]

7. Appendix

An appendix is only necessary if figures, tables, derivations, etc. cannot be included into the running text because of their nature or extend.

8. Citations and references

8.1. General habits

It is scientific duty that all arguments and hypotheses from other authors, which are not scientific common knowledge, have to be indicated clearly. There are different ways of citation in practice, however it is essential that the reader is able to find the cited original text or data with the reference as stated.

The list of references contains the entire cited literature as well as all other cited sources (data, legal norms, etc.). It cannot include any source that is not cited in the text.

The examiner may request quoted sources for inspection. Thus, you are asked to retain used sources in printed or digital form until your work is graded (especially online resources).

Please note, that the use of secondary sources is allowed only in rare and justified exceptional cases.

[4] Footnotes are indicated by a superscript directly after the punctuation mark unless it refers exclusively to a certain term.

8.2. Additional rules

Alternative 1: Footnote citation

The reference may be indicated in the footnote in partial form (see example). This is done by referring to the list of references via the author's name and the year of publication so that the reader can identify it in the list of references. The latter gives the reader all essential information, in a standardized way, to locate the original source. If applicable, you should also indicate the page numbers of reference.

EXAMPLES FOR PARTIAL REFERENCING IN FOOTNOTES:

- Barro, Sala-i-Martin (1992), p. 224.
- Cf. Barro, Sala-i-Martin (1992), p. 224f.

Alternative 2: Harvard referencing/ Parenthetical referencing (partial referencing in the running text)

This citation style uses partial citations - for example, "(Smith 2010, p. 1)" - enclosed within parentheses and embedded in the text, either within or after a sentence. Again only author, year of publication and (if applicable) page are indicated.

EXAMPLES FOR PARTIAL REFERENCING IN RUNNING TEXT:

- There is evidence for the fact that democracy has a significant and robust positive effect on GDP per capita (Acemoglu et al. 2015, p. 1).

or:

- There is evidence for the fact that democracy has a significant and robust positive effect on GDP per capita (Acemoglu et al. 2015:1).

8.3. Supplementary remarks regarding quotation

a) Citing more than one page

If a quote refers to a text passage reaching over two or more pages, you may attach “f.” or “ff.” respectively to the page number. You may also, and preferably, state the exact page numbers (e.g. 40-68). Choose one of these possibilities and remain consistent with it.

b) Primary and secondary sources

Reliable secondary sources can be named in cases in which the primary source is not easily accessible. They have to be clearly indicated with the add-on “quoted/cited from...”

EXAMPLE:

Running text:

> In the long run the causes of inflation are monetary (Friedman cited from Müller 1996, p. 12).

c) Legal sources

Legal sources have to be quoted as primary sources. The paragraph or article, passage and official abbreviation of the legal text have to be stated. In the list of references the official abbreviation, the official title and if applicable the date of the last amendment have to be stated.

EXAMPLE:

Running text:

> The Union shall be served by a single institutional framework which shall ensure the consistency and the continuity of the activities carried out in order to attain its objectives while respecting and building upon the acquis communautaire (Art. C TEU).

References:

> TEU, Treaty on European Union (Maastricht Treaty), signed 7 February 1992.

d) Author and year of publication

Up to 3 authors are mentioned by name in parenthetical or footnote citations. In case of more than three authors, only the first is mentioned by name the others are referred to with the add-on "et. al." In the list of references all authors have to be named.

EXAMPLE:

Running text:

> Devereux et al. (2007) Survey the empirical research on the influence of taxes on: discrete location choices; capital expenditure decisions of affiliates; the overall allocation of capital across countries; differences in the rates of profit across countries and financial and organisational form decisions.

References:

> Devereux, M. P., Maffini, G., Gould, J. and A. Berg (2007), The Impact of Taxation on the Location of Capital, Firms and Profit: a Survey of Empirical Evidence, *Journal of Public Economics, Vol 34(3), pp.23-45*.

If no natural person is denoted as author, the (legal) entity (e.g. International Monetary Fund, World Bank) has to be cited. Technical abbreviations for these legal entities are allowed in the running text as well as in the list of references but their full names must also be written in the list of references.

EXAMPLE:

Running text:

> Relative to last year, the recovery in advanced economies is expected to pick up slightly, while activity in emerging market and developing economies is projected to slow for the fifth year in a row, primarily reflecting weaker prospects for some large emerging market economies and oil-exporting countries. (IMF 2015, p. 64).

References:

> International Monetary Fund (IMF) (2015), *World Economic Outlook (WEO): Adjusting to Lower Commodity Prices*, October, Washington, D.C.

Name affixes (de, De, Di, La, Le, Mac, Mc, O', ten, van, von ... etc..) are part of the surname. Put contributions in the list of reference in alphabetical order according to the name affix. Academic titles (Dr., Ph.D., Prof. etc.) are omitted. If the authors name or the date of publication is not available use "Anonymous"[5] and "n.d." (no date) respectively.

If you cite more than one contribution of an author from the same year, you have to add an additional distinguishing feature as e.g. a, b … or A, B … These have to be used in the list of references as well.

Do not repeat the citation of the identical resource in successive references (whether footnote or Harvard-styled) but use ibid., ibd. or ib. which means "at the same place" (lat. ibidem), followed by the page number.

e) Verbatim and non-verbatim citation

In general, the thoughts of others should be expressed through analogous quotation that is with own words (cf. section 8.2 for the usage of such citation). In contrast, literal quotation are only to be used rarely and only for very important or concise statements. For literal quotation the respective text passage should be adopted word for word (even old or flawed writing) and put in quotation marks. With "[!]" the author indicates, that an error is not self-caused but quoted. Omissions have to be marked with "[...]". Keep in mind to not change the meaning of sentences by omissions. Own remarks have to be in put brackets as well. Quotation in quotation are framed with an apostrophe in the beginning and in the end of the quotation ('[...]').

EXAMPLE:

> *"Language is subject to change, and is not caused by unnecessary sloppiness, laziness or [especially not] ignorance" (Aitchison, 1981, p. 67).*

[5] "Although the use of 'Anonymous' is generally to be avoided, it may stand in place of the author's name in a reference list or in a bibliography in which several anonymous works need to be grouped. In such an instance, 'Anonymous' or 'Anon.' appears at the first entry [...] " (Chicago Manual of Style, 2003,15th ed.).

f) Figures and tables

When figures and tables are used, the source has always to be indicated directly below the table or graphic. It has to be closed with a full stop. If the author changed the specific table or chart, this has to be marked with “based on ...”. Self-made figures or tables have to be marked with “own figure/own calculations”. These sources have to be included in the references list as well.

EXAMPLE:

Table in the running text:

Tab. 6: Per capita income in Eastern and Western Europe 1950-1990.

Source: Maddison (1995), p. 193ff.

References:

Maddison, A. (1995), *Monitoring the World Economy 1820-1992*, OECD, Paris.

8.4. References

The list of references has to contain all resources mentioned or quoted in the entire work – not less and not more! Also included are unpublished work, marked with “unpublished”. You should be able to provide the latter to the examiner upon request.

Arrange entries in alphabetical order according to the author’s surname or the name of the publishing institution (e.g. IMF). There is no sorting by publication type (book, journal article …) Every entry ends with a full stop.

Note down the author’s surname and the first letter(s) of first name(s). Several authors are separated by comma. If you cite more than one contribution of an author from the same year, you have to add an additional distinguishing feature as e.g. a, b … or A, B… . The year of publication is put in parentheses, followed either by a comma or a colon.

The style of entry depends on publication type and should obey the following rules:

a) Monographs/books

Monograph entries have to contain the author(s), the year of publication in parentheses, title (in italics), the edition if applicable (with add-on "ed."), place of publication and publisher (comma or colon between place and publisher).

EXAMPLE:

Erber, G., Hagemann, H., Seiter, S. (1998), *Zukunftsperspektiven Deutschlands im internationalen Wettbewerb*, Heidelberg: Physica.

b) Discussion papers /working papers

Discussion and working paper entries contain the author(s), the year of publication in parentheses, title, name and number of the series (in italics).

EXAMPLE:

Fischer, S., Sahay, R. (2000), The Transition Economies after Ten Years, *NBER Working Paper No. 7664*.

c) Journal articles and newspaper articles

Journal article entries contain the author(s), the year of publication in parentheses, title, journal name (in italics), volume as e.g. "Vol.5", issue as e.g. "No.4" (alternatively, you may also write "5(4)"), and pages. Newspaper article entries contain the author(s), the year of publication in parentheses, title, newspaper name (in italics) (optionally introduced by "in:"), and pages.

Example:

Baumol, W. (1986), Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show, *American Economic Review*, Vol. 7, No. 5, p. 1072 - 1085.

Navarro, M. (2015), Public Housing Nationwide May Be Subject to Smoking Ban, in: *New York Times*, November 12, p. A1.

d) Contributions in book, collections or proceedings

Contributions in book, collections or proceedings contain the author(s), the year of publication in parentheses, title, the name of the editor(s) (introduced by "in:" and followed by "ed." or "eds."), the book/collection title (in italics), place of publication and publisher (comma or colon between place and publisher).

EXAMPLE:

Ohlin, B. (1991), The Theory of Trade, in: Flam, H., Flanders, M. J. (Eds.), *Heckscher-Ohlin Trade Theory*, Cambridge MA: MIT Press, p. 71 - 214.

e) Internet sources

With internet sources, the information required above apply as well. Additionally, the Internet address (URL) (underlined) and the date of access (introduced by "access:") have to be indicated. Please check carefully, that documents are accessible via the URL given.

EXAMPLE:

International Monetary Fund (IMF) (2015), National Accounts at a Glance, *IMF eLibrary Data*, http://data.imf.org/?sk=B5CDA530-07B8-46C6-B829-1827DF8B49C7, access: 12.11.2015.

9. Spelling and Style

Writing scientific contributions requires to follow certain criteria both in form and content. Both are assessed when evaluating your seminar paper or thesis. The guidelines at hand provide you with information about formal aspects. Not discussed are the topics of spelling, grammar and style.

It goes without saying that attending university you should have an excellent command of orthography, punctuation and grammar. (Professional) proof-reading before submission is nevertheless advisable. The reviewer of your work may forgive occasional slips, but a succession of errors concerning orthography, punctuation and grammar may be disastrous for your grading.

Additionally, the style of writing and the mastery of the rules of the language influence your grade. An academic work requires an appropriate style of writing. Brash or crude statements as well a cumbersome or a journalistic and lurid style should be avoided.

III. With regards to content

1. Setting of priorities

An essential part of the academic work is the delimitation of the topic and the formulation of relevant research questions. Try to get an overview and the current state of the art in your topic. Keep your research questions focused on the topic, not too broad and not too narrow. You are not allowed to change the title of your work independently.

2. Structuring

The outline is an essential part of the work. It mirrors the logical structure of the writing and proves how well you are able to structure a complex topic. Thus you should put extra effort in your outline: Find meaningful headings and discuss the outline with your supervisor. All items of the outline have to bear a relation to the topic. Attempt to create a clearly arranged outline, which follows a logical sequence of workflow or argumentative steps. The outline aims at providing a fast and accurate overview over the methodology and the content of the work. The items in the table of contents have to match the headings in the running text. All sub-items have to refer to the higher

level and be hierarchically equivalent concerning content. The subdivision of a section is only reasonable if there are at least two sub-sections.

A scientific paper consists of an introduction, a main section, and a conclusion. The main section contains both the descriptive and the normative parts. Following academic neutrality, it is often advisable to depict antithetic opinions before stating a personal evaluation that is of course well founded (e.g. to which theory you refer to).

The introduction and the conclusions refer to the main part and should be readable like a summary of it. The reader should be informed about the main aspects of your work without having to read the main section. The introduction includes:

- Naming of the topic/object of investigation, and definite demarcation lines
- Explanation of your course of action
- Epistemological interest
- Formulation of the research questions (which you have to pick up again and answer at the end)
- Brief presentation of the outline

The conclusion must contain (repeat) the most important scientific insights of your analysis, and a personal evaluation of the state of the research questions.

3. Processing of the content

In early seminar papers students often have problems to express their own (scientific) thoughts. First, you should learn to absorb the existing research and to summarize it. In seminar papers, your own scientific contribution consists in the examination of literature and the handling of the different approaches available in the literature.

Include only facts and issues you understand. Everything else leads you to an inaccurate and superficial presentation. Please make sure, that connections and relations are explained causally and that you do not just adopt several texts word by word. You are required to use your own words.

4. Literature

Good scientific work requires that the essential literature was found, understood and processed. The literature provided by the chair can only be regarded as a starting point of your research. You have to do your own literature search. Avoid the quotation of basic textbooks. The knowledge provided in basic textbooks is assumed to be known. Thus there is no need for explaining or quoting. With works with several editions, try always to quote the most recent. An important determinant for the success of your work is the processing of the current scientific essays and papers – mainly peer reviewed journal articles. Daily or weekly newspapers or other sources should only be cited if their content is of extraordinary relevance for your work. Avoid the usage of lecture notes, transcripts and popular scientific sources (Wikipedia, Brockhaus, etc.)

5. Specific information for bachelor and master theses

Content

A master or bachelor thesis is more than a long seminar paper. On the one hand, a more comprehensive analysis of the literature on the subject, especially of recent research, is absolutely essential. This usually requires the use of (usually in English) journal articles, since books often do not provide state of art research. On the other hand, a master or bachelor thesis must be more detailed and have a higher depth of personal analysis and evaluation. Nevertheless, an independent own scientific contribution is not demanded.

Supervision

The nature and intensity of supervision depends, to some extent, on your own initiative. In any case, it is highly recommended that you discuss your outline with your supervisor after you have read through the relevant literature and before you start to write. During your working process you can always consult the chair's staff in order to discuss specific issues. However, you should notice that your ability to work autonomously also influences your grade.

IV. Further reading

http://www.chicagomanualofstyle.org/home.html

Strunk, W., and E. B. White (1972) *The Elements of Style.* Boston, MA: Allyn and Bacon.

General texts and guidelines about "scientific writing."