



University of Cologne

Staatswissenschaftliches Seminar
Microeconomics, Institutions and Markets

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**Guideline for academic writing at the
Department of Economics, especially at the Chair of Energy Economics**

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List of Figures

1 Layout of title page of a seminar paper 2

List of Tables

1 General Requirements

1.1 Elements of an Academic Paper

A bachelor's and master's thesis or a seminar paper consist of the following elements:

- Title Page (for a bachelor's thesis or master's thesis see guidelines of the WISO examination office)
- Abstract (not compulsory)
- Table of Contents (including page numbers)
- List of Abbreviations
- List of Diagrams (List of Figures, List of Tables)
- Main Part (introduction, main section, conclusion)
- Appendix
- List of References
- Eidesstattliche Versicherung

1.2 Length of the Paper

The length of the main part of a master's thesis is limited to 60 pages and 30 pages for a bachelor's thesis, counted from introduction to conclusion. Requirements for the length of a seminar paper will be specified in the respective seminar. The paper must fulfil the formal requirements stated in section 5.1. Page numbering (with Arabic numerals) starts on the first page of the main part and runs till the end of the paper. All pages preceding the main part are numbered using Roman numerals. Numbering does not appear until after the title page.

1.3 Submission

Every paper has to be submitted in electronic and paper form.

A bachelor's and master's thesis has to be converted into a PDF file, burned to a CD or DVD and submitted along with the paper version to the examination office. In case own calculations were made, the original files of the corresponding program (e.g. Excel files)

have to be added to the CD/DVD.

The paper version of a seminar paper has to be submitted to the Chair. The electronic version can be submitted by e-mail.

2 Title Page

The first page of an academic paper has to be a title page. In case of a bachelor's or master's thesis, the design can be downloaded from the examination office. The title page of a seminar paper has to contain information about the paper itself (title, course etc.) and about the author. The exact layout is shown in figure 1.

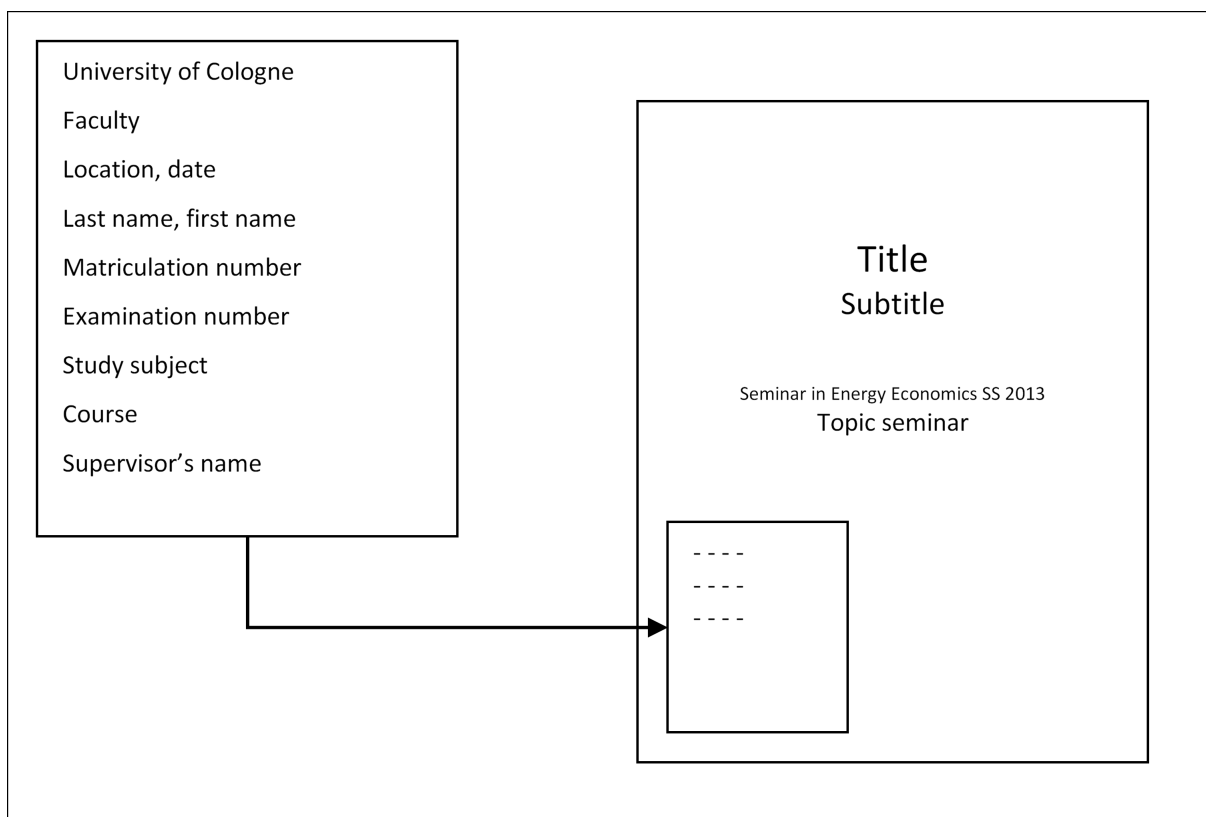


Figure 1: Layout of title page of a seminar paper
(source: own illustration)

On the title page no page numbering is visible, although it is included in the page count.

3 Table of Contents

The table of contents presents the structure and the line of thought of the paper and is placed directly after the title page. It has to contain all headings and subheadings of

the paper that are indicated by Arabic or Roman numerals. The table of contents must include the page numbers corresponding to the text. The headings included in the table of contents must be identical with those in the running text.

Subheadings are indented to facilitate the overview of the paper and following the line of the argument. The structure must be organised logically consistent, from the general to the specific.

The headings and subheadings must be in an appropriate relation to each other. Too many subheadings often indicate false or clumsy chosen main headings. Do not use too many subheadings, attempt for roughly equal blocks of text.

Headings and subheadings have to be enumerated in a consecutive manner. All numbers - except for the last one - are followed by a dot. There have to be at least two sub-items each time. If it is not possible to subdivide a section, it is not necessary to create sub-items. This means that section 1.1 has to be followed by section 1.2, section 1.1.1 has to be followed by section 1.1.2. In addition, headings should be followed by text in order to avoid a bare listing of titles. A short text introducing the structure of the following sections should be used in order to avoid the above-mentioned. In turn, the text of a section or subsection should not be too long.

4 List of Abbreviations

Only the usage of abbreviations and acronyms (short words as ‘USA’) used in e.g. the Oxford English Dictionary are permitted without limitations; they do not have to (but they can) be listed in the list of abbreviations. If subject-specific abbreviations are used that are not listed in the Oxford English Dictionary, they have to be explained in the list of abbreviations, even if they only appear once, e.g. in the bibliography.

5 Design of the Main Part

5.1 Formal Requirements

In Microsoft Word:

- **Paper size:** DIN A4; The sheets shall only be printed one-sided.
- **Font style:** It is recommended to use Cambria (standard) or Calibri (standard).

- **Font size:** The font size has to be 12 pt in the main part and 10 pt in the footnotes (sequential numbering), with normal character spacing each.
- **Page margins:** left: 5 cm; right: 2 cm; top: 2 cm bottom: 2 cm
- **Line spacing:** 1.5 lines
- **Alignment:** full justification
- **Table of Contents:** Chapters, sections, etc. must be numbered using Arabic numerals (e.g. 1.2, 1.3, 1.3.1, 1.3.2.), the appendix must be numbered using letters and Arabic numerals (A.1, A.2, B, C). Titles must be differentiated using appropriate methods (in particular: space after previous paragraphs, font size, bold or italics text). The titles of the main parts of the paper (first outline level) has to start on a new page (**this does not hold for seminar papers**).
- **Equations:** All equations have to be indented and written on a separate line. Be careful to number equations consecutively.

In LaTeX:

- **Documentclass, font style and font size:** 12pt, article
- **Encoding:** package "[utf8]{inputenc}" for Windows or "[applemac]{inputenc}" for Mac
- **Page margins, line spacing, alignment and table of contents:** as above

5.2 Content Requirements

Introduction

Mostly it is best to start a paper with an introduction before it continues with the main part. The purpose of an introduction is to inform the reader about the creation of the paper and to outline the fundamental research issue and the methodological procedure. The introduction should include the following aspects:

i. Motivation for the topic

At the beginning the interest of the reader has to be raised through an outline of the topic and its relevance. It should include why the topic is relevant and how it is related to current research or policy debates.

ii. Goal of the paper and scope of the topic

The next step should be to outline the goals or the aims of the paper and to narrow down

the topic. It might be helpful to state a research question or hypothesis. This serves as the scope or thread of the paper and must be explicitly revisited in the conclusion.

iii. Roadmap and methodological procedure

In the last paragraph, the methodological procedure is clarified by briefly describing the structure of the paper in text form.

In principle, it is useful to write the introduction at the very end of the writing process in order to ensure that it corresponds with the main part of the paper. Nevertheless, the aim and the approach should already be established at the beginning of the work process.

Main part

An academic work should follow a coherent and comprehensible reasoning and the main research question should run like a thread through the text. Depending on the topic, different ways to structure the content and the reasoning are recommended in the following:

i. Deductive reasoning:

Deductive reasoning is the reasoning by applying general principles or a general theory. After having explained those in the first part of the paper, the theory is illustrated in a second part by using practical or theoretic examples (e.g. a case study or an empirical examination). The final part then relates the concrete, practical realizations to the theory.

ii. Inductive reasoning:

The inductive reasoning follows the opposite logic. In this case, first a specific individual problem (e.g. a case study or an empirical examination) is analysed and general questions are presented.

Secondly, the general questions are illustrated and related to existent theories and concepts. In order to structure the reasoning clearly, the structure of the individual sections should look as follows: Firstly, the main statement (thesis, argument) should be mentioned. Then, this main statement should be explained and discussed by using additional statements. Finally, conclusions should be drawn from the reasoning which then lead to the next argument.

Conclusion

The conclusion should pick up and answer the main problem/research question of the paper such that the reader gets a final overall impression. There are two possibilities of writing a conclusion (one of them can be chosen):

i. Summary:

This is the author's own conclusion that is deduced from the main part.

ii. Preview:

The preview presents unanswered questions that could be studied and contribute to the topic.

5.3 Writing

In the following section, an overview of aspects to be considered while writing your paper is provided.

5.3.1 Stringent Writing

Generally, it is difficult to find the right balance between an extensive and detailed presentation on the one hand and a short, concise emphasis of the substantial aspects on the other hand. When describing and discussing it is best to strictly follow the research question and its individual aspects. Being off-topic and including redundant information can only be avoided by being stringent.

5.3.2 Linguistic Style

It might be tempting to write a scientific paper in the style of certain scientific authors after having read a lot of their work. It is best to avoid doing so and using one's personal style of writing.

Nevertheless, some formal aspects should be respected. All technical and economic terms should be used properly and the idea stated has to be clear. The language should be reviewed for unclear, misleading and false terms. Imprecise terms, sloppy use of language as well as fillers should be avoided, just as nested and confusing sentences. Furthermore, the use of a clear and factual language is advised and personal evaluations such as "I think", "I believe" and so on should be evaded.

5.3.3 Revision

It is highly recommended to revise and check the whole manuscript several times for stylistic aspects and language. Enough time to do so is essential. The cogency of the style of writing should be reviewed for inconsistencies. Further, checking whether sections form reasonable units is advised. During revision, it is possible to abbreviate passages that are too long. This often leads to a higher quality of the text as it becomes more precise and reduced to its essentials. In general, it is easier to reduce the text afterwards than to search for the shortest way to formulate a thought. This also serves the flow of thoughts.

5.4 Citation

In every scientific work the origin of ideas, statements, thesis etc. has to be proved clearly using source references. The source reference always refers to the effectively used source, even in case that this source in turn quotes another author or source.

If a source is cited, it has to be listed twice in the paper. First, the source is to be placed in the text at the corresponding position, which then refers to an indication in the bibliography that determines the origin more precisely.

There are two possibilities to cite:

i. In-text citation (Harvard-Style):

The author's last name, year of publication and the page number are stated in parentheses right after the respective passage. The full citation has to be entered in the list of cited literature.

ii. Footnote citation (Chicago-Style):

The source is stated with a footnote at the bottom of the page where the corresponding passage can be found. The full citation has to be entered in the list of cited literature.

In the following, the different quotation rules are only explained for the in-text citation as both ways of citation follow the same rules. Nevertheless, footnote citation is rather unusual in Economics. Thus, it is strongly recommend to use in-text citation.

Afterwards, rules for writing a bibliography are presented.

5.4.1 Types of Quotation

There are two different types of quotations.

First, it is possible to quote the author directly. This is unusual in economics, but can be useful e.g. for important definitions. Short quotations are included into the continuous text with quotation marks. Longer quotations are indented and the font size is reduced. When leaving out words this must be indicated by '(...)'. If the word order is changed due to a different sentence structure, these words have to be placed in square brackets. Direct quotations should be reduced to a minimum.

It is more common to paraphrase (i.e. quote analogously) a statement from the original source. Either the content of one single source (summary) or the content of several sources (generalization) is reproduced in own words (or in subjunctive).

5.4.2 Rules for Citing

When using in-text citations, each source has to be mentioned in parentheses after the respective sentence or paragraph as follows:

Name, year, page.

(Example: Lindenberger, 2004, p. 37)

When there are several publications from one author in one year, use letters to distinguish between them:

(Lindenberger, 2002a, p. 37; Lindenberger, 2002b, p. 68)

Different authors have to be separated by using slashes:

(Abadie/Diamond/Hainmueller, 2015, p. 10)

When citing more than three authors, use the abbreviation "et al.". E.g.:

(Parsons et al., 2011, p. 700)

Different sources have to be separated by using a semicolons:

(Abadie/Diamond/Hainmueller, 2015, p. 23.; Parsons et al., 2011, p. 645)

It is also possible not to quote the original source, but secondary literature. In this case the primary source needs to be stated first, added by the secondary source specified after the abbreviation "qtd. in" (for quoted in).

Quoting internet sources that have not been published elsewhere has to be done according to the following standard: author's last name and year of publication. The URL has to be given in the List of References.

(Bartels, 2005)

Data has to be cited to the following: institution's name and year of publication.

(Bureau of Labor Statistics, 2016)

Legal sources have to be cited according to their country of origin.

A German legislative text has to be cited as follows: section symbol proceeded by section number, including all smaller units and their abbreviations as well as the name of the legal code.

(§ 248 Abs. 2 HGB)

A legislative text from the United States has to be cited as follows: title number followed by the name of the legal code preceded by the section symbol or abbreviation and the section number.

(16 U.S.C. §824(c)(1))

These rules apply, regardless of whether a source is used for the first time or has been used before.

The citation rules mentioned apply also when using footnote citation.

5.5 Tables and Figures

In case tables, figures, diagrams etc. are used in the text, they have to be numbered separately and itemized in different lists (e.g. List of Figures and List of Tables). Figures and tables have to be marked with a number (e.g. fig.1, fig.2, table 1) as well as with a title. The caption for a figure appears below the graphic; for a table, above. They must be shown in the lists with the exact same title and page number. Tables, figures and diagrams can be used for the purpose of illustration, but they must not be used to shift explanations from the text to the illustrations. When there are many figures or tables in your paper, it can be advisable to combine them in an appendix. The source must be stated for each element. Tables and figures must be labelled such that the content can be captured (thematic, spatial and temporal differentiation, if appropriate mention the dimension or unit). Geographical figures have to contain coordinates, curves, dots etc. If the author refers to a table or a figure within the text, the number of the table/figure has to be cited. The source of a table or a figure should always be mentioned under the illustration. If the author creates a table using other author's tables, all relevant material has to be cited (e.g. own graph based on Source XYZ, year, p.123).

6 Appendix

The main elements of an appendix are additional material, documents or overviews that are suitable to give additional topic related information or that are difficult or impossible to access for the reader. Only aspects that are not necessarily needed for the understanding of the content may be mentioned in the appendix. In other words: It is not allowed to use the appendix as a further part of the main text (e.g. because of lack of space due to page number limitation). The appendix follows directly the main text. The page counting continues (with Arabic numerals). Illustrations in the appendix are counted anew. Each element of the appendix is to be indicated separately (e.g. Appendix A, B, C) and is listed

in the table of contents with the corresponding headline. Citations and source references in the appendix are done as in the main text.

7 List of References

The bibliography is a mandatory part of all scientific work. It is a complete list of all sources (publications, material) which are used in the text. Literature that has been used, but that was not taken into account verifiably shall not be included in the bibliography.

The bibliography is sorted by the author's names. The formatting should be as follows: single line spacing, left justified, 1.5 line spacing between paragraphs. The details concerning the indication of sources in footnotes and in the bibliography have to be taken from the source itself. Thereby the main title, not the binding title, is to be mentioned. More precisely, the following information are necessary:

- Author's last and first name (if author is unknown: "N.N."; academic degrees are not mentioned),
- The title of the work (for articles in journals or in compilations additionally 'in:' title of the journal/the compilation – for compilations the editor's name is to be mentioned with the addition '(ed.)' before the title,
- The volume and the edition (if necessary),
- Place of publication (not for journals – if there is more than one place of publication, than it is sufficient to mention the first), if necessary the number or the year of the journal
- Year of publication,
- Page numbers of the article in the journal or compilation,
- Internet: Name, date source has been accessed, URL
- The author's name and the year can be printed in bold type in order to facilitate the readability. It is also common to indicate single article titles in italics. If there are several publications from one author in one year, letters are used to distinguish between them.

***Last name, first name (or initials with dots) (year): Title. Subtitle.
Number. Place of publication: publisher.***

Complete book:

Gravelle, H. and Rees, R. (2004:) Microeconomics. 3rd edition. Harlow: Financial Times/Prentice Hall.

Complete book with more than two authors:

Mas-Colell, A., Whinston, M. D. and Green, J. R. (1995): Microeconomic Theory. Oxford: University Press.

Collective Volume:

Secomandi, Nicola (ed.)(2017): Real Options in Energy and Commodity Markets. Singapore: World Scientific Publishing Co. Pte. Ltd.

Essay in a book:

Dodds, P.E. and Garvey, S.D. (2016): *The Role of Energy Storage in Low-Carbon Energy Systems*. In: Letcher, T.M. (ed.): Storing Energy: with Special Reference to Renewable Energy Sources. Amsterdam: Elsevier 2016, p. 3 ff.

Article in a journal:

Alcott, Hunt (2011): *Rethinking real-time electricity pricing*. In: Resource and Energy Economics, 33(4), pp. 820-842.

Internet source:

IASC (2006): *Biodiesel Growth in Europe and its Impact on the Oilseed Industry*. In: International Association of Seed Crushers (IASC). San Francisco 16.06.2006. Accessed day.month.year http://www.iasc-oils.org/word_docs/europe.pdf.

Data:

National Renewables Energy Laboratory (2016). *Solar Data*. Accessed day.month.year. http://www.nrel.gov/gis/data_solar.html/.

Legal source:

Directive 2009/73/EC in the version of 13 July 2009.

Some examples for general abbreviations when dealing with literature:

Ed. = Editor(s)

Et al. = and others

Loc. Cit. = in the place cited

n.d. = No date
No. = Number
Vol. = Volume
Diss. = Dissertation
f. or ff. = following page or pages
p. or pp. = page or pages

8 Reference Management Software

Using a reference management software when writing a paper is recommended. The Universitäts- und Stadtbibliothek Köln offers a good overview over existing programs (all of them are free of charge):

https://www.ub.uni-koeln.de/infothek/recherche/literaturverw/ueberblick/index_ger.html

These programs help to organise the literature so more focus can be put on writing. Having added the literature to the program, the citing and the creation of the list of references are very easy.

9 Eidesstattliche Versicherung

Each paper has to be accompanied by the following statutory declaration on the last page which has to be signed by the author and has to be written in German. With this declaration the author confirms that the paper has been written independently only making use of the stated literature and aides. Further, that it has not been submitted in this or any other form for grading.

„Hiermit versichere ich an Eides statt, dass ich die vorliegende Arbeit selbstständig und ohne die Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe. Alle Stellen, die wörtlich oder sinngemäß aus veröffentlichten und nicht veröffentlichten Schriften entnommen wurden, sind als solche kenntlich gemacht. Die Arbeit ist in gleicher oder ähnlicher Form oder auszugsweise im Rahmen einer anderen Prüfung noch nicht vorgelegt worden. Ich versichere, dass die eingereichte elektronische Fassung der eingereichten Druckfassung vollständig entspricht.“