

GUIDELINES ON HOW TO WRITE A SEMINAR PAPER, BACHELOR'S THESIS, DIPLOMA THESIS AND MASTER'S THESIS AT THE CHAIR OF MACROECONOMICS

1. GENERAL INFORMATION

These guidelines provide information on the content and format of scientific writing at the Macroeconomics Chair.

A piece of scientific writing always contains the analysis of a specific research question. This research question must be stated and answered clearly and precisely in the paper. It is important that the main points and the course of the investigation remain clear throughout the paper. The minimum requirements concerning a sound piece of scientific writing at the Chair of Macroeconomics are: Compliance with all formal requirements, correct citation, a complete list of all references, and an appropriate presentation of the problem at hand. The argument has to be comprehensible, coherent and consistent. A systematic approach to writing is absolutely essential and saves time and unnecessary confusion when the deadline approaches.

2. LITERATURE RESEARCH

A thorough literature research is the foundation of any scientific paper and should always be the first step of the writing process.

There is no "correct" or "standard" number of references to be used. Not quantity but quality and relevance of the references you use are important.

When selecting references it is important to note that not every kind of literature is adequate for a scientific paper.

In particular, you should refrain from:

- Popular magazines (e.g. Rolling Stone, Men's Health, Closer) and likewise publications, Wikipedia or other web-encyclopaedias
- Seminar papers, Bachelor-, Diploma, Master- or comparable works. Doctoral thesis and works for a postdoctoral lecture qualification are allowed.
- Magazines like "The Observer" or daily newspapers are permitted given an important current matter. They should, however, be used rarely, as such publications predominantly contain common knowledge

Until their publication in a scientific journal, scientific papers are typically „work in progress" and often there are more than one version of the same piece of work (e.g. as working or discussion papers which can be outdated). Throughout the literature research it is therefore important to read and cite only the latest versions. From the type of publication one can usually infer to the quality of the paper. For example it is common practice in scientific journals to "peer review" an article, which means that one or more experts of

the scientific field evaluate the article. A positive assessment of these experts is a requirement for the article's publication in the journal. Working Papers and Discussion Papers have not undergone such a quality check and journal papers contain usually the final remarks of a scientist on a project. Therefore, if a published article exists, one should prefer this article to Working Papers or Discussion Papers with comparable contents.

It is generally not advisable to use online sources. Exemptions from this rule are web presence of research institutions, statistics agencies, government agencies, supranational government organizations and renowned scholars.

We advise all students who write their first term paper to take part in an introductory course on how to use the faculty's (university's) library. The library offers courses on a regular basis where you will be introduced to helpful methods regarding literature research.

Here is a first selection of catalogues to help you get started with literature research:

- OPAC - Complete catalogue of the University Library Bochum
- DigiBib All online research instruments and full texts provided by RUB,
sorted by subject area
- EZB - Electronic journal database
- IDEAS - Database for management and economics
- JSTOR - Journal-database with complete articles
- Google [Scholar](#) - Online search engine of Google for scientific papers

When looking for literature with the help of key words it is advisable to try out several slightly different key words in order not to miss important references because of minor differences in wording. During a literature research for degree dissertations it might be helpful to be aware of the quality of scientific journals, to separate relevant articles from less relevant ones. Journals considered as being "good" are normally those journals which are most frequently cited by scientists. Rankings that take the number of citations into account can therefore help to infer about the quality of journals and to identify the most important publications related to a topic. One of these rankings for scientific journals is for example the German Handelsblatt-Ranking.

3. FORMAL REQUIREMENTS

Every scientific work has to meet some formal demands. **Compliance with these requirements is mandatory.** A disregard has a negative influence on the assessment of the work.

3.1 VOLUME OF THE PAPER

A term paper in a Master's seminar is restricted to a maximum of 19 pages, including tables, figures, table of contents, reference list and author's declaration (a maximum of 15 pages text only). A term paper in a Bachelor's seminar is restricted to a maximum of 14 pages, including tables, figures, table of contents, reference list and author's declaration (a maximum of 10 pages text only). A Bachelor's thesis is restricted to a maximum of 26 pages, including tables, figures, table of contents, reference list, appendix and author's declaration (a maximum of 20 pages text only). Diploma and Master's theses are usually 50 pages long. You may be allowed to write up to 70 pages after consultation with the Institute for Macroeconomics.

In general, the content has to be presented in a concise and succinct way. This implies that it should not be unduly prolonged if it is shorter than the maximum number of pages. In particular, please do not insert empty paragraphs to stretch it.

3.2 STRUCTURE OF THE PAPER

The composition of the work includes the following points:

- Cover page, without page number (including title of the work, name, address, registration number, professor)
- Table of contents with page numbers in Roman numerals
- Text component with page numbers in Arabic numerals
- Bibliography with page numbers in Arabic numerals
- Appendices, Headings are A1, A2, etc. with page numbers in Arabic numerals (except for Seminar papers)
- Declaration (no page number, on a separate sheet)

The following table shows which elements are to be included in which kind of paper/thesis:

	Seminal paper		Degree dissertations	
	B.Sc.	M.Sc./Dipl.	B.Sc.	M.Sc./Dipl.
Title page	Yes	Yes	Yes	Yes
Table of Contents	Yes	Yes	Yes	Yes
List of Tables	No	No	No	No
List of Figures	No	No	No	No
List of Abbreviations	No, explain after the first usage in the text.	Possible, but not necessary, not for the explanation of commonly known abbreviations, otherwise like seminar papers		
Text component	10 pages	15 pages	20 pages	
List of references	Yes	Yes	Yes	Yes
Appendix	No	No	No	Possible
Declaration	Yes	Yes	Yes	Yes
Maximal page count	14	19	26	50 (after consultation up to 70)

3.3 FORMATTING

We recommend setting the formats in your word processor before you begin to write. Moreover, the indices (in particular, table of content) should be compiled concomitantly while composing the text.

The following page formats apply:

Text element	Formal Requirement
Margin on the left	2,5 cm
Margin on the right	2,5 cm
Margin on the top	2,5 cm
Margin on the bottom	2,0 cm
Line spacing text	1.5
Line spacing footnotes	1.0
Text alignment	Justification with hyphenation
Footnote alignment	Justification with hyphenation
Font	Times New Roman or Computer Modern
Font size text	12
Font size formulas	12
Font size footnotes	10
Page numbers	Bottom of page, centered or right

3.4 TABLES AND FIGURES

Tables and figures have to be numbered consecutively. They must have a title and a caption. The caption must contain the source of the table or figure and – if necessary – a brief explanation of the content (e.g. abbreviations used). In addition, the content of the table or figure has to be explained in the text. Tables and figures should be centered. Assure readability of the printed version. If you refer only to parts of a table it might be a better approach to present this content in a new table rather than just copying the table from the original source.

Table: Sample title

Criterion	Value 1	Value 2	Value 3
X	20.000 €	40.000 €	10.000 €
Y	300 PS	400 PS	75 PS
Z	VW	BMW	OPEL

Source: Musterman, 2008, p. 123.

Legend: Variable X stands for the car's market price (etc).

3.5 EQUATIONS

In a scientific paper, equations should be used whenever they yield an important contribution to the clarification of an issue or the course of an argument. They have to be centered in a new line and numbered consecutively with Arabic numerals. The meaning of all equations has to be explained in the text; this implies, amongst others, defining all variables. Items of general knowledge (e.g. the binomial theorem) do not have to be explained (or included).

Example:

$$a^2+xy = cx + F \quad (1)$$

3.6 SUBMISSION

All papers are to be submitted as a hardcopy as well as electronically.

The hardcopy of a Master's or Bachelor's thesis has to be submitted to the Examination Office. Two copies of the print-out of a seminar paper have to be submitted to the Institute for Macroeconomics (stapled in the upper left corner, punched, **no folders**). Term papers mustn't be bound. Please make sure to submit a high quality hardcopy without misprints or typos.

An electronic copy of a thesis or seminar paper has to be sent as an email attachment to mak@ruhr-uni-bochum.de. We accept all common text processing extensions and PDF. Bachelor's and Master's theses have to be submitted electronically to the Examination Office as well.

4. CITATION

Statements and ideas by other authors have to be marked as such. This should be done consistently and, as far as possible, you should use primary literature, i.e. the source where the content you use is originally coming from.

A literal citation has to be marked in the text by quotation marks “...” and italic typeface and has to end with the reference in parenthesis. Non-literal/indirect citations – i.e. if you use someone's thoughts but do not quote him word for word – have to be marked only after the sentence or paragraph with a reference.

Citation should be in line with the guidelines by the American Economic Association (AEA). This implies in particular that the German way of quoting by **using footnotes is not permitted**. If a sentence contains an

indirect citation, the citation is part of the sentence and the sentence ends after the citation with a punctuation mark. If you quote several sentences or an entire paragraph indirectly, the reference follows after the punctuation mark. The respective paragraph is to be demarcated clearly (e.g. using circuits). The same applies to direct citations. If the content of an entire section is taken from a single reference you have to indicate that in the heading of the section (however, we advise you use more than one reference for each section).

Examples:

„This is a direct quote which can be shortened using [...] if some of the sentences of the direct citation are irrelevant.“ (Last name, Year, page)

This is an indirect citation meant to express the general meaning of the sentence being cited (Last name, Year, page).

This is an indirect citation. It expresses the general meaning in several sentences. (Last name, Year, page)

X.Y This is an example section heading (taken from last name, year, page)

If a reference is written by more than three authors you have to use the abbreviation “et al.” after the first author. If you use several publications by the same author from the same year of publication, please distinguish the sources by adding an extra letter to the year, in the order that you use the sources in the text. If several consecutive pages of a source are quoted, this is indicated by the specification of f and ff.

Examples: „Quote“ (Mustermann et al., 1999, p. 25)

„Quote“ (Mustermann, 1999a, p. 25)

„Quote“ (Mustermann, 1999a, pp. 25-30)

For newspaper articles, institutions and websites, please use the name of the newspaper, the institution or the website instead of the author’s name.

Examples:

In an Interview with the NYT John Doe said... (NYT, 2008, p. 12f.).

The British Department for Business, Enterprise and Regulatory Reform announced ... (BERR, 2008).

When a source reference refers to a complete source, the naming of the author's surname and year is sufficient.

Examples: Doe (2009) shows that ...

In the literature there is a consensus that ... (Doe, 2009)

Legal texts are not included in the bibliography and cited as follows.

Examples: The non-assistance clause follows from Article 125 paragraph 1 TFEU.

It is important to note: Other authors' intellectual property which is used in your work has to be marked as such and cited. Missing citations or citation of other than the used sources is considered as attempted examination fraud. This implies that we will suspect a case of plagiarism and you will fail. Plagiarism is a criminal offence. It can have major consequences including expulsion from the university. If you work together with another seminar participant without being asked to do so we cannot distinguish between each participant's contributions. Therefore, this will also count as an attempt at deception.

A term paper/thesis is a single-handed exam equivalent.

5. REFERENCE LIST

Every source cited in the paper has to be included in the reference list; sources that you read but ended up not using must not be included. Both secondary sources (Hinz (2001) quoted according to Kunz (2002)) and primary sources have to be included in the reference list.

All references have to be listed in alphabetical order, according to the formal requirements by the American Economic Association (http://www.aeaweb.org/sample_references.pdf).

You must not sort the references in any other way; the following classification is meant as an overview only.

1. PAPERS IN SCIENTIFIC JOURNALS

A) PUBLISHED PAPERS

Surname, First name. Year. "Title." *Title of the journal*, Volume: pages.

Example: **Acemoglu, Daron.** 2002. "Technical Change, Inequality, and the Labor Market." *Journal of Economic Literature*, 40(1): 7–72.

If there are two or more authors, the authors are not abbreviated with "et al.", but the following notation applies

Example: **Baker, George, Robert Gibbons und Kevin J. Murphy.** 2002. "Relational Contracts and the Theory of the Firm." *Quarterly Journal of Economics*, 117(1): 39–84.

B) FORTHCOMING PAPERS

Example: **Bikhchandani, Sushil und Joseph M. Ostroy.** 2004. "Ascending Price Vickery Auctions." *Games and Economic Behavior*. Forthcoming.

Here it is important to check if the article has not already been published in the time since the initial access.

2. BOOKS

Surname, First name. Year. *Title of the book*. Place of Publication: Publishing house.

Examples: **Friedman, Thomas L.** 2005. *The World Is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus and Giroux.

Helpman, Elhanan and Paul Krugman. 1985. *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*. Cambridge, MA: MIT Press.

3. ARTICLES IN COLLECTIONS

Surname, First name. Year. "Title of the article." In *title of the book*, Edition, Editors, pages. Place of Publication: Publishing house.

Example: **Freeman, Richard B.** 1993. "How Much Has Deunionization Contributed to the Rise in Male Earnings Equality?" In *Uneven Tide: Rising Income Inequality in America*, eds. Sheldon Danziger and Peter Gottschalk, 133–163. New York: Russell Sage Foundation.

4. COLLECTIONS

These include, for example, Encyclopaedias or volumes of publications over the years or within one year.

Surname, First name. Eds. Year. *Title of the anthology*. Edition. Publication: Publishing house.

Example: **Kusuoka, Shigeo und Akira Yamazaki,** eds. 2006. *Advances in Mathematical Economics*. Vol. 8. New York: Springer.

Mokyr, Joel, ed. 2003. *The Oxford Encyclopedia of Economic History*. 5 Vols. Oxford: Oxford University Press.

5. UNPUBLISHED PAPERS

A) WORKING PAPERS

As Working Papers those works are merely referred to, which are published as part of a series of an institution. They are equipped with a special number, which must also be specified.

Surname, First name. Year. "Title." Kind of Working Paper (Institution, Title of the series) and serial number.

Examples: **Ausubel, Lawrence M.** 1997. "An Efficient Ascending-Bid Auction for Multiple Objects." University of Maryland Faculty Working Paper 97–06.

Heidhues, Paul und Botond Koszegi. 2005. "The Impact of Consumer Loss Aversion on Pricing." Centre for Economic Policy Research Discussion Paper 4849.

B) UNPUBLISHED WORKING PAPERS

Works which are, although not yet published, already available on the Internet (homepage of the author or the University of the author) are cited as follows:

Surname, First name. Year. „Title.“ URL (Accessed date).

Example: Zeitzewitz, Eric. 2006. "How Widespread Was Late Trading in Mutual Funds." <http://faculty-gsb.stanford.edu/zitzewitz/Research/latetrading.pdf> (Accessed date: 24th June 2008).

If the work is not available on the Internet, the following applies:

Surname, First name. Year. "Title." Unpublished.

Example: Acemoglu, Daron, Pol Atras und Elhanan Helpman. 2006. "Contracts and Technology Adoption." Unpublished.

6. DISSERTATIONS

Surname. First name. Year. "Title." PhD diss. University.

Example: Nash, John. 1950. "Non-Cooperative Games." PhD diss. Princeton University.

7. WEBSITES

As Internet sources only texts are indicated, which were taken directly from websites etc.. If it is a series of publications, electronic journal, or the like, then these sources are represented according to the above categories. Also, the EU or the ECB press releases can be cited as working papers. Basically, only if no other assignment of an online source is possible, it must be declared as an Internet source. If Internet sources are used, the direct and complete link must be listed with details of the access point in time.

Author or institution. Year (*if possible*). "Title.". URL (accessed date).

Example: Eurostat. 2013. "Population on 1 January"
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=de&pcode=tps00001&tableSelection=I&footnotes=yes&labeling=labels&plugin=1> (Date of access: 16th September 2013).

8. NEWSPAPERS

Name of the newspaper. Year. "Title of the article/interview." Date, pages.

Example: The New York Times. 2013. "New York to Sue Wells Fargo and Bank of America Over Settlement Violations." May 6, 2013, 1.

The Guardian. 2012. "In Somalia, western donors made famine more, not less likely." 26. August 2012, 5.

6. CONTENT AND LANGUAGE STYLE

6.1 STRUCTURE

Through an outline you achieve a structured overview of the topic and have an easier time focusing on the main arguments while you write. If you introduce several theories, arguments etc in the main section, it is advisable to separate them through different sections and subsections.

Please note that subsections must not exist on their own, i.e., if you have a subsection 2.1. it must be followed by a subsection 2.2.

The text body of a paper should be roughly structured as follows:

- Introduction
- Main section
- Conclusion

Introduction

The introduction provides a first glimpse at the paper. It should contain the following aspects:

- Relevance of the topic
- Aim of the paper (it is advisable to formulate a precise question to be answered in the paper)
- Scope and delimitation of the paper
- Methodology
- Current state of research
- Structure of the paper / Course of the argument

The introduction should establish the central theme so that you can refer to it all through the paper. Thus, the paper will make a structured impression throughout (Theisen, 2005, p. 132). The introduction should not have any subsections.

Main Section

The main section contains the treatise of the topic and the discussion of the arguments. How many sections and subsections you should use depends on the course of the argument (e.g. two sections with three subsections each). Transitions between sections should be logical and comprehensible. Please make sure not to lose touch with your central theme. The main section should contain the theoretical foundations of the topic, its practical implications, and an analysis or comparison.

Conclusion

The main results of your work should be summarized briefly in the conclusion. Additionally you should provide some possible consequences/implications of what you have shown.

The research question you stated in the introduction should be answered. Just like the introduction, the conclusion should not contain subsections.

Please note that the number of sectioning levels is determined largely by the length of the paper – it does not make sense to have four levels of sectioning in a term paper (e.g. 1.2.3.1.).

A table of contents could look like this:

1. Introduction
2. Theoretical Underpinnings
 - 2.1. The role of human capital
 - 2.2 The screening model
3. Identification strategies
 - 3.1 OLS
 - 3.2 Instrumental variables
 - 3.3 Fixed Effects
4. Empirical results
 - 4.1 OLS
 - 4.2 Instrumental variables
 - 4.3 Fixed Effects
5. Conclusion

6.2 LANGUAGE STYLE

Term papers as well as Bachelor's and Master's and Diploma theses constitute example of scientific writing. Therefore, they have to fulfill certain requirements regarding language style.

Generally you should use your own words rather than borrowing phrases or wording from the literature. You should avoid filler words like „actually“, „sort of“, etc., as well as strong opinions („gross“, „in my point of view, this is a stupid argument“). Very specific abbreviations should be used sparingly and have to be explained

when used for the first time, e.g. Record Industry Association of America (RIAA). Unnecessary words of a foreign language, which have an equally widespread English translation, are not desirable. When using a foreign language technical term the English translation of the original term can be mentioned separately (e.g. “The rising German socio-demographic phenomenon of a so called precarious milieu (Prekariat) remains a serious issue for economists and policy makers.”) In general, foreign words and technical terms should be used with caution. Symbols, metaphors and other figures of speech have to be adequate and comprehensible. A scientific piece of writing must not contain superlatives (e.g. „This is the very best macroeconomic model“). Moreover, there is no room for colloquial language in a scientific piece of writing.

A final piece of advice: proofread your paper and have at least one other person proofread your paper. Also, you should use spell checking software to avoid receiving a lower grade because of bad spelling. Punctuation plays a part, too. Based on the experience at our chair it is worth to repeat the rules of punctuation, e.g. in relative clauses.

7. SUPERVISION OF THE WORK

COLLOQUIA

For all undergraduate candidates two colloquia will be organized. At the first appointment, you will be asked to present the outline and briefly explain the course of reasoning of your work. At the second appointment the work should be well advanced. You should be able to present your main results.

Both times it is advised to prepare a PowerPoint (or LaTeX) presentation. You will have 10 minutes to present in each colloquium. After your presentation, you will receive feedback from the employees of the Chair of Macroeconomics and your fellow students.

RELATIONSHIP TO YOUR SUPERVISOR

We expect you to read these guidelines thoroughly before you contact us with questions.

It would be nice if you send your supervisor your questions before the meeting date so that he/she can prepare for the meeting. We are happy to help with problems, but we will not read your work before the deadline – neither whole nor in part. Please also note that the independence of the processing can also be incorporated into the note.

BIBLIOGRAPHY

American Economic Association. 2008. “AEA Publications Sample References“

http://www.aeaweb.org/sample_references.pdf. (Accessed date: 24th June 2008).

Theisen, Manuel R. 2006. *Wissenschaftliches Arbeiten: Technik, Methodik, Form*. München: Vahlen.

EXAMPLARY DECLARATION

Declaration

Herewith I declare that I prepared this diploma/masters/ bachelor/seminar paper independently on my own and without the use of any aids except those specified, that I used only the specified sources and that any direct or indirect quotes taken over from other authors are indicated as such. The work has not been submitted to any other examination board in the same or similar form.

Place, Date

Signature