



GUIDELINES ON HOW TO WRITE A TERM PAPER, BACHELOR'S THESIS, DIPLOMA THESIS AND MASTER'S THESIS AT THE INSTITUTE FOR MACROECONOMICS

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1. GENERAL INFORMATION

These guidelines provide information on the content and format of scientific writing (both in English and German) at the Institute for Macroeconomics.

The minimum requirements concerning a sound piece of scientific writing at the Institute for Macroeconomics are:

- Compliance with all formal requirements, correct and consistent citation, a complete list of all references, and an appropriate presentation of the problem at hand, as well as clear research questions and answer.
- The argument has to be comprehensible, coherent and consistent.
- A systematic approach to writing and a clear line of argumentation is absolutely essential, 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 *corrector 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 type of contribution is adequate for a scientific paper. In particular, you should refrain from:

- Popular magazines (e.g. Rolling Stone, Men's Health, Closer) and comparable publications, Wikipedia or other online encyclopedias.
- Seminar papers, Bachelor's, Diploma, and Master's theses or comparable assignments. (Doctoral theses and works for a postdoctoral lecture qualification are allowed.)
- Magazines like *The Observer* and daily newspapers are permitted given an important current matter. They should, however, be used rarely, as such publications predominately contain common knowledge.
- Textbooks, e.g. Introduction into Macroeconomics

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and often there are more than one version of the same piece of work (e.g. as working or discussion papers which can be outdated). In 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 such as the content from websites or homepages. 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.

Scientific online literature research works best through a range of catalogues and search engines. Access to those catalogues and to many journal articles may be restricted from your home computer. Therefore, it is advisable to conduct your research on campus, where you have access to a broad variety of literature. Alternatively, there is the option of setting up a VPN connection to the university network. This way you can use services that are restricted to the university network from your home computer.

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

- OPAC Complete catalogue of the university library
- DigiBib All online research instruments and full texts provided by the Ruhr-University, sorted by subject area
- EZB Electronic journal data base
- IDEAS Data base for economics
- JSTOR Data base for full text journal articles
- Google [Scholar](#) Google search engine for scientific publications

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. Considered as being “good” journals 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. CONTENT AND LANGUAGE STYLE

3.1 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 structured as follows:

- Introduction
- Main section
- Conclusion

Introduction

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

- Motivation
- Relevance of the topic
- Aim of the paper & research question (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

Introduction

A piece of scientific writing always contains the analysis of a specific research question which must be stated and answered explicitly and precisely in the paper. The introduction should establish the central theme so that you can refer to it all through the paper. 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 argument (e.g. two sections with three subsections each). Transitions between sections should be logical and comprehensible. Please make sure not to “loose touch” with your central theme and therefore refer to your topic and research questions. The main section should contain the theoretical foundations of the topic, its practical implications, and an analysis or comparison.

Conclusion

In the conclusion, you should summarize the content, purpose and main results of your paper briefly. The research question stated in the introduction should also be mentioned and answered explicitly. Additionally, you should provide some possible consequences or implications of what you have shown. However, you should not add new information or references that you did not explain in the main part. Ideally, you end your paper with a take-home message. Just like the introduction, the concluding section should not contain subsections. Please note that the number of sectioning levels is determined by the length of the paper – it does not make sense to have four levels of sectioning in a term paper.

Example on how to structure a table of contents.

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

3.2 LANGUAGE STYLE

Term papers as well as Bachelor's, Master's and Diploma theses constitute examples 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 (*in my point of view*, *this is a stupid argument*). Very specific abbreviations should be used rarely and have to be explained when used for the first time, e.g. Record Industry Association of America (RIAA). 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.

Please do not use the pluralis majestatis *we*, since you are the single author of your paper.

When writing in English, please consider the following:

- Use active instead of passive voice, since it shortens and simplifies sentences and thus improves readability (e.g. The papers were corrected by the teacher -> The teacher corrected the papers.);
- Avoid synonyms to achieve creative variation, such as project, study, research, stick to one expression throughout the paper to not confuse the reader;
- Avoid writing in your mother tongue and translating into English;

- Write sentences that are clear, short and easy to read. Try to avoid long and complicated sentences, but write as simple as possible;
- Use English spelling-control (UK or US);
- Consult website such as <http://www.phrasebank.manchester.ac.uk/> that can help you to find the appropriate wording.

4. FORMAL REQUIREMENTS

4.1 VOLUME OF THE PAPER

<i>Type of academic writing</i>	<i>Maximum pages (including tables, figures, table of contents, reference list and author's declaration)</i>	<i>Maximum text pages</i>
term paper in a Bachelor's seminar	14	10
term paper in a Master's seminar	19	15
Bachelor's thesis	26	20
Diploma and master's theses	50 (max. 70 after consulting your supervisor)	45

Due to reasons of fairness, we are very strict with page numbers. In case the number of pages of your paper undercuts or exceeds the requirement, please contact your supervisor for advice.

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 line breaks to stretch it.

Please note that every piece of writing must follow certain formal requirements; non-compliance with them will have a negative impact on your grade.

4.2 STRUCTURE OF THE PAPER

A paper or thesis contains the following items:

- Title page, without page number (title of the paper, name, address, student ID, professor's name)
- Table of contents, with page numbers in Roman numerals (page number II)

- Text component, with page numbers in Arabic numerals (starting with 1)
- Reference list, with page numbers in Arabic numerals
- Appendices, numbering with A1, A2 etc. with page numbers in Arabic numerals (optional, only for Master theses)
- Declaration, with no page number, on a new page

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

	<i>Seminar paper</i>		<i>Thesis</i>	
	<i>B.Sc.</i>	<i>M.Sc./Dipl.</i>	<i>B.Sc.</i>	<i>M.Sc./Dipl.</i>
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 them when you first use them.	Possible, but not necessary; not for abbreviations of common knowledge. Otherwise like for seminar papers.		
Text body	10 pages	15 pages	20 pages	45 pages
Reference list	Yes	Yes	Yes	Yes
Appendix	No	No	No	possible
Author's declaration	Yes	Yes	Yes	Yes
Maximum total number of pages	14	19	26	50 (after consultation up to 70)

4.3 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	Format
left margin	2.5 cm
right margin	2.5 cm
top margin	2.5 cm
bottom margin	2.0 cm
line spacing	1.5
line spacing foot notes	1.0
alignment	Justified
alignment foot notes	Justified
font	Times New Roman
font size	12
font size equations	12
font size foot notes	10
page numbering	bottom right

4.4 TABLES AND FIGURES

Tables and figures have to be numbered consecutively (Table 1, Table 2, Table 3 etc.). Other numbering e.g. table 1a, Table 1b, are not allowed. They must have a title and a caption. The caption must contain the source of the table/figure and a brief explanation of the content (including abbreviations used, if the case). In addition, the content of the table or figure has to be explained in the text. Tables and figures should be centered.

Please, check the readability of the printed version. If you refer only to parts of a table that you found in the literature, it might be better to present this content in a new table rather than just copying the table from the original source.

Table: Sample title

Category	Observation 1	Observation 2	Observation 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.).

4.5 EQUATIONS

In a scientific paper, equations should be used whenever they yield an important contribution to the clarification of an issue or 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, among others, that you need to define all variables.

You do not need to explain (or include) items of general knowledge (e.g. the binomial theorem).

Example: $a^2+xy = cx + F$ (1)

5. CITATION

You need to clearly show if you used statements wrote by other authors. As far as possible, you should use, and always read, primary literature, i.e., the source where the content you use is originally coming from. This means that if "*Mayer (2008) talks about Mustermann (2007, p. 7)*" always read and cite Mustermann (2007, p.7).

A literal citation has to be marked in the text by quotation marks using "... " and italic typeface (optional). It 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 the corresponding reference.

Citations should be in line with the [American Economic Association \(AEA\) guidelines](https://www.aeaweb.org/journals/policies/sample-references) (https://www.aeaweb.org/journals/policies/sample-references). 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.

The same applies to direct citations. It is misleading and not acceptable to have only one single reference for the content of an entire section.

Examples:

- a) „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)
- b) This is an indirect citation meant to express the general meaning of the sentence being cited (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 (a, b, c, etc.,) to the year, in the order that you use the sources in the text. If you use several subsequent pages from a source indicate this by using “p. x-y”. If you write in German, the same applies. Therefore, please do not use ff. or f, since this is outdated. Instead of *p. 5*, please use the German *S. 5*.

Examples of in-text citation and multiple authors publication:

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

„Quote“ (Mustermann, 1999a, p. 25)

„Quote“ (Mustermann, 1999a, p. 25-30)

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

Examples:

- a) In an interview with The Economist, Mustermann said that... (The Economist, 2008, p. 12).
- b) The German Federal Ministry of Economics and Technology issued a press release saying that.....(BMWi, 2008).

If you want to cite an entire publication it is sufficient to indicate last name and year.

Examples:

- a) Mustermann (2009) shows that...
- b) In the literature there is the argument that...(Mustermann, 2009).

Legal texts are not to be included in the reference list. They are cited as follows.

Example: The no-bailout-clause results from Art. 125 section 1 AEUV.

6. BIBLIOGRAPHY (REFERENCE LIST)

You need to include every in-text citation in the reference list. There should be no source in reference list that you did not use within the text. This means that sources that if you read, but ended up not using them in the text, then they must not be included.

Both secondary sources (such as: *Hinz (2001) quoted according to Kunz (2002)*) and primary sources have to be included in the reference list. Again, please make sure that your reference list is consistent. Only use Hinz (2001) quoted according to Kunz (2002) if you cannot find (read) the primary source, which in this case is Hinz (2001).

All references have to be listed in alphabetical order according to the last name of the author, according to the formal requirements established 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: *Last name, first name. Year. "Title." Journal Title, Volume: page numbers.*

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

In the reference list, do not shorten the author list by using „et al.“; rather provide all names in the following way:

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

B) FORTHCOMING PAPERS: *Last name, first name. Forthcoming. "Title." Journal Title*

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

Before handing in the paper, check whether the paper has been published in the meantime.

2. BOOKS: *Last name, first name. Year. Title of Book. Location of Publisher: Publisher.*

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

b) 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: *Last name, first name. Year. "Title of Article" In Title of Book, Volume, editor, page numbers. Location of Publisher: Publisher.*

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: *Last name, first name, eds. Year. Title of Volume. Volume. Location of Publisher: Publisher.*

Collections are e.g. encyclopedias or volumes of a publication that is published every year or several times a year.

Examples: a) Kusuoka, Shigeo and Akira Yamazaki, eds. 2006. *Advances in Mathematical Economics*. Vol. 8. New York: Springer.

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

5. UNPUBLISHED PAPERS

A) WORKING PAPERS: *Last name, first name. Year. "Title." Type of Working Paper (institution, working series title) and number.*

Only papers appearing as part of an institution's working papers series should be classified as working papers. These should always include a specific working paper number as assigned by the institution.

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

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

B) UNPUBLISHED WORKING PAPERS: *Last name, first name. Year. „Title.“ URL (retrieved Date).*

When a paper has not been published but can be found on the Web (such as the author's website or the university website), use the following format:

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

If the paper does not appear on a website: *Last name, first name. Year. "Title." Unpublished.*

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

6. DISSERTATIONS: *Last name, first name. Year. "Title." PhD diss. University.*

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

7. WEBSITES: *Name of website. Access year. Publisher/ Firm / Institution. URL (retrieved Date).*

If you cite websites you have to provide the direct and complete link to the website, including access date.

Examples: a) Biography Resource Center. 2006. Thomas Gale.
<http://www.galegroup.com/BiographyRC/> (retrieved September 25, 2006).

b) OECD. Stat. 2008. OECD. <http://stats.oecd.org/wbos/Index.aspx?usercontext=sourceoecd> (retrieved June 30, 2008).

8. NEWSPAPERS: *Name of newspaper. Year. "Title of Article/Interview." Date, page numbers.*

Examples:

- a) The New York Times. 2013. "New York to Sue Wells Fargo and Bank of America Over Settlement Violations." May 6, 2013, 1.
- b) The Guardian. 2012. "In Somalia, western donors made famine more, not less likely." 26. August 2012, 5.

7. IMPORTANT REMARKS

7.1 PLAGIARISM

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.

7.2 SUPERVISION OF THE WORK

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 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.

7.3 SUBMISSION

The hardcopy (1 hardcopy and PDF format) of a **Bachelor's or Master's thesis** has to be submitted to the Examination Office (please contact the EO for further details) as well as to the Institute for Macroeconomics (1 hardcopy and PDF format to be sent to mak@ruhr-uni-bochum.de).

Two printed copies of a **seminar paper** have to be submitted to the Institute for Macroeconomics (stapled in the upper left corner, no folders). Term papers mustn't be bound. Please make sure to submit a high-quality hardcopy without misprints or typos. An electronic copy (PDF format) should be sent as an e-mail attachment to mak@ruhr-uni-bochum.de.

8. ATTACHMENTS

AUTHOR'S DECLARATION

Declaration

I declare that I have independently authored the present term paper/ Bachelor's thesis/ Master's thesis with the title "... ..". I have not used any other than the declared sources or resources, and I have explicitly marked all material which has been quoted either literally or by content from the used sources. This paper has not been submitted either in whole or part, for a degree at this or any other university or institution.

Bochum, Date

Signature

CHECKLIST

Please use this checklist before when editing your Seminar paper, Bachelors' thesis or Masters' thesis

Please note: It is absolutely mandatory to stick to the requirements contained in our guidelines. Any non-compliance will have a negative impact on your grade!

Please note: this checklist is not intended to be complete and it does not cover all requirements in detail. We highly recommend reviewing the guidelines before submitting your paper/thesis to check that all requirements have been met.

BEFORE STARTING YOUR PAPER/THESIS WE HIGHLY RECOMMEND CONSIDERING THE FOLLOWING OPTIONS

- Careful reading of the guidelines
- Attending research courses offered by the libraries of the Ruhr-University
- Attending workshops and consultations at the Writing Center of the Ruhr-University
- Set up a VPN connection to the university network if you want to work from home

CONTENT

- Is there a clearly stated research question in the introduction?
- Is the structure logical and the argumentation stringent?
- Did you refer to your research question and answer in your conclusion?
- Did you answer this question explicitly in your paper/thesis, i.e. in your conclusion?
- Does your paper include all necessary information for the reader's understanding?

FORMATTING AND LANGUAGE

- Did you proofread your text? Did another person proofread your text?
- Is the formatting of your paper consistent to all requirements stated in the guidelines (see table p. 8 and point 4.2)?
- Is the formatting of your tables, figures, and equations etc. consistent to the guidelines (see points 4.4 and 4.5)?
- Is your formatting consistent, e.g. equal spacing, in-text citation, correct numbering of headings, etc.?
- Are the page numbers given in the table of contents correct?
- Did you use a scientific language style without colloquial formulations?

- Did you check the spelling and grammar?

REFERENCES

- Did you mark and cite every other authors' intellectual property that you have used in your paper/thesis (see point 7.1)?
- Did you use high quality and 'up-to-date' literature?
- Is there any reference that belongs to the categories you should refrain from e.g. textbooks, magazines (see p. 2)? If yes, please modify accordingly.
- Are the citations consistent with the guidelines?
- Is the reference list consistent with the guidelines?

BEFORE HANDING IN YOUR WORK

- Did you sign the declaration of commitment?
- Is the outer appearance of your printed work clean and tidy?
- Do you have a sufficient number of versions for the Institute for Macroeconomics and the Examination Office (see point 7.3)?
- Did you send an electronic copy of your work (sent as an email attachment, in pdf-format) to the Institute for Macroeconomics?

ACCEPTANCE OF GUIDELINES

I hereby declare that I have carefully read the guidelines on how to write a Seminar paper, Bachelor's thesis, and Masters' thesis at the Institute for Macroeconomics. I am aware that I need to fulfil all requirements stated in the guidelines as a mandatory and minimum criterion to pass the examination (if not otherwise agreed upon with my supervisor).

Place, Date

Signature