

## **Formal Guidelines for Writing a Bachelor or Master Thesis**

For all Bachelor and Master theses written at the Chair of Environmental and Behavioral Economics, the following guidelines must be followed. If students wish to deviate from the guidelines for valid reasons, they should discuss this with their supervisor. Otherwise, non-compliance may result in a lower or even failing grade.

### **1 Formal requirements**

#### **1.1 Language and number of pages**

A thesis may be written in German or English. A Bachelor thesis contains 35 pages ( $\pm 10\%$ ). A Master thesis contains 50 pages ( $\pm 10\%$ ). This refers exclusively to the main text body including all tables and figures shown in the main text. The front cover, table of contents, lists of abbreviations/symbols/tables/figures/references, table of the use of AI, appendix, and affidavit do not count towards the number of pages.

#### **1.2 Formatting**

The following guidelines for formatting must be followed:

- Font type: Times New Roman, size 12 (footnotes size 10).
- Line spacing: 1.5 (footnotes and headings 1).
- Margins: 2.5 cm at the top and bottom, 1.5 cm at the right and 3.5 cm at the left.
- Alignment: Even right margin by using 'justification' (except for headings).
- Page numbers: In the footer or header.
- Classify sections and subsections with Arabic numerals according to the decimal classification system (1, 1.1, 1.1.2, 2, ...).
- Highlight headings in bold.
- Font size for main section headings (1, 2, ...) are two points larger than the rest of the text. All other headings are font-sized like the text.

- Tables are numbered with Arabic numerals (Table 1, Table 2, ...). The table heading **above** the table should be as concise as possible. Below the table, provide the source.
- Figures are numbered with Arabic numerals (Figure 1, Figure 2, ...). The figure caption **below** the figure should be as concise as possible. Below the figure, also provide the source.
- Formulas: All formulas must be numbered and appear in separate lines. All symbols used must be defined in the text.

## 2 Structure

A thesis contains (in this order):

- Front cover
- Table of contents
- Lists of abbreviations, symbols, tables, figures (if applicable)
- Main text body
- List of references
- Table of the use of AI (see Section 8 for details),
- Appendix (if applicable)
- Affidavit

Empirical theses which involve data analysis using statistical methods must also include:

- Data and replication files (to be submitted as extra files, see Section 11 for details)

Bachelor and Master theses may, but do not have to, include an abstract, summary or acknowledgements.

## 3 Front cover

The front cover must be prepared in line with the template provided by the examination office.

## 4 Table of contents

The table of contents provides a comprehensive overview of the thesis structure, encompassing all its elements. It outlines each section and subsection of the text body, including section numbers, titles/headings, and their corresponding page numbers. Page numbers for the

introductory lists are given in Roman numerals, those for text sections and subsequent pages are given in Arabic numerals. See Figure 1 for an example.

<b>Table of contents</b>	
List of abbreviations .....	III
List of symbols .....	IV
List of tables .....	V
List of figures .....	VI
1 Introduction .....	7
2 Heading of the second main section .....	10
2.1 Heading of the first subsection of the second main section .....	11
2.2 Heading of the second subsection of the second main section .....	12
3 Heading of the third section .....	15
4 Conclusion .....	16
References.....	18
Use of artificial intelligence (AI) tools in preparing the thesis.....	19
Appendix .....	20
Affidavit.....	24

Figure 1. Example of a table of contents

**5 Lists of abbreviations, symbols, tables, figures (if applicable)**

- The list of abbreviations includes all abbreviations used in the text body in alphabetical order. Commonly used abbreviations such as “e.g.” do not have to be included.
- The list of symbols includes all symbols used in the text body with their respective definition.
- The list of tables includes all tables used in the text body and the appendix with the number of the table, the title, and their respective page number.
- The list of figures includes all figures used in the text body and the appendix with the number of the figure, the title, and their respective page number.

## **6 Main text body**

### **6.1 Introduction**

The introduction provides information on the topic, the research objectives, and the methodological approach of your work. The introduction should include:

- A motivation of the relevance of the topic: At the beginning you should arouse the interest of the reader by presenting the topic of the thesis and pointing out its relevance (both practical and scientific).
- Definition and distinction of the thesis objectives: Define the central research question and goal of your thesis. The main research question serves as a framework which guides through the thesis and should be answered in the conclusion.
- Methodological approach: Complete the introduction by briefly illustrating your methodological approach and explain why the approach is suitable for answering the research question.

### **6.2 Main part**

The main part of the thesis contains the investigation of the research question. It follows a consistent and comprehensive argumentation and is divided into sections and subsections with precise titles. Usually, (sub)sections should not be less than one page in length. A third outline level may be useful, but it should be made sure that each outline level contains at least two bullet points (if you have a section 1.1, then there must also be a section 1.2).

The number of sections and the depth of the hierarchical structure should be proportionate to the length of the thesis. The length of each section should reflect its importance within the thesis. Make sure the reader can follow your train of thoughts. Explain equations, figures, and tables in the main text. Explain every abbreviation when used for the first time. Be clear and concise. Use professional technical terms and avoid colloquial expressions. Choose an appropriate style and use correct grammar and orthography. A presentation free of your personal valuations is necessary.

### **6.3 Conclusion**

The conclusion takes up and answers the initially formulated research question which represents the central goal of your thesis. It should include a critical reflection of the contents and results of the thesis and summarize its main outcomes. Do not provide new data or facts in the conclusion. However, do not simply review the arguments stated before. Instead, provide a synthesis that highlights the significance and implications of your findings. Additionally, include a discussion of the political implications of your research and suggest potential directions for future research. Be sure to also address and critically discuss any methodological limitations encountered during your study.

## 7 References

### 7.1 References in the text body

External thoughts, notions and ideas must be marked as citations and references by using the [Harvard Citations Style](#). Thus, whenever you directly or indirectly quote sources from external literature, statements or ideas, these references must be indicated right after the quote in short form by using the following pattern: Last name of the author(s) and year of publication.

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***Important:** Plagiarism occurs when the thoughts of others are incorporated into one's own scientific work without them being identified as thoughts of others. Every thesis is checked for plagiarism. If plagiarism is found the thesis is graded with 5.0.*

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The reference must always be related to the source you used, even if the author used a quotation herself. Every source that has been used needs to be found in the list of references, providing more details about the place of origin. If a paper has three or more authors, only the name of the first author is given. All other authors are identified by 'et al.', e.g. (Dannenberg et al. 2023). (Attention: 'et al.' is only used in the text; all names must be mentioned in the list of references). If you cite several works by different authors as evidence for a statement, list the authors in alphabetical or chronological order, e.g. (Dannenberg and Weingärtner 2022; Tavoni et al. 2011) or (Tavoni et al. 2011; Dannenberg and Weingärtner 2022). However you do it, do it consistently throughout the thesis. If several works by the same author are cited as evidence for a statement, the years should be given chronologically, e.g., (Dannenberg 2009; 2012; 2015).

Direct quotations are unusual in economics and should be used only rarely. Direct quotations are useful when you want to emphasize particularly concise statements by an author. Direct quotations must be taken verbatim from the source and placed in quotation marks. If it is necessary to add something to a direct quotation, this is done with square brackets. (Example: "After the start of the coronavirus pandemic, the [hospitality] industry suffered a sharp drop in sales in some cases."). For omissions in direct quotations, square brackets are used, in which three dots are inserted [...]. Grammatical errors or spelling mistakes are taken over and highlighted to show that it is not an incorrect quotation. (Example: "An experiment with 100 subjekts [sic] was conducted.")

*Examples for references in the text body:*

- Indirect quote (paraphrase) with reference in given in parentheses after the quote:

An experimental study shows that early commitments are important to limit the negative effects of threshold uncertainty (Dannenberg et al. 2015).

- Indirect quote (paraphrase) with reference built into the text:

As shown by Dannenberg et al. (2015), early commitments help to limit the negative effects of threshold uncertainty.

- Direct quote:

“One key result of our experiment therefore is that early action becomes very important in the presence of uncertainty.” (Dannenberg et al. 2015, p. 377).

*Figures and tables must also be provided with references. Examples:*

- Figures and tables that do not rely on content or data by other authors:

“Source: Own presentation” or “Source: Own calculation”

- Figures and tables that are based on content or data by other authors:

“Source: Own presentation/calculation/... (based on Dannenberg et al. 2023, p. 5).”

- Figures and tables by other authors that are directly used (e.g., by scanning or by pasting out of a PDF document):

“Source: Dannenberg et al. 2023, p. 5.”

## **7.2 List of references**

The list of references catalogues all sources used in the thesis in alphabetical order of the authors' last name(s). This includes books, book chapters in collective volumes, and articles in scientific journals. Each reference includes the essential bibliographic data (name of author(s), title of the publication, volume and year of publication). Each reference must also include a DOI (Digital Object Identifier) or another persistent link to confirm the existence of the source. Several sources of the same author in a given year are indicated with small letters after the year (e.g., 2015a, 2015b). Below you find an overview of how to reference different types of sources in the reference list.

- *Journal articles:*

Name, Initials and Name, Initials (Year). Title of the article. *Title of the journal*, Volume(Issue), page numbers. Link/DOI

Example:

Dannenbergh, A., Löschel, A., Paolacci, G., Reif, C. and Tavoni, A. (2015). On the Provision of Public Goods with Probabilistic and Ambiguous Thresholds. *Environmental and Resource Economics*, 61(3), 365–383. <https://doi.org/10.1007/s10640-014-9796-6>

- *Books and independent publications:*

Name, Initials (Year). *Title*. publisher. Link/DOI

Example:

Barrett, S. (2005). *Environment and Statecraft: The Strategy of Environmental Treaty-Making*. Oxford University Press. <https://doi.org/10.1093/0199286094.001.0001>

- *Book chapters in collective volumes:*

Name, Initials (Year). Title of the article. In: Name, Initials of the editor(s) (eds.), *Title of the collective*, Vol., (pages), publisher. Link/DOI

Example:

Fréchette, G.R. (2016). Experimental Economics across Subject Populations. In: Kagel, J.H. and Roth, A.E. (eds.), *Handbook of Experimental Economics*, Vol. II, (435-480), Princeton University Press. <https://press.princeton.edu/books/hardcover/9780691139999/the-handbook-of-experimental-economics-volume-2?srsId=AfmBOooX1kwK-wsuwE3q5LDsTzLNsndB-2k9-hBFei-vX6H1x1RcSLe5>

- *Discussion/working papers:*

Name, Initials (Year). *Title*. Discussion/working paper series, number of the paper. Link/DOI

Example:

Nordhaus, W.D. (2016). *Projections and Uncertainties About Climate Change in an Era of Minimal Climate Policies*. NBER Working Paper Series, Working Paper 22933. [https://www.nber.org/system/files/working\\_papers/w22933/w22933.pdf](https://www.nber.org/system/files/working_papers/w22933/w22933.pdf)

Note: Discussion/working papers may only be cited if a paper has not yet been published. If there is already a published version of a paper, this paper must be used for the citation. If referring to a discussion/working paper, use the latest available version.

- *Internet sources:*

Name, Initials (Year). *Title*. Link [last accessed: TT.MM.JJJJ].

Example:

Victor, D.G. (2023). *COP28 and the ghosts of Copenhagen*. <https://www.brookings.edu/articles/cop28-and-the-ghosts-of-copenhagen/> [last accessed: 24.04.2024]

Note: Not all Internet sources have an author's name. If necessary, the name of the publishing institution can replace the author's name (e.g., Carbon Brief (2022)). Be aware that not everything that can be found online is an Internet source (e.g., academic articles in online journals are not Internet sources). Rule of thumb: If there is a PDF of the text, it is not an Internet source.

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***Important:*** *A thesis must include a reference list that includes all sources cited in the main text. Each source must include a DOI (Digital Object Identifier) or another persistent link to confirm the existence of the source. If the reference list is missing or incomplete, then the thesis is graded with 5.0. It is not possible to submit the reference list or missing parts after submission of the thesis.*

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## 8 Using tools of artificial intelligence (AI)

For theses written at the Chair of Environmental and Behavioral Economics, the use of AI tools is permitted, provided that it is transparently disclosed. Specifically, students using AI tools must include a table after the list of references titled “Use of artificial intelligence (AI) tools in preparing the thesis.”. This table must disclose which tools were used for which purpose for the preparation of which section of the thesis. Specifically, the table must list all “higher-level” AI tools used throughout the course of the student's thesis work, for example, literature search tools (e.g., Consensus, Elicit, or Scholar GPT) used during literature review, tools used to assist with the research question or data analysis, and generative AI tools used during the writing process (e.g., ChatGPT). “Lower-level” AI tools, such as those designed to improve the spelling, grammar, or the style of one's own written text (e.g., DeepL Translator or DeepL Write) do not need to be included. As a rule of thumb, an AI tool is considered a “higher-level” tool that needs



to be listed if it is used by formulating prompts. Table 1 shows an example for a table listing AI tools, their purposes and possible sections.

**Table 1:** Use of artificial intelligence (AI) tools in preparing the thesis

<b>Tool</b>	<b>Purpose</b>	<b>Section(s)</b>
<b>Consensus (accessed via ChatGPT)</b>	Used to identify relevant literature for the research question.	Sections 1, 2
<b>ChatGPT</b>	Assisted in writing and data analysis.	All sections, particularly Section 4

If you do not use AI tools in the sense described above, you must include the following statement instead of the table: “No AI tools were used in preparing the thesis.”

Note that when using AI, students should be aware that the results produced may not be of the desired quality. For example, translation or writing tools may use unconventional or erroneous expressions, research tools may have difficulty distinguishing between well-published, peer-reviewed journal articles in reputable journals and “grey literature”, and generative AI may generate entirely inaccurate statements (“hallucinate”). It is therefore the responsibility of the student to ensure the quality of their thesis, regardless of whether or not they use AI. As it is the case for all tools, the skill level of the user will significantly influence the quality of the resulting outcome.

## **9 Appendix (if applicable)**

The appendix contains supplementary material (e.g., detailed description of the data set, survey items, additional tables and figures, etc.) providing helpful information to the reader. It only includes secondary material without direct relevance for the main text, but nevertheless with enough significance to be mentioned. The main text must reference to all additional material in the appendix.

## **10 Affidavit**

The affidavit is located at the very end of the thesis. It must be included in German language to be legally binding but can additionally be included in English as well. It must be signed indicating the date of signature.

- German version (must be used):

„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. Die elektronisch eingereichte Fassung der Arbeit stimmt mit der gedruckten Fassung überein.

Mir ist bekannt, dass bei meiner Arbeit eine Prüfung auf nicht kenntlich gemachte übernommene Textpassagen und sonstige Quellen stattfinden kann (vgl. u.a. § 16 Abs. 7 der Allgemeinen Bestimmungen für Fachprüfungsordnungen mit den Abschlüssen Bachelor und Master der Universität Kassel). Ich stimme zu, dass dafür gegebenenfalls ein Upload auf eine externe Datenbank des jeweiligen Software-Anbieters erfolgt und die Arbeit dafür auch gespeichert wird, sofern meine Arbeit dafür vorab ausreichend anonymisiert wird (i.d.R. genügt dafür die Entfernung des Deckblatts und der Unterschriftenseite). Ich stimme ebenfalls zu, dass zukünftig umgekehrt auch andere Arbeiten auf Plagiate aus meiner anonymisierten Arbeit überprüft werden.“

- English version (may be used additionally):

„I hereby confirm to the best of my knowledge that this thesis is solely my original work and that I have only used the sources and materials indicated. All quotations from other works as well as paraphrases or summaries of other works have been identified as such and properly acknowledged in the thesis. This thesis or parts thereof have not been submitted to an educational institution in Germany or abroad as part of an examination or degree qualification. The electronically submitted version of the thesis is the same as the printed version.

I am aware that my thesis may be checked for unidentified text passages and other sources (see, among other things, § 16 paragraph 7 of the General Provisions for Examination Regulations for Bachelor's and Master's Degrees at the University of Kassel). I agree that an upload to an external database of the respective software provider may take place and that the work will be saved for this purpose, provided that my work is sufficiently anonymized in advance (usually the removal of the cover sheet and the signature page is sufficient). I also agree that in the future other works will be checked for plagiarism from my anonymized work.”

## **11 Data and replication files**

For an empirical thesis, the data and documentation of statistical analysis (replication files) must be submitted as extra files together with the written document. This is necessary to ensure the transparency, reproducibility, and credibility of your findings. The data and analysis code will be tested for plausibility and consistency with the results reported in the thesis.

What to submit:

- Raw data: Submit the original data used in your analysis. This also applies if the data was given to you by your supervisor. Ensure that the data is well-organized and properly labeled.
- Statistical analysis documentation: Include the code or scripts used for statistical analysis (e.g., Stata do-file, R script). It is essential that the documentation together with the data enables the reproduction of all results presented in the thesis. This includes descriptive statistics, statistical tests, regression analysis and any other form of statistical analysis conducted.

How to submit:

- Data and documentation files must be submitted on a USB-Stick attached to the printed thesis. If the file size of the data is not too large, the data and documentation files may also be sent to the supervisor by e-mail within the submission deadline. Refrain from posting data to public repositories as this may violate privacy policies.

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***Important:*** *Without submission of data and documentation files an empirical thesis is incomplete, and the thesis will be graded with 5.0. It is not possible to hand in the data and replication files after submission of the thesis.*

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