

UNIVERSITY OF HOHENHEIM
CHAIR OF SERVICE AND
LABOR ECONOMICS (520G)
Prof. Dr. Thomas Beißinger
E-Mail: labour@uni-hohenheim.de



UNIVERSITY OF
HOHENHEIM

Date: May 4, 2024

Guidelines For Scientific Writing

Preliminary Remarks

This guide is intended for students who wish to write a scientific paper (seminar, bachelor's, or master's thesis) at the Chair of Service and Labor Market Economics. In addition to formal requirements, this guide aims to assist students in creating their scientific paper and to clarify any uncertainties that may arise in advance. Please contact your assigned supervisor if you have further questions (especially regarding content). For rules specific to your course of study, which may result from the individual examination regulations, please refer to the information provided by the Examination Office or the Study Information Center (SIZ). Please also note that seminar and bachelor's theses at our chair are most often written in the form of literature reviews. Students wishing to pursue quantitative papers are required to seek prior consultation. Such topics are recommended only for students with sufficient knowledge of econometric methods and analysis software (e.g., Stata). Bachelor's theses can be written in German or English. If the work is written in German, you are free to decide whether to use gender-sensitive language in your work or not.

Contents

Preliminary Remarks	i
List of Figures	iii
List of Abbreviations	iii
1 Components of a Scientific Paper	1
1.1 Title Page	1
1.2 Table of Contents	1
1.3 List of Tables and Figures	1
1.4 List of Symbols and Abbreviations	2
1.5 Main Text	2
1.5.1 Introduction	2
1.5.2 Main Body	3
1.5.3 Conclusion	4
1.6 List of References	4
1.7 Appendix	5
1.8 Declaration of Originality	5
2 Formal Requirements	5
2.1 Scope	6
2.2 Formatting	6
2.3 Tables and Figures	7
2.4 Formulas and Equations	7
2.5 Citation Style	8
3 Conceptualization of the Paper	10
3.1 Literature Review	10
3.2 Rough Structuring	11
3.3 Discussion of Structuring	11
3.4 Further Office Hours	12
4 Appendix	13

List of Figures

1 New Logo University of Hohenheim 7

List of Abbreviations

- KIM** Kommunikations-, Informations- und Medienzentrum (Communication, Information, and Media Center)

- OECD** Organization for Economic Cooperation and Development

- SIZ** Studieninformationszentrum (Study Information Center)

1 Components of a Scientific Paper

This chapter describes the fundamental components of a scientific work and provides further guidance on content and structure.

1.1 Title Page

The title page should contain the following information:

- Name of the supervising chair, first examiner, and (if required) second examiner
- For seminar papers: Course, semester, and supervisor
- Title of the paper
- Information about the author (name, email, student ID number, semester, course of study)
- Submission date

1.2 Table of Contents

The table of contents should provide readers with an initial overview of the content and structure of your paper. Take care to use concise but informative headings. Generally, more than three levels of hierarchy are not recommended and should be avoided if possible. Subsections are advisable only if, after one subheading (e.g., 2.1), there exists at least a second subheading (e.g., 2.2). Additionally, as a rule of thumb, if a section of text fills less than half a page, it does not require its own heading. The introduction and conclusion of your work are typically not subdivided but consist of a cohesive, continuous text. Please ensure a uniform appearance regarding the table of contents. It is best to automatically generate your table of contents using your chosen word processing program.

1.3 List of Tables and Figures

The list of tables and figures must include an organized list of all tables and figures used in the main text of your work. The table (figure) numbering, title, and page number where the corresponding table (figure) can be found should be listed here. Tables and figures that are part of the Appendix should be excluded from this list.

1.4 List of Symbols and Abbreviations

Apart from standard abbreviations (such as e.g., etc., i.e., or viz.), abbreviations in your work should be listed alphabetically in this section. Nevertheless, abbreviations should be spelled out and introduced as abbreviations when first appearing in the main text.

1.5 Main Text

The main text of your work consists of three parts: the introduction, the main body, and the conclusion. The following provides some guidelines for the most critical components and their structure. However, these guidelines are not exhausting. Ultimately, writing a scientific work is highly individual and depends on the chosen topic. Specific and detailed questions regarding the content of your work should therefore be discussed with your assigned supervisor.

1.5.1 Introduction

In the introduction, you should pique the readers' interest and explain your topic's relevance. You can achieve this, for example, by presenting interesting statistics or referring to a current debate in the media¹.

Before addressing the objectives and content of your original work, the research problem should be described in the context of the existing literature. Here, you demonstrate that you understand the current debate in the scientific community and have integrated it sensibly into your work².

In the subsequent explanation and delimitation of the topic, you should clearly state which aspects (research questions) your work will address and which aspects will not be part of your thesis. By clearly defining your topic, you ensure that readers do not develop false expectations regarding the content of your work.

Finally, your introduction should include a brief section that provides readers an overview of your scientific work. In addition to outlining the structure of the work, the central theme of your thesis should be recognizable and you should clearly state how you are going to answer your research question(s). Make sure that instead of simply listing the different chapters of

¹Unlike citing scientific sources to answer the research question (see Section 3.1), citing newspaper articles, etc., in the introduction is allowed. However, such sources should be used exclusively to introduce the topic.

²For this purpose, it is helpful to mention only a few important works from the literature in the introduction and then provide a structured literature review in a separate section.

your work, you explain the main points/content/arguments of each section in a brief and concise manner.

1.5.2 Main Body

The main body is the core of your work and should be divided into logical chapters that sequentially build on each other. Care should be taken to minimize overlap between sections. Otherwise, reading your work can quickly become cumbersome.

The structure of the main body depends heavily on the topic, so it is best to clarify the exact structure with your assigned supervisor. After the introduction, presenting a chapter of descriptive evidence (so-called stylized facts) related to your research question is advisable. In such a chapter, relevant data for the research topic are presented using charts, time series plots, bar graphs, tables, etc³. The subsequent chapters should contribute to answering your research question. By now, you should be familiar with the literature's most important theories and findings, allowing you to examine your topic from various perspectives. Note that the most important scientific papers in the field of economics are usually written in English. Ignoring this literature in your work (e.g., due to a lack of English proficiency) will negatively impact the evaluation.

Depending on your topic, it may be useful to start with an initial chapter on theoretical models that help to identify the key economic mechanisms/aspects of your research question⁴.

In a subsequent chapter, it is then advisable to address empirical analyses of your topic. Empirical analyses use econometric/statistical methods to quantify economic relationships and identify causal channels. It is best practice to describe the data-set and methodology used in each case. Make sure to not only provide verbal descriptions, but to also include the most important formulas and equations. If articles examining the same research topic reach different results, this is often due to differences in the data sources or empirical methodology. If you have integrated a theoretical part into your work before describing empirical studies,

³This chapter provides a good opportunity to integrate your own research contribution into the work, as you may also collect and present data graphically or in tables.

⁴our contribution in such a theoretical part is that you do not reproduce the equations from a research paper 1:1 but rather show, for example, how more complicated equations are derived in your own calculations (in the appendix). Sometimes, it can make sense to combine different models from the literature into your own hybrid model that contains the different models from the literature as a particular case. Choose a uniform notation for the variable names when presenting different theoretical models. For example, if X denotes the aggregated output in one research paper and Y in another, choose a uniform variable name for your representation of the two models, e.g., Y .

you should establish a connection between theoretical and empirical results.

To make reading your paper as easy and comprehensible as possible, place a short introductory paragraph at the beginning of each (main) chapter. This paragraph serves as a short transition from the previous chapter and prepares readers for the subsequent content. By doing so, you reaffirm the coherence of your work and can also determine whether the current chapter is appropriately placed.

1.5.3 Conclusion

The final part of your scientific work is the conclusion. Here, the central ideas and findings of your work are summarized. Your research question(s) should be answered based on the results from the main body. Additionally, you can identify existing research gaps and provide an outlook for future research.

Ensure that you do not cite any sources in the conclusion that were not referenced in the main body of your work. The conclusion should not contain any new information except for the outlook. Introducing new information could confuse readers and disrupt the readability of your thesis.

1.6 List of References

Any use of external ideas must be properly marked and documented in a scientific work. When directly quoting from the original source, enclose the segment in quotation marks. However, try to avoid direct quotes if possible. If you decide to use occasional direct quotes, provide the page number as well. In contrast, indirect quotes involve paraphrasing statements from the original source **into your own words**. Simply replacing individual words or reversing the beginning and end of a sentence is not sufficient. Doing so results in the failure of your work. If the original source is in English, translating the text into German word for word is prohibited and will also lead to a failure. You must convey the thoughts and arguments of the source material in your own words. The Appendix (Section 4) provides examples of sufficient and insufficient indirect quotes.

Section 2.5 explains how to mark external ideas in the text in more detail. The bibliography should only include sources cited in the text. It should not include additional literature that you have read but not used. Furthermore, citing primarily from primary literature in scientific papers is advisable. If you cite a source that you consider relevant to your work,

look it up independently. Doing so ensures no false statements or interpretations arise from citing secondary literature.

1.7 Appendix

If your work includes additional materials (e.g., additional figures, tables, theoretical derivations, etc.) that cannot be integrated into the main text for clarity reasons, you can include them in the appendix. However, the material necessary for understanding your text should remain in the main text of your work.

Longer appendices of various types should be labeled separately and numbered within the appendix (e.g., Appendix..., A Figures, B Tables, C Mathematical derivations, etc.). Remember to appropriately refer to the appendix in your main text, for example, through a note in parentheses or with a footnote.

1.8 Declaration of Originality

To ensure that you have written your work without outside assistance and have adhered to the rules of good scientific practices, you must attach a Declaration of Originality to your work upon submission. With this document, you declare that you have complied with the rules of good scientific practice, you have independently written the work, used no other sources or aids than those indicated, and have identified content borrowed verbatim and passages as such. Furthermore, you assure that the electronic version of the thesis submitted corresponds without exception in content and wording to the printed version and that you agree to have this electronic version checked for plagiarism using plagiarism detection software. You can find a corresponding form on the [Examination Office's website](#).

2 Formal Requirements

For writing scientific papers, we recommend using LaTeX⁵ or other word processing programs that specifically facilitate the formatting of formulas and other mathematical expressions. In

⁵LaTeX software is freely available. Typically, working with LaTeX requires a LaTeX distribution (e.g., TeX Live, MiKTeX, MacTeX) and a text editor (e.g., Texmaker, TeXworks, TeXstudio). Alternatively, the online LaTeX editor [Overleaf](#) can be used. A clear introduction to working with LaTeX can be found here: [latex-tutorial.com](#).

addition to the standard regulations of scientific writing, special attention should be paid to linguistic and orthographic correctness.

2.1 Scope

The following information pertain to the main text of the work, including footnotes but excluding the Appendix. The prescribed page count for thesis papers may vary by up to 10% above or below the stated limit.

- Bachelor's theses: approximately 40 pages.
- Master's theses: approximately 60 pages.
- Seminar papers (M.Sc.): 15-20 pages.

2.2 Formatting

The basic requirements for formatting your work are listed below. Anything else (e.g., special indentation of the first line of a paragraph) is at your discretion as long as you maintain a consistent appearance that facilitates readability.

- *Page margins*: Left 3 cm, right 2 cm, top 3 cm, bottom 2 cm.
- *Font*: Computer Modern Font (default font in LaTeX) or Times New Roman with font size 12pt (footnotes with font size 10pt) or Arial with font size 11pt (footnotes with font size 9pt).
- *Line spacing*: 1.5-line spacing in the text part and single-line spacing in footnotes.
- *Alignment*: Justified.
- *Page numbers*: All pages after the title page should be numbered consecutively. The Table of Contents, List of Figures, List of Tables, List of Abbreviations, and List of Symbols should be numbered using Roman numerals. For the main text, Appendix, and Bibliography, use Arabic numbers.

2.3 Tables and Figures

Where appropriate, tables and figures should be integrated sensibly into the text of your work. Tables and figures not extensively discussed in the text should be placed in the Appendix, as they may otherwise disrupt the readability. It is best to create tables/figures yourself and label them with the addition "Own illustration (based on...)." If this is impossible or too cumbersome, you must indicate the corresponding source in a note.

Also, ensure a self-explanatory presentation of the tables/figures is used. Even a person who briefly reads your work should be able to understand the integrated tables and figures and place them in a rough context. For example, Figure 1 shows the logo of the University of Hohenheim, which has been used since 2018, and demonstrates how a figure with appropriate source information and explanation can be integrated into the text of a work.

Figure 1: New Logo University of Hohenheim



UNIVERSITY OF
HOHENHEIM

Source: The University of Hohenheim Homepage (www.uni-hohenheim.de/en/logo). *Explanation:* The figure shows the logo of the University of Hohenheim used since 01 January 2018.

2.4 Formulas and Equations

Formulas can be included in the text as inline formulas or as displayed equations in the work. Important formulas are included as displayed equations and should be numbered flush right. All formulas should be explained in the text. Symbols or parameters should be defined in the text after the formula (see example below). If your work uses a sufficient number of symbols (which cannot be considered generally understandable), creating a List of Symbols at the beginning of your work is advisable.

Example:

For the marginal utility of a consumer i , the following applies:

$$\frac{\partial U_i(q_i)}{\partial q_i} \geq 0 \quad (i \in I, q_i \geq 0), \quad (1)$$

where I is the index set of consumers. U_i and q_i denote the utility function and the quantity demanded by consumer i , respectively. Eq. (1) illustrates that the marginal utility and the quantity demanded by a consumer are non-negative.

2.5 Citation Style

Within the main text, sources are cited in parentheses (short references in the text) immediately after the direct quotation or paraphrased passage. Authors and publication years are provided. For publications with more than two authors, only the first person is mentioned in the text, and all others are summarized with "et al." In the bibliography, sources are listed alphabetically by the last names of the first-listed authors, maintaining the order chosen by the authors themselves. If authors have multiple contributions, these are additionally sorted by year of publication. If authors have multiple contributions in the same year, sort the sources by the publication title in ascending order, and then add a lowercase letter (starting with the letter a) to the year. This practice allows sources to be uniquely identified at any time. The year notation supplemented with the letter is also used for the short reference in the text for this purpose.

You can choose your citation style as long as it is consistently applied. Below are citation templates (following APA, 7th Edition) for the most common types of publications that you can use as a guide in your work⁶:

(a) *Journal Article*

Author's Last Name, Initials. (Year). Title of the article. *Title of the Journal, Volume*(Issue), Page numbers. DOI/ URL

Example:

Blau, F. D., & Kahn, L. M. (2017). The Gender Wage Gap: Extent, Trends, and

⁶Digital literature management programs such as Citavi, Zotero, or Mendeley provide additional support in creating a bibliography. For more on this topic, please also consult the Communication, Information, and Media Center (KIM) [Homepage](#).

Explanations. *Journal of Economic Literature*, 55(3), 789–865.

<https://doi.org/10.1257/jel.20160995>

(b) *Monograph*

Author's Last Name, Initials. (Year). *Title of the work* (Edition). Publisher.

Example:

Cahuc, P., Carcillo, S., & Zylberberg, A. (2014). *Labor Economics* (2. Auflage). MIT Press.

(c) *Chapter in an Edited Book*

Author's Last Name, Initials. (Year). Title of the work. In Editor's Initials Last Name (Ed.), *Title of the Edited Book* (Edition, Page numbers). Publisher.

Example:

Altonji, J. G. & Blank, R. M. (1999). Race and Gender in the Labor Market. In O. C. Ashenfelter & D. Card (Hrsg.), *Handbook of Labor Economics* (3C, pp. 3143–3259). Elsevier.

(d) *Discussion Paper*

Author's Last Name, Initials. (Year). *Title of the work* (Series and number of the discussion paper). DOI/ URL

Example:

Ashenfelter, O. C., Farber, H. S. & Ransom, M. R. (2010). *Modern Models of Monopsony in Labor Markets: A Brief Survey* (IZA Discussion Paper Nr. 4915).

<https://doi.org/10.2139/ssrn.1599013>

(e) *Internet Source*

Author's Last Name, Initials or Institution. (Date). *Title of the work*. Website Name if applicable. URL

Example:

Statistisches Bundesamt (Destatis) (2023, 17. Mai). *Erwerbslose und Erwerbstätige*.

<https://www.destatis.de/DE/Themen/Arbeit/Arbeitsmarkt/Erwerbslosigkeit/Tabellen/erwerbslose.html>

3 Conceptualization of the Paper

3.1 Literature Review

Pay special attention to selecting relevant (primarily English-language) literature on your topic. A good starting point is the introductory literature provided by our department on your subject. Additionally, conducting a Google Scholar search using the key terms of your topic is recommended. Translating the search terms into English is advisable, as most articles are written in English nowadays. Moreover, the number of citations (e.g., in Google Scholar) is a good indicator for identifying key articles for your work. While newer articles may have fewer citations, they can still contribute to the current discussion and be relevant to your work. Newspapers, weekly magazines, and freely accessible online encyclopedias like Wikipedia do not meet the standards for scientific sources and should not be used in your work.

In addition to articles from academic journals, monographs, and edited volumes, your work may also cite discussion papers. Unlike published articles in academic journals, these papers have yet to undergo a peer-review process and thus belong to the category of gray literature. Therefore, it is your responsibility to assess the quality of the text. You can confirm the text's legitimacy by independently researching the authors involved or the publishing institution⁷. Also worthy of citation are publications from reputable institutions such as the Bundesbank, the Organisation for Economic Co-operation and Development (OECD), or the Federal Statistical Office.

Access to licensed e-resources is available within the university network. Additionally, Hohenheim students can access licensed scholarly articles outside the university network after logging in, for example, via Shibboleth or Open Athens. Another option is to use a VPN client⁸. Detailed information on successful literature research can be found on the [KIM Homepage](#).

⁷Always check whether discussion papers have been published in refereed journals. If so, use and cite the publication that appeared in the journal.

⁸Further information on setting up a VPN client can be found here: <https://kim.uni-hohenheim.de/en/94958>.

3.2 Rough Structuring

After familiarizing yourself with your topic, start thinking about a possible structure for your work and assigning the literature to individual sections. It is essential that the structure of your work follows a clear line of argumentation and that the content of each section overlaps as little as possible. The outline should already give readers a good impression of your work's content and argumentative structure. In some cases, the topic raises a straightforward research question that must be addressed in the work. In other cases, the topic is more general, requiring the formulation of one or more overarching research questions.

Creating the outline and selecting relevant literature is highly individual and depends heavily on your topic. Use the outlining discussion (see Section 3.3) to clarify any existing uncertainties from the outset.

In the next step, you will delve deeper into the theoretical models and/or empirical studies relevant to your research question. It is expected that you will come across additional literature during your research, the consideration of which may necessitate an adjustment of the initially chosen outline. You may also need to acquire further knowledge about specific methods (e.g., through textbooks) to understand the scholarly literature.

Imagine individuals with an economic background as readers of your work who are not specialists in the research area you are addressing. Concepts such as "utility function," "production function," "equilibrium," "labor market," etc., can be assumed to be generally known. Therefore, you can refrain from explaining basic micro- and macroeconomic principles. However, the mechanisms of your theoretical models must always be explained. The same is expected for the methods and results of the empirical studies you present.

3.3 Discussion of Structuring

The outline discussion represents the first significant milestone of your academic work. By this point, you should have engaged with your topic sufficiently enough to discuss your rough outline with your supervisor and provide a professional assessment of the individual outline points. Even if you do not need to present a perfectly formulated outline at this stage (that is what the discussion is for), you should take enough time to create the outline. If your outline merely corresponds to a general outline copied from the internet, we cannot assist you with this step of your academic work. It is advantageous if you can provide exemplary literature for the individual outline points, as this helps the supervisor assess whether you are able

to find relevant literature. If important questions arise before the first discussion about, for example, an empirical method or a theoretical model, we encourage you to raise them during the outline discussion so that you can confidently begin writing your work afterward. We are aware that at this point in your academic career, you may not have much experience with academic work. Please do not hesitate to ask questions during the first discussion session.

3.4 Further Office Hours

Throughout the writing process of your academic work, you should collect any questions that arise and address them during prearranged office hours. Unfortunately, we do not have the personnel capacity for intensive individual supervision. Therefore, we can only offer one additional office hour after the outline discussion. Please refrain from requesting feedback on the progress of your academic work. Since you typically do not conduct your own empirical investigations, engaging meaningfully with scholarly literature and the writing process constitutes your own contribution. Too much assistance from us would accordingly affect the grading of your work.

4 Appendix

A.1 English Example of Indirect Quoting from Dustmann et al. (2022)

Original: ” *We find that the minimum wage significantly increased wages of low-wage workers, relative to wages of high-wage workers located further up the wage distribution. At the same time, there is no indication that it lowered the employment prospects of low-wage workers. [...] Our findings therefore do not confirm the fears of many economists that the minimum wage would cause substantial job losses. Rather, our findings support the idea that the minimum wage helped reduce wage inequality without reducing employment across individuals and across local areas.*” (Dustmann et al., 2022, S.269).

Example of Unacceptable Paraphrasing: Dustmann et al. (2022) find that the minimum wage raised wages of low-wage workers compared to wages of high-wage workers. Additionally, they find no evidence that it worsened the employment opportunities of low-wage workers. Their results do not confirm the worries of many economists that a minimum wage leads to significant job losses. Instead, their results lend evidence to the idea that the minimum wage lowers wage inequality without adversely affecting individual and local employment.

Example of Acceptable Paraphrasing: Dustmann et al. (2022) examine the effects of the introduction of the minimum wage in Germany in 2015. Their results suggest that the introduction led to significantly higher wages for employees in the low-wage sector. No negative employment effects were found for low-wage earners. Additionally, the research results suggest that the minimum wage has successfully reduced wage inequality between low- and high-wage workers (Dustmann et al., 2022).

Source: Dustmann, C., Lindner, A., Schönberg, U., Umkehrer, M. & vom Berge, P. (2022). Reallocation Effects of the Minimum Wage. *The Quarterly Journal of Economics*, 137(1), 267–328.

A.2 Example of Translated Indirect Quoting from Kalina & Weinkopf (2023)

When indirectly quoting sources in another language (e.g. German), it is essential to avoid simply translating into English.

Original: "Bei der Entwicklung der Niedriglohnschwelle in Deutschland lassen sich im Rückblick drei unterschiedliche Phasen erkennen (Abbildung 1): Von 1995 bis 2003 war die Niedriglohnschwelle in Deutschland mit Ausnahme des Jahres 2000 durchgängig gestiegen. Von 2004 bis 2013 erhöhte sich die Niedriglohnschwelle hingegen kaum und sank in den Jahren 2006 und 2010 sogar. Von 2014 bis 2019 war die Niedriglohnschwelle dann jedoch meist stärker gestiegen als in den Vorjahren. Die deutlichsten Erhöhungen waren zuvor im Jahr 2014 (+0,39 €) und im Jahr 2018 (+0,42 €) zu verzeichnen. Im Jahr 2020 hat sich die Niedriglohnschwelle sogar um 0,57 € pro Stunde auf 12,07 € erhöht." (Kalina & Weinkopf, 2023, S.2).

Example of Unacceptable Paraphrasing: In retrospect, three different phases can be identified in the development of the low wage threshold (LWT). With the exception of 2000, the LWT in Germany rose consistently from 1995 to 2003. From 2004 to 2013, the LWT hardly increased and even fell in 2006 and 2010. From 2014 to 2019, however, the LWT usually rose more sharply than in previous years. The largest increases were seen in 2014 (+0,39 €) and in 2018 (+0,42 €). In 2020, the LWT even increased by 0,57 € per hour to 12,07 € (Kalina & Weinkopf, 2023).

Example of Acceptable Paraphrasing: Kalina and Weinkopf (2023) find that the development of the low wage threshold (LWT) in Germany over the past 25 years can be divided into three phases. The first phase covers the years 1995 to 2003 and, excluding 2000, is characterized by a constant increase in the LWT. In the second phase (2004 -2013), only small increases in the LWT were recorded, although a decline was observed in 2006 and 2010. A comparatively rapid increase in LWT occurred in the third phase between 2014 and 2020. In particular, sharp increases in the LWT were observed in 2014, 2018, and 2020 (Kalina & Weinkopf, 2023).

Source: Kalina, T. & Weinkopf, C. (2023). *Niedriglohnbeschäftigung 2020 — Rückgang des Anteils von Niedriglöhnen in den letzten Jahren* (IAQ-Report Nr. 2023/02).