

Guidelines for writing a thesis with the Agricultural Economics and Rural Policy Group

This document gives some guidelines on how to write a thesis with the Agricultural Economics and Rural Policy Group. Formal requirements are given in a separate document. First, the structure of a thesis is discussed. Second, some writing tips are provided. Finally, referencing is discussed.

1. Structure

A thesis starts with the introduction, is then followed by core chapters and ends with a chapter that gives the main conclusions and a general discussion.

Introduction

The introduction is the first chapter of your thesis. The introduction has different parts. The first part of the introduction describes the '*background*' of your research. This introduces the field of research and indicates the gap in knowledge. Possible hypotheses can be indicated here. Important is also to delineate the research, you cannot do everything and it is important to be clear about that. Second, the '*objective of the research*' states the gap in knowledge in the form of the goal of the research. The objective is followed immediately by the '*research questions*' which indicate via which steps the objective can be reached. Research questions need to be operational in the sense that it should be possible to give a specific answer to them. As chapters have different subjects it can be useful to link the research questions to the chapters of your thesis. For example, 'Which data are required to estimate ...'. Third, the '*methodology*' part specifies the theory and methods used to answer the research questions. Examples of theories are 'micro economics' and 'institutional and organisational theory'. Examples of methods are 'literature research', 'cluster analysis' and 'semi-structured interviews'. Indicate the methodology for each research question separately. Finally, an '*overview*' is given of the contents of the subsequent chapters.

Core chapters

There is no unique order for the core chapters because this depends on the topic and the methodology that is selected. However, in most empirical research the first core chapter (i.e. chapter 2) presents either a literature overview (which could also be part of the introduction) and or (economic) theory (i.e. theoretical framework). The second core chapter (i.e. chapter 3) presents the available data (and how this data is collected) or a description of the sector or case study area. In the third core chapter (i.e. chapter 4) theory and data are confronted leading to an empirical model. This chapter also indicates how the coefficients of the empirical model are determined e.g. by econometric estimation or calibration. The last core chapter presents the estimation results and their discussion (i.e. signs and size of effects) in case of an econometric model. Alternatively, in case of a simulation model, it presents the scenarios, the results of the simulations and a discussion of the results. In the case of a qualitative research design, this chapter may present and discuss interview or other results in a structured way, i.e. in line with the literature review or the theoretical model that was presented in chapter 2.

Conclusions and discussion

Conclusions and discussion form the last chapter of your thesis. The conclusions summarize the main findings and provide direct answers to the research questions formulated in the introduction. You also have to indicate if your conclusions are confirmed by others or fit within the literature. The general

discussion provides a critical reflection on the research and mentions the caveats of the study, and therefore puts the conclusions into perspective. From the caveats, suggestions for future research (i.e. recommendations) can be derived. Caveats usually concentrate on data quality and availability and methodological issues (e.g. was the used method appropriate). In some cases you can also provide policy recommendations. The general discussion is an important assessment criterion.

Other elements of a thesis

There are seven other elements of a thesis. First, there is the cover with the title of the thesis, your name, the year you wrote the thesis, the logo of the university and a nice picture. The title of the thesis should be short and should summarize your research. Second, there is the title page with the title of the thesis, your name and in the left lower corner your registration number, whether it is a BSc or MSc thesis and the study programme for which you wrote the thesis. Third, a preface is added in which you put some background information (e.g. you can mention your study programme and how you found or became interested in the topic) and a personal note, e.g. thanking your supervisors and others who supported you. Fourth, a summary (one page) or abstract (short summary) should be added. Fifth, the contents of the thesis is presented. At the end of the thesis you give a reference list. If applicable, the thesis concludes with the appendices. You have to number each appendix separately e.g. using A, B, etc. or I., II, etc. so that they can be easily referred to in the text. Appendices also require a title, e.g. Appendix II A: Map of the study area.

2. Writing tips

Some writing tips:

1. Start each chapter with the goal of the chapter and a short overview of the contents of the subsequent sections (just a few lines and you do not have to create a separate section for it). Doing this improves readability substantially.
2. The length of a thesis should preferably not be longer than 30-40 pages (main text). Theses longer than 70 pages are unacceptable. Nobody nowadays reads long texts. Careful delineation of your research (i.e. be selective and focus on what is new and what you contribute), using effective referencing (i.e. do not rewrite other people's text) and appendices can help to keep your text short.
3. Use references, do not express your personal views or ideas. Your ideas can be expressed when selecting and describing the topic of your thesis.
4. Avoid short sections, a section should contain more than one paragraph. Instead of having a short section it is better to work with sub-headings that are not numbered. For example, usually an introduction covers only 1-2 pages in which case creating sections does not make much sense and working with short sub-headings is preferred.
5. Avoid sub-sections of sub-sections, 2.3 is ok, 2.3.1 is a question mark, 2.3.1.2 is not done.
6. In a scientific text you have to avoid words like: should, could, would, huge, tiny, etc. These are examples of vague and subjective use of language. Something is true or not, an author states this and another author states something else, and size has to be indicated with (relative) numbers.
7. Number tables, figures and graphs chapter by chapter (Table 2.3: The ...).
8. Always provide a source in case you use tables, figures or graphs.
9. Make short sentences containing only one subject.
10. Always carefully check the units in which numbers are expressed.
11. Avoid using a lot of abbreviations and always define them, e.g. European Union (EU).

12. There is UK and US spelling, e.g. labour versus labor, modelling versus modeling and analyse versus analyze. Be consistent.
13. "Good writing is rewriting," and you should make a serious effort at editing, rewriting, and fine-tuning before you hand in (parts of) your text to your supervisor. It takes much longer to read poor writing than good writing. It is a waste of a supervisor's time to read material that is not yet ready to be presented – and it is disrespectful to expect him or her to do so.
14. Avoid passive constructions wherever possible. The rule that you must avoid personal pronouns is antiquated and has been rejected by most scientific journals. If you collected the data using a survey, there is nothing wrong with saying, "I collected the data using a survey." Where it would be repetitive to use personal pronouns ("I did this. I did that. I did the other thing."), or where it makes the sentence more awkward to use the active voice, you may occasionally, use the passive voice (e.g. data have been collected using a survey).
15. Do not use long words where short ones will do. Do not use jargon where regular language will do. Do not use special words to make your writing seem more technical, scientific, or academic when the message is more clearly presented otherwise.

3. References

Although there are many formats for referencing and a reference list (i.e. bibliography) agricultural economists usually use the one below. It is always important to be consistent.

In the text you mention author plus year in case you refer to a text in a book or report (e.g. Jansen, 2019). If you use a literal citation from a text, you add also the page number where the citation can be found in the original text (e.g. Jansen, 2019: 2). In case of two authors you mention both (e.g. Jansen and Pietersen, 2018). In case there are more than two authors you mention the first plus et al. (e.g. Jansen et al., 2019). In the reference list (or bibliography) you give the complete reference.

Article:

Samson, S., Gardebroek, C. and Jongeneel, R.A. (2017). Analysing trade-offs between milk, feed and manure production on Dutch dairy farms. *European Review of Agricultural Economics*, 44(3): 475-498.

Chapter in book:

Klijns, J., Peerlings, J. and Heijman, W. (2016). Regionalising input-output tables: Comparison of four location quotient methods. In: Matias, Á., Nijkamp, P., and Romão, J. (eds.), *Impact assessment in tourism economics*. Basel: Springer International Publishing: 43-65.

Book:

De Gorter, H., Drabik, D. and Just, D.R. (2015). *The economics of biofuel policies. Impacts on price volatility in grain and oilseeds markets*. New York: Palgrave MacMillan.

Internet source:

European Commission (2018). Proposal for a Directive of the European Parliament and of the Council amending Directive 2008/98/EC on waste. <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1453384548330&uri=CELEX:52015PC0595>. Accessed 6-4-2018.