

OULU BUSINESS SCHOOL

GUIDELINES FOR WRITING A THESIS

Manual
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1 INTRODUCTION

The purpose of a thesis is to demonstrate your proficiency in academic research and appropriate academic communication, both written and oral. A thesis demonstrates your mastery of a particular subject area and your ability to independently create new scientific knowledge. When writing your thesis, your information retrieval skills are developed and your facility for critical and analytical thinking, problem solving and argumentation is strengthened – all of which are skills required for success in your future working life.

A bachelor's thesis¹ is your first academic thesis. Its purpose is to develop the basic skills of academic research. After completion of your bachelor's thesis, you will be familiar with the methods and tools of academic information retrieval and you will be able to critically evaluate the reliability and significance of published information. You will have acquired the necessary skills to choose, define and justify a research topic. Your ability to interpret information will be developed and you know how to draw conclusions from it. The end product is a thesis that adheres to the general principles of academic writing and which you will present orally in a seminar.

The purpose of academic texts is to present new information or, at least, a fresh perspective on the research topic. At the start of writing your master's thesis, you will already be conversant with the established conventions of academic writing, and so it will be easier for you to devote more attention to the academic content of your work. The process of writing a master's thesis develops your skills to gather, analyse and make conclusions from data and your ability to independently create new scientific knowledge. Master's thesis is a way to show your expertise in the topic of your choice on the levels of both theory and practice.

Academic writing has its own particular style, with the emphasis on the subject matter along with precision of expression and the use of grammatically correct language. In addition, academic texts follow rules and conventions that have been generally agreed

¹ Students in the International Master's Programmes and subsidiary subject students write a seminar report instead of a bachelor's thesis. If not specifically noted otherwise, the guidelines presented in this manual apply both to bachelor's theses and seminar reports.

upon. This manual presents the principles of academic writing as well as the formal writing requirements for theses in Oulu Business School (henceforth OBS) at the University of Oulu. The guidance provided is brief and to the point. For those seeking more detailed information there is ample literature available (e.g. Lipson 2005 and Murray 2006). This manual as such is a formal model – except for the large number of lists, which is not recommended in theses.

The next chapter of this manual includes a brief account of the phases of thesis writing as well as the evaluation criteria for theses. The third chapter describes the typical structure of a thesis. The fourth chapter contains guidance on matters like style of writing, referencing and paraphrasing techniques, lists of references, illustrating the text and page settings. Chapter 5 is a short summary of the aims of this manual.

2 THE PROCESS OF WRITING A THESIS

Regarding thesis work, each main subject in OBS has its own practices, for example, how often and at which stage the thesis is presented in a seminar. Full instructions are given at the start of the seminars. However, writing a thesis usually progresses according to the following steps.

The process starts with *the choice of the research topic*. You are expected to propose a topic yourself, after which you discuss the topic in general terms together with your supervisor. The research topic for the thesis can be found in any subject area of the field. You can get a general idea of the central and topical themes by having a look at the recent volumes of the most relevant scientific journals. Especially topics that are being studied by the staff of OBS are worth considering. A thesis may also be commissioned by a company or other organisation outside the university.

As in all decisions in scientific research, there must be solid arguments concerning the choice of the research topic. There are several aspects worth noting:

- your personal interest in the topic,
- your own resources (knowledge, skills and time available),
- the availability of source material,
- the availability of data,
- the scientific importance of the topic,
- the general social interest of the topic and
- the importance of the topic for your future professional career.

After the topic has been chosen and the supervisor has accepted it, the next step is gaining familiarity with the available scientific literature on the topic. Reading earlier research serves several purposes:

- 1) Outlining the general picture
- What is the state-of-the-art knowledge in the chosen research area? Is there much or little earlier research? Is it recent or older? Who are the leading scholars?

- From which viewpoints has the topic been investigated before? What kinds of methods and data have been used in earlier research? What are the most important findings?
- How does your thesis relate to other publications in the field?
- 2) Strengthening the substance knowledge
- helps you to focus on the essential literature regarding your own thesis.
- helps you to choose the studies upon which you will develop the theoretical framework of the thesis and design its empirical research setting.
- 3) The development of expertise
- helps you to evaluate the existing literature critically and to identify potential gaps and shortcomings in it.
- helps you to make your viewpoint precise and to define the actual research problem or research task.

It is well worth starting off by studying earlier research in textbooks, edited compilations or review articles published as recently as possible. This represents a straightforward way to get at the actual source material, that is, scientific journal articles. Literature databases are another valuable tool. Guidance to the use of databases is given on the courses arranged by the university library, which, primarily, are designed for those students aiming at a bachelor's degree, but which can be tailored to suit the needs of students writing their master's theses as well. The staff of the library are experts in information retrieval. They give assistance in locating source material at any time, not only during taught courses. One more place for guidance in information retrieval is the web pages of the university library: (http://www.oulu.fi/library/node/10692).

The choice of research topic and getting acquainted with the literature in the chosen research area are of vital importance in getting the thesis process started. In order to ensure the smooth progress of the research process and in order to achieve successful results, *narrowing down the research topic* is the most critical task. Crystallising the research focus and concentration on a limited area enable you to manage your study effectively.

For students writing their first thesis, narrowing down the research topic is often difficult, and it sometimes happens that even after the work is finished, it is still, to some extent, unclear what the purpose of the study actually is. The most common problem is a too broadly defined topic. One should note that a broadly defined topic does not equate to a comprehensive knowledge of the subject matter. Rather, it is proof of the inability to discern the essential from the unessential. Ability to define the research topic so that the thesis offers a solution to a precisely specified research problem or task is one of the most important skills you can have as a thesis writer.

The next step in the process is writing *a preliminary research plan*. This document usually includes the following:

- a preliminary title of the thesis,
- a preliminary table of contents of the thesis,
- an introduction of the topic,
- an assessment of the significance of the topic and the motivation for the research,
- a description of the aim of the thesis and the research problem or task,
- an outline of preliminary research question(s),
- a brief description of the research method(s) and data and
- a brief review of existing research and/or a preliminary list of references.

The preliminary research plan can simply be composed of a sketch of outlines for the thesis. It serves as a guide for you at the outset of your work. However, the plan will develop and become more precise as the work evolves. Therefore, the final thesis may differ, and often does, from the preliminary plan.

Thesis work sometimes involves *an intermediate report*, especially when writing a master's thesis. This report is presented when one or more sections of the thesis, for example the theoretical framework, the literature review or, in case of data-driven research, after the data description and analysis have been finished. It is also recommended that you sketch an outline of the unfinished sections of your thesis in the intermediate report.

The final report is a thesis which is nearing completion, and which the thesis writer presents orally in a thesis seminar. In OBS, it is a common practice that each student acts as an opponent, that is, they familiarise themselves with another student's text and comment on it orally. The other participants of the seminar will also ask questions and make comments and suggestions for improvement. Based on this feedback, you make the final revisions to your thesis and then leave it to be evaluated.

When you wish to *submit your bachelor's thesis or seminar report for review*, at the supervisor's request, you should send your thesis to be checked by Urkund at the address http://www.oulu.fi/urkundsystem. Urkund is a system for checking references to prevent plagiarism, a system which all teachers within the University of Oulu are obliged to use in their courses. Before uploading your thesis to Urkund, you should read and accept the student agreement (https://login.oulu.fi/uadr/urkund_lomake.html). In case you do not accept the conditions of the agreement, together with your supervisor you must come to an acceptable agreement about the consequent procedure. Thereafter, you are required to deliver to the student office of OBS two versions of the bachelor's thesis, one bound in soft covers (with transparent front cover), and another, loose-leaf version. A seminar report need not be delivered to the student office.

OBS has adopted a system called Laturi designed for the submission and archive of master's theses in electronic form. Of course, you may still, at your own expense, bind your master's thesis in hard cover, but only electronic versions are accepted for review. Consequently, when you wish to *submit your master's thesis for review*, at your supervisor's request, you should submit the thesis to the Laturi system, where it will also go through the Urkund check. Further instructions are available on the Laturi website at: http://laturi.oulu.fi/index.php?uilang=en-US.

After submitting your thesis for review, you can sign up for the so-called *maturity test* in WebOodi. For the maturity test, the supervisor formulates three questions based on your thesis, among which you will choose one and write an answer of circa 450-600 words in essay style. The maturity test is accepted proof of your command of the subject matter of your thesis and shows that you can demonstrate a good knowledge of the English language. The supervisor then evaluates your command of the subject matter, after which your paper is sent for language assessment. Language skills are

evaluated only once, so, if you have already demonstrated good knowledge of the English language in the bachelor's maturity test, in the master's maturity test only the command of the subject matter is tested. Writers of seminar reports need not take a maturity test.

Master's theses are *assessed* on a scale 1–5 by the Education Committee of OBS based on the supervisor's written evaluation. The issues under scrutiny are the following:

- research question (introduction to the research question, defining the orientation of the research question),
- scientific basis of the thesis (defining of concepts and conceptual framework, use of methods, presenting conclusions, use of sources and citations, clarity of presentation) and
- implementation of the study (outline of study, independence and personal contribution, thoroughness of exposition, degree of textual quality, significance of results).

The assessment of bachelor's theses and seminar reports are not taken to be verified by the Education Committee. The assessment scale is the same as that for master's theses (i.e. 1-5), but the criteria may differ to some extent from those presented above. The evaluation criteria are explained in the seminars for each main subject.

If you wish to graduate by a certain date, you must take into account that the last few phases of the thesis process require a lot of time. The graduation schedule for M.Sc. degree students can be found at http://www.oulubusinessschool.fi/studies/graduation_schedule_for_degree_students. To a large extent, the same schedule applies to B.Sc. degree students as well.

More information about the evaluation of theses, maturity tests, and other issues related to thesis work is available on the notice board of OBS, in the guide for international degree students (http://www.maigbe.fi/file.php?10), and on OBS web pages (http://www.oulubusinessschool.fi).

3 ORGANISATION OF THE THESIS

The general structure of a thesis is always the same, regardless of the research topic or the research orientation. A thesis includes the following ingredients in the given order: the cover page, (abstract), table of contents, introduction, body, summary, list of references and possible appendices. The following description of the structure² is for theses with both a theoretical and an empirical section.

a) Cover page

- The contents and the page settings of the cover page of a thesis have been defined in the following template: http://www.taloustieteet.oulu.fi/file.php?766.
- The title of the thesis should be informative, to the point, and in harmony with the contents of the thesis.

b) Abstract

- An abstract is required in master's theses only.
- The abstract presents its reader with a good general idea of the contents and the most important conclusions of the thesis.
- The abstract form can be found at: http://www.taloustieteet.oulu.fi/file.php?657.

c) Table of contents

- The table of contents has the short title CONTENTS and like all the other main chapter headings it is printed in bold.
- The table of contents presents the structure of the thesis, that is, the headings and the subheadings along with their page numbers.
- The indentation (see the table of contents of this manual as an example)
 illustrates the hierarchy of chapters and subchapters.
- There must be at least two subchapters at each chapter level (e.g. 2.1 and 2.2).
- Chapter levels should not exceed three (e.g. main chapter 2 and subchapters 2.1 and 2.1.1).
- Chapter titles REFERENCES and APPENDICES are not numbered.
- Figures and tables have their own tables of contents.

² The description of the structure applies to the order in which the issues are presented in the thesis. The advance of the writing process itself differs considerably from the organisation of the thesis; starting writing from the first chapter does not often suit its purpose or may even prove impossible.

d) Introduction

- The purpose of the first chapter is to lead the readers to the theme of the thesis and arouse their interest in the topic.
- The introduction normally contains the following issues:
 - description, background and significance of the research topic,
 - purpose of and motivation for the study,
 - research problem or task and research question(s),
 - relationship with and value added to previous research,
 - description of research method(s) and data (on a general level),
 - the most important results and conclusions (especially in quantitative research)
 and
 - roadmap paragraph, for example: "This thesis proceeds as follows. In chapter
 2...".
- In the introduction, the style of expression should be short and to the point.
 However, especially in master's theses, the introduction sometimes takes up so many pages that division into subchapters might well be needed.

e) Theoretical framework

- Theoretical framework is not a chapter heading, but a section, which forms the basis for your own research.
- This section can contain several chapters and its structure and contents are determined by the chosen topic and research orientation. Typically, the following issues are addressed:
 - definition of key terms and concepts,
 - description of the central theoretical frameworks and research approaches related to the chosen topic,
 - definition of the theoretical or conceptual framework of the thesis,
 - review of previous empirical studies (different viewpoints, methodological approaches, most important results, differences of opinion, contradictions and shortcomings),
 - positioning of the thesis in relation to the research field and
 - definition of the research strategy (in qualitative research) or the hypotheses to be tested (in quantitative research).

f) Data and research method(s)

- This section of the thesis includes the description and justification of the data being used (contents, quality, quantity, collection method, adjustments made) and the chosen research method(s).
- The descriptions should be so distinct and transparent that, following them, the research can be repeated.
- The description of methods in common use in a particular area of research need not be as detailed as those of new or less common methods.

g) Data analysis

- Data analysis is not a chapter heading, but the most important section of a master's thesis that contains a detailed description of your own research, the results you have obtained and their interpretation.
- The results are not only reported but they are also reflected towards the previously presented theoretical framework and earlier empirical results.
- This section can contain several chapters and it can be structured in many different ways, for example, thematically or by research problems.

h) Summary

- This chapter (alternative title: CONCLUSIONS) is started with a repetition of the purpose of the thesis and its stated research problem, after which answers will be given to the following kinds of questions:
 - What are the main results of the study and what new information has been obtained?
 - To what extent do the results support or differ from earlier research results?
 - To what extent can the results be generalised?
 - How reliable are the results and what restrictions are there connected with the research?
 - How can the results be made use of?
 - What kinds of topics and questions arise for further study as a result of your study?
- The summary chapter is thus very similar to the analysis section, but now no numerical results are to be presented, the ideas are expressed in written text only, just using fewer words.

i) List of references

- The list of references has the short title REFERENCES in bold letters, and it is not numbered.
- The list of references contains all the sources cited in the text.
- The list of references follows the instructions given in chapter 4.3 of this manual.

j) Appendices

- The appendices contain all such clarifying information that does not serve any purpose if presented in the actual text.
- Typical appendices are questionnaires used in the research, outlines for semistructured interviews (see Appendix 1), and detailed data descriptions.
- The appendices are the place for material that takes up too much space in the body of the thesis (e.g. long mathematical expressions).
- In the text, there must be a reference to all appendices.
- The appendices are numbered consecutively.
- In the table of contents, the appendices are given a title describing their contents.

4 TECHNICAL ISSUES OF WRITING

It is said that you learn to write by writing. Although that is true about academic writing as well, we have a style of our own characterized by keeping to agreed formal writing techniques. The writer of a thesis is supposed to know the basics of academic literary conventions. This chapter describes the typical features of an academic text along with the requirements for the language and the layout of theses in OBS.

4.1 Style of writing

Scientific writing requires a good knowledge of standard language and the command of a formal style of writing. The grammatical and the orthographical rules of the language must be followed. Scientific language is unambiguous and precise and discards vague expressions like "several studies show that...", with no valid reference to an example. An English text does not use contracted forms like "doesn't" or "can't". All standardised forms of English are accepted but they must not be mixed. A characteristic feature of the scientific style is the use of special concepts and terms, which must be defined when they first occur in the text. Acronyms, like the ECB (the European Central Bank), can be used if they make the language more fluent and if the reader has previously been familiarized with their meaning. Short expressions like "e.g." and "cf." can be used in brackets, but in a consecutive text whole words are written.

In the academic community, the use of the first person pronouns "I" or "we" is a source of some disagreement. Academic writing tends to be neutral and objectivity is the goal, so, the passive voice or the third person are typically used. The first person plural is the correct choice if you want to emphasise the choices that you, as a researcher, have made. Notice that academic texts use the pronoun "we" even if the talk is about one person only. The tense is normally the present, also when referring to earlier research.

Academic texts are a way of conveying information. To avoid misunderstandings, expression must be exact and precise. This is achieved by logical organisation of the text, by writing carefully considered sentences and by the astute division of your text into paragraphs, subchapters and chapters, which then form a solid whole. You can contribute to the clarity of your text by stepping into the shoes of your reader and

examining the text from an outsider's point of view. Other important aspects are fluency and coherence of expression. Do individual sentences and paragraphs fit their environment and are the chapters mutually connected? Fluency benefits from letting the reader know, between chapters, what will be dealt with next. This is how the reader will keep pace with your thoughts. This can be done either at the beginning of a new chapter before the first subheading or at the end of the previous chapter. The chosen practice must be followed consistently through the whole work.

4.2 Citing references

Academic texts contain references to previous research, which are indicated by in-text citations. In your thesis, each piece of text that is not based on your own reasoning must be accompanied by an appropriate reference to the original source(s). It is only the facts that may be regarded as general knowledge that do not require a citation. If, however, your text is based on some source, even if it is general knowledge, the source must be indicated. A person who uses someone else's text without giving credit to the original author is guilty of academic theft called plagiarism, which is considered a serious academic offence the University of Oulu at (see: http://www.oulu.fi/sites/default/files/Plagiarism or unauthorized citation final.pdf).

A bachelor's thesis and a master's thesis are two separate theses, however, linking them to each other is possible. A common practice is such that, in the bachelor's thesis, the student writes a review of the previous literature on the chosen topic. This review then becomes the basis of the theoretical part of the student's master's thesis. One should note that at the University of Oulu, self-plagiarism, that is, using your own text unchanged in two or more occasions, is also unacceptable. If you use the text of your bachelor's thesis as the basis of your master's thesis, you must indicate clearly which part of your work is based on your earlier work. This is best done in the last paragraph of the introduction of your master's thesis, in the so called roadmap paragraph. The fact that the bachelor's thesis and the master's thesis are two independent theses leads to the practice that the bachelor's thesis must be written before the master's thesis. Furthermore, you must be able to show clearly what additional value your master's thesis brings to your bachelor's thesis.

References can be cited in many different ways. Different disciplines have different practices and even in one discipline there is variation within different scientific journals. In our field, the most common technique is the so-called Harvard system, in which references are cited in-text with the author's name followed by the date of publication and page number if necessary.³ In the theses of OBS, references are cited according to the following instructions, which are based on the Harvard system.

a) Reference to one author

Example 1: Fama (1970) distinguishes three forms of market efficiency: weak form efficiency, semi-strong form efficiency, and strong form efficiency. According to Fama, markets are weak form efficient when...

Example 2: Odean (1998: 1776) assumes that investors' value function is concave in the domain of gains and convex in the domain of losses.

Example 3: According to Jaccard (2001: 65–66), correlation between the interaction term and its component variables is not a problem unless the multicollinearity is extremely high.

- An article is referred to using the surname of the author and giving the publication year of the article. The year need not be repeated in the same paragraph (example 1). In the text, there is no mention of the first name of the author, neither the title of the article nor the name of the publication.
- If a certain point in the article (e.g. a figure) requires special emphasis, the page number is given (example 2).
- If a book is referred to, the page number(s) must always be given (example 3).
 Between the page numbers there is a dash (-), not a hyphen (-).
- Examples 1 and 2 are so-called author-oriented citations and example 3 is a socalled subject-oriented citation.

³ Citations are not written in footnotes in this system. Instead, footnotes may contain short remarks or specifying facts that do not fit the original text smoothly.

b) Reference to more than one author

Example 4: Fama and French (1992) show that small companies and companies with low book-to-market values have higher stock returns.

Example 5: ... there is also a relationship between firm size and book-to-market value (Fama & French 1992) and stock returns.

Example 6: Davila, Foster and Oyon (2009) outline a framework, where innovations are categorised based on two dimensions: source of the innovations and their impact on company strategy.

Example 7: Davila et al. (2009) point out that existing knowledge of how management identifies, chooses and implements strategic innovations is still relatively limited and further research is needed.

- Two authors: In a citation that is integrated into the text (example 4), there is the word 'and' between the two names. If the citation is in brackets (example 5), an ampersand (&) is used instead.
- Three or more authors: The above rules are followed when the source is referred to for the first time (example 6), after which there is just the first author's name plus the abbreviation 'et al.' (example 7).

c) Reference to one sentence

Example 8: Escalation of commitment refers to a phenomenon whereby people tend to continue or even intensify their commitments to a previously chosen losing course of action (Staw 1997: 191). In general, escalation situations...

- When just one sentence is referred to, the citation becomes part of the sentence and it is written inside the sentence before the full stop.
- Example 8 is from a book and therefore the page number is given.

d) Reference to many sentences or to a whole paragraph

Example 9: The traditional product term approach tests for a bilinear interaction for the log odds. However, there are other forms of interaction and it is important to make sure that the right type of interaction is being modelled. Especially with continuous variables, the traditional product term approach may not be appropriate and a more complex model (e.g. polynomial terms in addition to the product terms) is needed. (Jaccard, Turrisi & Wan 1990: 39–42, Jaccard 2001: 61–62.)

- When many sentences, or a whole paragraph, are referred to, the citation is written after the full stop of the last sentence, forming a whole sentence which ends in a full stop within the brackets. (Cf. the placing of full stops in examples 8 and 9.)
- When the reference includes more than one source, the sources are written in chronological order from the oldest to the most recent, separating them with a comma.

e) Reference to a publication whose author is unknown

Example 10: During the last 20 years (1991–2010), the volume in Helsinki Stock Exchange has hundred folded. (NASDAQ OMX Helsinki 2011: 10.)

f) Reference to an Internet source or to other non-printed material

Example 11: Woodpine and Liu (2010) examine the relationship between different leadership styles and moral decisions that internal auditors make.

Example 12: A consultation conducted by the European Commission (2011) shows that there is significant gap between what stakeholders of public-interest entities expect of a statutory audit and what the auditors actually do.

Example 13: According to Edelström (2012), the overall purpose of the merger is to streamline organisational structure of the company.

- Sources on the Internet as well as in other non-printed materials are referred to according to the same principles as those for printed materials.
- In example 11, an article in an electronic journal is referred to.
- If the author is unknown, the reference is cited as in example 12.
- In example 13, a telephone interview is referred to.

g) Direct quotation

Example 14: According to Pyrczak and Bruce (1992: 51), a direct quotation is justifiable "when the writer of the review (1) wants to illustrate either the original author's skill at writing or lack thereof or (2) believes that the wording of a statement will have an emotional impact on the reader that would be lost in paraphrase."

- Direct quotations must be used sparingly and they should be as short as possible.
- A direct quotation is placed in quotation marks "..." and its wording is exactly the same as that of the original.
- The reference is written outside the quotation marks and the page number is always included. If the reference is at the end of the quotation, the place of the period follows the rules for examples 8 and 9.
- In qualitative research, direct quotations are often used when referring to interviews. The quotation can be separated from the actual text by using the carriage return, indenting by 1 cm and using spacing 1:
 - "... Then we realised that if we want to remain in the net business, we had better start using classified ads." (The managing director)
- The use of indentation and tighter line spacing is also justified in case the direct quotation is rather long.
- h) Reference to an edited compilation, a working paper, or a secondary source
 - The citations should always be to the original sources.
 - Before referring to an article in an edited compilation, a check must be made if the
 article has been published earlier, in an scientific journal for instance, and if so,

- the original article must be referred to. In any case, the name of the author of the article (and not that of the edited compilation) is written in the citation.
- As for working papers, reference is made to the latest available version. Of course, one must always check first if the study has already been published in an scientific journal.
- The use of secondary sources is only acceptable if the original source is very hard to come by.
- A secondary source is referred to with the help of a 'via reference', for example: (Ewert 2003 via Pott et al. 2009). In this example the original source (Ewert 2003) was unavailable, and so it has been referred to using the secondary source (Pott et al. 2009).
- Both the original and the secondary source are included in the list of references.

i) Reference to a legal text

Example 15: ...does not cover emissions from international maritime traffic (NECD 2:1(a)).

 In a reference to a legal text, the official acronym (which must be defined at its first occurrence in the text) is used, followed by the paragraph, the article and the clause.

4.3 List of references

The list of references must contain all the sources that have been referred to in the text. Its purpose is to give the reader the possibility to check the information referred to from its original source. There is no one correct way of compiling the list of references; for instance, every scientific journal has its own practice. In OBS the list of references is written in the following way:

- Only the sources referred to in the text are listed.
- The sources are listed in alphabetical order according to the surnames of the authors, followed by all their initials.

- The order of authors is kept similar to that in the original source, which might not be alphabetical.
- The names of the authors are separated using a comma, except for the last two names which are separated by an ampersand (&).
- In case of more than one work from the same author, the works are listed in chronological order from the oldest to the most recent.
- In case of more than one work from the same author in the same year, the works are listed in alphabetical order according to the title of the publication, marking an index number to the year using small letters (e.g. 2007a, 2007b).
- In the list of references, spacing 1 and hanging indentation of 0.5 cm are used.
 There is one carriage return between each entry.

When compiling the list of references, you should first consider which of the groups a)—i), presented below, the source belongs to. As soon as the group is known, the examples and the associated comments guide you in making the entry. You can also use bibliographic management tools, such as RefWorks, whose use is taught in the data retrieval courses of the university library.

a) An article in an academic journal

- Dunning, J. H. (1988a). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies* 19(1), 1–31.
- Dunning, J. H. (1988b). The theory of international production. *International Trade Journal* 3(1), 21–66.
- Kross, W. J. & Suk, I. (2012). Does regulation FD work? Evidence from analysts' reliance on public disclosure. *Journal of Accounting and Economics* (in print).
- Pagano, M., Panetta, F. & Zingales, F. (1998). Why do companies go public? An empirical analysis. *Journal of Finance* 53(1), 27–64.
 - In the title of an article, only the first word and a word after a full stop, question mark, exclamation mark or a colon are written in capital letters.
 - In the title of a journal, all words are written in capital letters, except for the socalled conjunctions.

- The title of a journal is written in italics.
- After the title of the journal, the volume and the number of the journal and the page numbers of the article are given. If not printed yet, this information is compensated with the words 'in print'.

b) A book

- Clegg, S., Kornberger, M. & Pitsis, T. (2008). *Managing and Organizations: An Introduction to Theory and Practice* (2nd edition). Los Angeles: Sage Publications.
- Hull, J. C. (2011). *Options, Futures and Other Derivatives* (8th edition). Boston: Pearson Education.
 - In the title of a book, all words except for conjunctions are written in capital letters.
 - The title of the book is written in italics.
 - After the title of the book, the edition is mentioned, if other than the first.
 - Finally, the place of publication and the publisher's name are given.

c) An article in an edited compilation

- O'Curry Fogel, S. & Berry, T. (2010). The disposition effect and individual investor decisions: The roles of regret and counterfactual alternatives. In: Bruce, B. (ed.). *Handbook of Behavioral Finance*. Cheltenham: Edward Elgar Publishing, 65–80.
- Prelec, D. (2009). Compound invariant weighting functions in prospect theory. In: Kahneman, D. & Tversky, A. (eds.). *Choices, Values, and Frames*. New York: Cambridge University Press, 67–92.
 - An article is listed according to instructions in part a), and edited compilation according to those in part b). The page numbers of the article are given at the end.
 - In an edited compilation, the name of the editor (ed.) or editors (eds.) are preceded by the word 'in'.

d) An article in a newspaper

Siegel, M. (2012). Economic outlook: Eurozone prospects worsen. *Financial Times* 10.2.2012.

- e) Reports, discussion papers, working papers, statistics, etc.
- Basel Committee (2011). Progress report on Basel III implementation. Bank for International Settlements, Basel.
- Korkeamäki, T. & Takalo, T. (2012). Valuation of innovation: The case of iPhone. Discussion Paper 24/2012. Bank of Finland, Helsinki.
- Official Statistics of Finland (2012). Consumer price index June 2012. Statistics Finland, Helsinki.
- Stern, J. J. (2004). The impact of the crisis decline and recovery. CID Working Paper No. 103. Harvard University, Cambridge.
- f) Theses
- Juntunen, M. (2011). Corporate rebranding processes in small companies. A multiple case study from B2B software industry. Doctoral Dissertation. Acta Universitatis Ouluensis, Oeconomica 51. University of Oulu, Oulu.
- Karivaara, J. (2012). Creating portal-based international business to business relationships in retail buseiness. Master's Thesis. University of Oulu, Oulu.
- g) Internet sources
- Cunningham, L. A. (2001). *The Essays of Warren Buffett: Lessons for Corporate America*. Minneapolis: The Cunningham Group. Available at: http://www.monitorinvestimentos.com.br/download/The%20Essays%20Of%20Warren%20Buffett%20-%20Lessons%20For%20Corporate%20America.pdf. Cited 3.1.2012.
- Dierksmeier, C. (2011). Reorienting management education: From the homo economicus to human dignity. SSRN Working Paper No. 1766183. Available at: http://ssrn.com/abstract=1766183. Cited 11.2.2012.
- h) Laws and statutes

Finnish Accounting Act 31.12.1997/1336.

i) Interviews⁴

Mallikas, E. (2012). The Main Analyst, Bank Ltd. E-mail interview on March 15, 2012.

⁴ When the actual research material of the thesis consists of interviews, they are not included in the list of references but as appendices.

4.4 Paraphrasing

Plagiarizing another author's text without correct reference to the original source is a serious offence, so the referencing technique presented in chapter 4.2 should be adopted right at the beginning of the thesis writing process. In addition, it is of vital importance to realize that the original texts must not be used unprocessed; they need to be paraphrased. Paraphrasing is restating what someone else has said *in your own words*. You should introduce the *essential issues for your own thesis in adequate extent and correctly*. The aim is to crystallize the central issues of the original text, however, at the same time, you should present your own observations, opinions and conclusions.

There are formal rules for in-text citations. It is not possible to define such exact rules for paraphrasing. A good paraphrase is, however, characterized by certain features, which will be illustrated by examples in the following.

Original text:

"At the beginning of each month, we rank all stocks independently on the basis of past returns. The stocks are then assigned to one of five portfolios based on returns over the previous J months (J = 3, 6, 9 or 12). In each month, we long the winner portfolio and short the loser portfolio. [...] In table 1, we report average monthly returns over the next K months (K = 3, 6, 9, 12). In addition, we also report the mean return from a strategy of buying the extreme winners and selling the extreme losers (R5–R1). For instance, with a six-month portfolio formation period (J = 6), past winners gain an average of 1.37 per cent per month over the next six months (K = 6). We also report that the past losers lose an average of 1.51 per cent per month over the same time period. The difference between R5 and R1 is 2.88 per cent per month." (Drew, Veeraraghavan & Ye 2007: 774.)

An example of a *bad-quality* paraphrase:

At the start of each month, Drew, Veeraraghavan and Ye (2007) sort all stocks independently based on their past returns. After that, the stocks are allocated to one of five portfolios based on their returns over the preceding J months (J = 3, 6, 9 or 12). In every month, Drew et al. go long the winner portfolio and short the loser portfolio. The authors then present the mean monthly returns over the next K months (K = 3, 6, 9 or 12). Furthermore, they also calculate the average return from a strategy of buying the winner portfolio and shorting the loser portfolio. For example, with a six-month portfolio construction period (J = 6), past winners appreciate by an average of 1.37% per month over the next six months (K = 6).

The results also show that the value of past losers drop by an average of 1.51% per month over the same time span. The difference between extreme winners and extreme losers is thus 2.88% per month.

If interpreted tightly, the above paraphrase is very close to plagiarism and, if interpreted more loosely, it is located in a grey area. *This is true even though the original source is correctly indicated.* The most common failures in paraphrases are, firstly, the writer's following too closely the original passage and, secondly, the fact that the writer does not present all essential information (or sometimes does the opposite by emphasizing unessential information). The paraphrase above fails in both respects. First of all, the paraphrase resembles the original text too tightly; paraphrasing is not changing, leaving out or adding a few words or changing the order of the words. Nor does the writer report all the essential information the reader needs to know. As the text has been separated from its original context, the writer's responsibility is to write it out to ensure the reader has a clear understanding of the issue. In this example, among other things, the reader is here left without the information about the data that has been used in the study.

What best explains the defects of paraphrases is the writer's failure to understand the original text properly, that is, the writer's inability to put into his/her own words the poorly understood information. A deep comprehension of the original text calls for a careful scrutiny of the source material. It is worthwhile to start with the big picture – picking up the main thread and identifying the essentials – and then relating details to the whole. A good aid is making notes and mind maps while reading.

An example of a *good* paraphrase:

To examine whether the momentum effect is present in the Australian stock market, Drew, Veeraraghavan and Ye (2007) follow the method first introduced by Jegadeesh and Titman (1993): First, each month all stocks in the sample are sorted into five portfolios based on their returns over the past 3, 6, 9 or 12 months. Portfolio of stocks with the lowest (highest) past returns is called the loser (winner) portfolio. Second, a zero-cost strategy is applied that sells the loser portfolio short, uses the proceeds to buy the winner portfolio, and holds this position for 3, 6, 9 or 12 months. Drew et al. show that the returns of all the zero-cost momentum strategies are positive and statistically significant.

Another study conducted in the Australian stock market is Phua, Chan, Faff and Hudson (2010), who find results qualitatively similar to those of Drew et al. (2007). However, there are surprisingly large differences in the magnitude of the observed momentum profits: For example, the 6-month/6-month momentum return is 2.88% per month in Drew et al., but Phua et al. report a monthly return of just 0.62%. This is rather peculiar since they both have almost the same sample period (1988-2002 vs. 1991-2002). Phua et al., however, use daily data, whereas Drew et al. have monthly data. Another difference is that Phua et al. exclude very low-priced and illiquid stocks from their analysis. Whatever the reason behind the discrepancy between the results, it is inadequately addressed by Phua et al.

In the above example, the writer provides all the essential information regarding the Drew et al. (2007) study in own words and concisely, but with enough detail to get the main points across to the reader. The writer does not only paraphrase the text of Drew et al., but also discuss the background of the study, compares the results with those of another study and reflects on their contradictions. At its best, a paraphrase is a synthesis of the source material and of the writer's own argumentation and reasoning.

4.5 Illustrating the text

A thesis often comprises elements supporting and illustrating the text, such as tables, figures and mathematical formulas. All illustrative material is closely linked to the text, however, all tables and figures should be composed in such a way that the reader is able to understand them without reading the text. The text presents the essential observations and conclusions based on the tables and figures, not repeating the individual numerical information (i.e. single figures) reported in them. Tables, figures and mathematical formulas are numbered consecutively, each as an independent series. They are placed as near as possible to the section of text where they are first referred to.

4.5.1 Tables

A great amount of information can be compressed into tables, for instance in reporting numeral information (see example tables 1 and 2) and presenting summaries (see example table 3). In order to achieve a neat result, it pays to make use of the table tool of the word processing program.

Example table 1. Unemployment rate (%) in Finland.

Men 7.9 6.8 6.0 5.9 6.0 8.7 8.2			2005	2004	
	6.8 6.0 5.9 6.0 8.7 8.2 8.	6.0	6.8	7.9	Men
Women 7.5 8.6 6.8 6.1 6.1 7.0 7.5	8.6 6.8 6.1 6.1 7.0 7.5 6.	6.8	8.6	7.5	Women
All 7.7 7.6 6.4 6.0 6.1 7.9 7.9	7.6 6.4 6.0 6.1 7.9 7.9 7.	6.4	7.6	7.7	All

Source: Statistics Finland

Example table 2. Determinants of monthly stock returns.

Explanatory variable	Model 1	Model 2	Model 3	Model 4
		Panel A: F	Period 1980–1994	
Intercept	0.985***	0.856***	0.869***	0.799***
	(2.647)	(2.588)	(2.351)	(2.321)
Market return	1.234**			1.056
	(1.998)			(0.621)
Firm size		-0.825***		-0.996***
		(-2.694)		(-2.332)
Book-to-market ratio			2.637***	3.417***
			(5.639)	(5.474)
N	11 400	11 350	11 050	11 025
		Panel B: F	Period 1995–2010	
Intercept	0.751***	0.856***	0.869***	0.799***
	(2.647)	(2.588)	(2.351)	(2.321)
Market return	1.836			1.056
	(1.601)			(0.621)
Firm size		-0.825***		-0.996***
		(-2.694)		(-2.332)
Book-to-market ratio			2.637***	3.417***
			(5.639)	(5.474)
N	12 100	11 950	11 900	11 825

N = number of observations, t-values in parentheses, * = 0.05 level of significance, ** = 0.01 level of significance, and *** = 0.001 level of significance.

Example table 3. Technical and social validity of recruiting methods (Folger & Cropanzano 1998: 84–91).

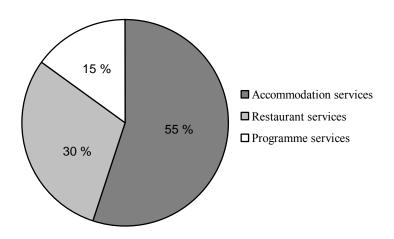
Method	Technical validity	Social validity
Recruiting firms	yes	yes
Biographical information	yes	no
Cognitive ability tests	yes	neutral
Structured interviews	yes	yes
Unstructured interviews	no	yes
Integrity tests	yes	neutral
Personality tests	yes	no
Reference checking	no	yes
Aptitude tests	yes	yes
Drug tests	yes	neutral

- As a rule, the table fills out the whole column.
- A broad table is presented horizontally.
- The same font is used as in body text, font size is 10 pt.
- A table is given a short but descriptive title.
- The title is written above the table, using font size 10 pt and bold letters.
- There are horizontal lines above and below the column headings as well as at the bottom of the table.
- Below the table there is a caption, giving all necessary information for understanding the table. The font size of the caption is 9 pt.
- The possible source is given in the title of the table or in the caption (cf. example tables 1 and 3).

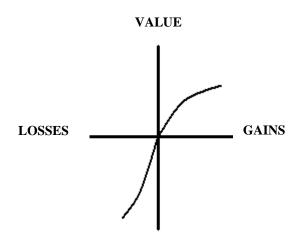
4.5.2 Figures

In scientific research, as in all communication, figures are an effective means of conveying information. Like tables, figures can be used to illustrate the results of your own research (see example figure 1). It should be kept in mind that figures are protected by copyright laws. Therefore, you must not copy or scan another person's figures into your thesis without the copyright owner's permission. If you have no permission, you

will have to redraw the figure yourself – preferably using a graphics program – and provide the reader with a reference to the original source (see example figure 2).



Example figure 1. Breakdown of sales for Firm X in 2011.



Example figure 2. Value function (Kahneman & Tversky 1979: 279).

- In figures, the same font is used as in body text.
- A figure is given a short but descriptive title.
- The title is written below the figure, using font size 10 pt and bold letters.
- Within the figure font size 10 pt is customary.

- If the figure is not the size of the whole column, it is placed in the middle of the page.
- If you make any changes to another person's figure, you must indicate this by adding the words 'adapted from' to the reference.

4.5.3 Formulas and equations

When presenting mathematical material, the equation editor of the word processing program should be used. Formulas and equations are integrated into the text in one of the following ways:

Example 1: Government has the following budgeting constraint:

$$B_t = D_t + (1 + r_t)B_{t-1}, (1)$$

where the subscript t refers to time, B_t is public debt at the end of the period, D_t is the primary deficit and r_t is the real interest rate from t-1 to t (Lahiri & Puhakka 1998: 181).

Example 2: Equation (2) represents the relationship between domestic price level P, exchange rate E and foreign price level P^* at time t:

$$P_t = E_t P_t^* \,. \tag{2}$$

This relationship is called the law of one price.

Example 3: The demand, q, is assumed to be of the following form:

$$q = f(sh)v, (3)$$

where s = exchange rate,

h = price and

v =random factor.

- The main font is Times new roman 12 pt, italics.
- The size of the subscripts and superscripts is 8 pt.
- Formulas and equations are indented 1.5 cm.
- The equation number is enclosed in parentheses and placed flush right.
- There is no need to number equations that are part of a series of intermediate steps that are not specifically discussed in the text.
- Symbols being used must be defined at their first occurrence.
- The use of symbols must be consistent: that is, the same symbol should not be used to denote different things, nor should the same variable or concept be referred to by using different symbols in different contexts.

4.6 Page settings

Page settings for a thesis are as follows:

Page numbers	placed at the top right-hand corner of the page, font size 12
	pt, numbering starts from the cover page but the page
	numbers are shown not until the first page of the introduction
	chapter
Table of contents	chapter headings are formatted the same as in the text, sub-
	headings are indented
Line spacing	1.5 (1 in the list of references), spacing before and after the
	paragraph 0 pt
Indentations	list of references 0.5 cm hanging indent, other lists 0.5 cm,
	long direct quotations 1 cm, formulas and equations 1.5 cm
Carriage return	after each chapter heading, paragraph, list, figure, table,
	formula and equation

Page margins top and bottom margin 2.5 cm, left margin 4 cm, right

margin 2.5 cm, gutter 0 cm, headers and footers 1.25 cm

Basic font style Times New Roman 12 pt, fully justified

HEADING 1 Times New Roman 12 pt, CAPITALISED, **bold**, each main

chapter starts from a new page

Heading 1.1 Times New Roman 12 pt, **bold**

Heading 1.1.1 Times New Roman 12 pt

Appendix 1 Times New Roman 12 pt, **bold**

Footnotes consecutive numbering, Times New Roman 10 pt, line

spacing 1

Emphasis italics

You can either adjust the page settings manually, or use a customised Microsoft Word template: http://www.taloustieteet.oulu.fi/file.php?761. Some instructions (not all are in English) on how to use the template can be found in the following manual: http://www.taloustieteet.oulu.fi/file.php?762.

5 SUMMARY

Writing a thesis requires knowledge of the conventions of academic writing. This manual presents the principles of academic writing and the technical formalities that must be adhered to when writing a thesis in OBS. This manual is intended to be used as a self-study material. The instructions will guide you, on your own, to compose a thesis, which is refined in language and lay-out and which is in accordance with the formal requirements set for theses. When the responsibility for the formalities is your own, during your supervisory meetings you and your supervisor are able to concentrate on the essentials, that is, on the contents of your work.

After reading this manual, particularly if you are writing your first thesis, you may get the impression that the task before you demands the command and memorizing of an enormous amount of information. In a way it is true, as the list of matters to be considered is very long indeed and, ultimately, commas seem to become your best friends. Luckily, there is no need to learn these detailed rules by heart – they can always be checked from this manual. One has to bear in mind, though, that any manual like this cannot be a perfect guide. In the course of writing the thesis, questions certainly arise which cannot be anticipated, but in regard to all problems and uncertainties, you are always able to turn to your supervisor. In the end, one has to point out that just reading these instructions will not get your thesis finished. Your own power of thinking, your thirst for knowledge and your own determination are the necessary tools to get the job done.

REFERENCES

- Davila, A., Foster, G. & Oyon, D. (2009). Accounting and control, entrepreneurship and innovation: Venturing into new research opportunities. *European Accounting Review* 18(2), 281–311.
- Drew, M. E., Veeraraghavan, M. & Ye, M. (2007). Do momentum strategies work? Australian evidence. *Managerial Finance* 33(10), 772–787.
- Edelström, U. (2012). Managing director, XYZ Corporation. Phone interview in May 15, 2012.
- European Commission (2010). Proposal for a regulation of the European parliament and of the council on specific requirements regarding statutory audit of public-interest entities. 2011/0359 (COD). European Commission, Brussels. Available at: http://ec.europa.eu/internal_market/auditing/docs/reform/COM_2011_779_en.pdf Cited 8 February 2012.
- Ewert, R. (2003). Prüfung, Beratung und externe Rotation: Ökonomische Forschungsergebnisse zur aktuellen Regulierungsdebatte im Bereich der Wirtschaftsprüfung. *Der Konzern* 1(8), 528–539.
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance* 25(5), 383–417.
- Fama, E. F. & French, K. R. (1992). The cross-section of expected stock returns. *Journal of Finance* 47(2), 427–465.
- Folger, R. & Cropanzano, R. (1998). *Organizational Justice and Human Resource Management* (2nd edition). Thousand Oaks: Sage Publications.
- Jaccard, J. (2001). Interaction Effects in Logistic Regression. Thousand Oaks: Sage.
- Jaccard, J., Turrisi, R., & Wan, C. (1990). *Interaction Effects in Multiple Regression*. Thousand Oaks: Sage.
- Jegadeesh, N. & Titman, S. (1993). Returns to buying winners and selling losers: Implications for stock market efficiency. *Journal of Finance* 48(1), 65–91.
- Lahiri, A. & Puhakka, M. (1998). Habit persistence in overlapping generations economies under pure exchange. *Journal of Economic Theory* 78(1), 176–186.
- Lipson, C. (2005). How to Write a BA Thesis: A Practical Guide from Your First Ideas to Your Finished Paper. Chicago: University of Chicago Press.
- Murray, R. (2006). *How to Write a Thesis* (2nd edition). Maidenhead: Open University Press.

- NASDAQ OMX Helsinki (2011). *Opi osakkeet* (6th edition). Helsinki: NASDAQ OMX Group.
- National Emissions Ceiling Directive 2001/81/EC.
- Odean, T. (1998). Are investors reluctant to realize their losses? *Journal of Finance* 53(5), 1775–1798.
- Phua, V., Chan, H., Faff, R. & Hudson, R. (2010). The influence of time, seasonality and market state on momentum: Insights from the Australian stock market. *Applied Financial Economics* 20(20), 1547–1563.
- Pott, C., Mock, T. J. & Watrin, C. (2009). Review of empirical research on rotation and non-audit services: Auditor independence in fact vs. appearance. *Journal fur Betriebswirtschaft* 58(4), 209–239.
- Pyrczak, F. & Bruce R. R. (1992). Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioral Sciences. Los Angeles: Pyrczak Publishing.
- Staw, B. M. (1997). The escalation of commitment: An update and appraisal. In: Shapira, Z. (ed.). Organizational Decision Making. Cambridge: Cambridge University Press, 191–215.
- Woodpine, G. F. & Liu, J. (2010). Leadership styles and the moral choice of internal auditors. *Electronic Journal of Business Ethics and Organization Studies* 15(1), 28-35. Available at: http://ejbo.jyu.fi/pdf/ejbo_vol15_no1_pages_28-35.pdf. Cited 8 February 2012.

Appendix 1

OUTLINE OF A SEMI-STRUCTURED INTERVIEW

Managing the cooperation between businesses

- 1. For how long has cooperation between businesses been part of your work?
- 2. What is meant by cooperation between businesses?
 - What is it / how would you define it?
 - Why do companies engage in cooperation? The benefits of cooperation?
 - What does cooperation between companies encompass?
 - The effects of cooperation from the viewpoint of an individual company?
- 3. How would you describe a successful cooperation between businesses?
 - What is required for cooperation to be successful?
 - What are the main obstacles that prevent successful cooperation?
- 4. What is meant by managing the cooperation between businesses?
 - What issues are important?
 - What does it involve in your own organisation?
 - How would you, personally, organise the management of cooperation between businesses?
- 5. How does cooperation between businesses show as part of the strategy/planning/operation/raison d'être of your own (sub)organisation?
- 6. How would you describe the existing cooperation between businesses?
 - How could it be developed?
 - What does it require?