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THE RULES/REQUIREMENTS for Diploma Thesis (bachelor and master)

#### THESIS CONTENT

The thesis should aim to provide **the answer to an interesting question** by means of gathering significant data/information and analyzing it in relation to / with **the use of economic concepts discussed during your studies** (e.g. externalities, asymmetric information, efficiency). One should therefore start with the question "would I be able to write the same paper without my knowledge gained at the WNE UW?". If the answer is "yes", then it is likely that the topic or method of analysis is not appropriate, or the work is very superficial.

## The thesis should contain:

- title make your title short!
- summary/abstract it should be self-contained, without abbreviations, footnotes, references.
   This is a few sentences that gives the main idea in your thesis: (i) What your research is about?
   (ii) What methods have been used? (iii) What is a horizon and geographic coverage? (iv) What you found out? Do not describe all, but principal results:
   <a href="https://www.journals.elsevier.com/social-sciences-and-humanities-open/policies-and-guidelines/how-to-write-a-great-abstract-for-your-academic-manuscript">https://www.journals.elsevier.com/social-sciences-and-humanities-open/policies-and-guidelines/how-to-write-a-great-abstract-for-your-academic-manuscript
- keywords phrases, which identify the most important subjects covered by the thesis. Avoid repeating words in the keywords section that are already in your thesis title:
   <a href="https://scientific-publishing.webshop.elsevier.com/manuscript-preparation/how-choose-keywords-manuscript/">https://scientific-publishing.webshop.elsevier.com/manuscript-preparation/how-choose-keywords-manuscript/</a>
- introduction an explanation why the topic is important, the objectives of the work, hypothesis
  and research question, brief description of data and method, thesis structure. Do not use the
  argument that the topic is important because it is current or interesting (whether a topic is
  "interesting" please let a reader judge). Avoid a detailed literature review or a summary of the
  results.
- a chapter informing about the topic and the motivation for undertaking it. You should also provide evidence that you properly understand economic theory used in your thesis (explanation of concepts, illustration of the theory with a graph, etc.)
- literature review discussion of published literature relevant to the topic
- main substance containing the essential analysis results should be clear and concise.
- conclusions explore the significance of the results of the work (do not repeat them) and derive conclusions. Avoid extensive citations and discussion of published literature.
- bibliography it should include those and only those works to which you refer in the text (not necessarily citing their fragment).

Your work should contain a research question (bachelor and master thesis) and hypothesis (master thesis). A **research hypothesis** is a prediction (based on significant knowledge or previous research on this subject) about the relationship between variables and it does not allow a wide range of outcomes. A **research question** is the open question your thesis sets to answer and it does not require any previous research or knowledge on the subject and allows a wide range of outcomes. Example of weak research question: "what are highway tolls in Poland?". Example of improved question: "are highways tolls too high in Poland?"

In addition, you should formulate a **research objective** that clearly states what you want to achieve through your research. It determines the scope, depth and the overall direction of the research. Achievement of research objective provides answer to the research hypothesis/question. <u>Avoid</u> a broad objective, but narrow it down as much as possible, because it is impossible to perform an in-depth analysis of a broad objective. <u>Avoid</u> several objectives or hypothesis/questions, because it will be difficult for you to account for them in details. Example of weak objective: "The research focuses on bibliography management tools" or "The research was designed to find out whether bachelor students like to use the tool for bibliography management". Example of improved objective: "The research addresses the use of bibliography management tools by Polish bachelor students". Example of good objective: "The research was aimed to identify attitudes of bachelor students from Polish universities to use bibliography management tools". The **research problem** (what is this research about?) is not the same as the research objective (what do you want to achieve through this research?).

Do not confuse **method** with **methodology**. A method is the tool/technique used to answer your research questions/hypothesis or how you will go about collecting your data (e.g. interview, survey, econometric model, computer simulation). A methodology describes the broader strategy for your research approach that outlines the way in which research is to be undertaken (e.g. views the participants as active researchers or examines how people use dialogue and body language to construct their view). It is a systematic and theoretical approach to collect and evaluate data throughout the research process. The methodology influences what methods are chosen. The purpose of research methodology is the justification for choosing a particular research method.

Describe the **economic theory** used in the thesis. Just as for building a house, the right tools are needed, so to conduct an economic analysis an appropriate theoretical framework is needed.

## **LITERATURE**

An extensive survey of directly related **academic literature**<sup>1</sup> would be valuable but is not inevitable, even for those who want to receive the maximum score. One should, however, **approach the gathered materials with criticism**. An academic paper or a report of a respected institution will usually be more precise and reliable than someone's statement for the media, etc. Generally, all unobvious statements that are not the result of one's own analysis should be provided with references to literature/sources. E.g. in the main text of the paper one will say "(...) Stanton (2010) argued this, while Andreoni et al. (2003) argued that (...)". In principle, do **not** provide titles of works referred to in the main text or in footnotes, only in the bibliography (the list of references).

The thesis should end with a bibliography containing all the works you have used:

Andreoni, J., Castillo, M., & Petrie, R. (2003). What do bargainers' preferences look like? Experiments with a convex ultimatum game. *American Economic Review* 93(3), 672-685.

Stanton, F. (2010). Great negotiations: Agreements that changed the modern world. Westholme. (...)

<sup>&</sup>lt;sup>1</sup> It is recommend scholar.google.com. Access to full texts of journal articles is possible via the University library (BUW) website – see 'E-resources' and select 'AtoZ list'.

The bibliography should contain these and only these works, which you refer to in the text (not necessarily citing a particular passage). As a rule, the **footnotes** do not contain bibliographic items, but they supplement the threads discussed in the text. The bibliography should (i) contain all the necessary elements so that the reader can easily identify it, (ii) be sorted in alphabetical order according to the last name of the first author, (iii) have a uniform format (i.e. you choose the format yourself, but each reference presented must have an identical format), (iv) no sections like "articles" or "web sources" should be applied.

A **link** is <u>not</u> a bibliographical reference. The fact that a piece of text was found and read in the internet does not release you from the obligation to provide the author's name and the title. Similarly, when using data (e.g. from the Polish Main Statistical Office GUS) provide the title on the database/report and the table/page number (not just the link). If you discuss the results of a given study, e.g. based on a survey, it is worth mentioning a few words on the methodology and, in particular, the sample.

If you use **Artificial Intelligence** (AI), please note that references provided by AI-tools may be false. You should check the original source. You are also obliged to include AI-tool in your bibliography (use the name of the tool as the author, the year of the version, the scope of the support, title of platform where accessed, date accessed, full URL). In addition, according to <u>University of Warsaw requirements</u>, the diploma thesis should describe and clearly mark (in the introduction or in the chapter on research methods) the AI tools used, the purposes and methods of their use.

#### **PLAGIARISM**

The thesis must be ORIGINAL. Hidden borrowing from others' works, including translations (no matter whether from published articles, books, webpages, master/bachelor thesis, written assignments, with or without the author's consent) and AI, will result in failing the course and may cause the initiation of a disciplinary procedure before the relevant university committee. Obviously, this does not concern quotations and discussions accompanied by a bibliographic reference.

Even if the promoter does not notice passages rewritten from other sources, a reviewer or an antiplagiarism program may do so. Please keep **quotations** to a minimum (we quote only those phrases that are extremely accurate and irreplaceable) and put quotation marks. Long quotations gives the impression that the author is dependent or sloppy in formulating his thoughts.

## **LANGUAGE**

The thesis should be written in **proper English.** Typos, punctuation errors, wrong verb forms/tenses, etc., as well as using colloquial phrases will result in lowering the grade. Please avoid the words "should" or "must". Do not advocate for the general public: "everyone knows", "everyone is disturbed", "it is generally known", etc.

The thesis should be **logically structured.** Each paragraph should deal with one issue and should relate to the previous, as well as to the next paragraph (whenever they are in the same section). It is a good exercise to summarize each paragraph in one sentence. This should be possible and the resulting text

should be relatively coherent. If a paragraph cannot be reasonably summarized in one sentence, then it is likely a) lacking substance and/or b) self-contradictory and/or c) devoted to too many different issues. If a paragraph consists of a single sentence or is more than half a page long, something is certainly wrong.

**Footnotes** should be avoided in view of the principle that if any thought is so important that we want to mention it, we include it in the main text. If it is not so important that it merit a place in the main text, then let's not mention it at all. However, there are situations when a footnote is necessary. Namely, when a thought is important, but its placement in the main body of the text would break up the paragraph's plot.

If you provide **numbers**, remember that in English decimal numerical notation uses (decimal) points, not commas. In addition, the reader will usually not be interested in the fact that in a given year 37849180 cars have been registered in Mexico and may actually have a problem to count the digits in such number. Therefore, it is much better to write that there were 37.8 million of them. It is also worth considering whether a graph could be the best way to present a large number.

If the work contains **tables and/or figures**, each of them should be given a number, title, and any explanations (if necessary) allowing to comprehend what they represent without reference to the main text. At the same time, in the main text at least one reference should be made to every table/figure. If such reference does not fit in the text, it is likely that the discussed object is superfluous.

The writing do's and don'ts (common errors to avoid, phrases to use, and other insights that help writing a solid text:

https://zoom.us/rec/play/VY6wCFXtxBne-uSRVrox13-oxSVs5G6UNHZo16PdGuLVzXchZ71vALLprHlTfbh6hev8Aer3jTSHGWhc.iKD4rnwWP79yP7Ne?startTime=1 644483566000& x zm rtaid=cX8xTBebQF2bfBibGayByw.1644511237400.5a9600f2504ae5a1013faf10fd a50be5& x zm rhtaid=147

You may wish to install application "Writefull" - an automated proofreader for science. This artificial intelligence is trained to work with scientific writing, rather than a common language.

## Other academic language tips:

- common errors in prepositions
   https://blog.writefull.com/academic-writing-errors-to-avoid-prepositions/
- common errors in verb-noun pairs
   https://blog.writefull.com/academic-writing-errors-to-avoid-verb-noun-pairs/
- how to introduce your study <a href="https://blog.writefull.com/how-to-introduce-your-study/">https://blog.writefull.com/how-to-introduce-your-study/</a>
- how to structure your abstract/summary https://blog.writefull.com/how-to-structure-your-abstract/

## **THESIS FORMATS**

Thesis may be written in the one of the following formats:

- 1) traditional
- 2) traditional, but co-authored by 2 students (the share of each co-author must be equal)
- 3) scientific article (it does not have to be published)
- 4) scientific article (it does not have to be published), but co-authored by 2 students (the share of each co-author must be equal)
- 5) scientific article (it does not have to be published), but in co-authorship with the supervisor (student's share of at least 60%). Example
- 6) scientific article (it does not have to be published), but co-authored by 2 students and the supervisor (share of each student at least 40%)

Thesis as a scientific article should contain the annex. The limit of words does not cover the annex. The annex should contain broader description (than presented in the main part of the thesis) of the literature overview and the applied research method and the results.

#### **GRADING**

The following main components of your thesis will be graded by both, your Supervisor and Reviewer, after your Supervisor will accept your thesis:

- significance and originality of the topic / research question (please note that a Master's thesis should include a **research hypothesis**, while a Bachelor thesis a **research question** in addition to a **research objective**/task/goal/ statement)
- theoretical analysis, with reference to concepts learned at the economic classes
- reliability of gathered data / significant information
- the methods of analyzing the data/information and formulating conclusions
- proper language, style, conciseness, editing, etc.

The full evaluation form is available here:

https://www.wne.uw.edu.pl/download file/121/254

## **DETAILED RULES**

The detailed elements of thesis grading and formal requirements:

https://www.wne.uw.edu.pl/download\_file/2369/1977

https://www.wne.uw.edu.pl/download file/101/254 (Polish version)

## The detailed layout of thesis:

https://www.wne.uw.edu.pl/download file/2368/1977

https://www.wne.uw.edu.pl/download\_file/120/254 (Polish version)

#### Future information:

https://www.wne.uw.edu.pl/en/students/diploma-thesis

https://www.wne.uw.edu.pl/student/prace-dyplomowe (Polish version)

#### **EXAMPLES OF GOOD THESIS**

Note: the formal rules in older theses are different from the current ones.

### Bachelor

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Bors.pdf (CGE-sport)

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Cichminska.pdf (meat industry)

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Lewczuk.pdf (CGE - Polish version)

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Iwaniuk.pdf (game theory - Polish version)

#### Master

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Okhrimenko.pdf (rationality)

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Koper.pdf (CGE-international trade)

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Rokicka.pdf (machine learning - Polish version)

http://coin.wne.uw.edu.pl/kiuila/CGE/Thesis/Hagemejer.pdf (international trade - Polish version)

## INSTRUCTIONS FOR SENDING THESIS DRAFTS TO THE SUPERVISOR

You are kindly requested <u>not</u> to submit the entire thesis at once, as this will avoid repeated errors and the rewriting of the entire thesis. You should submit a completed subchapter or whole chapter, and after the supervisor's approval, prepare further parts of the thesis without repeating the previous mistakes.

**Before each submission** of the file (in editable text format!) for the supervisor's review, ensure that the following items are present:

- 1) The purpose of the thesis and a brief justification is included.
- 2) The thesis should immediately comply with the formatting requirements (see previous section), i.e. include a title page, approximate table of contents, adequate margins, correct formatting of tables, etc.
- 3) The bibliography should be updated on an ongoing basis, i.e. references in the text should be immediately followed up with the relevant entry in the bibliography list at the end of the file, instead of being completed later.
- 4) The re-submissions should contain a clean text (without marked changes and comments), unless (i) you disagree with some claims (leave them out and provide a counter-argument), (ii) you postpone a comment until later, or (iii) you have made changes to a part of the thesis that has been already accepted by the supervisor (in this case please mark your changes to that part only). Make sure that you have taken into account all the corrections and comments made by the supervisor.
- 5) Your corrections should not only take into account the corrections marked by the supervisor, but should also be appropriately applied to the whole thesis. The supervisor's task is only to show you, by proofreading the first few pages, how the whole thesis should be written, not to correct every sentence in the whole thesis.
- 6) Do not send just new version of the text, but double check that the quality of the submitted parts is high enough (i.e. that you are proud of the quality and that you follow all the rules).