

University of Bayreuth  
Faculty of Law, Business & Economics  
Professorship of International Competition Policy

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TERM PAPER  
Seminar

## “Topics in Economic Theory”

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Lecturer: Magdalena Helfrich M.Sc. & Prof. Dr. Fabian Herweg

Title:

# On the Welfare Effects of Competition for FDI

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## **List of Abbreviations**

- AV    Armstrong and Vickers (2001)  
FOC   First Order Condition  
SOC   Second Order Condition  
i.i.d.   independent and identically distributed



## 2 Text

### 2.1 Structure and Content

The actual text part of a term paper should not exceed 10 to at most 12 pages for a Bachelor's seminar and 12 to at most 14 pages for a Master's seminar not counting the title page, appendix, table of contents, table of figures, etc.). In general, the text part consists of three parts: an introduction, a main part and a concluding section.

The **introduction** (1–1.5 pages) should

- introduce – and give motivation for – the topic at hand (*What is the paper about? Why is the topic relevant?*),
- illustrate the goal of the paper (*What is the paper trying to show?*),
- briefly explain the main findings of the paper,
- briefly explain how the authors previously dealt with these findings (*discuss related literature*) as well as
- describe how the rest of the paper is structured.

If a specific publication is dealt with, this should be made clear in the introduction.

The **main part** should be clearly structured and written in a manner that can be understood easily. In most cases, the main basis of the paper is a specific publication. In this case, the content of this publication should be illustrated in your own words, i.e., introduce the model or experiment and summarize the findings. With emphasis on “in own words” – copying or translating does not count as your personal contribution.

Keep in mind that 12 to 14 pages are not nearly enough to give an in-depth analysis of a topic (most publications are far more extensive). Instead of giving a wide but too shallow overview of many topics, you should focus on certain aspects and describe them in more detail. In your term paper, you should show that you grasped a (small, narrow) problem or aspect – this includes the mathematical methods used in the model – and are able to critically analyze the discussed assumptions and findings. Therefore, in most cases limiting the focus of your paper might be a good idea.

In the **conclusion** the main findings are summarized again and discussed critically. In addition, own thoughts on the topic at hand and ideas for future research might be mentioned.

## 2.2 Own Contribution

Your term paper must include an own contribution. Own contributions might be in the form of calculations not included in the discussed publication, or verbal descriptions, assumptions or findings which were not discussed on a deeper level. Your own contribution also includes a critical discussion of the presented research. You might discuss certain assumptions of the model or the design of the experiment, as well as present other research papers that deal with the topic or related ones and mention empirical papers that investigate the topic.

## 2.3 Critical Discussion of the Model

Do not solely criticize that a model is too abstract and therefore unrealistic. Every economic model is a stark simplification of reality and ergo unrealistic. For this reason, when criticizing the assumptions of the model it is not enough to mention this point. Critically question which assumptions are relevant for the findings. Maybe a certain assumption is not crucial for the conclusions the author arrives at. For example, in many models in Industrial Organization demand is assumed to be linear. This assumption simplifies the formal representation and is in general not crucial for the findings. However, sometimes it might be exactly this assumption that leads to a certain outcome; if this is the case, you should mention and criticize this aspect since a linear demand function is indeed a stark simplification of reality.

## 2.4 Language and Terminology

Prefer short and precise phrasing. Less is often more! Do not assume that a scientific paper must be phrased complexly. A well written scientific paper illustrates an issue in a formally correct manner. At the same time, the language used should be as comprehensible as possible. Avoid long and unnecessarily complex sentences and limit the usage of loanwords to a minimum. Make sure to use the correct scientific terminology. Err on the side of caution and double-check if you are unsure which expression to use.

## 2.5 Citations

Citations and thoughts taken from other papers must be indicated as such. The reader should be able to comprehend where a certain aspect is taken from at all times. If you

fail to cite correctly, this is to be graded as plagiarism and an attempt at deception.

Cite by including the author, year of publication and the page in the text. The cited paper, book, etc. is then included in the references section at the end of the text.

Please also note the following:

- If the citation is a literal one, it must be in quotation marks. The citation must be worded identically as the in the source itself. Omissions and changes must be indicated using square brackets. Example:
  - Herweg and Müller (2015, p. 1) note that “[a] classic topic of antitrust economics [...] is the welfare effect of third degree price discrimination”.
- In general, a correct citation includes the pages referred to. Example:
  - ... (see Herweg and Müller 2014, p. 777–800)
  - (*or if the cited aspect spans over two pages*) Fratianni and von Hagen (1990, p. 75f.) define dominance using four hypotheses.

Only if you refer to a paper, book, etc. in general, the page number may be omitted.

Example:

- Fratianni and von Hagen (1990) analyze Germany’s dominance in the European Monetary System.
- If a paper, book, etc. has three or more authors you should only use the name of the first author and indicate that there are others using “et al.” (e.g. “Helfrich et al.” instead of “Helfrich, Herweg and Müller”). In the reference section however, the names of all authors must be listed.
- Common knowledge in the field of Economics or very general aspects that can be considered as common knowledge in general do not have to be cited. Example: The demand function is downward sloping.
- (If possible) Cite the primary source!
- If your term paper is based on a single research paper, it might be detrimental for the readability of your text if you cite your main source again and again. In this case, it is sufficient to mention that you will be dealing with a certain paper in the following. To distinguish which contributions were your own and which are the

author's of your main source, it might be reasonable to add a personal remark in the form of, e.g., "With regard to this assumption, I would like to state that...".

## 2.6 Footnotes

References to footnotes should be indicated by an Arabic numeral in superscript form. The use of footnotes should be minimal and they should be numbered consecutively throughout the text.<sup>1</sup> The font size in footnotes should be smaller as the main font (see chapter 4.1.2). The first word in a footnote should begin with a capital letter; at the end of the footnote a full stop follows. A horizontal line separates the main text from the footnote text on the same page.

## 2.7 Mathematical Expressions

Formulae or equations are displayed in a separate line and either with an indent or centered. Equations are numbered consecutively. Example:

$$\pi(p) = (p - c)(1 - p). \quad (1)$$

The variables used in the equations should be explained when they are first introduced. If there are equations in the appendix as well, make sure to number them in a way that makes them distinguishable from the ones used in the main text. Numbering appendices alphabetically and adding these letters to the equation number is one way of dealing with this. Example:

$$\pi'(p) = 1 + c - 2p. \quad (A.1)$$

The readability of the text is improved if the variables are presented in italics whenever they occur. Example: In equation (A.1) the price is indicated by  $p$ , while  $c$  indicates the marginal costs.

## 3 Indexes

### 3.1 Table of Contents

The table of contents, respectively an outline of the paper is added after the title page before the main text. It should outline the content of the paper. The table of contents

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<sup>1</sup>Footnotes include information or remarks that disrupt the readability of the text, e.g., extensive remarks regarding related literature. If the information is important for your topic, it should be included in the text.

on page II might serve as an example. Please keep in mind that subdivision of the text into sub- and sub-subsections is reasonable only if there are at least two subsections.

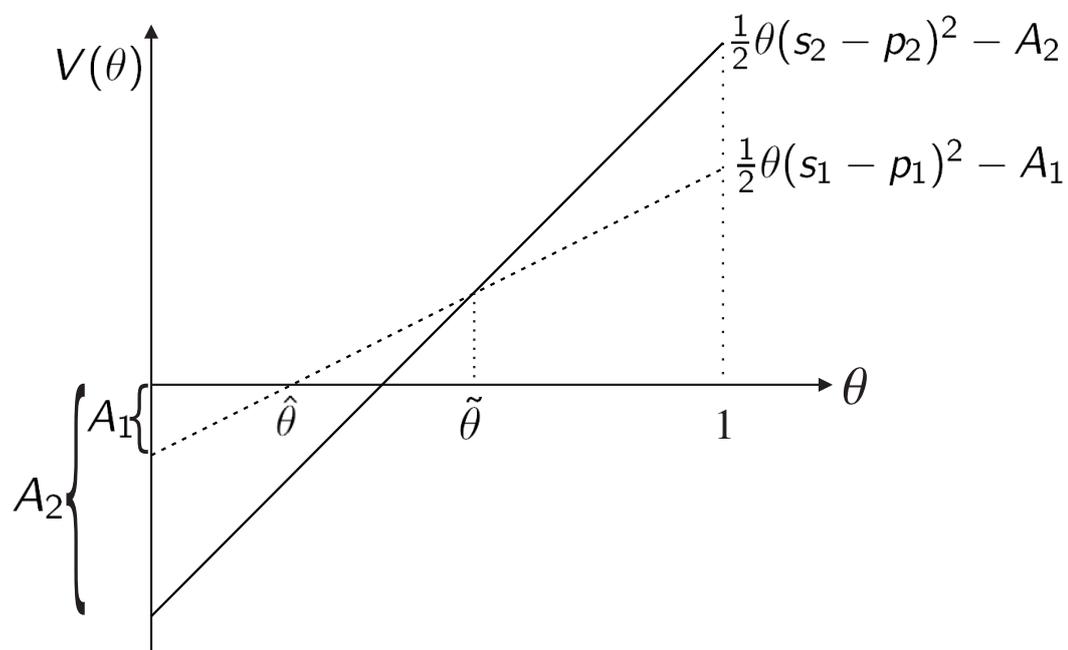


Figure 1: Choice of tariff depending on the type.

### **3.2 List of Figures and List of Tables**

A list of figures or tables is only necessary if the paper includes many tables or figures. The style of the list of figures should correspond to the style of the table of contents. Every list of tables, figures, etc. is displayed on an individual page. Both tables and figures must include a title and are numbered consecutively. If the tables or figures are not your own illustrations, they must be indicated and cited as such.

### **3.3 List of Abbreviations**

If many scientific abbreviations are used, it is recommended to include a list of abbreviations before the text part. Abbreviations included in Merriam-Webster or other comparable dictionaries and commonly used abbreviations should not be included in the list of abbreviations. Nonetheless, abbreviations should be explained once when they first occur in the text. Please note: Abbreviations at the beginning of a sentence are to be spelled in full. Don't use too many abbreviations as they decrease the readability of the text – use few (if any) and memorable abbreviations.

All above mentioned lists are to be placed between title page and the beginning of the text part, with the table of contents being the first list after the title page.

### **3.4 References**

If (and only if) you cite a book, paper, working paper, etc., it is to be included in the references section. The references section is either placed before or after the appendix. Please list publications in alphabetical order according to the name of the author(s) or – if applicable – publishers. Every entry should be displayed left-aligned and completed with a full stop. The following examples illustrate how different forms of publications should be cited. Please also refer to the references section at the end of this guideline. When citing internet sources make sure to include the complete web address as well as the date of access in the corresponding entry in the references section.

**Examples:**

- Articles in Scientific Papers:

**Fratianni, M. U. and J. von Hagen (1990):** “German Dominance in the EMS: The Empirical Evidence”, *Open Economies Review*, Vol. 1 (1), 67-87.

- Books:

**Standop, E. (1994):** *Die Form der wissenschaftlichen Arbeit*, 14<sup>th</sup> Edition, Heidelberg Wiesbaden: Quelle & Meyer Verlag.

- Articles in Collected Volumes:

Articles in collected volumes are cited like articles in scientific papers, adding the name of the publisher and place of publication in the references section: **Jones, R.W. and P.J. Neary (1984):** “The Positive Theory of International Trade”, in: Ronald W. Jones and Peter B. Kenen (Publ.), *Handbook of International Economics*, Vol. I, Amsterdam: North Holland, 1-62.

## 4 Miscellaneous

### 4.1 Layout

#### 4.1.1 Page Margin

Page margins should be chosen in a fashion such that they seem neither too wide nor too narrow. As a guideline the following values can be used: Left margin 3.0 cm, right margin 2.0 cm, top and bottom margin 2.0 cm.

#### 4.1.2 Font

The standard font is “Times” 12pt for the text part and 10pt for footnotes. For first order headings the font size should be 14pt and 12pt for second order headings. Headings should be left-aligned and printed in bold. The rest of the text should be aligned. If the term paper is written using L<sup>A</sup>T<sub>E</sub>X, the standard formatting of the “article” or “scrartcl” document class can be used; this applies to the font settings as well as the formatting of the headings.

The line spacing should be set to 1.5 in the main text (respectively 34 lines per page); line spacing in footnotes and the references section should be set to 1.

### 4.1.3 Page Numbering

The page numbering begins with the first page of the text part. The text part is numbered consecutively with Arabic numerals. After the text part, the numeration can continue in this fashion. Before the text part, numeration can be omitted due to the small scope of a term paper or Roman numerals are chosen, beginning with the title page. However, the title page does not include a page number. Therefore, the first page after the title page should be numbered with “II”.

Illustrations and tables are not part of the text. They can either be included in the appendix or displayed on a separate page (i.e., page 6a between 6 and 7; see example). In this case, the back page of the previous page can serve as a separate page.

## 4.2 Mathematical Appendix

Long formal derivations should be included in the mathematical appendix. This might regard step-by-step derivations of calculations only briefly mentioned in the text part, as well as proofs of propositions or lemmas which were only explained intuitively before. However, the mathematical appendix is not part of the main text and therefore the main text must be understood without having to look into the mathematical appendix. Make sure you include all relevant information in the main text and do not try to save space by excluding too many calculations from the main text and adding them into the appendix.

## 4.3 Literature

Search for literature beyond the main source of your term paper and make sure the quality of your references is on a high level! Mainly cite publications in internationally renowned scientific journals. Textbooks do not suffice. The so called “top-5-journals” in economics are a good point of reference:

- American Economic Review
- Econometrica
- Journal of Political Economy
- Quarterly Journal of Economics
- Review of Economic Studies

Other sources might be the following journals (sometimes with a focus on a specific field or topic in economics):

- American Economic Journal: Microeconomics
- Economic Journal
- Games and Economic Behavior
- Journal of the European Economic Association
- Journal of Economic Theory
- RAND Journal of Economics

You can have a look at a ranking of economic journals in order to assess the quality of the article you plan to cite.<sup>2</sup>

When searching for literature, it might be useful to have a look at the most important references in the reference section of your main source. Use the essay database of the “BibliotheksVerbund Bayern” which gives you access to most articles. Log on to the University Bayreuth server and search for publications using the catalogue of the library of University Bayreuth.<sup>3</sup> (activate “Aufsatzdatenbank BVB” under “Datenbank-Auswahl”). If you are looking for a publication in a specific journal you can use the electronic journal library.<sup>4</sup> In addition to these electronic sources the RW-library of University Bayreuth offers print versions of many journals. If you are having trouble finding an article you should check the website of the author. Usually you can find information whether a “working paper” you plan to cite has been published already or is still categorized as a working paper.

Further databases are “Business Source Premier”<sup>5</sup>, Google Scholar<sup>6</sup> and JSTOR.<sup>7</sup> These sources can also give an indication about how many times a publication has been cited.

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<sup>2</sup> E.g. <http://tool.handelsblatt.com/tabelle/?id=33>

<sup>3</sup><https://opac.uni-bayreuth.de/InfoGuideClient/start.do?Login=opacweb>

<sup>4</sup><http://rzblx1.uni-regensburg.de/ezeit/fl.phtml?colors=3&bibid=UBBAY>

<sup>5</sup><https://search.ebscohost.com>

<sup>6</sup><http://scholar.google.de/>

<sup>7</sup><http://www.jstor.org/>

## 5 Handing in your Term Paper

The term paper should be handed in in printed *and* electronical form. Please hand in one printed copy of your term paper in a proper form; stapling the pages together is sufficient (no binders or folders). The term paper should be printed one-sided in A4 format. Please send an email to the person in charge of correcting your term paper with the electronical version of your paper as *one* PDF-file enclosed (important: PDF-version!). Shortly before handing in your paper you should spell-check it again. Make sure your paper is formally correct. Use spell-check while writing your paper! However, make sure to read your paper carefully in order to avoid mistakes, and ask fellow students to proof-read your paper. Check the grammatical structure of your sentences and ensure the paper can be read easily. Make sure all references are included and cited.

## 6 Conclusion

The aim of this guideline is to give an overview of requirements when writing a term paper. The above mentioned mainly comprises of recommendations. Every seminar is different and has its own requirements and criteria.

Layout can be a question of taste. Therefore, a range of possible layouts is acceptable. Make sure to have a look at the layout structure of scientific journals or books.

## A Mathematical Appendix

### Proofs of Propositions and Lemmas

**Proof of Lemma 1:** Let  $s_1 \leq s_2 \leq 1$ . The net utility of a consumer of type  $\theta$  is:  $\frac{1}{2}\theta(s_i - p_i)^2$ , where  $i = 1, 2$  if he purchases from firm  $i$ . Therefore, the profit of firm  $i$  is given by

$$\pi_1 = \begin{cases} p_1(s_1 - p_1) \int_0^1 \theta d\theta, & \text{if } s_1 - p_1 > s_2 - p_2; \\ \frac{1}{2} \cdot p_1(s_1 - p_1) \int_0^1 \theta d\theta, & \text{if } s_1 - p_1 = s_2 - p_2 \text{ and } s_1 = s_2; \\ 0, & \text{otherwise.} \end{cases} \quad (\text{A.1})$$

From the above equation it follows that firm 1 has an incentive to set its price  $p_1 \geq 0$  as high as possible, such that  $s_1 - p_1 > s_2 - p_2$  is satisfied. In this case firm 1 supplies the whole market. However, it is never optimal to set a price above the monopoly price, therefore  $p_1 \leq \frac{1}{2}s_1$  holds. Note that the problem of firm 2 is very similar. It is possible to conclude that the following must hold in the equilibrium of the price-setting-game:

$$\begin{aligned} \text{If } s_1 = s_2 & \implies p_1^* = 0, p_2^* = 0 & \text{and} & \pi_1^* = 0, \pi_2^* = 0; \\ \text{if } s_1 < s_2 & \implies p_1^* = 0, p_2^* = s_2 - s_1 & \text{and} & \pi_1^* = 0, \pi_2^* > 0. \end{aligned}$$

If firm 1 assumes  $s_2 = 1$ , then firm 1 never makes a profit, independent of its own level of quality  $s_1$ . Therefore, in equilibrium, all quality levels  $s_1 \in \{0, \frac{1}{3}, \frac{2}{3}, 1\}$  are possible.

q.e.d.

## References

- [1] **Heidhues, P.** and **B. Köszegi (2005)**: “The Impact of Consumer Loss Aversion on Pricing”, *CEPR Discussion Paper*, No. 4849, <http://ssrn.com/abstract=717706>.
- [2] **Heidhues, P.** and **B. Köszegi (2008)**: “Competition and Price Variation when Consumers are Loss Averse”, *American Economic Review*, Vol. 98, 1245–1268.
- [3] **Herweg, F., D. Müller** and **P. Weinschenk (2008)**: “The Optimality of Simple Contracts: Moral Hazard and Loss Aversion”, *Bonn Econ Discussion Paper*, University of Bonn.
- [4] **Köszegi, B.** and **M. Rabin (2006)**: “A Model of Reference-Dependent Preferences”, *Quarterly Journal of Economics*, Vol. 121, 1133–1165.
- [5] **Köszegi, B.** and **M. Rabin (2007)**: “Reference-Dependent Risk Preferences”, *American Economic Review*, Vol. 97, 1047–1073.