

‘harvardeconthesis.cls’: Instructions for Use

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This package includes ‘harvardeconthesis.cls,’ a L^AT_EX file to support the formatting of dissertations according to the Harvard GSAS guidelines. It has been created by Davide Cantoni based on ‘econthesis.cls,’ a file created by Halla Yang (Harvard GSAS ‘07); the latter is a slight modification of ‘thesis.cls.’

1 Summary of Files

1.1 econthesis.cls

This is a modification of thesis.cls as distributed with L^AT_EX. It is described in further detail in the next section.

1.2 main.tex

The main file is called main.tex. This is the master file that you will want to compile—all other files will not be able to run autonomously, they only make sense when incorporated together with this master file. Make sure that the file ‘harvardeconthesis.cls’ is in the same directory as ‘main.tex’. You will also need to have the files titlepage.tex, copyright.tex, abstract.tex, acknowledgments.tex, introduction.tex, paper1.tex (the first paper in your thesis), paper2.tex, paper3.tex, appendix.tex, and bibliography.tex in the same directory.

As with most things L^AT_EX, you’ll need to compile a few times before the table of contents and the cross-references show up properly. Also, do not forget to compile the B^IB_TE_X file if needed!

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1.3 titlepage.tex

This follows the example in the GSAS Handbook ‘The Form of the PhD Dissertation.’ Modify according to your needs. You can adjust spacing between lines with any of the relevant `vspace` commands.

1.4 copyright.tex

This follows the example in the GSAS Handbook ‘The Form of the PhD Dissertation.’ Modify according to your needs.

1.5 abstract.tex

This follows the example in the GSAS Handbook ‘The Form of the PhD Dissertation.’ Modify according to your needs. The GSAS Handbook example has only one advisor listed, I added a second line for two more advisors. I assume this is fine with GSAS.

1.6 acknowledgments.tex

Modify according to your needs.

1.7 introduction.tex, paper1.tex, paper2.tex, paper3.tex

These are the papers of your dissertation and, if needed, the introductory chapter. Take the `.tex` files of your three papers and eliminate the headers—anything that comes before `\begin{document}`. Put the title of your paper into `\chapter{}` and eliminate `\end{document}` at the end.

1.8 appendix.tex

This document class does not support multiple appendices (i.e., one after each chapter of the thesis). You should take any appendices out of the main body of your papers and put them in this document, to appear at the end of the thesis, and structure the appendices with `\chapter{}` and `\section{}` commands. Appendix chapters are treated like regular chapters, except they are numbered with letters, e.g. Appendix A, B, C, ... Do not use cross-references in the names of the appendix chapters (see section 4 below, “Open bugs”).

1.9 bibliography.tex, bibliography_semibibtex.tex, and bibliography_allmanual.tex

This file, ‘bibliography.tex’, assumes that you have used $\text{BIB}_{\text{T}}\text{E}_{\text{X}}$ and the `natbib` package to manage your bibliography. If you haven’t done so yet, I recommend that you start now. JabRef for Windows and BibDesk for Mac are fantastic applications that help you managing bibliography entries in $\text{BIB}_{\text{T}}\text{E}_{\text{X}}$ format. Also see section 3.1 in this document.

The other two files, ‘bibliography_semibibtex.tex’ and ‘bibliography_allmanual.tex’, are to be used if you are new to $\text{BIB}_{\text{T}}\text{E}_{\text{X}}$ but still want to take advantage of some aspect of automatic bibliography typesetting, or if you want to do your bibliography manually. Again, refer to section 3.1 in this document for further details.

1.10 thesis.bib

This is a little $\text{BIB}_{\text{T}}\text{E}_{\text{X}}$ database with eight entries, that will be called up by the different papers in this sample thesis. You can use JabRef for Windows or BibDesk for Mac to manage this bibliography (or just open it with any text editor).

2 Instructions for use of ‘harvardeconthesis’

2.1 Main options

There are a series of options that you can choose when loading the ‘harvardeconthesis.cls’ style class. The following ones will be included in the first line of your document ‘main.tex’, in the preamble, as follows:

```
\documentclass[option1,option2]{harvardeconthesis}
```

The options are:

Font size. You can choose between

10pt, 11pt, 12pt

that is, 10, 11, and 12 points as main font size (all other sizes, footnotes, chapter titles etc. will change accordingly). The default is 10pt, which may be too small for your taste. 12pt used to be the standard, but for my taste it looks too much like an elementary school reading book. 11pt might be a good compromise.

Centering. You can add the option

```
nocenter
```

As a default, chapter and section titles are centered on the page. With this option included, they will be left-justified.

Upper case. You can add the option

```
noupper
```

As a default, chapter and section titles are typeset in upper case. With this option included, they will be in normal case (as typed).

2.2 Font

It is not true that \LaTeX documents are always typeset in Computer Modern, the iconic \LaTeX font that you can see in this document. Other fonts can be included; however, not many fonts also support math, i.e., in many cases (e.g., if you choose Garamond) the equations will appear in Computer Modern anyway.

The ‘main.tex’ document offers two alternative fonts: Palatino and Times New Roman, both of which have full math support. The latter is particularly recommended if you’re close to the 400-page limit set by GSAS, an unlikely occurrence for economists. Times New Roman is included with the command:

```
\usepackage{mathptmx}
```

Palatino is included with the command:

```
\usepackage[osf]{mathpazo}
```

where you can either include or do without the option `[osf]`. With the `osf` option you get to use old-style numerals as the default, i.e. 1234567890 instead of 1234567890.

2.3 Ragged right or full justification?

The GSAS Handbook laconically writes: “Full justification of the text is not recommended,” from which I deduce that it is tolerated. I strongly prefer full justification, as that is one of the main reasons to use \LaTeX . However, if you prefer the ragged right/flush left appearance, you need to uncomment two lines in ‘main.tex:’ one is

```
\usepackage[ragged]{footmisc}
```

in the preamble—this one takes care of the the footnotes. The second one is

```
\raggedright
```

after the beginning of the document—this one takes care of the main body of the text. If you choose ragged right, you should also uncomment the line

```
\setlength{\parskip}{16pt plus 0.5ex minus 0.5ex}
```

in the preamble. With ragged right, L^AT_EX suppresses indentation (I guess there is a reason for this). Therefore, you should use spacing *between* paragraphs to make clear where a paragraph ends.

3 Other advice on thesis files

3.1 References with or without BibT_EX

The example files include a series of citations based on the `natbib` citation format. To show the potential of this format, in ‘paper1.tex’ and ‘paper2.tex’ I included examples of three citation styles: `\citet{smith1776}` for in-text citations, `\citep{smith1776}` for parenthetical citations, and `\citealp{smith1776}` for citations within existing parentheses (to avoid double parentheses). Note also the optional use of arguments in brackets, e.g. `\citep[page 456]{smith1776}`.

The bibliography is typeset automatically using the Econometrica standard. Personally, it seems to me that this is the most compatible, esthetically speaking, to the rest of the layout of this thesis class.

If you have not used these citation commands within the text, but still would like the bibliography to be typeset automatically, you can enter all your references and manage them in a `.bib` file (with JabRef or BibDesk), and then follow the `\nocite{...}` approach which you can find illustrated in the alternative file ‘bibliography_semibibtex.tex’.

Finally, if you want to go for the all-manual referencing approach, you can follow the approach delineated in the alternative file ‘bibliography_allmanual.tex’.

3.2 Coauthors

You might want to add info about the coauthors of papers as a footnote to the chapter titles. The way to go is the following:

```
\chapter[A fabulous paper]{A fabulous paper\footnotemark}  
\footnotetext{Joint with Adam Smith, University of Glasgow}
```

The reason for not using `\footnote` right away is that otherwise the footnote text will appear all in upper case.

3.3 Introductory chapter

If you do not want the introduction to your thesis to be numbered as chapter 1, the first paper in your thesis as chapter 2 and so on, but would rather have paper 1 as chapter 1, you can replace the command `\chapter{Introduction}` in the first line of ‘introduction.tex’ with its corresponding starred version: `\chapter*{Introduction}`. However, in that case the introduction will not appear in your table of contents.¹

3.4 Labels and Cross-referencing

You’ll want to use labels and cross-references (equations, theorems, sections, figures, tables, appendices). Reference labels must go after the caption in figures/tables, not before, else they won’t be indexed properly (danger: they’ll still compile).

3.5 Figures and tables

Some examples of figures and tables are included in ‘paper1.tex’. According to the GSAS handbook, captions go on the bottom of figures, but on the top of tables. This is done correctly in the example files.²

The package `graphicx`, which is included in the ‘main.tex’ document, allows for both the inclusion of `pdf` figures (mainly vector graphics) and of `jpg` figures. Two examples are included in the sample file ‘paper1.tex’. This is the basic structure of how to include a figure:

```
\begin{figure}
\centering
\includegraphics[width=10cm]{myfavoritefigure.pdf}
\caption{My favorite painting} \label{f:myfav}
\end{figure}
```

Notice the label `\label{f:myfav}` that can be used for cross-referencing. The (optional) parameter in brackets `[width=10cm]` controls the size of the picture, if needed. You can control width or height, and use centimeters, inches, points. . .

¹I’m sure there’s a fix for this, but I could not find it yet.

²The example assumes that you compile directly from the `.tex` document into `pdf` (i.e., using `pdfTeX`).

4 Open bugs

This is a to-do list for L^AT_EX programmers savvier than me:

- References do not seem to work properly when used in (appendix) chapter titles. For example, the following command within the appendix

```
\chapter{Appendix to Chapter~\ref{firstchapter}}
```

works fine within the appendix (the correct chapter number appears), but not in the table of contents.

- The bibliography does not appear in the table of contents.
- It would be preferable to have the `\setlength{\parskip}` command (when ragged right) and the `\setlength{\footnotesep}` command to be a function of the chosen font size (now it's fixed at 16pt).