Organizational tips for masters students

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1 Introduction

This document is a collection of ideas and tricks I picked up during my economics masters. These ideas come from professors, colleagues, friends, random people on the internet, and *ad hoc* solutions that seemed like a good idea at the time. This should in no way be construed as an authoritative guide, but rather some stuff that seemed to work okay. I recommend considering everything here and asking yourself if it might work for you. If yes, do more research on that particular topic. If no, then please disregard. Feel free to email with questions or if you have further tips.

I want to cover organization skills here, since I think that aspect gets neglected. Aside from a few pet peeves, I won't go into specific writing and presentation skills. However, I do provide links to both for the curious. Additionally, I want to reemphasize that what works for me in these areas may not work for everyone. However, as someone who is not predisposed to a well-ordered desk, I offer these tips as my coping mechanisms for the demands of grad school.

2 Managing documents

At the start of any project, you generally have a PDF from the professor that lays out the assignment parameters. Perhaps there is a paper that you are replicating, and it is always useful to have lecture notes at hand. If this is a group project, your colleagues are probably already sending each other articles that might be relevant. I find it useful to have this in one place.

For this, I am a slave to Google Drive. It's accessible from anywhere, the desktop app updates automatically, and it's easy to add people. At the beginning of each semester, I create a folder for each of my classes and save every paper and presentation there. Most classes had multiple sub-folders. Parts of larger project also had their own sub-folders (literature review, code, graphics, etc.). The advantage of this is that each group member can update the folder, adding (and hopefully not deleting) articles, graphics for the presentation, and even writing

the paper together in a shared document.

I found this less effective when doing projects that involved shared coding. I have heard rumors about Git providing a solution that updates better in real time, but I have no experience there. My groups simply saved and re-downloaded the same few .do files constantly when we were not working on the same device. Still, having a single folder for the code eliminates some of the hassle. Also, in addition to your group members having access, using cloud storage also makes it easy to pull up something in the computer lab, or even on a mobile phone or tablet, without worrying about having a USB drive.

Google also has a calendar. I have some friends who block everything, with reminders of how far along they should be with a project. Personally, I only use my calendar for appointments and class times. But I do like to write out a timeline of when I want parts of a project done, including dates. This is usually part of my outline, but I tend to be more explicit when I have other group members to coordinate with. Deadlines are a huge part of motivation for many people, so having several small project deadlines can mitigate stress at the final deadline. Hopefully.

Uni Hamburg also has UHH-Disk and UHHShare. I can't tell them apart, but I used them to routinely save a backup of my thesis materials (plus on a flash drive, because you can never have too many backups). And while we're on the topic of uni software, go ahead and download the VPN, Stata, Matlab, and anything else on the software list you might need. Searching for papers with the VPN makes life much easier, as journals think you're in the library and give you access to more papers.

3 Reference managers

Universität Hamburg has a Citavi license, and I used this extensively during my thesis. Other options are Mendeley, Zotero, Endnote and more, and I have no strong opinion on which is the best. For me they serve two purposes: organizing the papers I have read and preparing a bibliography.

First, when I read a paper, I download it into the Google Drive (sub)folder for that (part of that) project. My current format is to save the title by each author's last name, the year, and as much of the paper title as I can stand. For example, the file name for the central paper to my thesis is saved as "mumtaz theodoridis 2019 mp shocks on macro vol.pdf". This helps me with the citation, as well as making the paper easy to find in my folder again, particularly for those authors who write a lot and have a name early in the alphabet (*e.g.* Chetty).

When I decide that a paper is worth downloading, I also like to immediately put it into Citavi. I do this for two reasons. First, this is a great time to be sure I have the most recent citation. Many times, I only have access to the working paper because the journal has the final copy behind a paywall. Using sites like https://ideas.repec.org helps to be sure that you have the final version cited and can point you to older paper versions that are accessible. Secondly, when I add a paper to Citavi, I write at least a few lines about why I like this paper. Does it have a good model? Lots of background material? An example of what not to do? This note is invaluable when, three months later, I'm looking for a paper that I swear I read but can't remember which one it was.

Since I have my outline elsewhere (often in a paper notebook), I do not use Citavi for helping with the writing process. However, I do group the papers thematically. I prefer to group them by theme, rather than section. For example, I felt that "Empirical methods" was too general, so that portion of my thesis was divided into "VAR methods" and "DSGE methods". Some of these decisions are a little arbitrary, but it is more about finding the paper again than about properly classifying it. Nobody has ever asked to see my Citavi file, so I don't care if it gets a little messy.

One professor I talked to has a single file on his computer where he keeps every article that he has downloaded. I have also talked to someone else who recommends keeping a single master bibliography file. If asked, Citavi can export only the references in a specified document, and BibTeX only adds files to the bibliography for which a citation appears in the text. However, I have only started these things recently and have no track record with them yet. Further research is needed. Similarly, Citavi and other programs have further

functionality that I have not utilized. Check it out and see if that's your thing.

Another random thought: if you can't find replication files, or the paper you want to read is behind a paywall, most authors will send either to you directly. A quick note saying that you're a grad student at Uni Hamburg, that you admire their work (stroke the ego), and that you'd be forever grateful usually gets a positive response.

4 Word processors

I fell in love with LaTeX. It makes my equations sexy, I don't have to worry too much about formatting, and presentations are much easier. However, there is a learning curve. The good news is that it's open source, and Google has all the answers for all the questions you could possibly have. I stared using Latex more the semester before my thesis, which worked well. I use TeXstudio as my editor, but I haven't experimented much with others.

Finding a good Latex template is the first challenge. Finding an editor in which multiple people can work is the second. Both are solved by Overleaf, which is also a pretty great place for tutorials. And of course, BibTeX makes your bibliography really easy. Also, find a tool like http://detexify.kirelabs.org/classify.html. It'll help you with those pesky symbols like $\otimes$ that might not be easy to find in a list.

However, for me there's no substitute for a notebook and pencil. In addition to any notes I may take in class, I have a small notebook that I can carry around. This is where I collect random thoughts, such as papers someone suggested that I read or a Stata command to look into later. Similarly, I keep a large notebook around for those pesky derivations. A game tree, derivations of a macro model, or whatever – sometimes it's nice to have that extra space.

Speaking of notebooks: models (particularly the big macro ones) get complicated rather quickly. At one point, I started keeping a list of definitions for every symbol in a model. For me, this is much easier than constantly flipping back a few pages and trying to find the first time that η appeared. Maybe you can remember these better, but I still do this when looking into a new model.

5 Paper writing

This is something that too few people talk about, in my humble opinion. For the nuts and bolts I refer the reader to Marc Bellerme, and for the style, John Cochrane. I read the Cochrane paper twice, but then again, I'm a style nerd. Still, it's key to have some idea about that stuff.

Group writing is its own challenge, and I don't want to get bogged down in the details. However, I'm a fan of having everyone read each other's contributions. It helps catch errors, keeps the entire document cohesive, and hedges against tricky questions from a professor who wants to be sure that everyone contributed to the more technical aspects. On the other hand, it's still a good idea to embrace specialization. Figure out who's good at a lit review, at coding, at writing, and at presenting. These seem to be the aspects of a project that are easiest to split, but there's obviously a ton of overlap.

One of my pet peeves: the professor does not want to know how hard you worked. This includes a long explanation of the coding gymnastics – leave that out. For one seminar paper, a friend and I spent days trying to accurately count the number of times each person in the sample had been married. It would have been very satisfying to write a page on how we surmounted this problem, but the only mention that made the final draft was along the lines of "Control variables include age, number of times married, income..." Yes, cleaning data is awful, and building variables can be tedious. But if the solution isn't relevant to your econometric method, you should probably pretend that the data came pre-packaged.

Also, paragraphs! If you don't have at least two (better four) new paragraphs per page, you need to split them. Similarly, don't write super short paragraphs. It's not a newspaper. Similarly, many writers think that long sentences sound more academic. I disagree. In proofreading both friends' theses and a prof's working papers, I have spent much of my time dividing long sentences into two or three smaller ones. Nobody is grading on your style. Reasonably short sentences and paragraphs are generally easier to digest, giving your reader (and grader) a chance to think about your content.

For explaining the results, there are a few things that I didn't realize were so important. Sample size is important, particularly if it isn't the same in all specifications of your model. If you had 741 people when you used OLS but 698 in your fixed effects regression, what happened to those other 43 people? Your prof cares about that (and with good reason, of course). Also, don't do you summary statistics in logs. Finally, be clear about your standard errors and how you got there (robust, clustered by what group, and so on).

A quick word on graphics: don't use .jpg files. Save all your graphs as a PDF files with as little border as you can. This is a vectorized image, which basically means you can zoom in a lot and it still looks sharp. A .eps file is apparently the same, but I could never get them to work. It's also easier to save your graphic as a 20 cm .pdf file and shrink it down in Latex than it is to save it as a 2 cm .jpg and have fuzzy lines in your final paper. I leave it to you to figure out how to do this in Stata, Matlab, etc. But it's worth the time, especially for presentations.

And as an afterthought, give the graphics a bit of thought and energy. Most of us leave this until the end, but if you can get good sharp graphs and easy to read tables into your paper, that's basically an automatic upgrade. If you want to take the deep dive, read stuff by Edward Tufte. Otherwise just take a look at the help files for graph commands in Stata or Matlab. It's worth it.

6 Presentations

There is a lot out there about presenting, some of which is covered in the Cochrane article above. Worth mentioning is not to use full tables from your paper if you can avoid it. Instead, the tables should be only the relevant information, and I tend to highlight the most important parts. Literally color them yellow, or put a box around them. I like the green box for increases, red for decreases. But you do you.

I also tend to break down my equations by color, particularly with longer models. For example, my thesis contained a nasty-looking equation with was really just the same term

for the home country, Eurozone, and rest of the world. If we make them green, blue, and red:

$$C_t \equiv \left[(\alpha_H)^{\frac{1}{\eta}} (C_{H,t})^{\frac{\eta-1}{\eta}} + (\alpha_E)^{\frac{1}{\eta}} (C_{E,t})^{\frac{\eta-1}{\eta}} + (\alpha_R)^{\frac{1}{\eta}} (C_{R,t})^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}}$$

and it's easy to tell that this is the same term with different subscripts. This is not the right technique for a paper but can help a lot in a presentation, particularly when the audience is not already familiar with models like yours.

Also, add images and humor. Images can be a causal diagram or something that makes a point, but there's also nothing wrong with saying "Differential equations are scary, so here's a picture of a puppy." Don't go too far and try to do a stand-up routine, but plan a lighthearted one-liner or two. "The Kuhn-Tucker conditions are necessary for optimization with inequalities, just like coffee is a necessary condition for me to do math." Bad example, but you get the idea, right?

Finally, illustrate your ideas with examples. The classic example is the diminishing marginal returns and beer. It's easier to listen to than explaining $f'(x) > 1$ and $f''(x) < 1$, and also more intuitive. The more you connect to your audience, the better they will follow the technical aspects of the presentation. And as long as the technical aspects are well-prepared, nobody will deduct points for a lighthearted moment or two. If Angrist and Pischke can write a textbook based on "Hitchhiker's Guide to the Galaxy", you can spice up your presentation a little.

To get an idea of what to do (and often not to do) in presentations, Uni Hamburg has a weekly(ish) PhD seminar, as well as several topical ones. If that's not your thing, you can find more online. These cover a wide range of topics, sometimes with YouTube archives for re-watching (or only watching a few minutes). Either way, watching others present their work gives you an idea of what makes a good (and bad) presentation, and sometimes you learn some economics too.

7 Conclusion

I didn't get half of this stuff until I was writing my thesis. My hope is that anyone reading will think about this more actively, and maybe even talk about it. Ask about things in the group chat, and maybe even start a study session or two. One final anecdote: My first semester, one of my colleagues booked a room for study sessions. I never would've passed Microeconomics without it. Ask your favorite prof if you can book a classroom for a few Saturdays before the exams. It's better than booking a library room because you don't have all those pesky bachelor students who only show up at the end of the semester.

I hope this was informative. It's simply a few things that I wish I had known three years ago. Good luck with whatever you're doing!!