

## WHEN DO I START MY THESIS?

Although an economics thesis can be a six-month project, begun in the fall of senior year and completed in the spring, many of the most successful theses come from students who begin serious background work in their junior year. The ideal path involves finding a topic and an advisor before the summer begins. This allows ample time for finding data, as well as for the inevitable bumps along the road.

## WHERE DO I START?

If you aren't sure where to begin, a good place is the Harvard Archives in Pusey Library. There you will find copies of every economics thesis ever written that received a grade of *Magna* or higher. We have compiled a list of the available titles for recent years that will be distributed at the thesis meeting and is available online. Look through the titles, find three or four that seem related to your area of interest, and take an afternoon to go read them (you can read an entire thesis in not much more than an hour).

This will give you a sense of what good theses look like. You will see how long they are (some as short as 30 pages, some as long as 100 pages), how much math they include (some none, some lots), and how results are presented. You will see what kinds of topics in your area of interest students have addressed before. You will see what level of originality and sophistication we are looking for: not a professional article or a Ph.D. dissertation, but a well-reasoned, careful analysis that tells us something about the world we didn't know before.

You will see how wide the definition of a successful thesis really is. The majority use data and regression analysis to answer an empirical question. Many, though, include no regressions. Some are more literary or historical in style, some report results of laboratory experiments, and still others consist entirely of theory presented as mathematics.

Above all, you will see that many, many students have started this process and carried it through to a successful conclusion. If they could do it, so can you.

## ECONOMICS 985

You should enroll in one of the Economics 985 courses for both semesters of your senior year. You can't write a thesis without enrolling in 985, and you can't enroll in 985 if you're not writing a thesis.

These seminars are designed to give structure to the thesis process. They will provide you with deadlines to help manage a long process. They will give you a chance to present work in progress and hear feedback from your fellow students, the leader of the seminar, and sometimes a teaching fellow. This advice is a valuable second opinion to supplement the help you get from your main thesis advisor.

Each year several 985 seminars are available, organized loosely around areas of study. We will try to help you find the seminar that is most suited to your interest. Don't worry, though, if the title of the seminar does not correspond exactly to what your thesis is about - remember that this is not a course on macro, or finance, or industrial organization, but a chance to bounce around ideas with fellow scholars. The seminars

tend to be most successful when students bring a diverse set of interests to the table.

Economics 985 counts as a full-year course even though it doesn't meet after the theses have been turned in. Every 985 student must turn in a 25-page paper representing work-in-progress in December on the last day of reading period. A copy must be given to your 985 seminar leader AND your advisor. It is YOUR RESPONSIBILITY to get a copy to your advisor. (Occasionally, something comes up that prevents a student from carrying a thesis through to completion. If in December you decide that you won't be able to finish the thesis, you can "Divide with Credit" and receive credit and a grade for the first semester's work in 985.)

Occasionally, students who plan to graduate at mid-year write theses "out of sequence." That is, they begin writing in the spring and turn in their theses in the fall. The equivalent to 985 for these students is a course called Economics 990. If you think you may be writing a thesis out of sequence, you should talk to Emily Neill, the Economics Undergraduate Program Administrator. For those enrolled in the 990 (the off-cycle equivalent), theses are due at the last day of reading period in December.

The 985 seminars begin meeting after the mandatory thesis meeting in the Fall at which you will submit your preferences for the seminars. If you are even remotely considering writing a thesis, you should enroll and begin attending one of the seminars. It is much easier to switch seminars or decide to drop than to try to pick up the process midstream.

## FINDING A TOPIC

Finding a research question that is interesting to you, interesting to other economists, has not been answered already, and can feasibly be addressed in six months of active research is not an easy task. Most students find that this is the hardest part of the process.

The first step is to recognize that this is perhaps the single most important stage of the thesis process. If you find a topic that sincerely interests you, the rest of the process will be enjoyable and probably less difficult than you think. If you set out to spend six months working on something that only half catches your interest, it may be somewhat less fun.

It is natural to think that the time commitment to your thesis will grow gradually - you will work at a leisurely pace in the fall, step it up in December and January, and really pour in the hours the last couple of months before the thesis is due. As hard as it is to do, you need to adopt a sense of urgency *now*. Be prepared to spend several hours a day on your thesis, all along the way. Procrastination kills theses.

Avoid the temptation to narrow your search too much too fast. Well-trained Harvard students tend to start with specific, well-formed research questions. Well-trained economists, however, also know that in a search process choosing the first option you see can have serious costs. The *only* way to find a good topic is to go through 2 or 5 or 10 not-so-good ones (and a few more that you thought were really great but turned out not to be).

Ask yourself what broad subject areas interest you the most: Electricity deregulation in California? Dollarization in Latin America? The effects of psychology on financial markets? The search at this point should be more specific than a subfield (i.e., "I'm

interested in finance”) but less specific than a real research question (“Can loss aversion among mutual fund investors explain excess variance of stock returns?”).

Once you have one or two or three broad topic areas, *read*. Not just economics literature, but newspapers, *The Economist*, political science journals, and anything else you can get your hands on that seems relevant. You want to know what questions people who care about this subject think are important. What things seem like puzzles that people don’t understand? You also want to know what kinds of evidence people have brought to bear on these questions before. What information do reporters writing about this draw on? Do they really have evidence to back up their claims?

As far as economics literature goes, don’t read papers in detail at this point. You want to get a general sense of what kinds of questions economists seem to think are important, how they have gone about trying to answer those questions, and what kinds of data they have brought to bear. Read abstracts, introductions, and sections on data and empirical methodology. Also, read survey articles in the *Journal of Economic Perspectives* and the *Journal of Economic Literature*. These tend to be accessible, and give you a clear overview of relevant research.

After a couple of weeks of this, you should be an expert. Then, and only then, start brainstorming specific research questions. List lots of them. Talk about them with your teaching fellows, friends, mother, siblings, and professors (more about professors below). If you can explain your topic to your mother, that’s a good sign. If she thinks it’s interesting, that’s a very good sign.

Eventually, you’ll be able to write down two or three questions that seem interesting, specific, and (to the best of your knowledge) have not been answered before. At this point you can congratulate yourself. Then you are ready to dig into the serious research.

## FINDING AN ADVISOR

As soon as you can articulate a handful of broad subject areas that interest you, you should go talk to faculty members. The goal should be to talk to as many as possible. Don’t worry at this point about who will be *the* advisor. Send e-mails, make appointments. We have the largest, most diverse economics faculty in the world - this is your chance to take advantage of it. You don’t need an excuse or special permission or to have taken their course. Talking to you is their job.

You should come in prepared to talk in detail about your areas of interest. If you can hand them a single page summarizing these interests, all the better - they may or may not read it, but it helps you organize your thoughts and makes you look prepared. Once again, at this point you needn’t propose specific research questions. You want to find out what parts of this topic they find interesting, what work has been done, and what directions they think you should go in next.

At the same time, you will be getting to know them. You will see who seems most interested in your topic, and who you connect with personally. You might want to read over their CVs and a few of their recent papers to have a better sense of their interests. You should ask them questions about their own work - whether specific or just “what kinds of things are you working on these days?” Faculty members rarely mind talking about themselves.

At some point, ideally during spring of junior year but without fail before the end of September, you should choose the one faculty member who you seem to connect with the best and ask him or her to be your official advisor. Any faculty member who is in Cambridge or Boston and has an economics PhD can potentially advise a thesis. So you can ask not only our own faculty, but faculty at the Business School, Kennedy School, M.I.T., and beyond.

Professors rarely say no to students who they perceive to be serious and genuinely interested in a topic. But if you find that you are having trouble getting a faculty member to advise you, feel free to send me an e-mail.

## WRITING IT UP

There is no formal style guide for economics theses. A thesis generally begins with a title page, followed by an abstract, body, and references. Many also include acknowledgements, a table of contents, and/or appendices. Use parenthetical reference style - for example, Friedman (2006) - double space, make the margins bigger on the left so the thesis can be bound, and use an 11 or 12 point serif font. If you're worried about the nitty-gritty details, consult the *Chicago Manual of Style*.

In economics, as most everywhere in life, writing matters. Buy and read a small book called *Economical Writing* by Deirdre McCloskey; the advice is invaluable. Look also at the handbook "Writing Economics," which you were given during your Sophomore Tutorial.

## A MODEL TIMETABLE: WHEN TO BE WHERE

November 4	Attend first fall meeting for Juniors and hear about funding opportunities available for summer travel and/or research throughout the university as well as beginning to map out topics, potential advisors, and pertinent and available data sets.
March 12	There is an additional planning meeting for juniors in the spring at which you will receive your <i>thesis preregistration form</i> . This form will formalize your intent to write a thesis and require you to make initial contacts with potential advisors.
February - April	Continue developing topics and speaking to Professors about signing on to advise your project.
April 6	Turn in thesis pre-registration form to the Undergraduate Program Office (Littauer 111 or 113).
Summer	If you have secured funding for travel related research, great! Funding may also be obtained for acquiring relevant data sets. Get this done NOW. Often things go wrong with data and it's better to know this sooner rather than mid-fall if you need a chance to go to Plan B or change course in your research. If you have not as yet secured an advisor, use this time to make contacts, in person or via email. Do NOT put this off until Fall or you could be left scrambling.
September 7	Attend the fall meeting for seniors writing theses. <i>You will submit your Ec 985 preferences at the end of this meeting.</i>
September 10	Ec 985 assignments will be emailed by 6:00pm. You must have your 985 on your study card for it to be signed.

Early September	You should have a thesis topic and an advisor. Start assembling a bibliography of relevant sources. <i>Start attending the appropriate 985 tutorial even if you don't already have an advisor.</i>
<b>September 20</b>	Turn in thesis registration form with advisor's signature to the Undergraduate Office (Littauer 111 or 113). <b>Anyone without a thesis advisor by this date (add/drop deadline) must drop the thesis</b>
Mid September	You should be entering data, reading the literature, and brainstorming specific approaches to the analysis.
Mid October	Write a brief review of the literature as well as a draft of the theory section of the thesis. You will find these drafts helpful to build upon. Submit drafts to your Ec 985 leader, and your advisor.
End of October	You should be running initial diagnostic tests on your data.
November	Arrange the data into the form you need for analysis. Calculate summary statistics and get a feel for what the data looks like. Write a section describing the data, where it's from, its strengths and weaknesses. Run preliminary regressions.
December 12	<i>Turn in a 25-page paper to your Ec 985 professor and give a copy to your advisor.</i> This may consist of the first chapters of the thesis: laying out the question, describing others work and your own approach, outlining the theory, and describing the data along with whatever empirical work you've done. Expect to revise it substantially. <i>THESES are DUE for 990 students.</i> See thesis formatting guidelines on the website.
Beginning of Second Semester	You have until the drop-add deadline (February 28) to divide 985 with credit for the first semester's work. If you would still like to be considered for departmental honors via the "advanced course track" (cum laude), be sure to inform the Undergraduate Office of your intentions. Note that for departmental honors you will still have to take the honors exam in April.
Late January	Work hard at the computer work. Decide what results to report and how to present them in the thesis. The sooner you have this done, the longer you'll have to write up the results.
Beginning Feb	Write up your results and interpretations and get feedback from everyone willing to read the chapter. This is the fruition of the project; make an effort to present it in an interesting and favorable light.
Mid February	Revise everything you've written and try to tie the chapters together. Continuity of argument and quality of exposition are important. Refine the empirical work if necessary.
Last week of Feb	Try to finish a first complete draft of the thesis. Keep in mind that putting together tables, charts, graphs, etc. can be time consuming. Get feedback on anything new that you've included in the draft.
1st week of March	Final revisions. Compile bibliography and table of contents. Prepare title page, etc. Proofread every single word of the thesis.

**March 10, 2010**    **Theses are due.** You must turn in *two* copies at the Undergraduate Office. Keep in mind that it takes a long time to print the entire thesis. There are always a few students who turn in the thesis a day late (and are penalized) because they misjudged how long it would take to print the thesis and make a copy.

#### CONCLUDING ADVICE

Remember that your thesis will almost certainly not follow the path you expect. You may set out to answer one question, find that what interests you is a second one, abandon that for lack of data, and then stumble onto a third. This process is called search, and it's how good ideas are found.

Most importantly, remember that all of us are here to help you. This includes the faculty, teaching fellows, advisors, and administrators. If you have questions or concerns of any kind, ask one of these people.

Good luck!