Ph.D. Admissions Advice:
How I Read a PhD Application and What I Wish Applicants Knew

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This was written to answer commonly asked questions about applying for a PhD in Economics. It is now a public good. All thoughts are my own. If you have feedback, feel free to contact me as I update this based on the feedback of others.

What Are PhD Programs Looking For

The goal of a PhD program is to train researchers. Ultimately everything is building towards research as the ultimate outcome. Consequently, ***the goal of the PhD admissions process is to identify applicants who are going to be successful researchers***. If you look at the process as trying to ascertain research ability, much more about PhD admissions will make sense.

The corollary to this is that with some rare exceptions just performing well in classes will not get an applicant into PhD programs. Although the first two years of a PhD are simply more school, everything is with an eye towards turning students into researchers. Being successful in classes – especially technical classes – is a good signal. Researchers must be smart and have strong technical skills to be successful. But research also requires other skills, so *signaling research ability and experience is a key feature of a successful application*.

First Things First: The Initial Screen

Since economics is a technical field, my initial screen is to look at whether an applicant has demonstrated strong technical abilities and can thrive in difficult and math-intensive coursework. *This is a prerequisite and necessary condition for getting in; at most schools, it does not get you in on its own, but one cannot get into a PhD program without it.*

I typically start by looking at standardized test scores. At BU that means the GRE and for students who have not gone to a school where instruction is in English, the TOEFL. I look for a very high (at least 80th percentile if not 90th) quantitative GRE score. Note that many people get the top score, and I am not trying to penalize an applicant for getting one or two questions wrong on a standardized test. But a poor quantitative GRE will often prevent an applicant from being admitted. For the verbal and writing GRE scores, I am looking for something decent but nothing remarkable. The same goes for the TOEFL (many graduate schools including BU have minimum TOEFLs for admission that they publish). Economists are by and large not known as great writers, and I know that the GRE is taken by students pursing humanities PhDs who have remarkable verbal skills. But I do not want to admit applicants for whom writing and communicating is difficult because the impact of research is limited by how well others are able to understand it.

I then look at undergraduate and graduate transcripts. I am looking for two things:

1. **Strong grades in math and other technical courses**. The courses I value most are *proof-based math courses*, and particularly *real analysis and to a lesser extent linear algebra*. At BU, we ask applicants to indicate which courses are proof based on the application. I want to see several very strong grades in proof-based courses.

2. **A strong overall GPA and record**. This varies by applicant background. If an applicant has an economics undergraduate or masters degree, I am looking for good grades in those courses. If an applicant does not have an economics background or has been away from school for a while, I am looking for more recent performance in related or more technical classes (e.g., STEM).

Some applicants performed poorly in their prior course work for a personal reason. For instance, they may have had to care for a family member or had health issues or some other personal issue that impacted their studies. It is useful for an applicant to communicate about this in their personal statement and have their letter writers mention them so I can adjust my expectations accordingly or discount certain poor grades.

*Note that the transcript typically does **NOT** get someone in and instead only gets them through the initial screening*. This is a common misconception. **Good grades do not get you into a PhD program. Demonstrated research ability does.** This is because a PhD is not just more school; instead, it is research training.

There are, however, important exceptions to the dictum that grades do not get you into a PhD program. If you have aced theoretical physics at a very top university and/or the math tripos at Cambridge, you can get in with relatively little research experience. Similarly, if you dazzle in class and get to know professors well at a *very* top school (top 10 in the US or best in country) and/or have a recommender who is *extremely* famous (potential Nobel laureate, tenurable at a top 5 department) who will write a letter bolding the word "genius" and saying you are the most impressive person they have seen in a decade by open water, you will get in. I have a few friends who are tenured at top departments who had zero economics research experience and still got into every top program by being blindingly brilliant. This is, however, a rare and risky path that does not apply to most prospective PhD applicants.

What Gets You In: Research Ability

Research ability is a harder thing to demonstrate, but after the initial screening for overall intelligence, technical ability, and ability to pass the coursework of a PhD, this is what I care about most, what distinguishes an application, and what in my view gets someone admitted. What I am looking for here is a track record of research and indicators of tenacity, initiative, research drive, creativity, and curiosity.

There are a few things that matter here:

1. **A strong record of independent research**. This can come across in an impressive research sample, in a personal statement, or in letters of recommendation. What I am looking for is clear evidence of high-level independent research, be it a class term paper, an

undergraduate or master's thesis, or independent publications. **Picking a letter writer who can talk about research ability in addition to performance in coursework is critical**. This can be a thesis adviser, a professor for whom you have written a term paper, or someone you have worked with extensively as a research assistant. Identify your letter writers early on so you can invest in these relationships. Be sure to give them plenty of time to write their letter and make sure you are aware of your research (many letter writers ask for short research summaries; if not you should offer to provide them with summaries). See below for more on picking letter writers.

2. **An impressive track record of research assistance**. More applicants are working as a full-time research assistant (sometimes called a "predoc") before applying for a PhD; others work as an RA in the summer. Having an RA supervisor write about how impressive an applicant was as an RA is useful in assessing research ability.

   What I am looking for is not just someone who is good at coding and producing data analyses as instructed by their supervisor. *I am typically reading a letter of recommendation or personal statement about RA experience for indications of tenacity, organizational ability, creativity, and impressive or unusual contributions as an RA*. For instance, having a letter of recommendation talk about how an RA did not just do what they were told but took imitative and made their own contribution (e.g., "I asked the RA to do A, but that led them to do B, C, and D and learn E which went above and beyond what I expected") shows that an applicant is developing his or her own independent research abilities as a research assistant. If an applicant is promoted to coauthor that is a particularly strong signal. I am always worried, however, if an applicant's research looks like a slight variation or twist on something their supervisor did; it is much better to have some research independence. In a letter of recommendation, it is also useful to see direct comparisons between an applicant and prior successful PhD applicants (e.g., "this person is as good as students who got into PhD programs A and B").

3. **Intangibles**. These are qualities that would make a good researcher that come through in an application without a clear track record of independent research or research experience. Examples of this are people who come to office hours and ask very creative questions, who are particularly sharp and inquisitive in class, or who succeed in difficult PhD coursework (particularly the first-year PhD sequence). I would also put "overcoming obstacles" in this category. For instance, an applicant could be the first person from their family to attend college or start at a community college and have an impressive resume and application despite these obstacles. This is important because research is often frustrating, and it requires drive, motivation, tenacity, and imitative to succeed.

The key point here is that demonstrating research ability is what gets an applicant admitted, at least in my experience. My advice would be to think about how to show your research ability most clearly in your application.

I would be remiss not to mention that there is significant heterogeneity in what research background may look like by field of interest. Many full-time research assistant jobs (or "predocs") are in applied microeconomics and these applicants tend to have strong RA experience.

Macroeconomics and IO tend to be more technical and econometrics and microeconomic theory more technical still; successful candidates tend to have a stronger technical background and more independent research. In this case, coursework can matter more. At the opposite extreme, some fields value particular non-mathematical skills, like economic history valuing archival work and development valuing fieldwork and managerial/organizational skills. If you are interested in these fields, this sort of experience can substitute for technical background. Faculty on admissions committees do, however, know that many people do not end up working in the field in which they express interest as an applicant. I certainly did not! Given this, I like to admit generalists with strong technical background and research aptitude.

I also want to mention that in talking to colleagues since the first version of this document was posted, some people think I over-emphasize research experience. They have told me that they admit people who are extremely technically qualified with less research experience rather than people who are borderline qualified with more research experience. I do not think this implies my advice in this document is misplaced but rather than some people and schools put differential emphasis on different parts of the application. I personally err on the side of more research experience, and in advising people who are considering a PhD I tend to think demonstrating research experience is an easier and more realistic path than acing the first year of a PhD program. While there is a path to admission from getting exceptional grades in PhD courses at a top-ranked institution, in my opinion you will never do yourself a disservice by gaining research experience. Furthermore, the biggest mistake I consistently see is having little to no research experience or not sufficiently emphasizing it in the application; performance in class comes across quite readily on a transcript, but it takes more effort to show research experience. Consequently, I think my advice is useful even for schools that put less emphasis on research experience and more emphasis on technical ability.

Mistakes In the Application

1. **Picking the wrong letter writers**. Letters that say that an applicant succeeded in difficult coursework and has been nice and smart in a few office hour interactions do NOT make successful letters. Again, I want to see evidence of research ability. Knowing that someone got an A in a very difficult course – which I know already from the transcript – does not add much to an application. Having a letter writer who advised a research paper or served as a research supervisor, who an applicant interacted with a lot outside of class, and who an applicant knows personally rather than through a few perfunctory interactions is ***always*** more successful.

   Think about this from the perspective of the single most important sentence in this guide: "The goal of a PhD program is to train researchers." Imagine you have two candidates. One has a letter that says they took a very hard class, got an A and scored highest on the exam, and came to office hours a few times and seem very nice. The other has a letter explaining why someone wrote such a brilliant research paper in a class and talks about how creative it was, how the student found new data and solved a complicated model and taught themselves various empirical or theoretical techniques to do so. This letter talks about how this will make them a good researcher because they wrote such a creative or technical paper. The later letter is what I am looking for and who gets in.

Finally, before I move on, I often get asked how well-known a letter writer needs to be. My answer is that it helps to have someone whose judgment I can trust. More established and famous researchers from top institutions have developed a track record of writing admissions letters for people who have gone on to be successful economists. This gives them credibility and makes their letters have more weight; it also lets them compare an applicant to prior successful applicants (e.g. "reminds me of prior applicants who went to school A and school B"). Experienced letter writers also have more experience writing useful letters, especially if they have done PhD admissions and know what a good and useful letter looks like.

When I say well-known, I mostly mean as a researcher. Some ways to tell if a potential letter writer is well-known as a researcher include: (1) Are they tenure track and primarily producing research or non-tenure track and primarily teaching? If they are tenure track, do they have working papers or recently published papers on their website? (2) Full professors are generally the most established, with associate professors being younger but with tenure at most schools, and assistant professors being the youngest without tenure (some places have different schemes for titles), (3) How many google scholar citations do they have in the last 10 years? If they are in the US, are they a member of the NBER for non-theorists and non-econometricians? (4) Many people list seminars they have given recently on their CV. Have they presented at schools that you would hope to apply to in the last 5 year? Have they presented at a top-notch conference (e.g. NBER conference, SITE, Cowles, etc.)? (5) Have they ever published in the top journals (*American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, Econometrica,* and *Review of Economic Studies*) and if so, have they done so in the last 10 years? If not have they published in the top field journals? You can use this ranking as a yardstick for journal prestige. (6) You can ask a prospective letter writer how many PhD letters they have written in the last 10 years or if they have sat on a PhD admissions committee.

However, *I would not go with the more famous person in all circumstances. Someone who knows you well and can vouch for your research ability is always better, and often a letter from a famous person who does not know the applicant well comes across as perfunctory.* The one exception may be letter writers who are not PhD economists or researchers. I prefer letters from active researchers in academia or policy circles (e.g. Federal Reserve banks) who have experience in or at a PhD program over people who are from the private sector and have no experience with an economics PhD program and do not know what it takes to succeed in one. If your letter writer has little experience writing a PhD admissions letter, you should offer put them in touch with people you know who have more experience to help them out. You might also refer them to this document.

2. **Personal statement dos and don'ts**. *Think of the personal statement as your opportunity to show your research ability and experience.* Tell us about your most impressive research projects and ideas and your contributions as a research assistant. If you are an RA, how did you take imitative and contribute to your RA work? What technical skills did you learn? If you wrote a paper of which you are particularly proud, what makes it impressive? More

broadly and importantly, what would you like to research in graduate school? What questions interest you? What excites you?

The personal statement is also your opportunity to explain anything unusual in the application. Did you get a few bad grades in a particularly difficult semester personally? Did you have a tough time adjusting to college and get bad grades in your first year? Did you take significant time off since college to pursue other things before realizing an economics PhD was for you? If so, tell us! I cannot discount the D in organic chemistry in the year when you spent a lot of time at home because your parent was ill, or you realized you did not want to be a doctor if you do not explain that in your personal statement.

The biggest don't for the personal statement is to spend most of it explaining why you are interested in economics. If you went on a trip to the developing world and saw a slum with poverty and that led you to want to study economics, that does not help us assess your research potential (and *many* people have that type of trite story). The one exception is if the story of why you are interested in economics is part of your personal story and explains who you are and why you would be a good researcher. First-hand experiences or transformational life events that are central to your identity, that show how you have overcome obstacles, or that shape your future research *are* important to include. Again, the two question to ask are "will this help convey research ability?" and "will this help explain who I am and what unique traits I will bring to economics research?"

Once your personal statement is written, you may want to share it with your letter writers both to get feedback and to help them with their letters.

3. **Not getting enough research experience**. This is advice to someone who has several years before applying rather than someone in the application process, but I think too many applicants do not try to gain enough research experience. They take classes that are hard and try to get an A on a test thinking PhD programs want a spotless transcript rather than trying to take classes that will help them demonstrate research ability by writing a paper. They do not engage faculty to become involved in research early enough.

Being exposed to research before you apply is important for two reasons. First, it makes your application stronger. Second – and I think more importantly – it exposes you to how research is produced. A PhD is a big commitment of 5-7 years of your life. It may seem glamorous, but it can be slow and tedious. *Being a researcher is not for everyone*. **The best way to determine if you want to get a PhD or if a PhD is not for you is to try research out**. **Take a class with a research paper. Write a thesis. Become a research assistant**. If you don't like it, that's fine! It is not for everyone. That is why it is so valuable to earn first-hand how the sausage is made to determine if a PhD is the right thing for you.