

# Preparing for and applying to a PhD in Economics in the United States

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- Why do one?
- How to prepare
- How to apply
- What matters in admission?
- Should you do a master's first?

## Why do one?

1. To do fundamental research (academic job)
2. To do applied research (economic consultancy)
3. To do gov't research (e.g. anti-trust, census bureau, Statistics Canada, central bank)
4. To run the world (government non-research jobs in similar places)
5. To save the world (World Bank, IMF, Asian Development Bank)

6. To make big bucks (investment bank, management consulting) – but PhD is not the best way to maximize bucks

## How to prepare

### 1. Take Math!!

- (a) You **MUST** take (or it will be almost impossible to be accepted):
- Calculus 3 (Math 222)
  - Linear Algebra (Math 223, in addition to Math 133)
  - Ordinary Differential Equations (Math 315)
- (b) Math 242 (Real) Analysis 1 will give an admission boost, but only if you get a B–B+ or better
- (c) You really need to take Real Analysis if you think you want to be a theorist

- (d) This is all more important than statistics and econometrics
- you will have to take these courses again in the PhD program anyway
  - but if in Honours Econ take Econometrics and not History of Thought
  - if think want to be an econometrician the more the better
  - apparently Probability (Math 323) is helpful even though should cover this material in econ stats class

## 2. Economics is almost optional

- (a) You must have taken some so as not to be totally lost and to persuade admissions you know what you want to do
- (b) The more mathematical these courses are the better prepared you will be (i.e. Honours courses)
- (c) Use undergraduate courses to explore different topics you might want to specialize in later – no time to do this in graduate school

## Get to know a professor well

- (a) For a top school it is essential to have an in–depth recommendation saying you have good research potential
- (b) A professor for whom you haven't done research cannot do this
- (c) Options:
  - Take a small course with a research paper where you run regressions
  - Sign up for an independent research course with a professor
  - Take a summer job as a research assistant with a professor (but low pay)

- Work for economic consultancy in summer (high pay) e.g. Analysis Group in Montreal
- Take a term-time job as a research assistant with a professor
- Do a summer internship with project (but no pay)
- Do some other summer job (not necessarily economics) where supervisor can say you are independent and creative

## How to apply

1. Take the Graduate Record Exam (in October best; now too late)
  - The part that matters is the quantitative: it is high school math
  - Do some practice tests; study if have forgotten geometry and trigonometry

## 2. Select schools to apply to

- Apply to at least 6, maximum 15, maybe 8–12 is optimal
- There is randomness at every place, so even if you are a star here somewhere might reject you
- If there is more uncertainty about where you will get in, apply over a wider range of schools
- Cost of applying is money, some time (though applications fairly similar)

3. Ask 3 professors for recommendations (in economics, or maybe mathematical subject)
- most important thing is how well they know you
  - but how famous they are also matters
  - most professors want you to sign to waive your right to see the recommendation

#### 4. Write personal statement

- why do you want to do a PhD?
- (related) what in economics has excited you, making you want to research it more deeply?
- what makes you particularly well-prepared to do a PhD? (also mention any awards)
- (related) if you have done past research, describe it
- describe what area you would like to do your PhD research, giving some questions that interest you e.g. the impact of immigration on natives: in economics we realize people do not know in detail what they want to do for their PhD thesis

- if had bad grades first year e.g. because not English mother-tongue, briefly mention
- (maybe) say why want to go to that particular school

## 5. Apply for funding

- SSHRC, NSF etc. (subject of another presentation – I have handout; SSHRC deadlines have passed)
- but many schools have their own funding – almost nobody pays tuition and most also get stipend

## **What matters in admissions at top schools?**

1. GRE math score: can't be below 750–770, but doesn't matter how much it is above
2. Courses: must have taken minimum math listed above

### 3. Grades and courses

- need mostly A's with some A-'s and at most 2–3 B's
- can get away with so–so grades in first year if all A's after that
- did you take extra math or hard courses generally?
- OK to do less well in language, art

4. Recommendations: many applicants are still left in the game, and now the recommendations are crucial to distinguish applicants: grades don't predict research ability well, so a letter convincingly saying you are an original thinker, creative, etc. is absolutely crucial, and if good enough will also override a few bad grades

## Should you do a master's degree first?

1. U.S. PhD programs (and UBC) are designed for people without a master's
2. You will repeat everything you do in Master's coursework in the PhD coursework
3. So my attitude: you will waste a year, so don't bother
4. What are some reasons why you might do it anyway

- If you are in your last year and you have only just found out about needing more math and you need your second term undergraduate transcript info to count in the admissions process
- You don't know any professor well so you need to stall for a year (I think this is why many foreign PhD candidates have a master's) - but apply for PhD's now too
- You don't care about wasting a year and you want to be ahead of the others for about the first six weeks of the PhD program: but note that PhD course grades don't matter when looking for a job
- Your grades have been improving a lot so you want more grades to count in the admissions process

5. Don't do a master's to find out if you want to do a PhD

- you won't know after (one semester of coursework in ) a master's
- you could do the 2–3 year MA at Laval with a big thesis to find out, but in that time you could be 1/2 way through a PhD
- consider working at somewhere where lots of people with PhD's in economics work