Most projects fail… and other things I've learned from (trying to do) empirical work

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Purpose

- Graduate school is well-structured to teach you:
  - Economics
    - i.e. What are the interesting and important questions?
  - Technical skills
    - i.e. How to answer them
- But what about the *process* of doing (or trying to do) research?
  - This is a semi-structured list of some tips I wish someone had told me….

Disclaimer

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The bottom line

1. It is hard to do good research
   - for *everyone*

2. Research is not a solo process
   - *Talk about your ideas with people early and often*

3. Most “projects” fail
   - *The key is to triage efficiently*

Two key steps early in the process

1. Coming up with ideas

2. Triaging your ideas

Step 1: Coming up with ideas

- All (good) research starts with a *question that is interesting*
  - Can you explain to others why it's interesting and exciting?
    - Your peers and professors
    - Non economists
      - Your family
      - Non-economist friends (if any)
  - Are *you* interested in this question?
    - If you are not interested and excited in your project, how can you possibly expect anyone else to be?
    - And you will certainly not enjoying working on it for many years!

All topics need good motivations

- Papers should be motivated by broad, interesting, and/ or important issues, although the specific problem you end of working on may be narrow and technical
  - This will keep you (and others) motivated and interested
  - *Write down the motivation* so you remember it
    - and look back at it from time to time
    - Keep adding to it

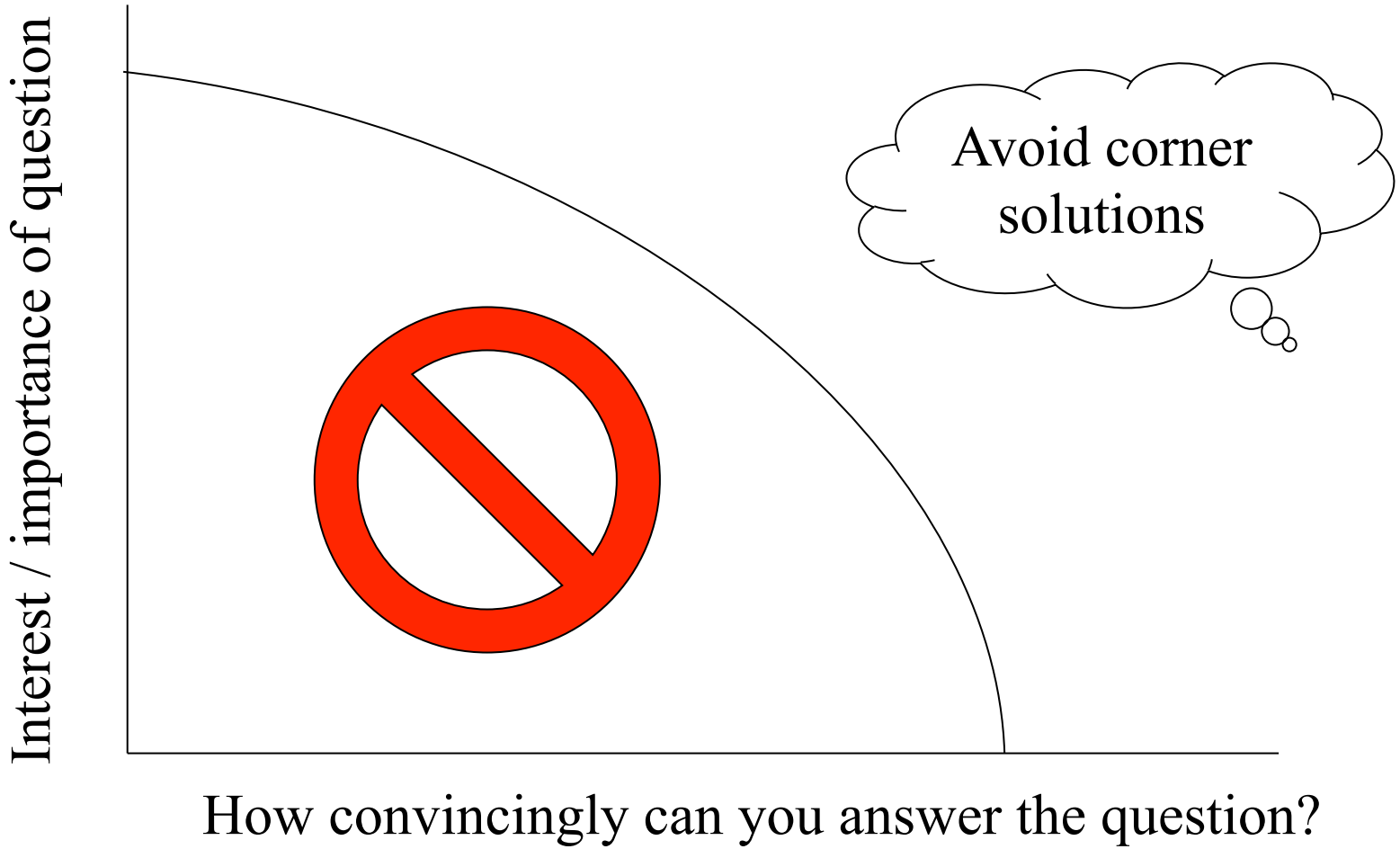
- Example 1: Development
  - Broad question: How to reduce corruption in developing countries?
  - Specific project: How do we get good measures of corruption?

- Example 2: Public Finance
  - Broad question: should the government stay out of insurance markets?
  - Narrow, technical paper: how do we design empirical tests of adverse selection?

There's a problem when…

- Your answer to "what are you working on" starts with:
  - "My paper is an extension of Famous Economist (2003b)"
  - "I found a really cool source of identification / natural experiment"
  - "My project is really hard because it involved
    - The use of a really cool new econometric technique
    - Really messy data
    - Really complicated programming
    - A lot of time

Always be on the frontier



How to come up with ideas??

- Chicago adage
  - "vote early, vote often"
  - Think about ideas early, often and always

- Write all your ideas down!
  - Especially *why you care*

- Sources of ideas:
  - Classes – what are the important unanswered questions?
  - Seminars – what does the seminar make me think about?
  - In general do not go to the literature for ideas
    - Broad survey articles can stimulate ideas
    - JEL, JEP, Handbook Chapters
  - Read the newspaper with an eye towards economic questions
    - Look at the real world, not just the economics literature
  - Read non-economics non-fiction
    - Biography, history
  - Talk to people – economists and non economists
  - Ideas come at random times
    - Be sure to write them down
  - *Keep at it*

2. How to triage your ideas

- Most projects fail
  - Being able to figure out the lethal problem quickly is the key to having time to work on your (ultimately successful) projects

- The first line of defense – *talk to people*
  - Especially your peers
    - Is this interesting / sensible? What are your reactions / thoughts / suggestions?
    - Do not *self-censor* your thoughts
    - Do not wait long before talking to them
    - You should be *constantly* tossing out your latest goofy thought
  - Don't wait to talk to faculty either
    - We expect you to bring us many non-workable ideas
    - We are on your side!

Important triage steps

- Do I have the facts right?
- If the effect is there would it be detectable?
- Would it be interesting if I found nothing?
- I almost wrote my dissertation on pet health insurance in Sweden….
- Talk to your friends

Do not immediately give up on an idea because

- You found a paper on econ-lit that seems to be on a similar topic
- The first time you tried to explain it to someone they weren't that interested
- It's not obvious how to go about answering the question
- You don't think there's any data to answer it

Data triage

- What are the ideal data I would need for this project?
- What kinds of data exist?
  - Look on ICPSR, the NBER data website, google
  - Talk to people!
- Is there anything I can do quickly to get a rough sense of whether the effect would be there?
  - Maybe not with the ideal data
- Step #1 with the data: *PLOT YOUR DATA*
  - And then show the plot to your friends

What if the data just don't exist?

- Collect your own data!!!
  - An enormous number of the exciting / interesting / important empirical papers involve new data collection

- If it's interesting and easy to do, more likely it's been done already
  - It's barriers to entry that make monopolists

Where to look for your own data?

- Archival work
  - People printed out data before computers
- Your friends and families may unwittingly be sitting on great data
  - Think creatively about what they might have access to
- Use internet resources creatively
- Design a survey
- Don't be afraid to make cold calls to organizations that might have data
  - What do you have to lose (aside from your time…)?

The bottom line re-visited.

- It is hard to do good research
  - for *everyone*
  - and that means *everyone*
- Research is not a solo process
  - Form weekly working groups with your friends to talk about your latest thoughts
  - Force everyone to talk about at least one idea, no matter how lame they think it is
- Most projects fail
  - The key is to triage efficiently…..

…. and to keep at it!!