How to read an academic paper (for undergraduates)
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This class will rely entirely on academic articles. You will be asked to read at least one article for each class, present an article to the class, and then develop a paper idea that follows the format of the papers you've read. For many of you, this will be your first experience really reading academic research, and I understand that this can be daunting. Many economic papers will contain math that you are not familiar with, and often these articles are not written as clearly as the could have been. Nevertheless, I am confident that you will get a lot out of them when you become comfortable with the general structure and style employed by academic economists. Fortunately, every article follows the same basic outline. This handout will give you a strategy for reading any economic article, and a list of questions you should be able to answer once you're done.

Follow these steps when reading an article:

1. Read the abstract carefully. In one paragraph, this will tell you what the research question is, what the methods used are, and what the punchline is. There is no suspense here, and it's useful to know where you're going so you can read the body of the article with this context.

2. Read the introduction. This section will expand on the research question and provide motivation for its study, typically from economic theory or policy. The introduction will also provide a nontechnical summary of methods and results, and, often, a description of how this paper contributes to the existing literature. You should pay careful attention to each of these things.

3. Read the results. Here it is often useful to skip to the conclusion, although the main findings should be clear from the introduction.

4. Skim the main figures and tables from the paper. Now that you know the paper's findings, they should be easily found in the main results of the paper.

5. Skim the rest of the paper. Read more carefully if:

   (a) you are presenting the paper in class
   (b) you do not understand how the results were obtained
   (c) you are interested

Questions to think about when reading an academic paper (adapted from John Asker)

What is the paper about?

- What is the research question?

  – Force yourself to state this as a question. So instead of "The authors study the relationship between energy and innovation", try "Do energy price spikes induce innovations in energy saving technology?"

- How does the research question relate to existing theoretical and empirical literature?

  – Is this paper answering a previously unanswered question? Or adding evidence from an important setting?

- Why is it worth asking?

  – Typical answers are that the answer matters for economic theory, or, in this class, the answer can inform some policy or business problem.

  – If the latter, you should have a sense of how the answer might be used. So if estimating the impact of power plants on local housing prices, we might have the end goal of comparing this number to the benefits of an additional power plant.

- Do you care what the answer is?

  – After reading the intro, you should...

What is are the data being used?

- How was it collected?

    - Is this publicly available or proprietary?
    - Has anyone used it before? If no, that could be a major contribution of the paper.

- What are the important variables?

    - In class we talked about reducing research questions into relationships between some Y and a couple X's. What are the key dependent and independent variables here?
    - How are they defined? Are these exactly the variables you'd want to have to answer the research question, or are they imperfect in some way?

- What is the unit of observation?

    - Is the data at the individual level or is it aggregated somehow?
    - Is it a panel?

What is the "empirical "strategy" for answering the research question?

- If you had an ideal data set, what would it look like?

    - What empirical strategy would you use on it?
    - How is the data set in this paper different from that ideal data set?

- How does identification (causal inference) work in this paper?

    - What are the sources of exogenous variation?
    - What is the "selection" story we could worry about? Would this lead to an over or under-estimate of the true causal effect?
    - Are the authors using fixed effects or difference-in-differences?
    - Is there an instrumental variable or regression discontinuity?

What are the main results of the paper?

- What are the economic/ policy implications of the results?

- What do we learn from this paper?

- What questions does this paper leave unanswered? How might you answer them?