



Developing Writing and Presenting an Empirical Paper Spring 2025

ECON 895-003
Mondays, 4:30 pm - 7:10 pm
Arlington: Van Metre Hall 479

Instructor: Thomas Stratmann, tstratma@gmu.edu

Office hours: Tuesdays, 10 am to 11 am, Vernon Smith Hall, Room 4013, Arlington Campus

I write entirely to find out what I'm thinking, what I'm looking at, what I see, and what it means.

Joan Didion (1934-2021)

Goals

The primary purpose of this course is to provide PhD students with all the skills necessary to write an empirical paper, which is by far the most common type of article in leading journals in the social sciences. The focus is on applying statistics (particularly micro-econometrics) to policy-relevant questions, including program evaluation. Ideally, each student will start the semester with a well-defined research question and ideas about econometric models and appropriate data to address the question, and they will be able to complete a draft of an original empirical paper during the semester. Less advanced students will improve their skills by conducting a replication project, using different data from the original article, and writing a paper explaining the replication. The course is intended to help this process with regular writing assignments, feedback from the instructor and course colleagues, several opportunities to make presentations, and the discipline of requirements and deadlines. The course also has several other purposes:

- Develop research writing skills, including the definition of the research question, effective ways of motivating a paper, and presentation of identification strategies.
- Overcome (or ameliorate) problems of “writer’s block” so that one can learn to produce publishable research as a professional on a regular schedule rather than as a student pulling all-nighters
- Improve the ability to find gaps and flaws in previous empirical research that may motivate new research.
- Understand the conventions of academic research and writing first, then criticize.
- Learn to use Overleaf, a user-friendly shell program for LaTeX, which has become the professional standard in quantitative research in the social sciences as well as technical fields
- Provide opportunities for graduate students to present their research, including early-stage ideas and brainstorming.
- Develop presentation and discussion skills for participating in academic and policy communities.

- Cultivate a collegial group of students with similar interests who provide intellectual and moral support to each other through the complex process of completing dissertations and entering professional life.

Students will learn many examples of empirical microeconomic research on public policies and delve deeply into one they are interested in. Some of the class meetings will be in conjunction with a parallel course offered by Professor John Earle in the Schar School of Policy and Government.

Pre-requisites

Students should have taken at least ECON 637 or have equivalent background/knowledge. Ideally, students would also have taken additional courses in econometrics, such as ECON 895: Causal Inference, which I taught, as we will engage in technical discussions on estimation and identification.

Organization

To produce an original empirical paper during one semester, students will submit a piece of writing every week, initially on Blackboard and later on Overleaf, and they will present it and discuss their progress several times. After an initial organizational meeting, the first few class sessions will involve students presenting draft proposals/prospectuses. The written document should be concise (with a final target of 1.5-2 pages, except for references, for the full prospectus) and should contain:

- Clear statement of the research question
- Motivation for the paper: contribution to existing/previous literature (concisely, but not missing any essential background from previous research) and possible policy relevance
- Data to be analyzed (source, key variables, sample), including their availability for the paper
- Methods to be used in addressing the question, including, in most cases, the identification strategy for credible estimation of a causal effect

In the first week of the semester, the draft proposal may be very short: a title and 1-2 sentences on each of the above: proposed question, motivation, data, and method. The presentation should be just 2-3 slides, including the title and each of these points. Later, each of these points may become a separate slide, and still later, each may become several slides.

It is likely that some, perhaps most, initial proposals will not be adequate. Sometimes, the proposal must be revised or even tossed out as infeasible or insufficiently well-defined, and students will be advised to find a different topic. This is a normal part of research. In other cases, the proposal will require fleshing out in some way before it is sufficient as a full prospectus that serves as a plan for the paper.

Once a prospectus is approved, the student will report weekly on the progress of the research, including writing short draft segments of the eventual paper (e.g., parts of the motivation, relationship to previous research, data, methods, and/or results sections). Guidance in writing each section (e.g., “How to Write a Data Section”) will be provided in advance. The drafts should be posted in Overleaf, and the instructor will provide feedback on each. At one point after the proposal is approved, each student may be asked to present one paper from existing research, the one which is closest (in the research question,

type of data, and methods) to the paper the student is writing.

The process of proposing research ideas that are rejected is a valuable learning experience for all. Still, it is possible, even likely, that some students do not find a feasible topic through this process. In this case, students will carry out a replication of an existing study. A replication is an empirical re-examination of the robustness of an estimate of an economic parameter (or small, well-defined set of parameters). Concerning data sources, it may be possible to re-examine the same data analyzed in the original article, as authors will frequently make these available, but students may also use a different data set to estimate the parameter. In either event, the work should involve a "replication of higher order" or "full-fledged re-analysis" (Arulampalam et al., 1997, p. 102-3) in the sense of checking for the effects of changes in data, specifications, and methods.

A replication project is usually a valuable learning exercise, particularly for students who have never done one. The replication may be more appropriate for students who are less far along in their programs and in developing their research interests. These students will present the paper to be replicated mid-way through the semester, and they will present their replication towards the end. The original research paper is most appropriate for students close to (or in) the dissertation stage of their programs. The type of paper will be decided after the first four to five weeks of the semester.

The replication project is not just a consolation prize. It allows students to explore some areas of interest more deeply, conduct empirical research using microdata, and experience designing, implementing, and writing a research paper. Yet, it avoids the difficult decision of choosing and designing a research question, which can be highly time-consuming for many students (and researchers more generally). The replication project has both the intrinsic pedagogical and professional value of this type of intellectual activity and the advantage of feasibility in carrying it out in a relatively short period.

In each case, the best way to start the project is to write a prospectus of 2 pages or less. It should clearly state the question to be addressed, provide a strong motivation for your research topic, and describe the data and methodology by which the question has been or will be addressed. For a replication or original research paper, the prospectus should include the list of variables employed in the empirical analysis and their definitions. For replications, there should be a discussion about how the definitions differ from those in the original study being replicated. That discussion will refer explicitly to the paper to be replicated and motivate the replication (for example, different data, different countries, different measures, different controls, different functional forms, etc., and why this is interesting). The list of references should include other relevant literature, and it should be identical to the works cited in the text. Besides allowing the instructor to check on the progress of the paper, the purpose of requiring a written prospectus is to provide students with some practice in designing a research project, as writing such a prospectus is the usual first step for a researcher embarking on a new project.

Throughout, I am happy to provide feedback on ideas and drafts.

Assessment

Course grades will be determined as follows:

Quality of contributions to class discussion: 25%

Prospectus (final version due February 21): 10%

Final paper (due May 12): 65%

In written work, the quality of writing and the quality of analysis are essential criteria for grading.

Resources

Some resources that may be useful for reference on micro-econometrics include:

Wooldridge, Jeff, *Introductory Econometrics*, 5th Edition, 2012.

Joshua Angrist and Alan Krueger, "Empirical Strategies in Labor Economics," *Handbook of Labor Economics*, 1999.

Angrist, Joshua, and Steve Pischke, *Mostly Harmless Econometrics*, 2008.

Wooldridge, Jeff, *Econometric Analysis of Cross-Section and Panel Data*, 2nd Edition, 2010.

Angrist, Joshua, and Steve Pischke, "The Credibility Revolution in Empirical Economics: How Better Research Design Is Taking the Con out of Econometrics," *Journal of Economic Perspectives*, 24(2), 3-30, 2010.

Cunningham, Scott, *Causal Inference: The Mixtape*, Yale Univ, Press, 2021.

Papers on replications

Arulampalam, W., J. Hartog, T. MaCurdy, and J. Theeuwes, "Replication and Re-Analysis."

Labour Economics, Vol. 4(2), 99-108, June 1997.

Hamermesh, Daniel S., "Replication in Economics, NBER Working Paper 13026, April 2007.

In what follows are GMU policies regarding conduct and behavior.

Rules and Expectations	<p>In correspondence/communication, students will be expected to:</p> <ol style="list-style-type: none">Be professional and respectful in correspondenceMake reasonable requests of the instructor. I will be happy to clarify the course material and answer legitimate questions; however, please exhaust other information sources (e.g., syllabus, Blackboard) to answer your questions before contacting me. Remember, "Poor planning on your part does not constitute an emergency on my part." <p>Regarding honesty in work, students will be expected to:</p> <ol style="list-style-type: none">Review the University integrity and honesty policies in the student handbook for guidelines regarding plagiarism and cheating (summarized below). I will gladly clarify my stance on any questionable or "grey area" issues you may have.Refrain from dishonest work. It will receive a minimum penalty of zero on the assignment and a maximum penalty of a zero for the course with a report to the Honor Committee. The GMU Honor Code requires that faculty submit any suspected Honor Code violations to the Honor Committee. Therefore, any alleged offense will be submitted for adjudication.
Mason Honor Code	The complete Honor Code is as follows:

	<p>To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.</p> <p>(From the Catalog – catalog.gmu.edu)</p>
Cheating Policy	<p>Any cheating on an activity, project, or exam will earn zero points.</p> <p>“Cheating” includes, but is not limited to, reviewing others’ exam papers, using ANY resources when not allowed, and collaborating with another student during an individual assignment.</p> <p>If you have questions about when to acknowledge others' contributions to your work and appropriate ways to cite those contributions, please talk with the professor or use the GMU writing center.</p>
Plagiarism and the Internet	<p>Copyright rules also apply to Internet users who cite from Internet sources. Information and graphics accessed electronically must also be noted, crediting the sources.</p> <p>This material includes but is not limited to e-mail (don't cite or forward someone else's e-mail without permission), newsgroup material, and information from Websites, including graphics. Even if you give credit, you must get permission from the source to put any picture you did not create on your web page. Shareware graphics are not free. Freeware clipart is available for you to use freely. If the material does not say "free," assume it is not.</p> <p>Putting someone else's Internet material on your web page is stealing intellectual property. Making links to a site is okay, but getting permission is strongly advised since many Web sites have their requirements for linking to their material. Review the Honor Code here.</p>
Individuals with Disabilities	<p>Students with documented disabilities should contact the <u>Office of Disability Services</u> (703) 993-2474) to learn more about accommodations.</p> <p>(From the Catalog – catalog.gmu.edu)</p>
Academic Integrity and Inclusivity	<p>This course embodies the perspective that we all have different views and ideas and deserve the opportunity. Therefore, we will conduct our discussions with respect for those differences. That means we each have the freedom to express our ideas. Still, we should also do so, remembering that our colleagues deserve to hear differing. http://oai.gmu.edu/</p>
Student Privacy Policy	<p>George Mason University strives to fully comply with FERPA by protecting the privacy of student records and judiciously evaluating requests to release information from those records.</p> <p>Please see George Mason University’s student privacy policy https://registrar.gmu.edu/students/privacy/.</p>
E-Mail Policy	<p>Web: masonlive.gmu.edu</p>

	<p>Mason uses electronic mail to provide official information to students. Examples include notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback.</p> <p>Students are responsible for the content of university communication sent to their Mason e-mail account and must activate that account and check it regularly.</p> <p>Students must also maintain an active and accurate mailing address to receive communications sent through the United States Postal Service. (From the Catalog – catalog.gmu.edu)</p>
Late Work Policy	<p>Late assignments will not be accepted without prior written approval from the instructor. Emergency, unforeseen, and extenuating severe circumstances will be handled case-by-case.</p>