Applied Macroeconomics – Micro Data for Macro Models
Winter 2018, University of Chicago
Professor Steven J. Davis

Course Meetings: 2-5 on Wednesdays and 9 to noon on Fridays in Harper 3SW
Office: 533 Harper Center
Email: Steven.Davis@ChicagoBooth.edu
Office Hours: By Appointment
T.A. Cristhian Seminario <seminario.amezcji@gmail.com>

Short Course Description
This course considers the use of data on firms, establishments and workers in research on business performance, labor market outcomes and economic fluctuations. We will see many empirical approaches and cover examples of how to use administrative records, financial data, survey data, field experiments and text-based data in economics research. Students will gain hands-on experience with micro data, develop and present their own research ideas, and learn to critically evaluate empirical designs and research strategies. Broadly speaking, the course aims to help students identify interesting questions, devise promising research strategies, improve their skills as empirical researchers, and sharpen their presentation skills.

Specific topics include the effects of private equity buyouts on jobs, wages and productivity; management practices and business performance; labor market fluidity and economic performance; the earnings losses associated with job loss; employer behavior on the hiring margin; new research search and matching in the labor market; measuring regulatory and policy risks; assessing their effects on firm-level and aggregate outcomes; eliciting subjective probability distributions from business units, and using them in economics research.

Lectures treat a mix of important, well-established research contributions and new papers that seek to advance the frontier. Homework assignments build proficiency in the use of micro data to address economic issues. They also give students first-hand experience in formulating research questions and devising empirical designs to answer them.

Grade Determination
- Your grade will be based on four homework assignments and the quality of your classroom participation.
- As the quarter progresses, you will receive a score of 1 to 5 on each written homework assignment and oral presentation.
  - 3 denotes an adequate performance.
4 denotes a good performance.
5 is reserved for truly outstanding work.
1 or 2 denotes a subpar performance.

- Homework assignments 2 and 4 involve both substantial written submissions and oral presentations. Thus, you will receive two separate scores for those assignments.
- You can track your scores on Canvas. You will also receive written or oral feedback from me or Cristhian on each written submission and oral presentation.

Some Guidelines for Homework Submissions and Oral Presentations

1. Effective communication is essential for success as a researcher. If you write poorly, no one will read your work. Your brilliant ideas will languish in obscurity. Somebody else will come along with a similar idea and get the credit and glory.

2. The time to hone your written and oral communication skills is now. Accordingly, I expect all homework submissions to be well written. Your prose should be crystal clear. Tables and charts should include informative titles, legends and notes. Your text should clearly describe the key message associated with each table and chart. Use 12 point or larger fonts including in notes, tables and figure legends.

3. A good guide for how to write clear prose is available in Strunk & White’s The Elements of Style. I advise you to read this short manual, and practice its principles and rules.

4. The visual presentation of data is a key skill in the execution and communication of empirical research. Your chances of writing impactful papers and of landing a good job are much greater if you learn how to communicate your empirical results in a clear and visually appealing manner. For a good introduction to the basics of data presentation, along with several concrete examples, see “An Economist’s Guide to Visualizing Data,” by Joanthan A. Schwabish in the Journal of Economic Perspectives, 28, no 1. I advise all students to read this paper and to put its principles and lessons to work.

5. My Golden Rule for Communicating Research: Strive for clarity and concision in written and oral communication. Corollaries and extensions:
   a. Do not waste your reader’s time with poorly written, haphazardly organized prose. If you can’t take the time and effort to write clearly, why should anyone bother to reader what you write?
   b. For oral presentations, do not waste your audience’s time with poorly organized remarks and slides that no one can understand or make out. No tiny fonts on slides! Check in advance that your slides are readable from the back of the room.
   c. Life is short, and people are busy. Engage others through clear, compact and engaging communication about your research ideas.

References on Econometric Methods: There are many useful textbooks on econometric methods. Two that are especially useful for empirical work considered in this course are:


Macroeconomics Field Certification Requirements:
To earn a field certification in Macroeconomics, you must secure a grade of B or better in at least three of the four courses offered in the Macroeconomics sequence. You must also submit an acceptable research paper by 31 July 2018.

Here are the research paper requirements:

- You can either replicate an existing paper or write a virtual paper. See below.
- You need one of the faculty members teaching in the Macroeconomics sequence to serve as a reader for your paper.
- You must contract with your reader by 30 April 2018. Your contract will set forth expectations for a suitable paper.

Paper Replication (option A): Take an existing paper with a substantial empirical component and replicate the paper’s key findings. If you choose this option, you must pick a paper for which you can secure the actual data used by the authors. You should explain (1) why you picked the paper, (2) what the paper’s goals were, (3) why you think those goals are interesting, and (4) what impact the paper has had on the profession. You should also compare your results with that of the paper. The hope is to match results exactly. However, that is sometimes very difficult to do. If that is the case, you should discuss where your results differ from theirs. Finally, you should extend the paper in some substantive way. For example, you can show the robustness of the paper’s results to some additional specification, sample, or time period. You need to defend why you think these additional robustness tests are interesting. Your faculty reader will provide more details about their expectations.

Paper Replication (option B): Take an existing paper with a substantial theoretical or computational component. Extend the paper’s theoretical or quantitative results in some substantive way. For example, the paper may have made “assumption A”. You may explore whether the paper’s results hold if that assumption is relaxed or if “assumption B” is made instead. As above, you should explain (1) why you picked the paper, (2) what the paper’s goals were, (3) why you think these goals are interesting, and (4) what impact the paper has had on the profession. Also, you need to defend why you think your extensions of the model are interesting. Your faculty reader will provide more details about their expectations.
**Virtual Paper**: Instead of replicating an existing paper, you can choose to start writing your own paper. Instead of submitting a completed paper, you could instead submit what we call a “virtual paper”. If you choose this option, you must formulate an original research idea, develop a practical plan for executing the idea, and take initial steps in the execution. An empirical virtual paper should include an introduction (what is the question and why is the question of interest), a literature review (how your paper fits into the broader literature), a theoretical motivation section (an actual theory or just a sketch of the relevant theory that underlies your question), a data section (what existing data sets exist to answer your question), an empirical methodology section (how would use the data to answer your question – keeping in mind concepts of identification and causality), falsification tests (what other specifications, tests, etc. could either bolster or cast doubt upon your primary tests), and some preliminary results (anything you have done so far to see if the paper will pan out). A theoretical virtual paper will be similar. However, more progress will be made setting up the model and talking about the expected predictions of the model. Intuition should be provided for those predictions. Your faculty reader will provide more details about their expectations.

I recommend that you write a virtual paper to start down the path of producing original research.
## Schedule of Course Meetings and other Key Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic or Activity</th>
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<tr>
<td>3 January</td>
<td>Course Introduction &amp; Using Large-Scale Longitudinal Business Databases</td>
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<tr>
<td>5 January</td>
<td><strong>Prep session for HW Assignment #1 (TA led)</strong> and help installing PyCharm and Anaconda (TA led)**</td>
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<tr>
<td>10 January</td>
<td>Private Equity, Jobs, and Productivity + Selected Other Quasi-Experimental Studies with Large-Scale Business Databases</td>
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<tr>
<td>12 January</td>
<td><strong>Introduction to Python for Text Analysis by Marco Sammon (Bring your PC or Mac to class)</strong></td>
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<td>17 January</td>
<td>Business Dynamism, Labor Market Fluidity and Economic Performance</td>
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<tr>
<td>18 January</td>
<td><strong>HW #1 due by 5pm (via electronic submission to Instructor and TA)</strong></td>
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<tr>
<td>19 January</td>
<td><strong>Help session for HW Assignment #2 (TA led)</strong></td>
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<tr>
<td>24 January</td>
<td>The Consequences of Job Loss</td>
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<tr>
<td>26 January</td>
<td><strong>Discussion of HW #1 results (TA led)</strong></td>
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<tr>
<td>27 January</td>
<td><strong>Draft Slides for HW #2 due by 5pm (via electronic submission)</strong></td>
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<tr>
<td>31 January</td>
<td>Three Lectures on the Hiring Process: (1) Notes on Matching Functions, (2) Vacancies and Hiring: Evidence and Implications, (3) Application Flows</td>
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<td>1 February</td>
<td><strong>HW #2 submission and final slides due by 5pm (electronic submission)</strong></td>
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<td>2 February</td>
<td><strong>Student Presentations of HW #2 Results</strong></td>
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<tr>
<td>7 February</td>
<td>Continuation of Three Lectures on the Hiring Process</td>
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<td>9 February</td>
<td>Held in reserve</td>
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<td>12 February</td>
<td><strong>Talking points summary for HW #3 due by 5pm (electronic submission)</strong></td>
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<td>14 February</td>
<td>Policy Uncertainty and Related Topics</td>
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<td>16 February</td>
<td><strong>Student Presentations for HW #3</strong></td>
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<tr>
<td>21 February</td>
<td>Policy Uncertainty, continued (if needed) + Selected Studies of Management Practices and Business Performance</td>
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<tr>
<td>23 February</td>
<td>Special guest lecture by Tarek Hassan on Firm-Level Political Risk: Measurement and Effects (during recitation meeting)</td>
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<tr>
<td>25 February</td>
<td><strong>Draft Slides for 2 March presentations due by noon</strong></td>
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<td>28 February</td>
<td>Eliciting and Using Data on Subjective Probability Distributions</td>
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<td>1 March</td>
<td><strong>Final Slides for 2 March presentations due by noon</strong></td>
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<td>2 March</td>
<td><strong>Student Presentations for HW #4</strong></td>
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<tr>
<td>4 March</td>
<td><strong>Draft Slides for 9 March presentations due by noon</strong></td>
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<td>7 March</td>
<td>Interesting New Papers on Course-Related Topics</td>
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<tr>
<td>8 March</td>
<td><strong>Final Slides for 9 March presentations due by noon</strong></td>
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<td>9 March</td>
<td><strong>Student Presentations for HW #4</strong></td>
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<tr>
<td>12 March</td>
<td>Referee report for HW #4 due by 5pm</td>
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<tr>
<td>14 March</td>
<td><strong>Student Presentations for HW #4, if needed</strong></td>
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