INTRODUCTION
This course focuses on non-structural applied micro. It combines with Professor Luigi Pastaferrri and Alessandra Voena’s Econ 246 (structural applied micro), Professor Isaac Sorkin’s 248 (labor markets, earnings and mobility) and Professor Muriel Niederle and Alessandra Voena’s 245 (economics of gender). You do not need to have taken this course previously – the labor courses are additive (not sequential).

In Econ 247 there will be a focus on three themes:
- **Workers and labor markets.** The class will look at earnings inequality, technical change and globalization. These topics are politically and economically important, and underscore a lot of modern labor economics.
- **Firms and goods markets:** We will focus on the production side of the economy, covering a set of particularly good recent applied micro papers. This is personal research interest of mine and an area with a wealth of potential thesis ideas.
- **Non-market interactions: peer-effects, academia, and unions:** Given the recent movement of research beyond standard maximizing models I will end on some more research frontier topics or non-market interactions. Again, I choose the paper as interesting recent applied micro papers, rather than trying to exhaustively survey the literature.

The course will study these topics by exploring one paper in each class in detail, typically a well-known and highly cited paper or a very recent paper. In my view successful applied-micro papers need to do be strong in at least two of the three following areas:

1. **Motivation:** that is answer an important question – a good test of this is would a newspaper, say the New York Times, find the results interesting enough to write up.
2. **Measurement:** often using a new dataset, sometimes assembled by the author – this would be new data, rather than say the 100th paper using Compustat or the CPS; and
3. **Identification:** showing clear causation, often with a natural or field experiment

For the typical class I have selected a main paper that is typically (but not always) well-motivated and either has good measurement and/or good identification. That is all the papers I select meet at least two of the three criteria (although very few – if any – meet all three criteria, despite this course covering many of the top applied micro papers in the last decade). I want us to study these papers in detail to provide ideas for your future research. I will then also cover a few other papers in the same topic.
CLASS ORGANIZATION

Regular class: Classes run from 1:30pm-3:20pm MW
The class is designed to be discussion focused – as phd students it is important you learn to think about, discuss, critique and evaluate papers. This covers both the content and the execution. Think about how easy (or hard) it would be to develop a project like this as a graduate student. Questions like “Would this have been a possible job-market paper”, “Could I do this as an assistant professor” or “Are there gaps in this paper/literature I could fill” etc.

To aid this discussion every student in the class is expected to read the main reading in advance and prepare a five slide discussion of it. The first two slides will summarize the paper – one slide the question and approach and one slide the result. The third slide will discuss the good points of the paper, the fourth slide the bad points of the paper, and the fifth slide how you would extend the research. The idea of this is the first two slides cover the basics of the paper – the QAR (question, approach and result) – and the last three slides are a review of the good points, bad points and areas for improvement.

These 5 discussion slides should be loaded up in advance to a class Dropbox folder I will create so I can check them and quickly load up presenters. I will randomly pick two or three people to present in 5-minutes their five slide overviews after the main presentation and organize the class discussion around this. So these should be short, concise and snappy.

If anyone wants, they can add a final slide (sixth) with some interesting finding or random related fact – basically something fun/interesting to share with the class (like your friend was the RA on the paper, you were an observation in it, the data mostly comes from your home town etc).

In the second part of the class I will either discuss a second paper or overview some other papers in the related literature to give you a feeling for the broader literature and the context of the paper. This way I hope you will get to dive into one paper in detail, plus gain a broader exposure to typically two or three other papers in the literature.

Special sessions: I will also have two special sessions. One special session will be on the basics of data cleaning and WRDS – you will have to download a CEO pay dataset and produce some basic results from this (graphs and regressions) which will we discuss in class. The second special session will be around replication – this has become a huge issue in economics (indeed the AEA journals now will not publish papers until all results are fully replicated).

Term papers: Every student taking the course for credit should write a term-paper. This should sketch out a research idea to the stage of about 10 pages of text, plus about 2 or 3 tables plus a graph or two. This is not supposed to be a fully written up paper as the amount of work would be too much - and I can’t properly review a full paper - but the first cut of a research idea. To do this you should have some data and have at least run some regressions in Stata/R (or any other package you are comfortable with). So the paper should at a minimum have a research question (what you are trying to answer), data and an identification strategy, alongside some primitive results. These papers should be completely (or at least mainly) empirical – a theory paper would not be suitable.
These are important as most students go on to use this as either their JMP (so you can use ideas developed in other classes), or if not as part of their job-market portfolio.

To develop this I want every student to form ideally into reading pairs (groups of two students). One week in advance of handing in your first draft to me please hand in your draft to your partner student and have them provide feedback to you. Hence, you should all get feedback from other students and provide feedback to another student in advance. The reason for this is to make sure the first draft submitted to me is in good shape – that is has completed sections, properly drafted English, finished tables etc, as my value added on feedback will be much greater if I have a good first draft. So when you provide feedback on each other’s papers you should focus on both content and presentation – these drafts should be is readable format with a proper structure (front page with an abstract, introduction, data section, results, conclusion and bibliography, and tables and figures should be properly labelled following QJE applied micro papers – so label all axes, note sources and content etc).

Keep iterating on these papers until they are in proper shape before submitting them as I will also focus on presentation as much as content - these things matter and I have seen many papers rejected from top applied journals for sloppy presentation and details. That is, tables with headings like “alpha” (rather than “elasticity of supply”), missing sources, no details on standard-errors (clustering, and if so how), sample selection, years etc. This signals poorly executed underlying research work and is also a key criterion for an applied micro job-market student (all top departments expect to see basic labelling, notes etc). A major reason is all modern applied-micro papers involve extensive data processing, and if you as a researcher appear careless in writing up your paper many readers will infer you have likely also been careless in your data work so you would not trust the results (e.g. seeing careless errors in your paper will make readers think you probably also have careless errors in your data do-files, R-files etc).

At the end of the quarter you will hand in the final version of the paper and depending on the quality of the paper we may set up another time for feedback (basically I will concentrate feedback on papers which have the potential to develop into proper full length job-market type papers). Most of these papers end up on job-market candidates webpages (which I see as I have been running Stanford placement for several years) so it is important to produce a final version that is polished enough to place online.

**PhD group presentation lunch:** On Fridays from 11:00 to 12:00 I meet with my PhD students (both primary and secondary) and one of them presents a piece of research in progress. If you are interested in coming – to see in progress applied micro and applied macro research (I have a mix of labor and macro students) – you are welcome to attend. Just come ask me after class or during the break and I can add you to the Google calendar so you can see the schedule of presentations. If you attend regularly, you can also present your research.
ZOOM CHANGES FOR 2022 (first two weeks)

From my advisees I hear that it is very hard having a heavy load of zoom lectures, so this part of class will be more discussion focused with much less formal lecturing.

As such there are some changes to the in-person format.

A) This zoom-class is focused heavily on discussion of papers so it is important you read these in advance and provide your three page discussion. If you have not read the paper, it will be hard to follow along and benefit from the discussion. The benefit of this is to think about and evaluate papers – almost put yourself in the minds of a hiring committee discussing the paper of a job-market candidate. Class grading will be 100% on class participation – attendance, questions and discussion.

B) Class participation means having your camera on unless there are extenuating circumstances you have discussed with me in advance. To make this class engaging for everyone – both faculty and students - it is important when each of us is talking we are facing a screen of faces (rather than blank screens). If there are any reasons this is not possible send me an email and we can discuss this directly – I understand that some students may have extenuating circumstances that makes video tricky, but otherwise it would be great if all students keep their videos on as part of their assessed engagement.

C) There is also a term paper which is an independent research paper. This is optional – if you do not want to work on this I totally understand given the pressures of pandemic schooling. If you do want to work on this we will meet twice in the quarter one-on-one to discuss this, and I’ll read the drafts and give you feedback.
CLASS DATE:

Section A): Workers and labor markets

Monday 3rd January Inequality and Skill Biased Technical Change:

Main reading:
- No main reading – first class of the course, so the only class with no reading!

Other readings:
- “Computing inequality: have computers changed the labor market” David Autor, Lawrence Katz and Alan Krueger (1998, QJE)

Wednesday 5th January Polarization and the top 1%:

Main reading

Other readings:
Monday 10th January  Trade and Labor Markets

Main reading:

Other readings:

Also at this stage apply for a Wharton Research Data Service (WRDS) account – if you do not already have this you will need it for the Stata exercise next week. As a Stanford student you are eligible to have one – you go to their website and apply and it should be granted within 48 hours (let me know if not thanks).

Wednesday 12th January  Race and Discrimination

Main readings

Other readings:

Monday 17th January No Class: MLK Day

Wednesday 19th January Competition, Firms and Inequality
Main reading:

Other readings:

Monday 24th January Stata Applied Micro Exercise
In advance of class make sure you have access to Wharton Research Data Service (WRDS). For the exercise you should first obtain: (A) Execucomp data from 1990 onwards (from WRDS), (B) the monthly US price deflator (try FRED), (C) monthly S&P 500 returns (try WRDS or Yahoo Finance) and (D) Compustat accounting data (WRDS).

Use this to show in graph and/or regression form:
   1) CEO real pay has been rising since 1990
   2) The share of CEO pay from equities (stock grants and options) has been rising since 1990
   3) Equity pay is more sensitive to stock returns than salary or bonus pay
   4) CEO pay is rising in firm size
   5) One other interesting fact which you decide

In class I will randomly pick people to present and we will have a class discussion about the best way to do this. I will also show you (and share) my Stata code (I know some of you may use different programs, but Stata is still the default empirical program in economics and is, for now,
used by the majority of applied-micro folks.\footnote{Other packages I have seen used include Matlab (good if you want to code estimators up from scratch or run complex models – so more common in Macro - but less user friendly), SAS (great for massive dataset manipulation), Gauss (good for rapid matrix coding and runs DPD) and R (free, so very popular with grad students).} Having run this session a few times now the main value added will be in the different approaches for cleaning data, dealing with outliers, choosing samples, functional form, controls, weighting etc. In short, there is always tremendous variation in how I and students tackle the same question using the same data, and good to discuss this.

**Section B): Firms and production**

**Wednesday 26\textsuperscript{th} January  Firm randomized control trials**

Main reading


Other readings:


**Monday 31\textsuperscript{st} February  No Class: Individual meetings on the Term Paper**

**Wednesday 2\textsuperscript{nd} February  No Class: Individual meetings on the Term Paper**

I will schedule individual meetings before, during and after class to discuss your term papers. In advance submit a short summary of up to 2 pages on the project, or a short-draft of up to 10 pages (that is, please do not submit long (>10 page) papers). This should be AEA P&P style length – 10 pages of text and maybe 3 tables and 1 or 2 figures (not a full length paper). If you have a short draft of a paper for another class/project either reduce this down to the limit or start another term paper (so please don’t submit 30 page papers). Only students taking the class for credit (not auditing students). I will set-up individual times to meet to discuss these thanks. Please email me (nbloom@stanford.edu) your papers in 24 hours before your individual meetings.

**Monday 7\textsuperscript{th} February:  Working from Home and Internet Surveys**
Main readings:


Other readings:

- “How many jobs can be done at home?” (2020) Jonathan Dingel and Brent Nieman, *Journal of Public Economics*
- “Will working from home stick” (2021) Jose Barrero, Nicholas Bloom and Steve Davis, NBER Working Paper (forthcoming)
- “Working remotely? Selection, treatment and market provision of remote work” Natalia Emanuel and Emma Harrington, Harvard Mimeo
- A pre-pandemic video if you are bored (a TEDX appearance and an interesting process in itself which I can discuss in class if we get time) [https://www.youtube.com/watch?v=oiUyyZPIHyY&ab_channel=TEDxTalks](https://www.youtube.com/watch?v=oiUyyZPIHyY&ab_channel=TEDxTalks)

**Wednesday 9th February: Text to Data**

Main reading:


Second half, I will discuss a few examples of text-to-data projects I have been involved in – measuring economic policy uncertainty ([http://www.policyuncertainty.com/](http://www.policyuncertainty.com/), [www.worlduncertaintyindex.com](http://www.worlduncertaintyindex.com) and [www.techdiffusion.net/](http://www.techdiffusion.net/)) – and some of the general trends in this. Readings include:

Monday 14th February Management and productivity

Main reading:


Other readings: management and bosses – there has been an explosion of literature on management practices in economics recently, so I have listed a bunch of example papers in top-journals in the last few years plus some older classics. This could be an entire course, but for now just one class 😊.

Newer Papers (last 5 years)

- “Management and shocks to worker productivity”, (2022), Achyuta Adhvaryu, Namrata Kala, and Anant Nyshadham, *Journal of Political Economy*
Older Papers


**Wednesday 16th February: Replication Exercises (I)**
**Wednesday 23rd February: Replication Exercises (II)**

These are increasingly important in social science and any paper in a top-5 economics journal (and many other journals) needs a full working replication package. For the class prepare 5 or 6 slides as follows:

1) Use 2 or 3 slides to present the main results of the paper – a very quick summary as background for the replication exercise. Make this interesting for the class - try and pick an applied micro paper in a top-5 journal or from a recent NBER conference that the class would be interesting in getting a quick summary of the results for everyone. We will all benefit from a quick overview of interesting papers.

2) Use 2 or 3 slides on your replication of the key results – maybe the main one or two tables. Focus on:
   a. Could you replicate these – was it feasible (did the files work, did it download etc, were there instructions etc), was it easy?
   b. How robust were the results – tweak the controls, sampling rule, use weights etc.
   c. Present one slide on suggestions for best practice in replication files

I’ll call on probably three to five people randomly to present in each class and run over two classes (so I reckon there is about a 50% chance of anyone being called…so worth doing this reasonably well).

**Monday 21st February No Class: Presidents Day**

**Section C): Non-market: peer-effects, gender, academia and unions**

**Monday February 28th: Technological Change and Education (Burning Glass day)**

First half reading – for a Quentin Tarantino non-linear style theme we will reconnect back to the start of the quarter and the routine/non-routine work literature. I included this paper as it is both interesting and uses great Burning Glass data (helpful for you to know about this as rapidly increasing use of this data):

2 [https://www.nber.org/conferences?eventType=past&page=1&perPage=50](https://www.nber.org/conferences?eventType=past&page=1&perPage=50)

Second half a different burning glass paper on the fascinating topic of the impacts of STEM vs non-STEM careers:

**Wednesday 2nd March:** No Class: Individual meetings on the Term Paper  
**Monday 7th March** No Class: Individual meetings on the Term Paper
We will have another update session of your papers – send me an updated draft from the last time and we can meet to discuss this, give feedback etc.

**Wednesday 9th March** Unions and Labor Relations and Politics
Four great papers which we should choose two to cover in class discuss:

Gender is a surging topic in economics (building on an old literature in economics and sociology). This is a great (and highly cited) paper in the field.
• “Gender identify and relative income within households”, Marianne Bertrand, Emir Kamenica, Jessica Pan (2015), Quarterly Journal of Economics, 571-614.

A clever (but macabre) paper, showing the returns to painful data collection:

By now politics has returned back somewhat to normal. A paper highlighting how US politics has always been evolving:

The classic RDD paper:

**TERM PAPER: Monday March 14th:** Give in your final term paper
Aim for a short AER P&P style length – about 10 pages of text and maybe 3 tables and 1 or 2 figures (not a full length paper). Only students taking the class for credit (not auditing students).