### Midterm Details

- You'll get back referee reports in lecture on Tuesday
- The midterm is coming up next class, October 11th
- The midterm is open book, you can have your notes, the readings and any other materials you want
- You can use your laptop to view these things but you cannot access the internet during the exam (download any files you want prior to the exam)

### Midterm Details

- The midterm will cover everything up to and including last Thursday's lecture (wrapping up money and banking)
- The required readings covered on the midterm:
  - Abramitzky (2015)
  - Feir, Gillezeau and Jones (2017)
  - Sawers (1992)
  - Federalist No. 11, 30 and 35
  - Temin (1968)

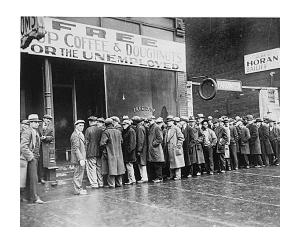
### Midterm Details

- There are a few things to focus on when studying
- Use past exams as a guide to the types of questions
- For the lectures, pay close attention to any bits of economic theory
- Be able to manipulate any of the graphs we have used
- Think about measurement and hypothesis testing
- For the readings, focus on the same sorts of things you did for your referee report
- Be ready to make connections between the readings and the topics from lecture

## **Empirical Project**

- Today we'll talk about the empirical project
- It's not due until November 30th, but now is a good chance to go over the basics
- All of the details are posted on Blackboard
- As with the referee reports, you are welcome to stop by office hours and ask me questions as you work on the project

## **Empirical Project Basics**



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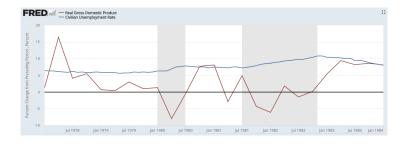
## **Empirical Project Basics**

The basic goal of the empirical project is to learn how to find, interpret and effectively present different forms of economic data. In particular, you will be producing a series of comparisons between the Great Depression and the Great Recession. One goal is for you to make meaningful connections between the two downturns, exploring their similarities and differences. A second equally important goal is to get good at conveying information to others.

- You will be preparing and submitting a single pdf document containing a mix of figures and written discussion
- The project should be submitted to me by email by 5pm on November 30th
- It is graded out of 20 points, one point will be deducted for late projects, with an additional point deduction for every 24 hours that passes
- There are five specific components you need to include in your project. Let's walk through each one

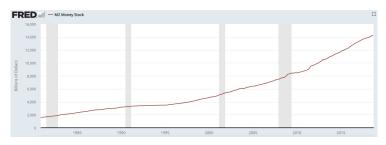
1. Before you can really compare the two events, it is necessary to decide when each one began and when it ended. There are a variety of ways to define the start and end of any economic downturn. The key here is that you should apply the same approach to both events in order to make meaningful comparisons. Provide your chosen beginning and end dates for the Great Depression and the Great Recession (you only need to specify starting and ending years, you do not need to give specific months or days). In one paragraph, explain the reasoning behind your choices.

### An Example



2. Create a single graph that compares the performance of financial markets during the Great Depression and the Great Recession. Your graph should have time on the horizontal axis and should begin at least two years before the start of each event and extend to at least two years after the end of each event. Provide one paragraph explaining your choice of variables and interpreting the graph.

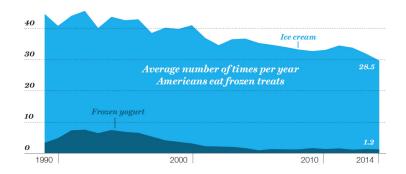
## A (Bad) Example



What's wrong with this figure? So many things.

3. Create a graph that compares the standard of living for the average consumer or worker during the Great Depression and the Great Recession. Your graph should use the same time periods you used in part 2. Provide one paragraph explaining your choice of variables and interpreting the graph.

## Another (Bad) Example



4. Identify one major piece of federal legislation aimed at aiding recovery from the economic downturn for the Great Depression and one for the Great Recession. In two to three sentences for each, describe the main features of the legislation. In two to three sentences, explain whether the two pieces of legislation represent a similar approach by federal government to both downturns or different approaches.

## A Non-US Example



5. Find two contemporary quotes from each economic downturn (four in total), one representing the general attitudes of the worker or consumer to the downturn and one representing the general attitudes of manufacturing firms to the downturn. These quotes can come from op-eds, political platforms, interviews, speeches or a variety of other sources. In addition to the quotes, include one paragraph based on your quotes explaining how attitudes toward the downturns differed between the Great Depression and the Great Recession.

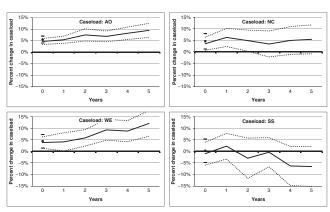
# A Non-US Example, Continued



### A Few Extra Tips

- The empirical project guidelines posted on Blackboard have all of these details and more
- Look at the guidelines for some helpful links to get you started (we'll look at a couple right now)
- One important thing to keep in mind is that I expect you to create your own graphs (don't copy and paste)
- When making graphs, make certain they are as clear and effect as possible
- Do as I say, not as I do (many a bad graph makes it into lecture)
- Let's wrap up by looking at Schwabish's 'An Economist's Guide to Visualizing Data'

Figure 1A
An Original Line Chart



Source: Klerman and Danielson (2011).

Figure 1B

A Revised Line Chart

#### Implied Impulse Response Functions for Different Caseloads

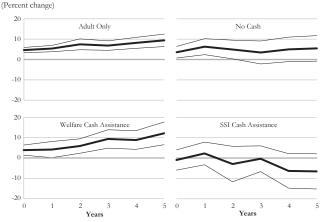
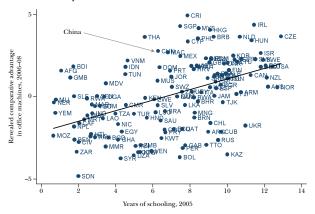


Figure 2A
A Clutterplot Example

#### **Education and Exports of Office Machines**



Source: Hanson (2012).

Figure 2B
Revising the Clutterplot Example

Education and Exports of Office Machines

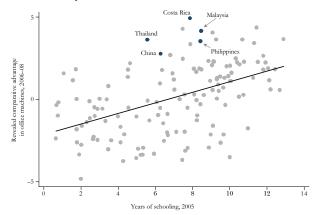


Figure 3A

The Basic Column Chart

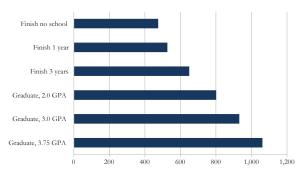
Figure 2 Discounted Expected Lifetime Earnings, VN(t') 1100 finish no school 1000 income in thousands finish 1 yr 900 800 finish 3 yrs 700 grad 2.0 GPA 600 grad 3.0 GPA 500 grad 3.75 GPA 400

Source: Stinebrickner and Stinebrickner (2013).

Figure 3B
The Revised Column Chart

#### Discounted Expected Lifetime Earnings, VN(t')

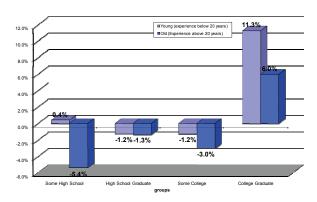
(Income in thousands)



Source: Author's calculations using numbers inferred from text in Stinebrickner and Stinebrickner (2013).

Figure 4A
A 3D Chart

Change in real weekly wages of US-born workers by group, 1990-2006



Source: Ottaviano and Peri (2008).

Figure 4B
Flattening a 3D Chart

## Change in real weekly wages of US-born workers by group, 1990–2006 $(\mbox{\sc Percent})$

