Long Run Macroeconomics

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University of California, San Diego
Spring, 2023

Lecture 1
(note: this lecture will be recorded)

Welcome, and nice to meet you!

Something about me…

Lucrezia (Italy)

Education:

BA in Economics from LUISS-Rome (2001)

Ph.D. in Economics from UW-Madison (2007)

Professional History:

Assistant Professor at UC San Diego from 2007 to 2014

Assistant Professor at CU Boulder from 2014 to 2017

Associate Teaching Professor at UCSD since 2017

Research Interests:

Asset Price Bubbles, Macroeconomic Impact of Sustainable Investing

Twitter: @giacomorondina

…now, your turn!

Why Study Macroeconomics?

Macroeconomics studies:

1. Economic Growth

1880: $5,000*

2016: $53,000*

***median income in 2011 dollars, source: Maddison Project Database**

Macroeconomics studies:

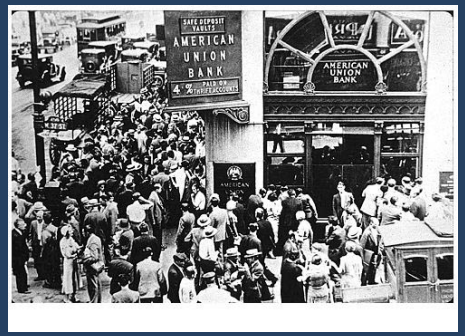
2. Economic Inequality

San Diego, 2023

San Diego, 2023

Macroeconomics studies:

3. Economic Cycles



1929-1933
Great Depression

2020-2021
COVID-19 Recession

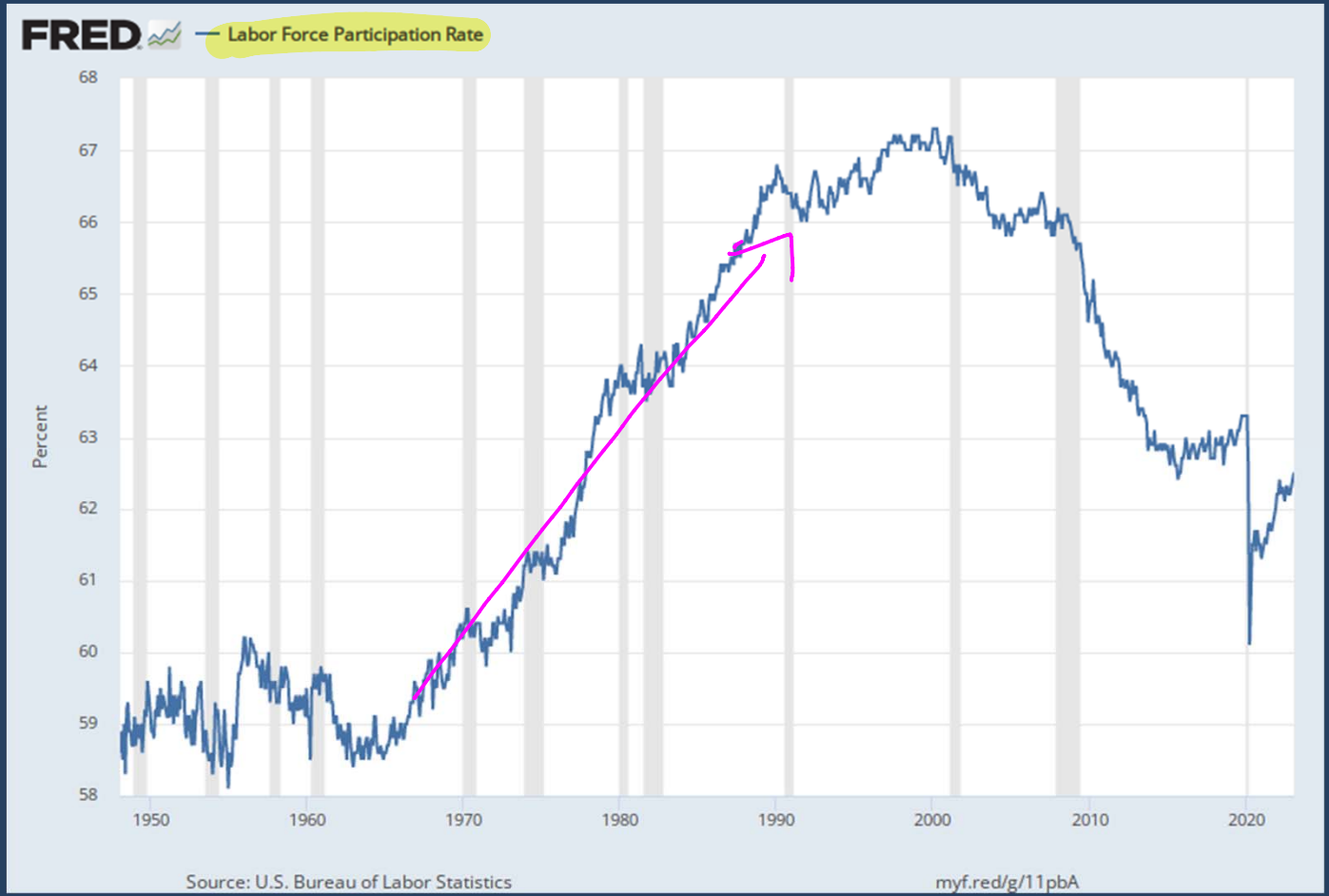
2008-2010
Great Recession

What is the “Long Run?”

definition based on time: any macro phenomenon that persists more than 20-25 years

definition based on “adjustment:” any macro phenomenon that persists once prices and quantities have had the chance to adjust

What is the “Long Run?”



What are our Learning Objectives in Econ 110A?

In the context of long run macroeconomic issues, we want to learn how to:

1. measure
2. model
3. understand/predict

What is different from Macro Principles (Econ 3)?

1. measure: advanced understanding of critical issues with measurement of macroeconomic variables
2. model: advanced practice of how to build and analyze macroeconomic models
3. understand/predict:
    a) quantitative predictions due to mathematical structure
    b) sophisticated and nuanced analysis of economic mechanisms
    c) advanced critical understanding of power and limits of macroeconomic analysis

Econ 110A: Important Info

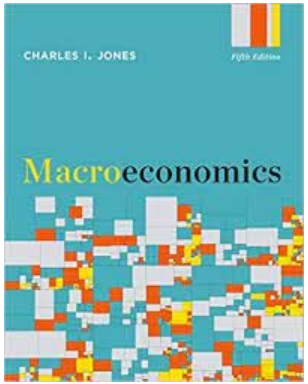
Lectures

- in person on Tue and Thu, Center Hall 214
- recorded and posted on Canvas

Web Platforms

- **Canvas**
  - Videos and Slides from Lectures
  - Practice Problems and Solutions
  - Review Material
  - Piazza Discussion Board
  - Weekly Reflection Notes

Econ 110A: Textbook



Title: **Macroeconomics**

Author: Charles I. Jones

Edition: 5th

Canvas: Redshelf (opt-out system)

Our Instructional Team

Graduate Instructional Assistants:

Carlos, John

Discussion Sessions

- Mondays (Section A), Wednesdays (Section B)
- Review important material
- Work on problems from old exams
- Recorded and posted on Canvas

This week: review of math needed for Econ 110A (asynchronous, posted on Canvas tomorrow)

Important Dates

- **Midterm**: Monday, May 8, 7 pm – 8:50 pm (**out-of-class**)
- **Final**: Saturday, June 10, 3 pm to 6:00 pm

Office Hours

- Tue and Thu, 5:30 pm to 6:30 pm, Econ 226 and Zoom

Academic Integrity

academic integrity means having the **courage** to act in ways that are honest, fair, responsible, respectful & trustworthy even when it is difficult

https://academicintegrity.ucsd.edu/forms/form-pledge.html

Plan for the rest of Lecture 1

- Math Review Quiz
- How Macroeconomics studies Questions
- Application: Consumption and Income

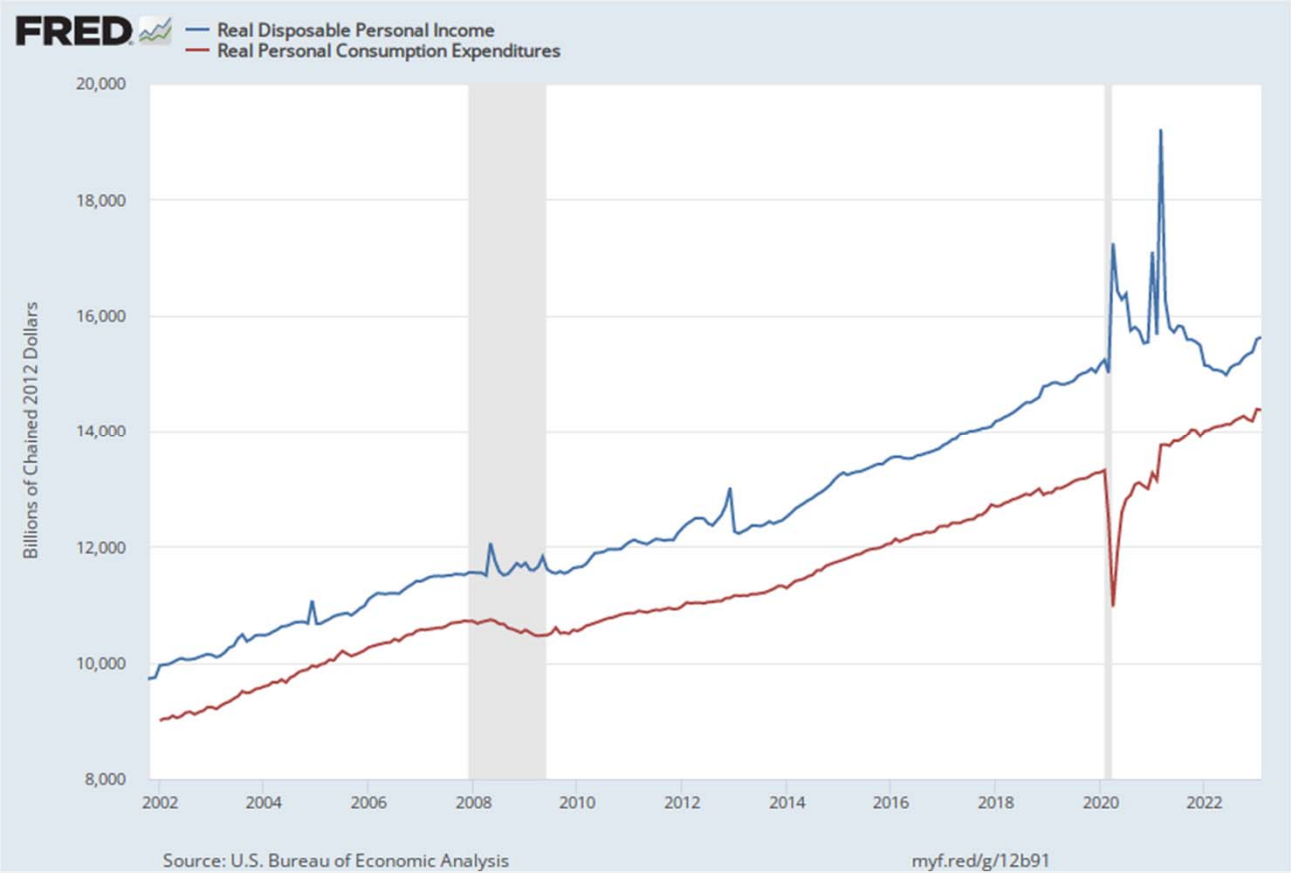
Math Review Quiz

- Not graded, but 5 bonus points for submission
- Use it as feedback on what math to review for the class
- Math review session posted tomorrow

How Macroeconomics Studies Questions

Step 1: document facts motivating the questions

Example: Income and Consumption



Question: Why is consumption smoother than income?

How Macroeconomics Studies Questions

Step 2: ~~run experiments~~ to replicate facts

build models

How Macroeconomics Studies Questions

Step 3: simulate policy experiments in the model

Example: Income and Consumption

Step 2: develop a model of income and consumption

Two-Period Neoclassical Consumption Model

1. The economy consists of a representative consumer who only lives for two periods: today (period 1), and the future (period 2).
2. The consumer earns income in both periods; can save (or borrow) and receives (or pays) some interest.

Y_1: income in period 1

Y_2: income in period 2

S: savings (borrowing)

C_1: consumption in period 1

C_2: consumption in period 2

$1 + R$: gross interest rate

$$Y_1 = C_1 + S$$

$$Y_2 + S(1+R) = C_2$$