



# Advanced Macroeconomics

## Introduction

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AY 2023-24, Semester I

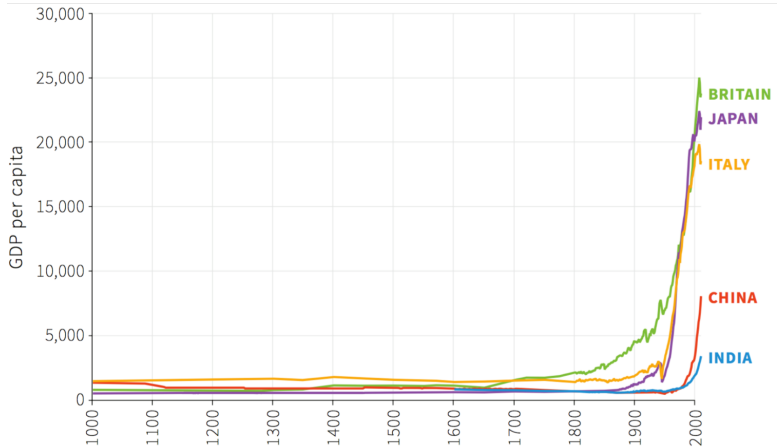
## Laptop ban

The use of laptops, tablets, smartphones and similar devices is banned in this class

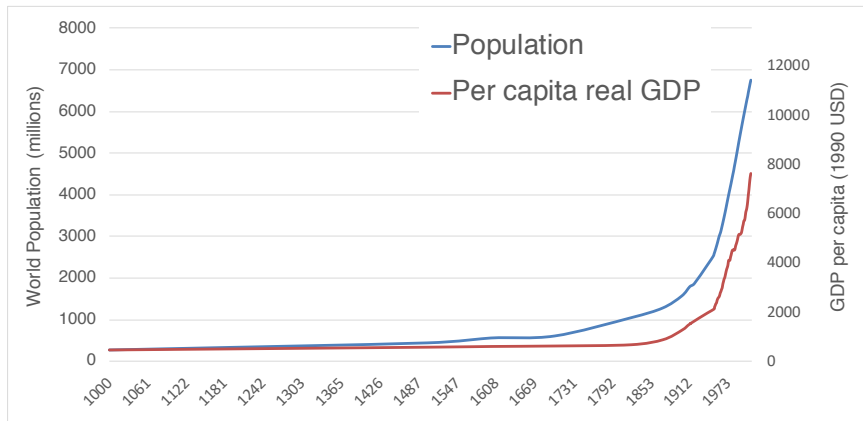
Research shows that the use of laptops in class harms learning and reduces students' grades.



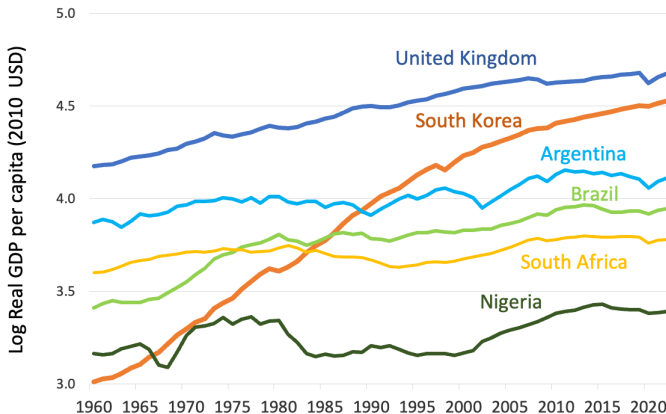
# History's hockey stick



## World population took off before living standards

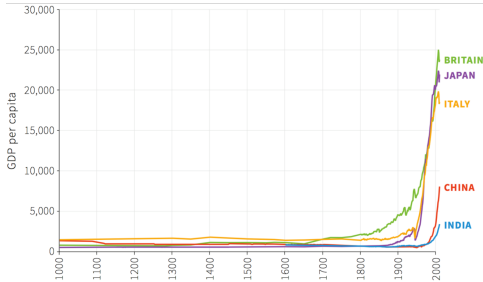


# Growth convergence & growth divergence





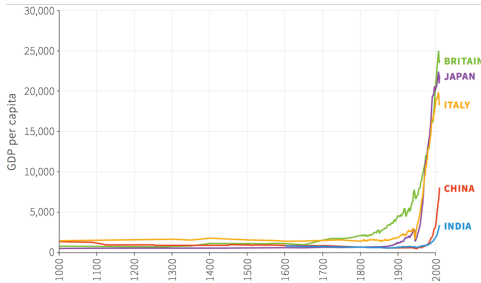
# Macroeconomic facts



How did all this happen?

Why some countries became rich & others much less?

# Macroeconomic facts



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Why some countries became rich & others much less?

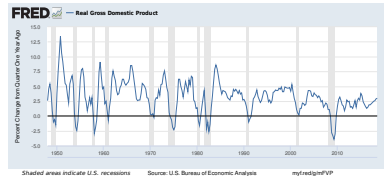
- ▶ Capitalism → industrial revolution → growth & inequality
- ▶ Capital accumulation? Technological progress? Institutions? Geography? History? Luck?
- ▶ mechanics of growth vs fundamental causes



## Business cycles in the US



(a) log Real US GDP

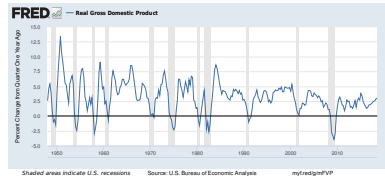


(b) quarterly growth rate (YoY)

## Business cycles in the US



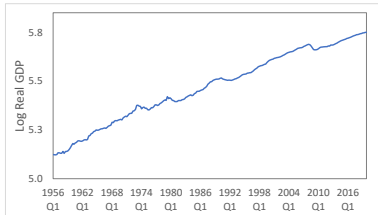
(c) log Real US GDP



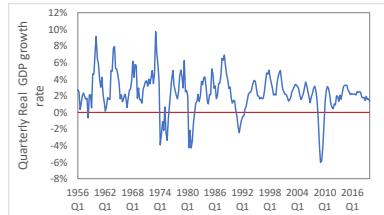
(d) quarterly growth rate (YoY)

- ▶ Long(-ish) expansions interrupted by short recessions.
- ▶ No regular cycles, apparently.

# Business cycles in the UK



(e) log Real UK GDP



(f) quarterly growth rate (YoY)

► Broadly similar features.

## Four 'Eras' of Macroeconomics

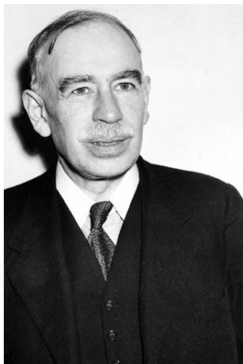
- ▶ **1930s:** Great Depression and Keynesian revolution.
- ▶ **1940s-1973:** Golden Age and neoclassical synthesis.
- ▶ **1970s-mid-1980s:** Neoclassical counter-revolution
- ▶ **Late 1980s-?:** New-Keynesian new synthesis

## Four 'Eras' of Macroeconomics:

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## A stylized history of macroeconomics

### Keynes and the birth of modern macroeconomics



*“On the one side are those who believe **that the existing economic system is a self-adjusting system** (...) On the other side of the gulf are those that reject the idea that the existing economic system is, in any significant sense, self-adjusting.*

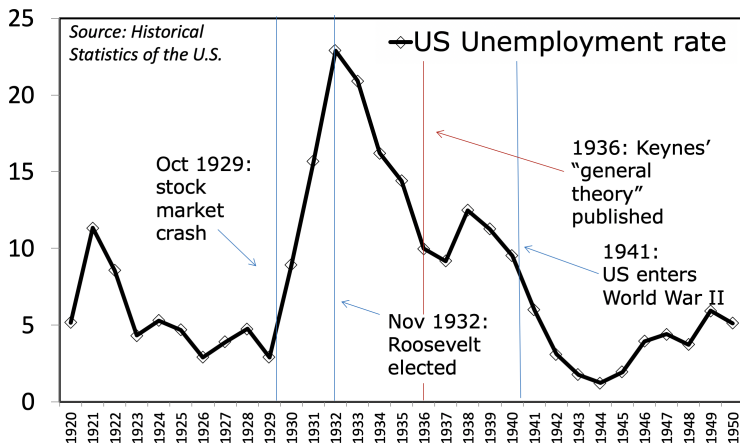
*The strength of the self-adjusting school depends on it having behind it **almost the whole body of organised economic thinking** of the last hundred years (...)*

*Thus, if the heretics on the other side of the gulf are to demolish the forces of nineteenth-century orthodoxy (...) they must attack them in their citadel (...) Now I range myself with the heretics.”*

(Keynes, 1973a, Vol. XIII, pp. 485–92)

# A (stylized) bit of history

## The Great Depression and the birth of modern macroeconomics



## The Keynesian revolution

- ▶ Strongly influenced by the historical context.
- ▶ Focus on *aggregate* variables.
- ▶ Macroeconomic equilibrium can feature involuntary unemployment.
- ▶ Aggregate demand determines the level of output in the short-run.



## The 'Eras' of Macroeconomics:

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## 1940s-1973: Golden Age & neoclassical synthesis

- ▶ Keynesian ideas dominate, and influence policy
  - Demand management
  - Active fiscal policy
- ▶ 'Golden Age' in industrialized economies;
- ▶ 'Neoclassical synthesis' in economic theory



## The Neoclassical Synthesis

- ▶ Reconcile neoclassical micro and Keynesian macro
- ▶ IS-LM + Phillips curve
- ▶ Theoretical extensions:
  - portfolio analysis [Tobin];
  - open economy [Mundell-Fleming];
  - **growth** [Harrod, Robinson, Kaldor, Solow].
- ▶ Large-scale econometric models [Lawrence Klein, Cowles Commission]

## The 'Eras' of Macroeconomics:

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## 1970s: Counter-revolution

- ▶ 1970s economic crises
  - labor unrest
  - stagflation
- ▶ Paradigm shift in macro theory
  - Monetarism (1960s)
    - natural unemployment rate
    - quantity of money
  - 'New-Classical' Macro (1970s-80s)
    - Lucas critique → microfoundations
    - business cycles as optimal responses to shocks



## The 'Eras' of Macroeconomic theory

- ▶ 1930s: Great Depression and Keynesian revolution.
- ▶ 1940s-1973: Golden Age and neoclassical synthesis.
- ▶ 1970s-mid-1980s: Neoclassical counter-revolution
- ▶ **Late 1980s-?: New-Keynesian new synthesis**

## New-Keynesian/DSGE: a new synthesis

- ▶ Historical context
  - Late 1980s-2007
  - Great Moderation in advanced economies graph
- ▶ Trends in macro theory
  - New-Keynesian DSGE models
  - a new-synthesis



## Recent trends

- ▶ 2008-09 Great Recession & slow recovery induced some rethinking
  - ▶ not a revolution, though
- ▶ Hysteresis
- ▶ Secular stagnation models
- ▶ The Great Return of fiscal policy? (at least at the ZLB...)
- ▶ HANK: Heterogeneous Agents New-Keynesian Models



## Module outline

1. **Intro:** Macroeconomic facts & a brief history of macro theory
2. **Economic growth (I):** Mechanics of capital accumulation & growth
3. **Economic growth (II):** Ideas, history, geography and institutions
4. **Real business cycles:** Theory & evidence
5. **New Keynesian models:** Introduction to DSGE

# The plan

1. **Week 1:** Introduction + Harrod model
2. **Week 2:** Solow growth model
3. **Week 3:** RCK + OLG models
4. **Week 4:** Endogenous growth theory
5. **Week 5:** Fundamental causes of growth
6. **Week 6-7:** Real Business Cycle theory
7. **Week 8-9:** Introduction to New Keynesian models

## Requirements & Grading

- A. Participation in lectures & seminars [10%]
- B. Coding project [25%]
- C. Final exam [65%]

## The rules of the game of the course

a. Textbook

David Romer *Advanced Macroeconomics*, Fifth Edition

*Also have a 'math for econ' textbook at hand (Chiang or similar).*

b. Readings

A reading every week (more or less).

You'll need to read the relevant materials *before we discuss them in class*.

It is crucial that you do that.

c. Keats page

for materials, assignments and announcements

d. Laptop ban

use of electronic devices is banned in this class.

## Next readings

Before Wed Oct 8 lecture:

- ▶ Romer textbook, Chapter 1 (skip Section 1.8)

Before Wed Oct 11 lecture:

- ▶ Romer textbook, Chapter 2