



Advanced Macroeconomics

Introduction

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AY 2025-26, Semester I

Plan for today

1. Basic macroeconomic facts.
2. Brief historical overview on macroeconomic theory.
3. Main logistics of the module.
4. The Harrod-Domar growth model

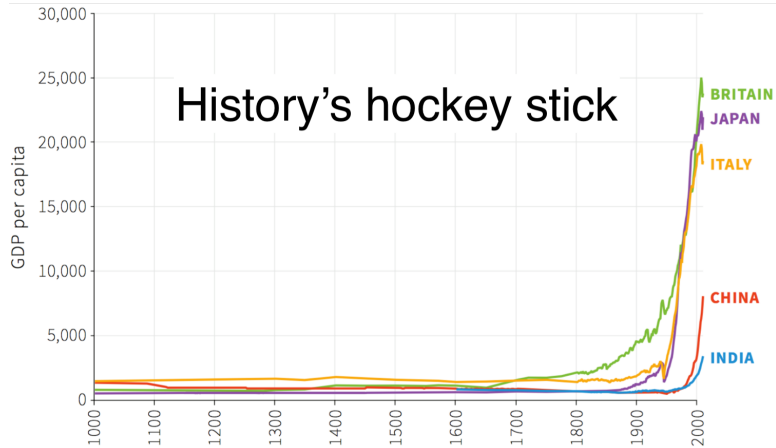
Laptop ban

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

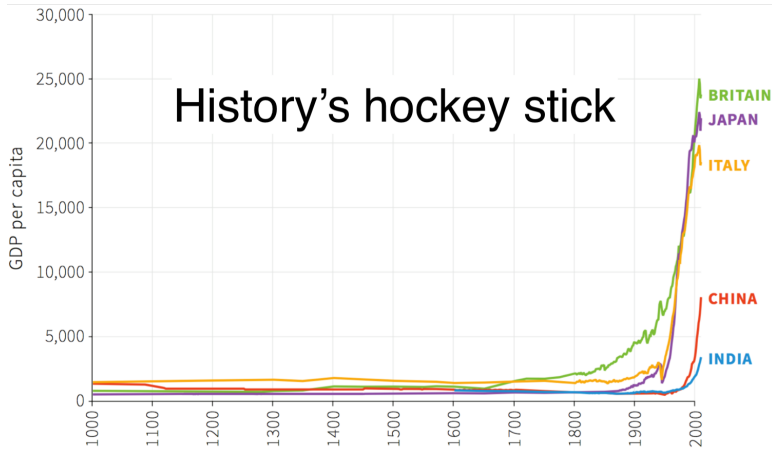
Research shows that the use of laptops in class harms learning and reduces students' grades.



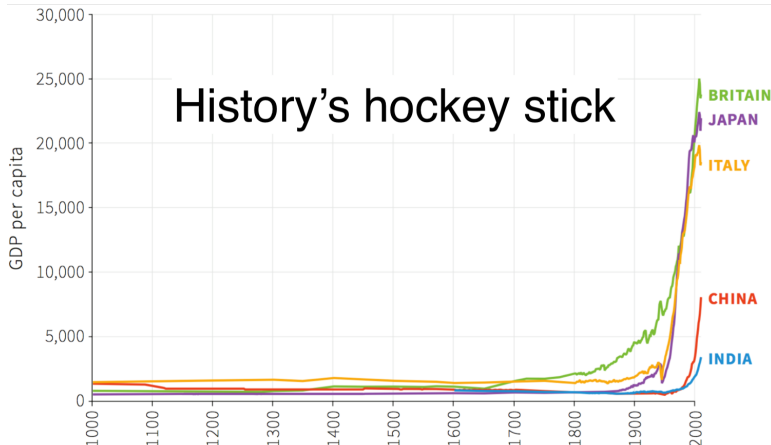
Macroeconomic facts: growth



Macroeconomic facts: growth

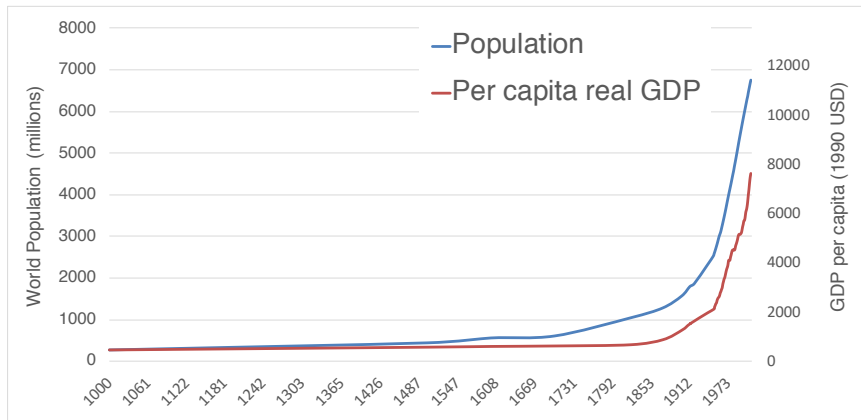


- ▶ What is GDP per capita? What does it measure?



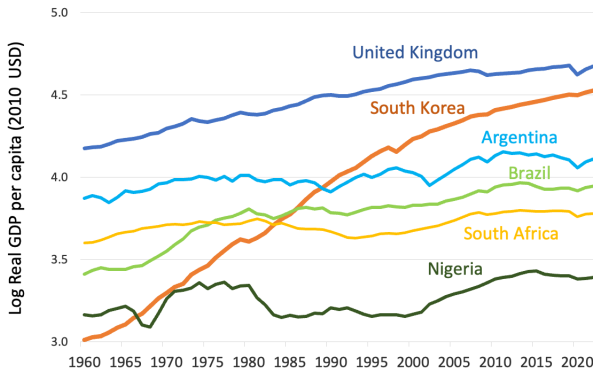
- ▶ What is GDP per capita? What does it measure?
- ▶ What do we learn from this graph?

World population took off before living standards

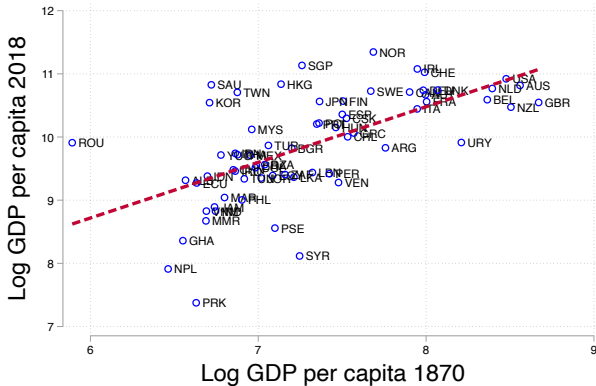


Macroeconomic facts: growth

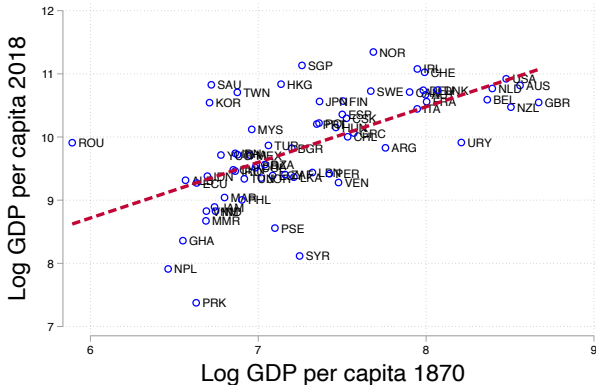
- ▶ Initial waves of growth largely confined to North Atlantic economies.
- ▶ Huge gap in living standards across countries opened up.
- ▶ In 20th Century, a few countries caught up (*growth convergence*) while few others fell behind (*growth divergence*)
- ▶ But for most countries, the gaps have largely persisted.



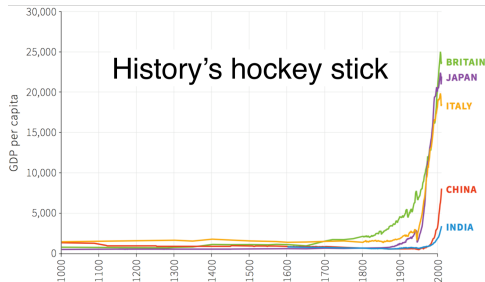
Persistence in GDP per capita



Persistence in GDP per capita



Macroeconomic facts: growth

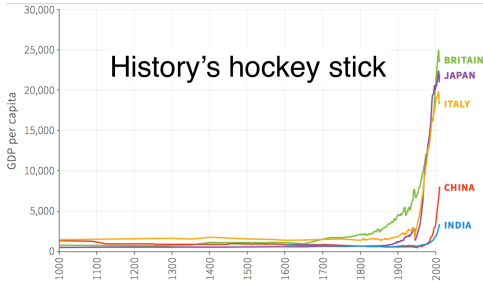


How did all this happen?

Why after millennia of stagnation, suddenly economic growth started?

Why some countries became rich and others remained poor?

Macroeconomic facts: growth



How did all this happen?

Why after millennia of stagnation, suddenly economic growth started?

Why some countries became rich and others remained poor?

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

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- The graph illustrates the long-term growth of real GDP per person in the United States. The logarithmic scale on the y-axis highlights the exponential nature of this growth over the seven-decade period. The data shows a consistent upward trajectory, with minor deviations due to economic cycles and external shocks like the oil price increases in the 1970s.

Shaded areas indicate U.S. recessions

Source: U.S. Bureau of Economic Analysis

myfred.com/FVP

9

Four 'Eras' of Macroeconomics

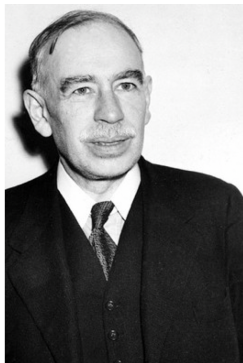
- ▶ **1930s:** Great Depression and Keynesian revolution.
- ▶ **1940s-1973:** Golden Age and neoclassical synthesis.
- ▶ **1970s-mid-1980s:** Neoclassical counter-revolution
- ▶ **Late 1980s-?:** New-Keynesian new synthesis

A stylized history of macroeconomics

Four 'Eras' of Macroeconomics:

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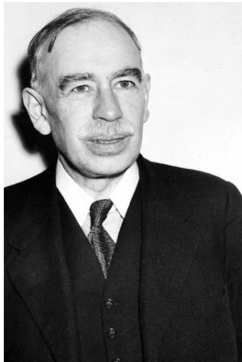
Keynes and the birth of modern macroeconomics



- ▶ Keynes founded modern macroeconomics
- ▶ 'General Theory of Employment, Interest and Money' (1936)
- ▶ A theory to explain behaviour of *aggregate* variables and their relationships
- ▶ Aimed to challenge the then prevailing neoclassical theory.
- ▶ Reject the conclusion that the economy is a self-adjusting system that spontaneously tends to full employment.

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 (...)*

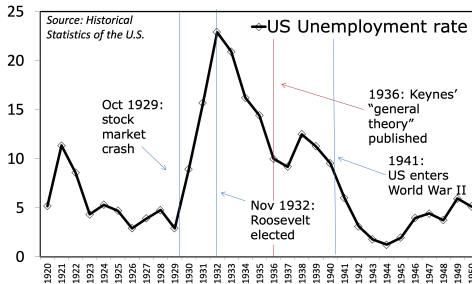
Thus, if the heretics on the other side of the gulf are to demolish the forces of nineteenth-century orthodoxy (...) they must attack them in their citadel (...) Now I range myself with the heretics.”

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

A stylized history of macroeconomics

The Great Depression & the birth of modern macro

- ▶ Modern macro born in the context of the Great Depression
- ▶ Keynes' GT provided an explanation for why it happened
- ▶ And for why expansionary policies seemed to help (as in the US, Sweden and Germany).



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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- ▶ Late 1980s-?: New-Keynesian new synthesis

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]

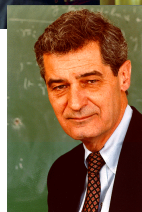
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1970s: Counter-revolution

Back to seeing the economy as a self-adjusting system

- ▶ 1970s economic crises
 - labor unrest
 - stagflation
- ▶ Paradigm shift in macro theory
 - Monetarism (1960s)
 - 'New-Classical' Macro (1970s-80s)



1970s: Counter-revolution

► Monetarism

- A *natural unemployment rate* the economy will converge to
- Keynesian attempts to reach full employment only cause inflation
- Policy should only ensure appropriate & stable money supply growth



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► New-Classical Macroeconomics

- Lucas critique → neoclassical microfoundations for macro
- Business cycles as *optimal* responses to shocks
- No role for fiscal *nor monetary* policy

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



New-Keynesian/DSGE: a new synthesis

- ▶ Methodologically, New-Classical Macro gains full acceptance
- ▶ But its implications are widely seen as unrealistic
- ▶ New Keynesian macro adds imperfections to the New-Classical model, leading to 'more Keynesian' (or at least monetarist) conclusions
- ▶ Monetary policy matters



Recent trends

- ▶ 2008-09 Great Recession & slow recovery induced some rethinking
 - ▶ more tinkering than revolution, though
- ▶ Hysteresis
- ▶ Secular stagnation models
- ▶ The Great Return of fiscal policy? (at least at the ZLB...)
- ▶ HANK: Heterogeneous Agents New-Keynesian Models
- ▶ ABM: Agent-based models

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:** Real Business Cycle theory
7. **Week 7:** Key elements of New Keynesian theory
8. **Week 8:** Simplified New Keynesian model
9. **Week 9:** Financial markets
10. **Week 10:** Labor market

Assessment

A. Essay (due on Dec 18) [50%]

B. Final exam [50%]

The rules of the game

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 Friday Oct 10 lecture:

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

Before Friday Oct 17 lecture:

- ▶ Romer textbook, Chapter 2