

Lecture 1

Introduction

Macroeconomics (Quantitative)

Econ 101B

Jón Steinsson

University of California, Berkeley

State of the Economy Today

- How is the U.S economy doing right now?
 - a) Very well, better than average
 - b) About average
 - c) Not well, less well than average
 - d) Terribly

Unemployment Rate



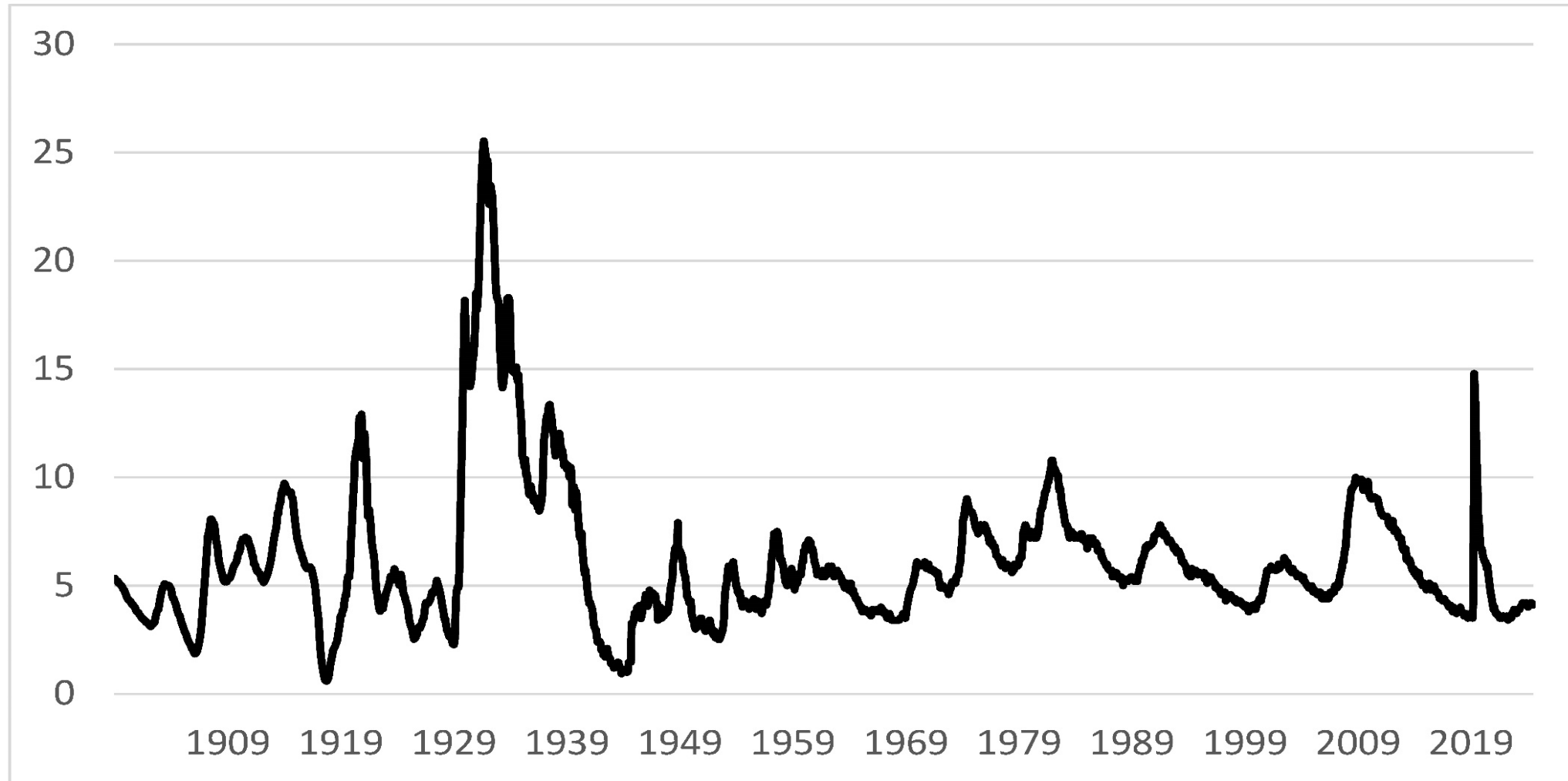
Unemployment rate in July 2025: 4.2%

Unemployment Rate – Long View



Source: U.S. Bureau of Labor Statistics via FRED®

Unemployment Rate – Very Long View



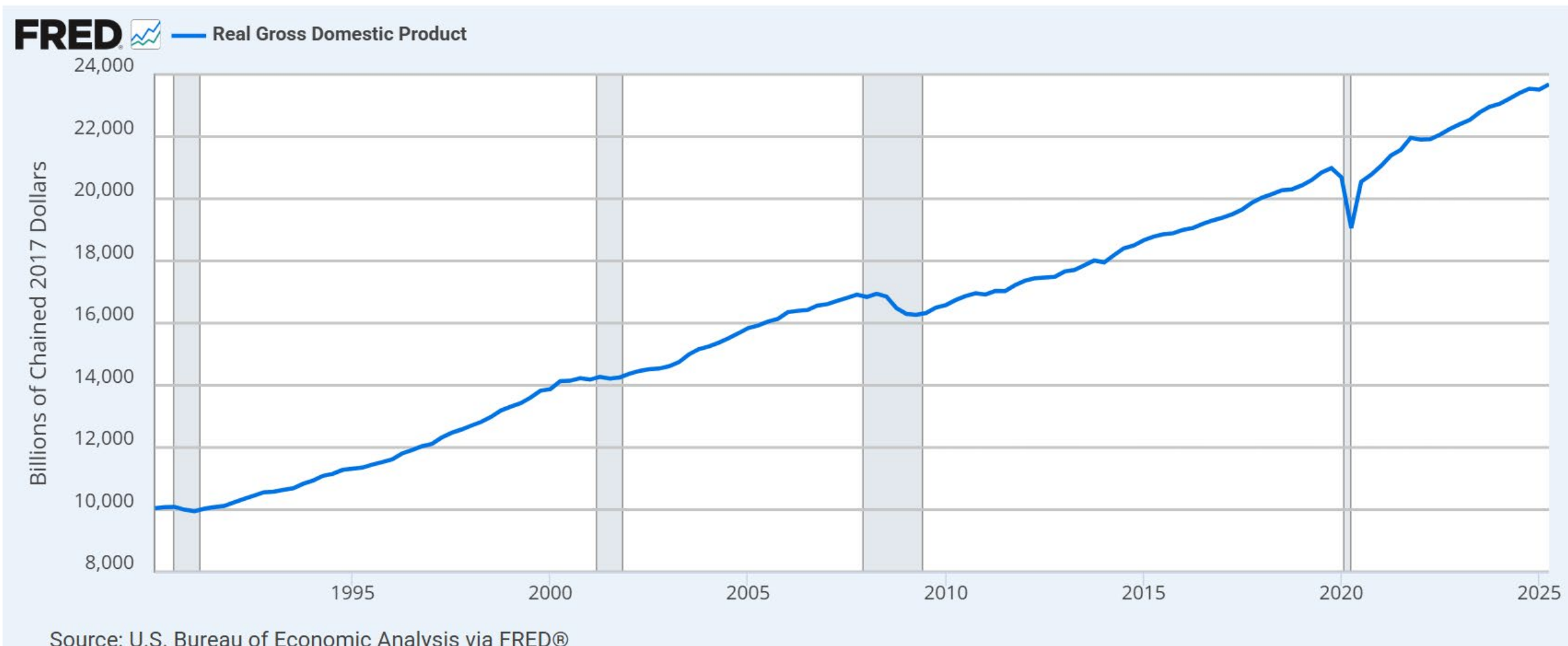
Source: BLS and Petrosky-Nadeau and Zhang (2020)

Real GDP Growth



Source: U.S. Bureau of Economic Analysis via FRED®

Real GDP



Core CPI Inflation

(less food and energy)

FRED



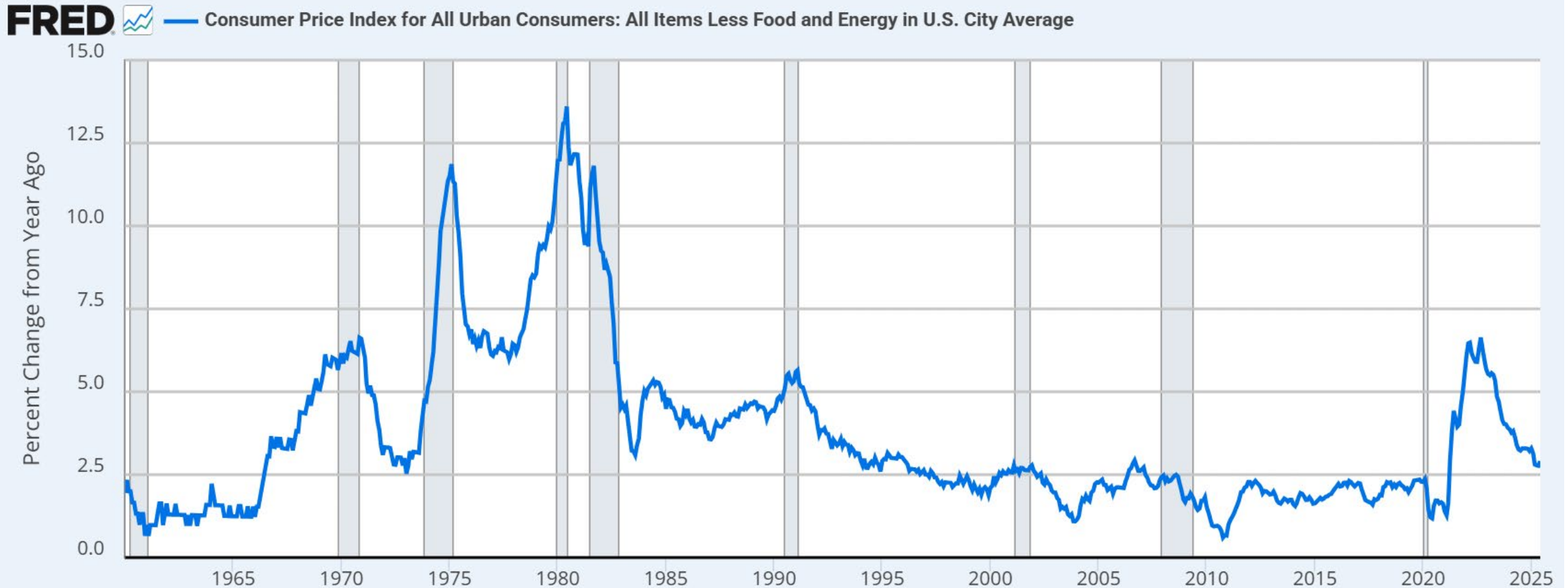
— Consumer Price Index for All Urban Consumers: All Items Less Food and Energy in U.S. City Average



Source: U.S. Bureau of Labor Statistics via FRED®

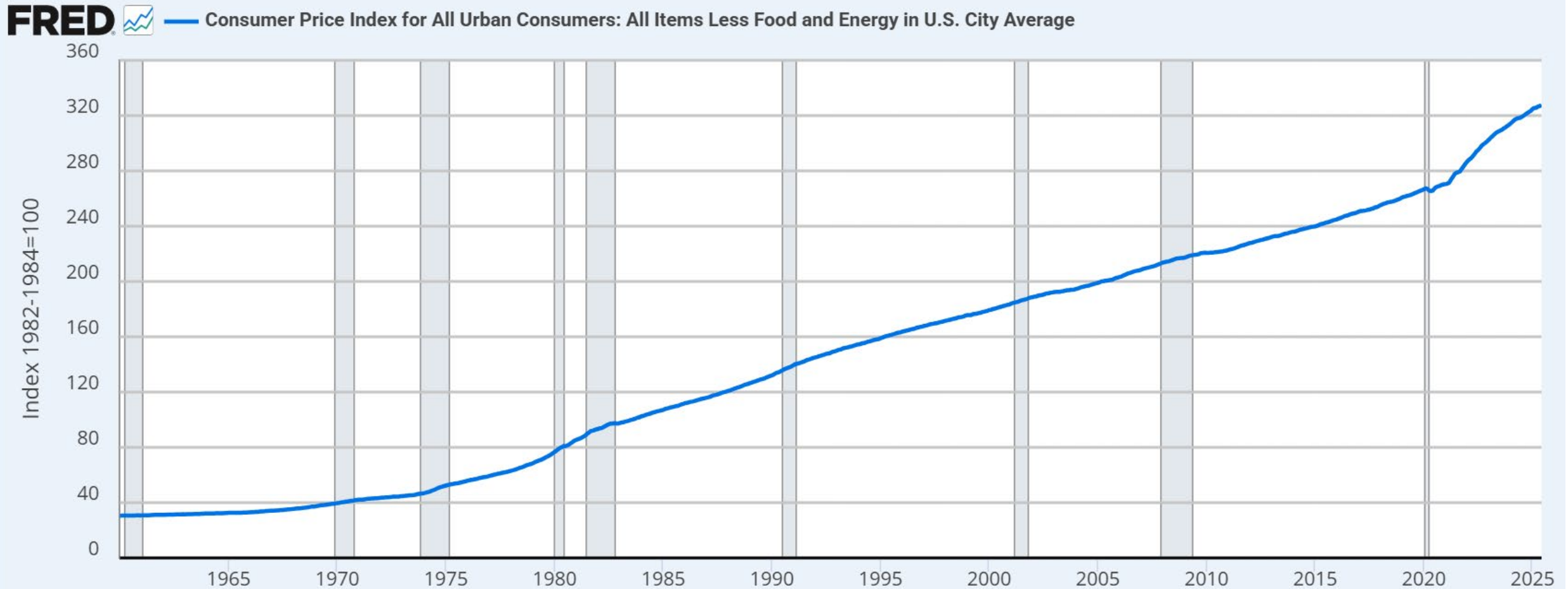
Core CPI Inflation in June 2025: 3.0%
(percentage change from a year earlier)

Core CPI Inflation – Longer View



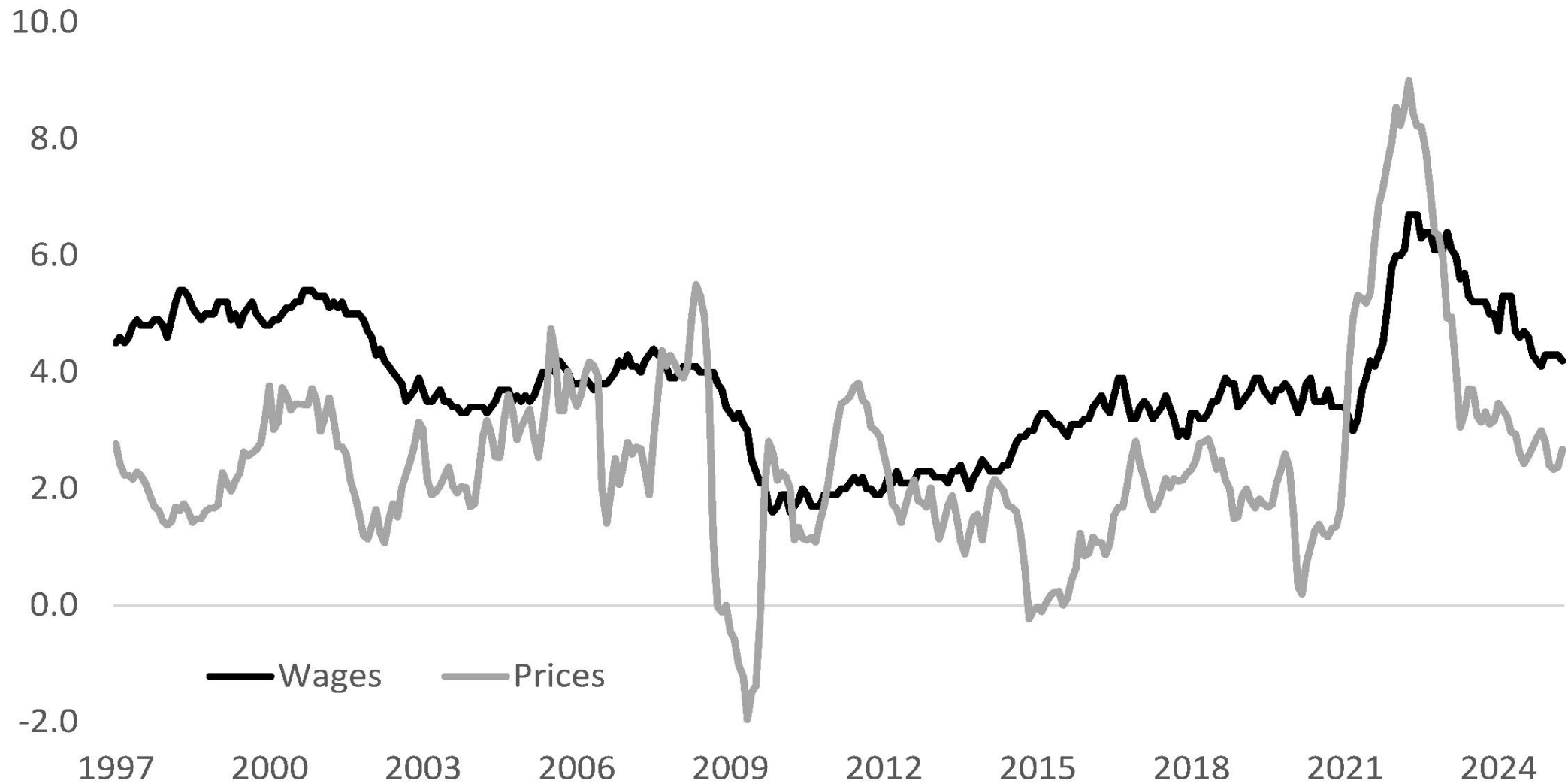
Source: U.S. Bureau of Labor Statistics via FRED®

Core CPI Level

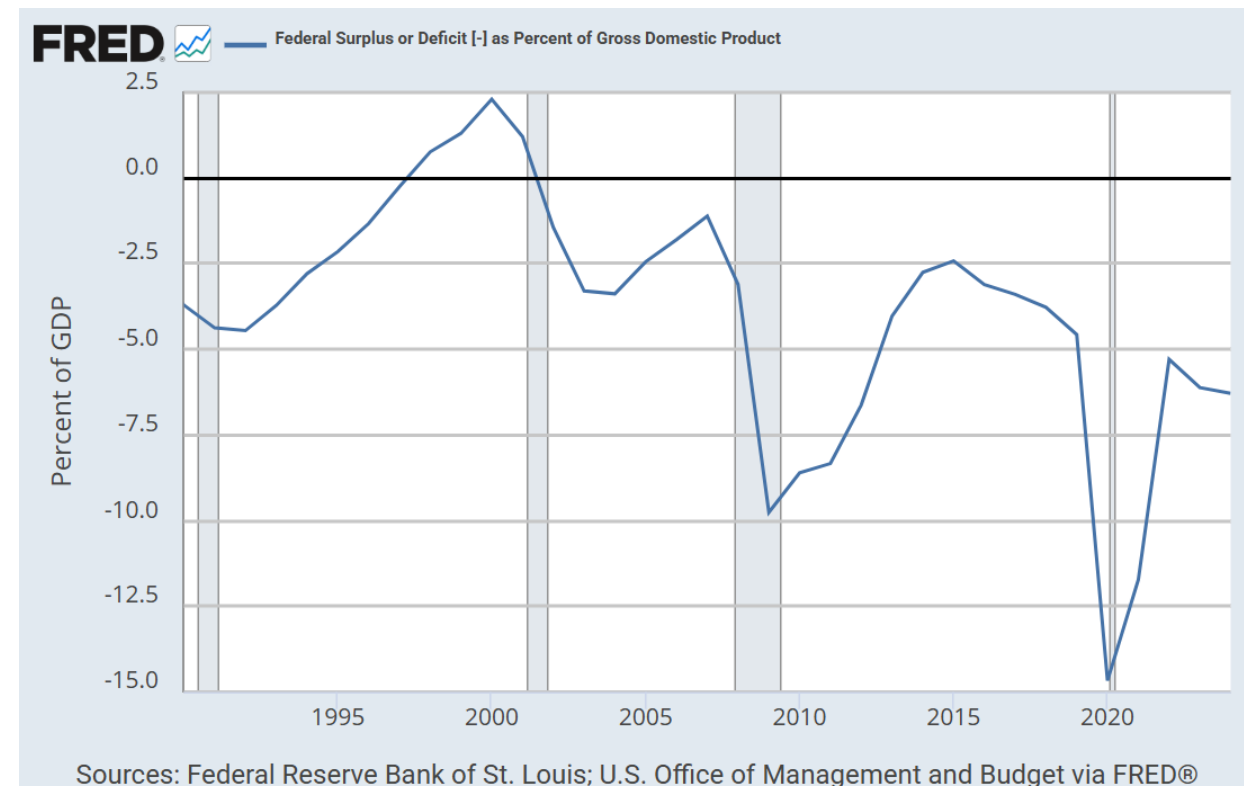
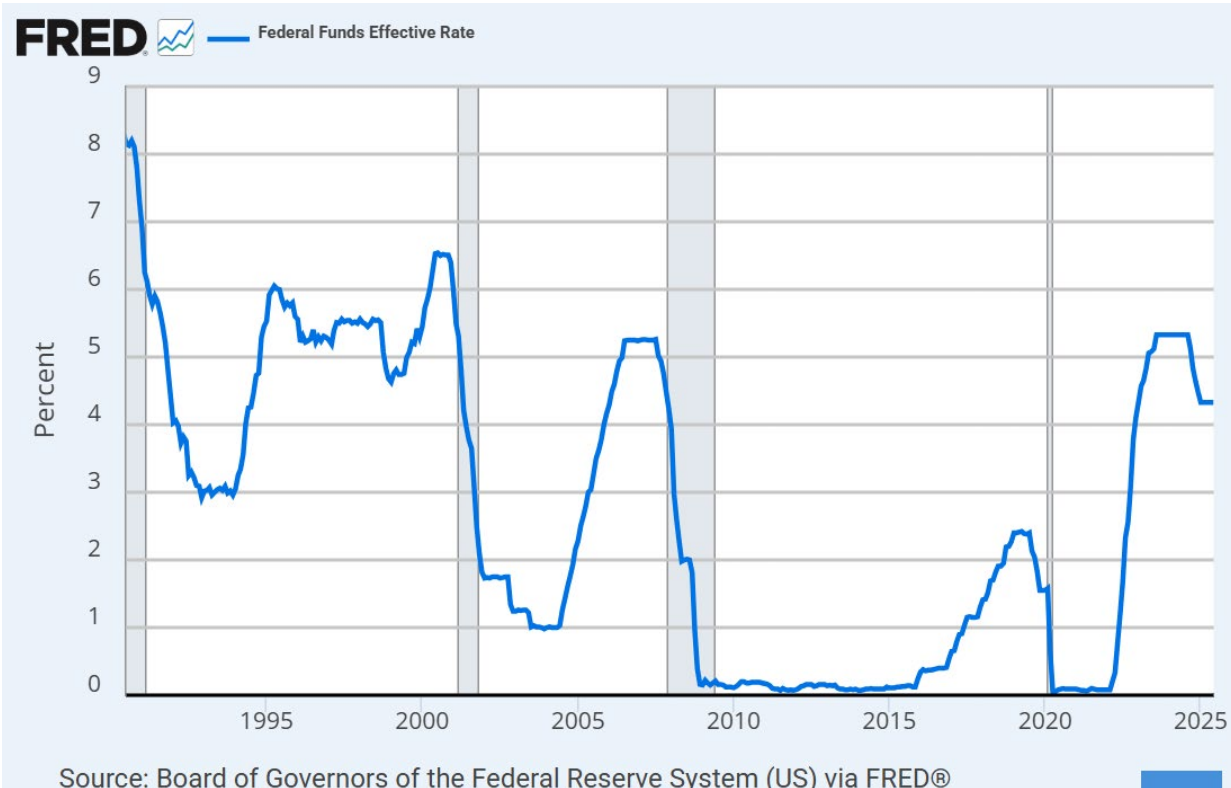


Source: U.S. Bureau of Labor Statistics via FRED®

Real Wage Growth



Monetary and Fiscal Policy



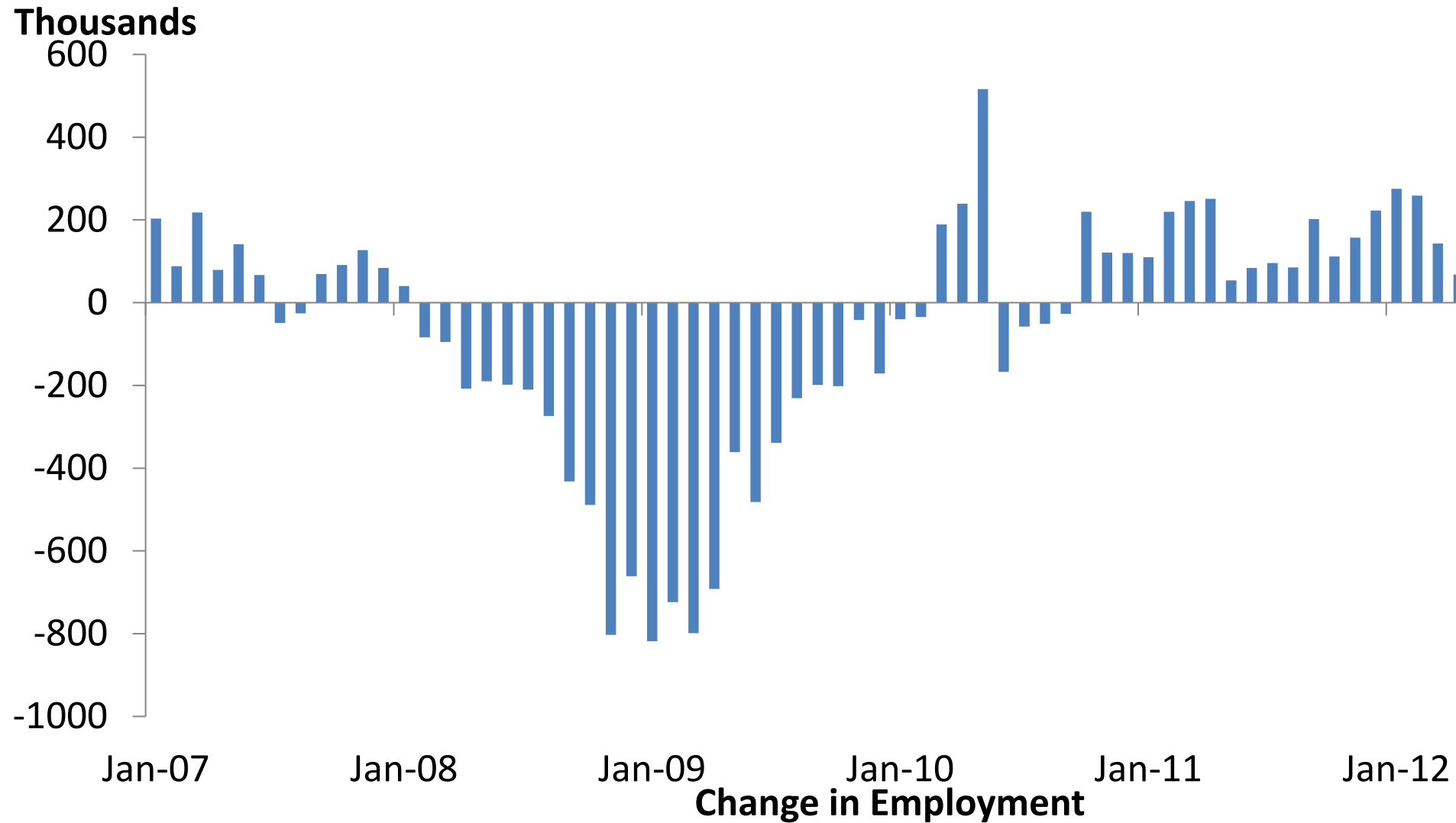
State of the Economy Today

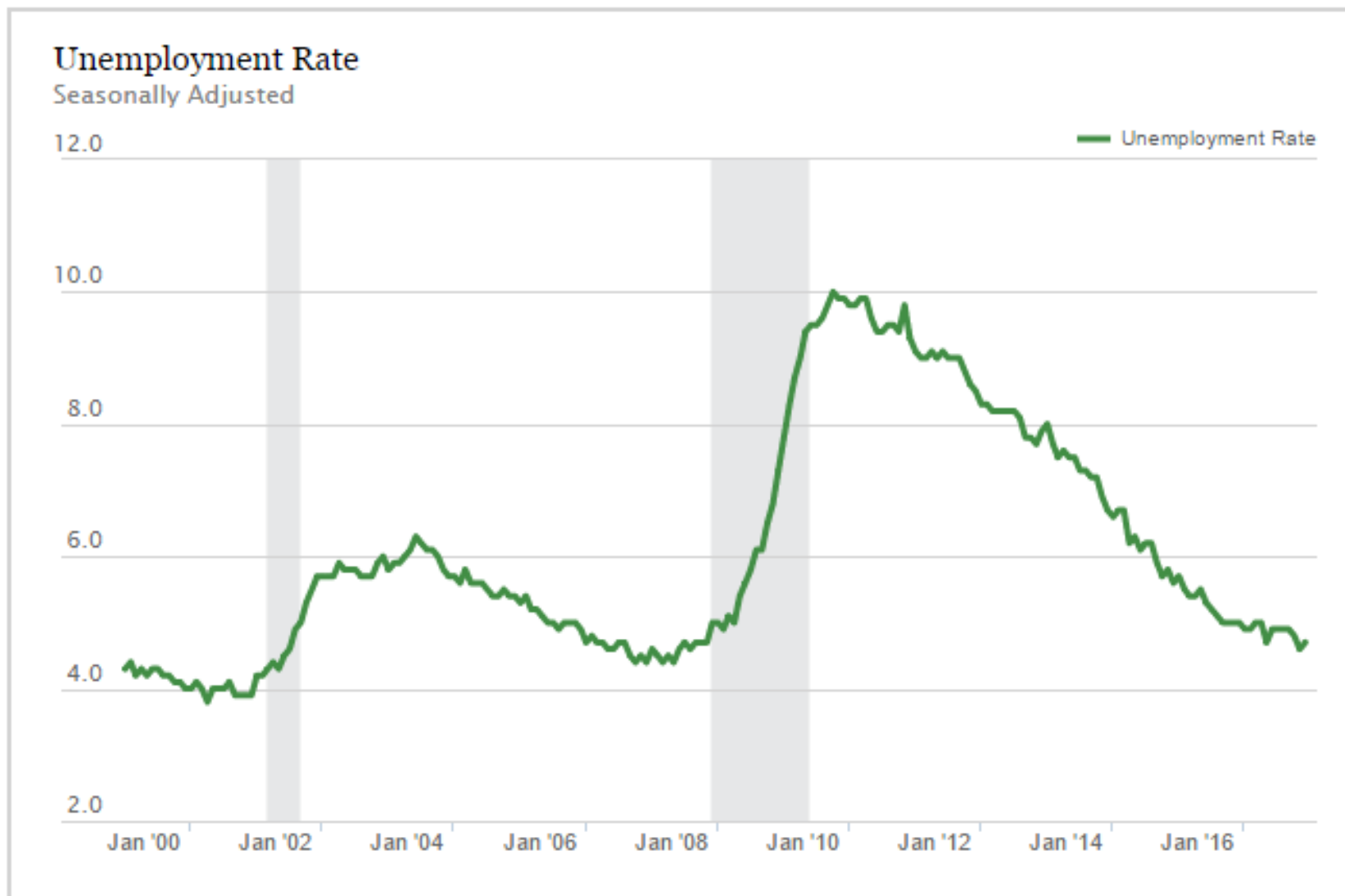
- Unemployment pretty low
- Middling GDP growth
- Inflation back down to low level
- Strong real wage growth
- Economy is doing very well

Gaining Perspective

- One goal of the class:
 - Understand better current economic situation
 - Ongoing policy debate
- Another goal: Gain a broader perspective
 - Recessions and booms more generally
 - Long run economic growth / Differences in income across countries
 - Inflation / Hyperinflation
 - Financial crises

Great Recession





Unemployment Rate, SA (Seasonally Adjusted), 16+ non-institutionalized population, is the ratio of the number of unemployed to the number of those in the labor force. Unemployed are those with no job, actively looking for work in the prior 4 weeks, and who currently can work.

Source: Bureau of Labor Statistics, Current Population Survey (CPS).

Policy Response

- Federal Reserve lowered interest rates to zero
- Bush/Obama administrations passed large “fiscal stimulus” bills
- Massive increase of federal deposit insurance
- Lehman Brothers let go bankrupt
- Large Wall Street “bailouts”
(Fannie Mae, Freddy Mac, AIG, big banks)

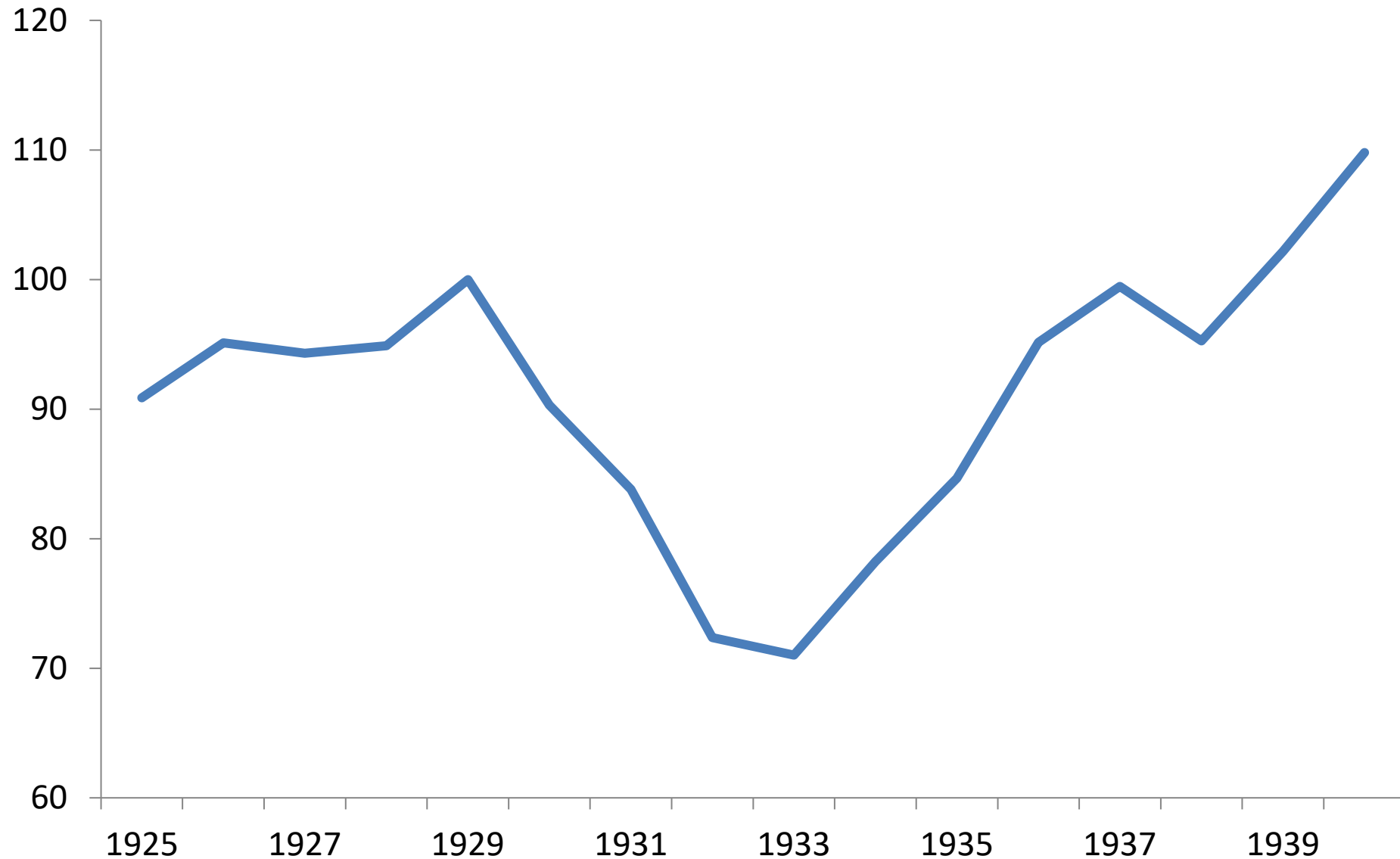
State of Macro Knowledge

- Krugman (2009):
 - How did economists get it so wrong?
(i.e., how could we let this happen?)
 - “mistook beauty, clad in impressive-looking mathematics, for truth”
 - “blindness of the very possibility of catastrophic failures in a market economy.”

Great Recession vs. Great Depression

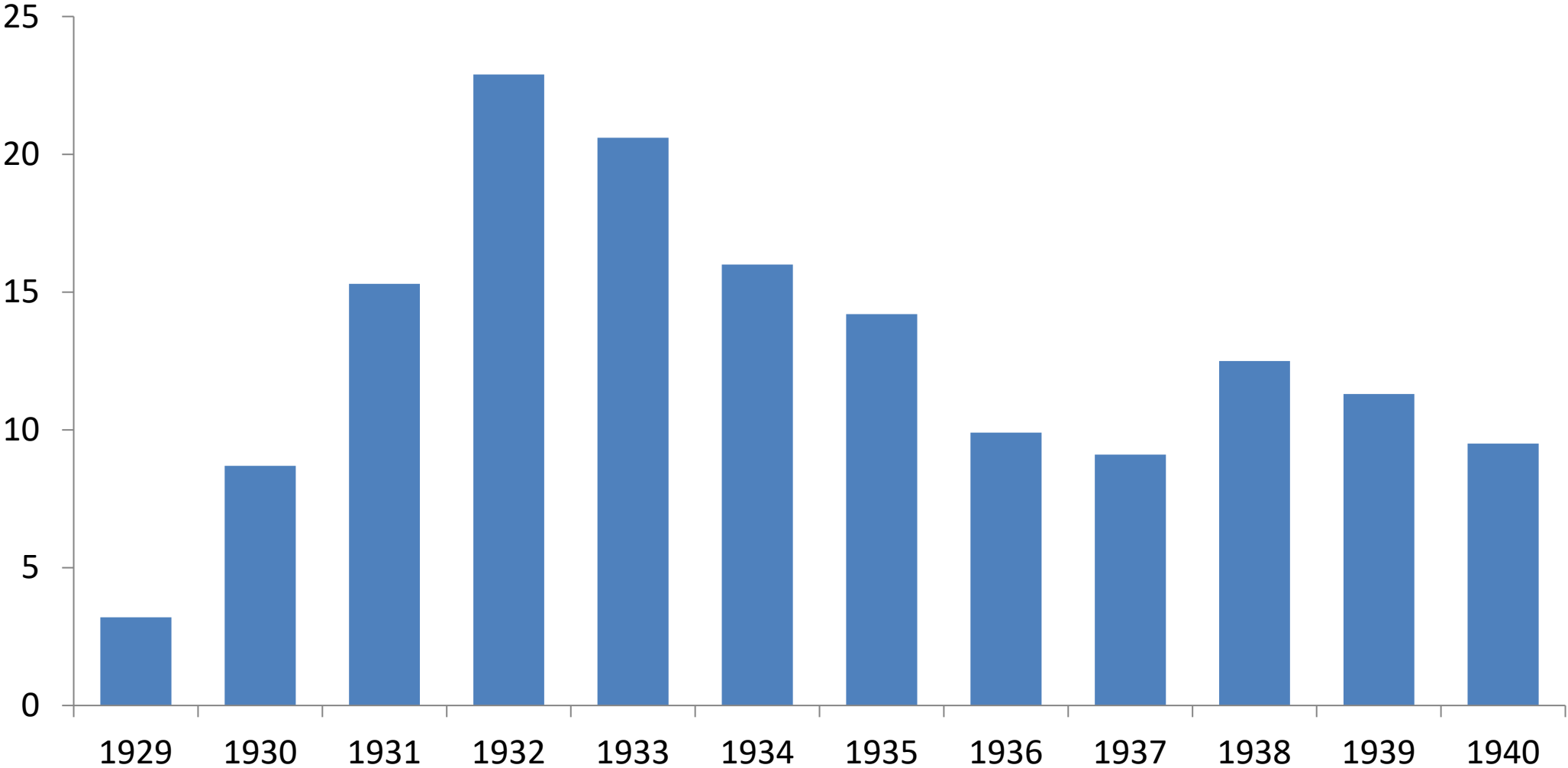
- Christina Romer (Chair, CEA, 2009-2010):
“I feel strongly that the shocks that hit the U.S. economy last fall [fall of 2008] were at least as large as those in 1929.”
 - Household wealth:
-17% in 2008 vs -3% in 1929
 - AAA-BAA spread:
338bp in Dec-2008 vs. 219bp in Dec-1930

U.S. GDP during Great Depression



U.S. Unemployment

% of labor force



The State of Macro

- Romer, Sep 24th 2009:
“The accomplishment of walking the American economy back from the edge of the second Great Depression is real and deserves to be celebrated.”
- Krugman, Sep 6th 2009:
“It’s hard to believe now, but not long ago economists were congratulating themselves over the success of their field.”

Ben Bernanke at Milton Friedman's 90th Birthday Celebration

“I would like to say to Milton and Anna: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again.”

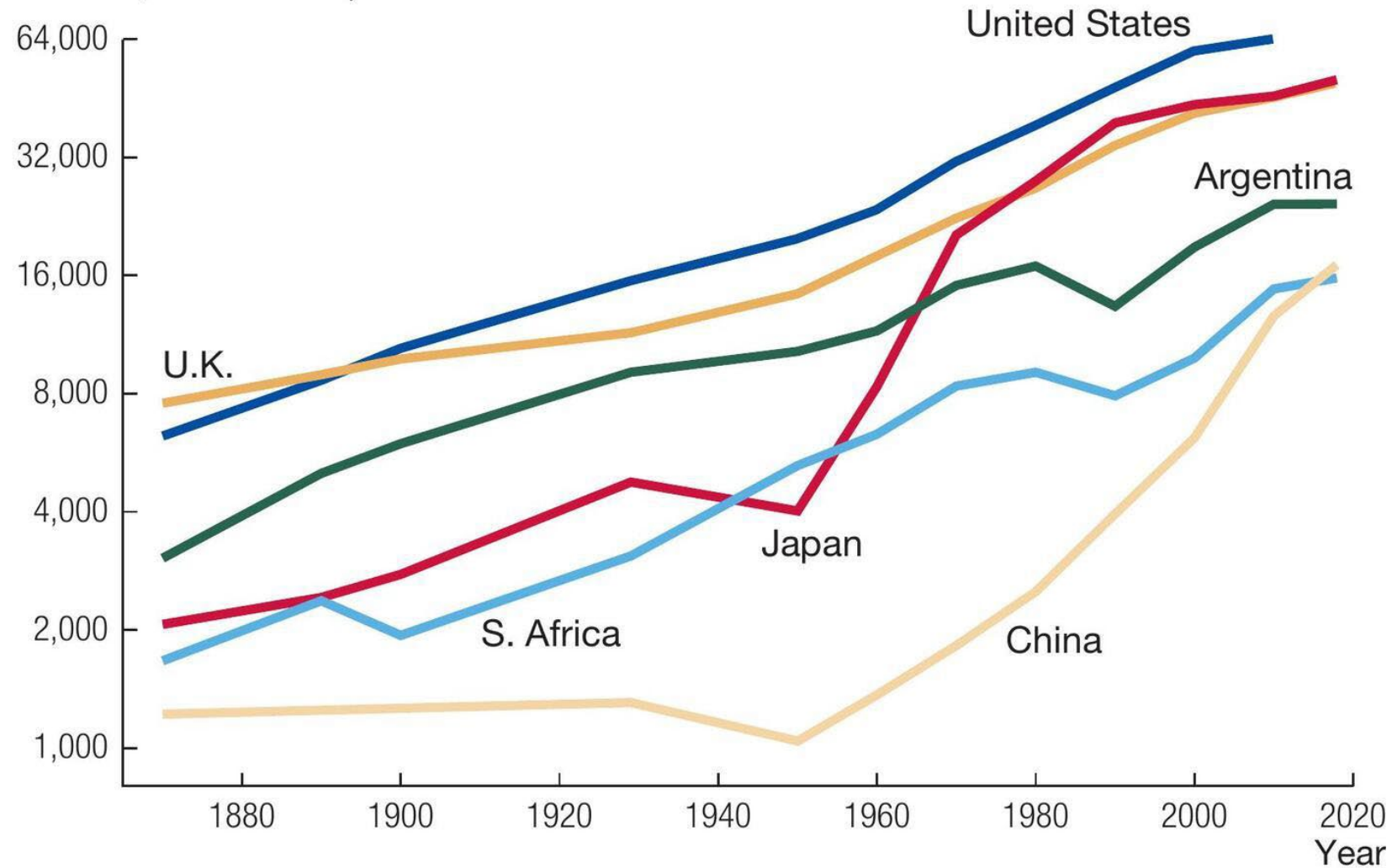
Ben Bernanke
Chairman of Federal Reserve Board, 2006-2014
[then Governor at Federal Reserve Board]
November 8th 2002

Key Questions about Recessions/Crises

- Why do they happen?
 - Irrational exuberance gone bad?
 - Policy mistakes?
 - Fundamental “shocks”?
 - Perhaps “self-fulfilling prophecies”?
- Can good policy prevent recessions/crises?
- What we do about them?
 - Major policy responses:
 - Monetary policy
 - Fiscal policy
 - Does it make sense to use fiscal stimulus? What kind?
 - Does it make sense to “bail out” banks? How? Why?

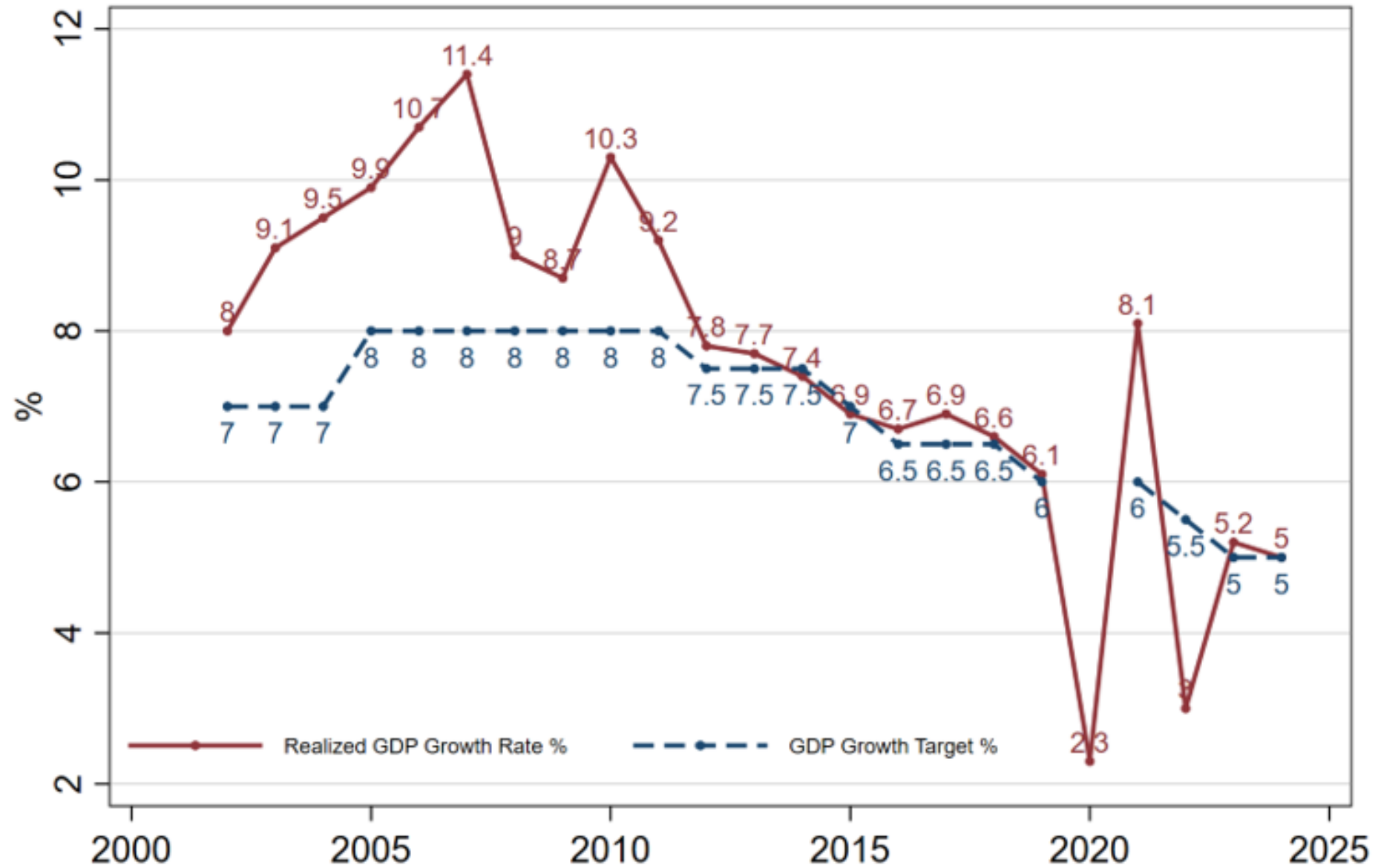
Economic Growth

GDP per person
(ratio scale, 2022 dollars)

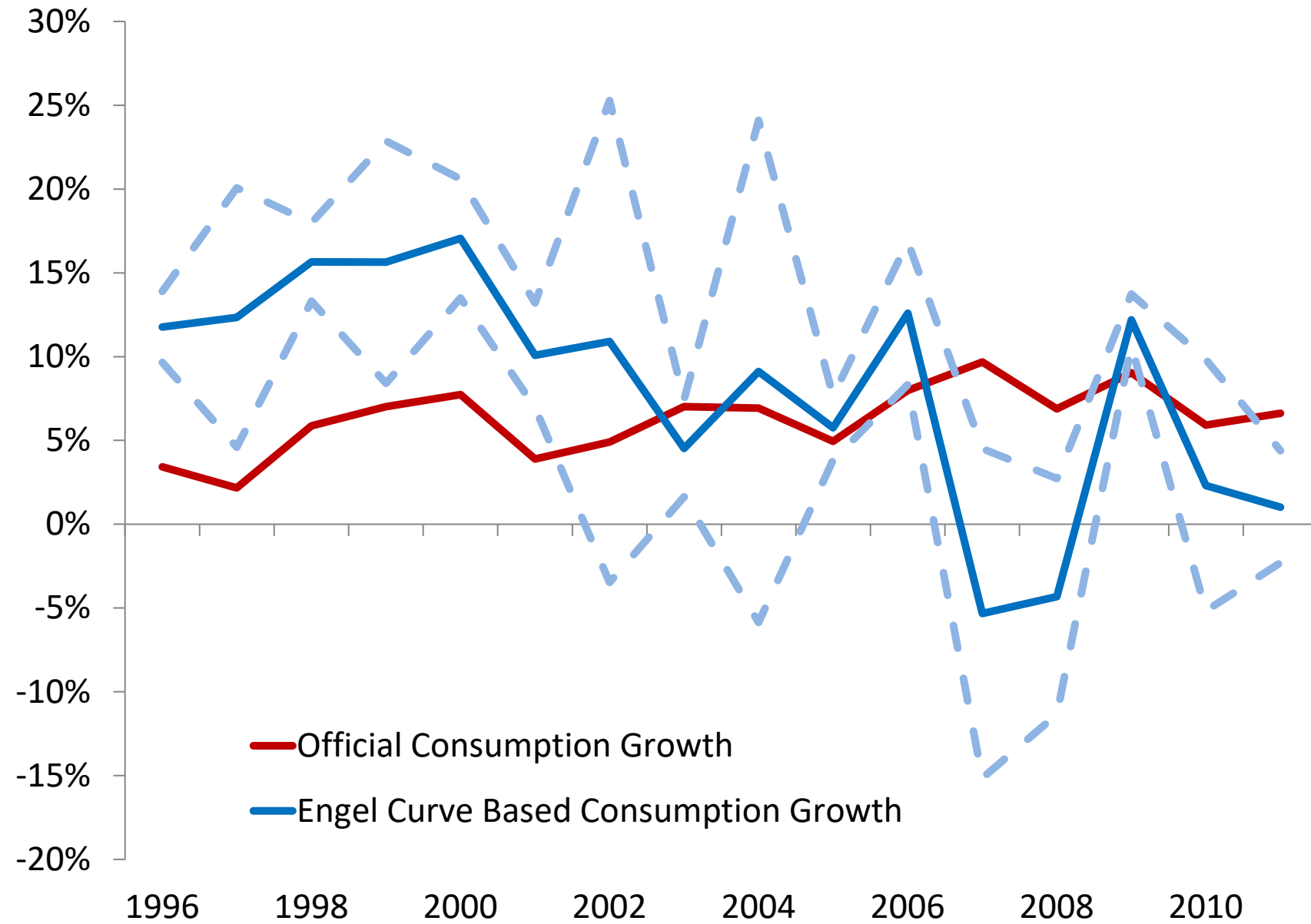


Source: The Maddison-Project, ggdc.net/maddison/.

Figure 1: Annual Growth Targets and Realized Growth Rates



GDP Growth in China. Source: Chang, Wang, Wiong (BPEA 2025)



Consumption Growth in China. Source: Nakamura, Steinsson, Liu (2016)

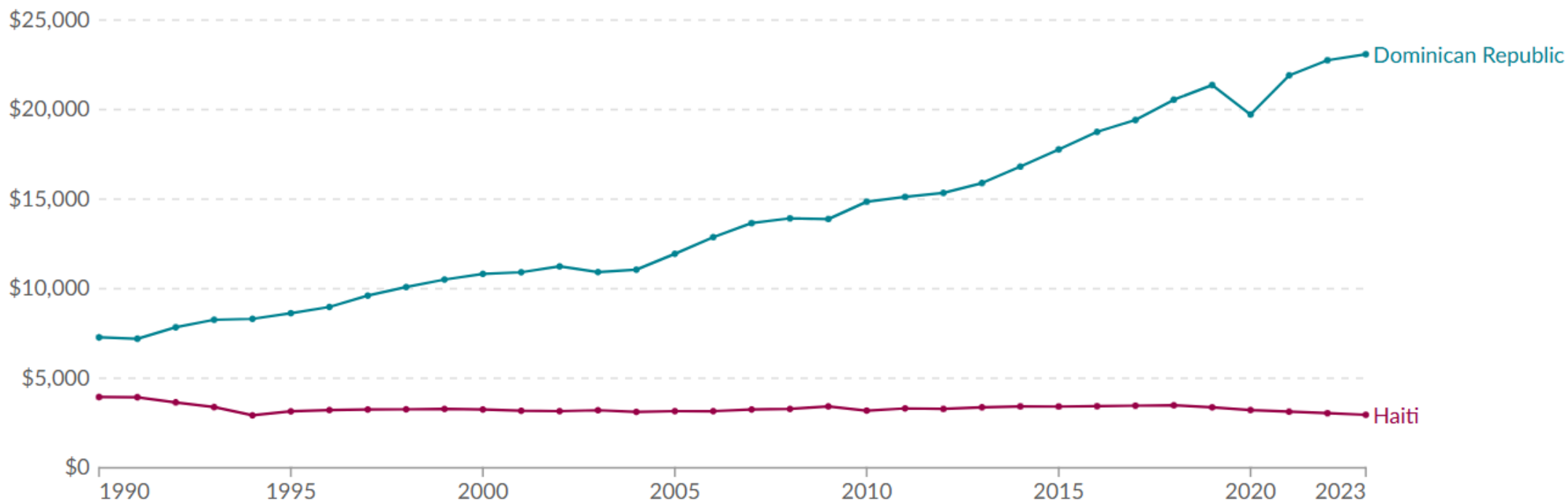
GDP per capita

This data is adjusted for inflation and differences in living costs between countries.

Our World
in Data

Table Map Line +3

Settings



Data source: Eurostat, OECD, and World Bank (2025) - [Learn more about this data](#)

Note: This data is expressed in international-\$ at 2021 prices.

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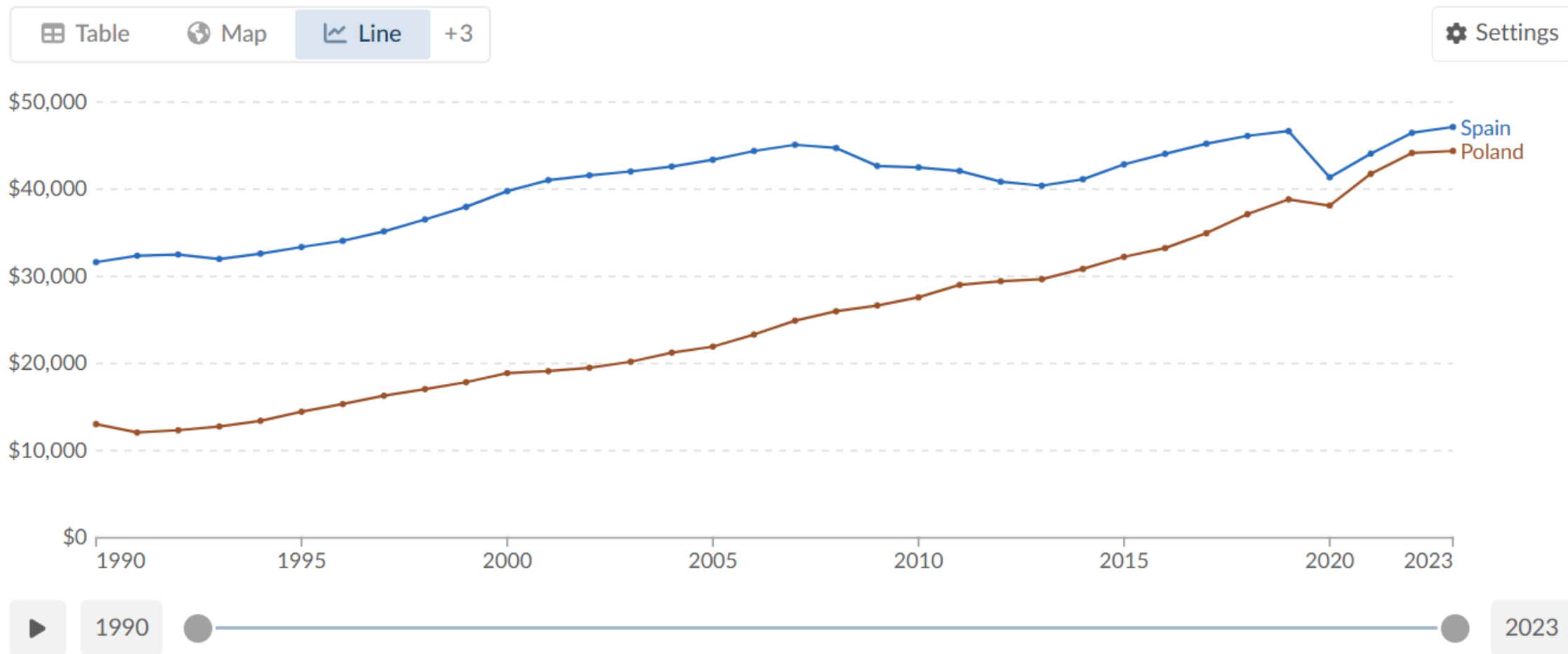
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Long Term Growth

- Robert Lucas (1988):
 - Per capita growth for period 1960-80:
 - India: 1.4% (doubles every 50 years)
 - Egypt: 3.4% (doubles every 21 years)
 - Indonesia: 7.5% (doubles every 9 years)
 - “Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia’s or Egypt’s?”
 - “The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else.”

Growth of Per Capita Real GDP in India

1960-1980	1.4%
1980-2000	3.4%
2000-2019	5.2%

Source: Penn World Tables 10.1

GDP per capita

This data is adjusted for inflation and differences in living costs between countries.

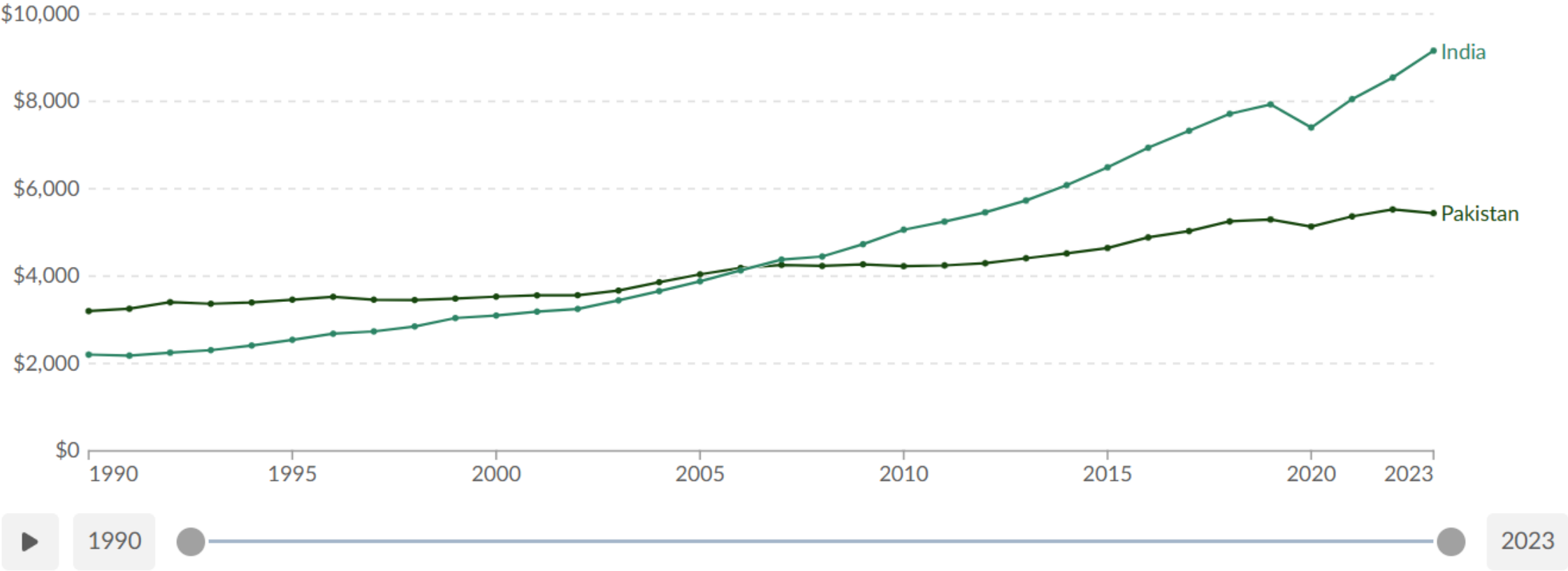
Table

Map

Line

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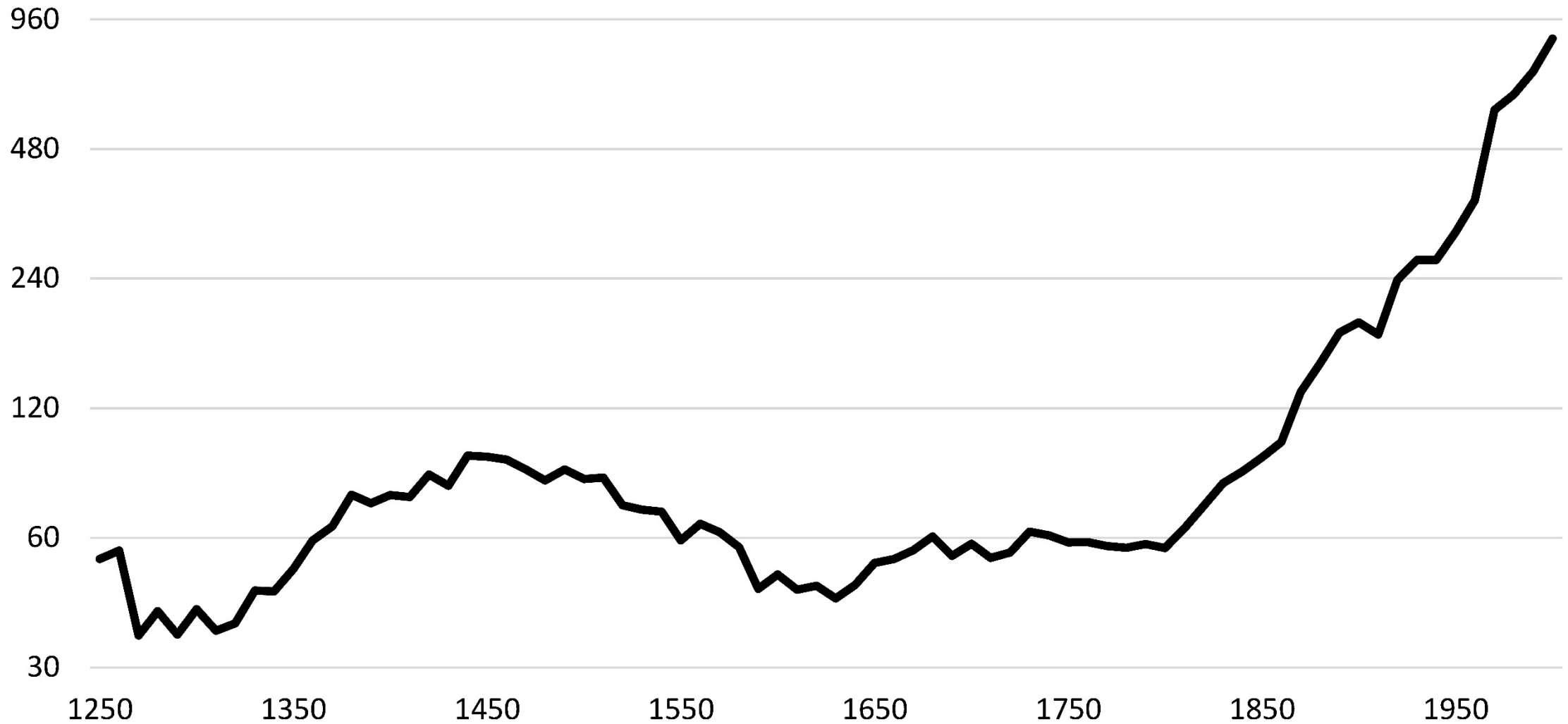
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Growth Is a Modern Phenomenon



Real Wages of Laborers in Building Industry in England from Clark (2005, 2010)

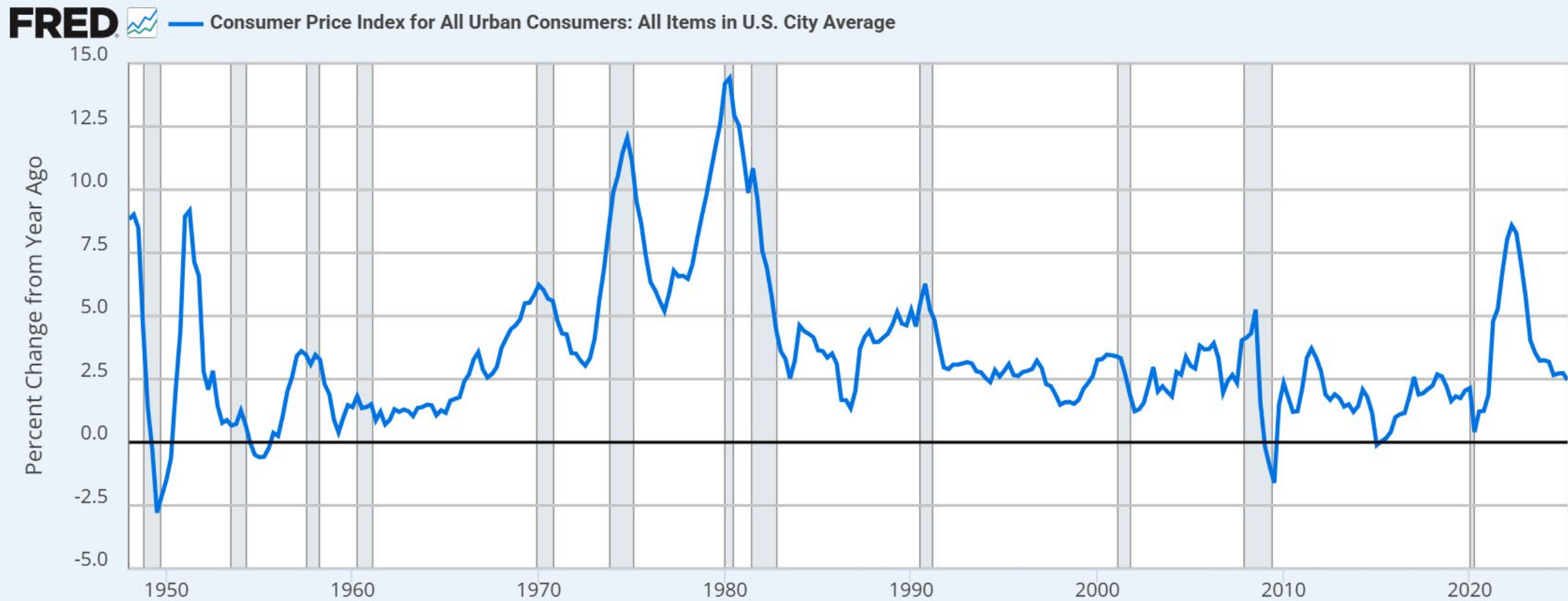
How Will the Next 50 Years Compare?

- Bernanke (2013) reading:
 - Compares 1963 with 2013
 - Most things the same (except internet, cellphones, microwave ovens) (since then, we have social media, ChatGPT)
 - Then compares 1913 with 1963
 - Fundamental differences (few people had electricity, telephones, cars. No radio, airplanes, antibiotics, etc.)
 - Is innovation running out of steam?
 - Bernanke doesn't think so.

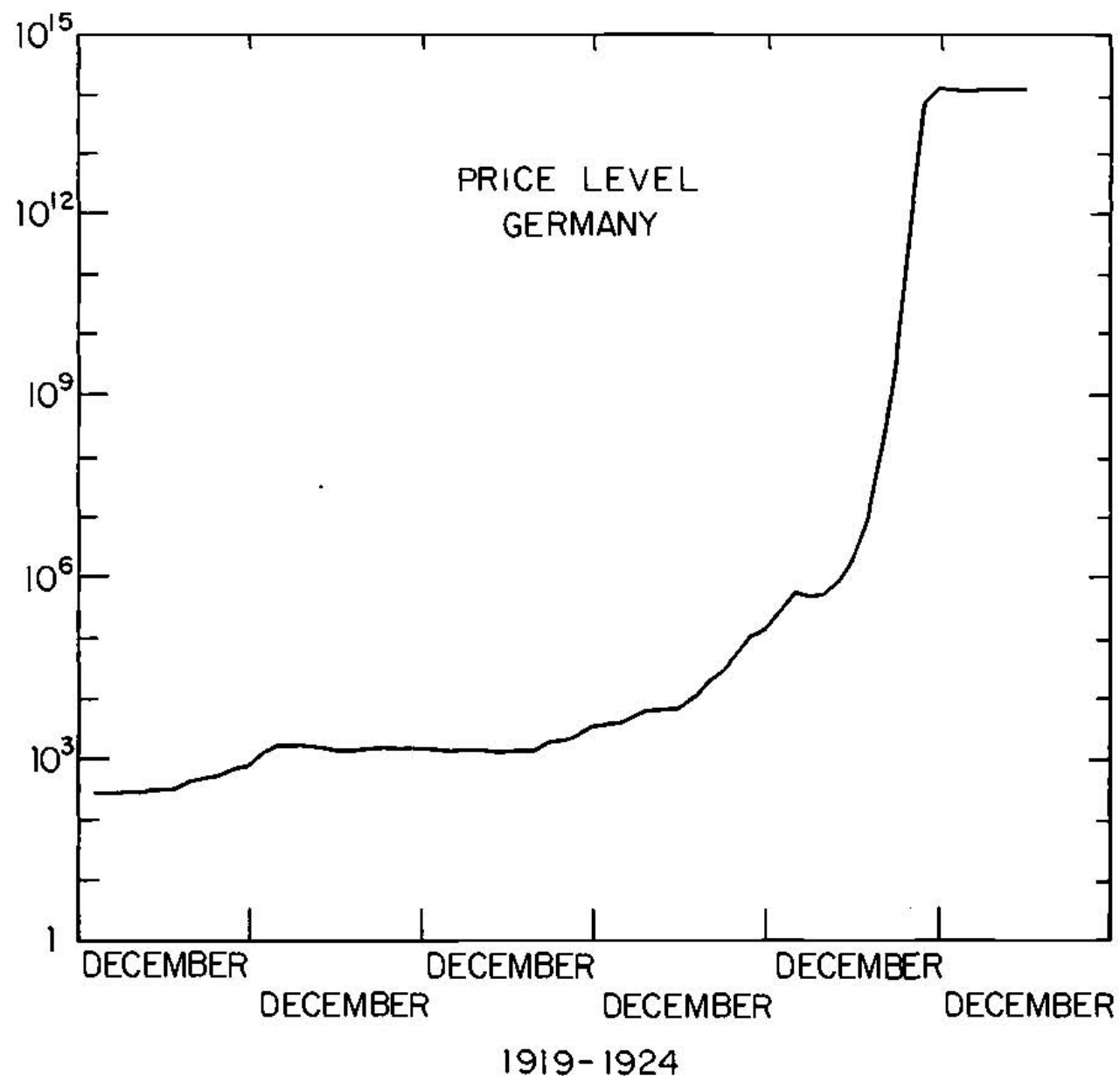
Key Questions About Growth:

- Why do growth rates differ so much across countries?
(China grew 3-4 times faster than the U.S. over last decades)
- What is the source of economic growth?
(Why are we about 10 times richer than Americans a century ago?)
- Why are some countries 50 times poorer than others?
- How did modern economic growth begin?
- Will it continue?

Inflation



Source: U.S. Bureau of Labor Statistics via FRED®



Date: German Marks needed
to buy one ounce of gold

Jan 1919.....	170.00
Sept 1919.....	499.00
Jan 1920.....	1,340.00
Sept 1920.....	1,201.00
Jan 1921.....	1,349.00
Sept 1921.....	2,175.00
Jan 1922.....	3,976.00
Sept 1922.....	30,381.00
Jan 1923.....	372,477.00
Sept 1923.....	269,439,000.00
Oct 2, 1923.....	6,631,749,000.00
Oct 9, 1923.....	24,868,950,000.00
Oct 16, 1923.....	84,969,072,000.00
Oct 23, 1923.....	1,160,552,882,000.00
Oct 30, 1923.....	1,347,070,000,000.00
Nov 5, 1923.....	8,700,000,000,000.00
Nov 30, 1923.....	87,000,000,000,000.00

Fig. 2.4 Wholesale prices in Germany.



Zimbabwe rolls out Z\$100 trillion note



BBC News
January 16th, 2009

Old banknotes such as this, once considered near worthless when in circulation, are enjoying a resurgence in value with tourists eager to buy notes as curiosities. ... The IMF says the [inflation] rate peaked at the end of 2008 at 500 billion percent.

The Scotsman
January 5th, 2010

TOILET PAPER ONLY

TO BE USED IN THIS TOILET

NO CARDBOARD

NO CLOTH

NO ZIM DOLLARS

NO NEWSPAPER

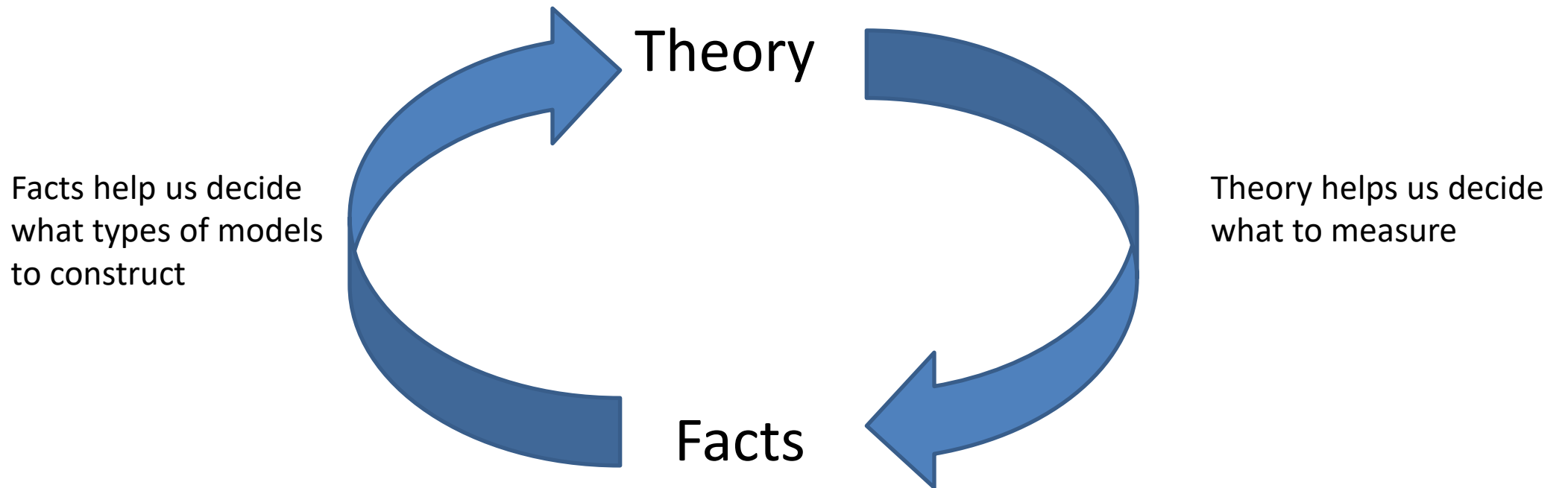
Key Questions About Inflation:

- What determines the rate of inflation?
- Why did inflation in the U.S. rise to double digit levels in the 1970's?
- Why do some countries experience hyperinflations?
- How should a country deal with deflation?
- How costly is inflation (and deflation)?

How Can This Class Help You Answer Key Questions?

1. We will discuss **empirical evidence** that may affect your thinking about these issues and we will discuss how to interpret this evidence
2. We will develop **theory** (i.e., a powerful language) that will help you think about these issues and explain the empirical evidence

The Interplay of Theory and Facts



Thinking Like An Economist

1. A correlation does not imply a causal relationship
 - Example: Countries with more complex tax systems have higher income per capita
 - Example: Teenagers that start to use alcohol later are less likely to have drug problems later in life
2. The power of competition
 - Competitive markets lead to an efficient outcome
 - Government intervention can be justified by a “market failure”. (What is the market failure?)

Left Wing Critique

- Mainstream economics is hopelessly biased in favor of the rich and powerful (i.e., capitalists)
- Neoclassical economics is a tool of the powerful to exploit the powerless

Left Wing Critique

- I have some sympathy for this view
 - Models with “perfect markets” are easier to solve
 - Hence, they are a common benchmark
 - Models are meant to be a stylized version of reality, but are often an idealized version of reality
 - We use them so much we forget that their conclusions depend on strong assumptions that may not accurately reflect the real world
 - Important (but hard) to not let this bias one’s thinking

Defense of Mainstream Economics

- Left wing critics often have a rosy view of reality:

“From each according to their ability,
to each according to their need”

- Basic premise of mainstream economics:

People respond to incentives

Defense of Mainstream Economics

- Central idea of mainstream economics:
Competition restrains exploitation
- Sometimes competition fails.
- Some economists have too rosy a view of market competition
- But throwing out neoclassical economics is like throwing out the baby with the bathwater