ECON 310 - MACROECONOMIC THEORY

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Chapter 1: Introduction

- Introduction to intermediate macroeconomics
- Look at some stylized facts

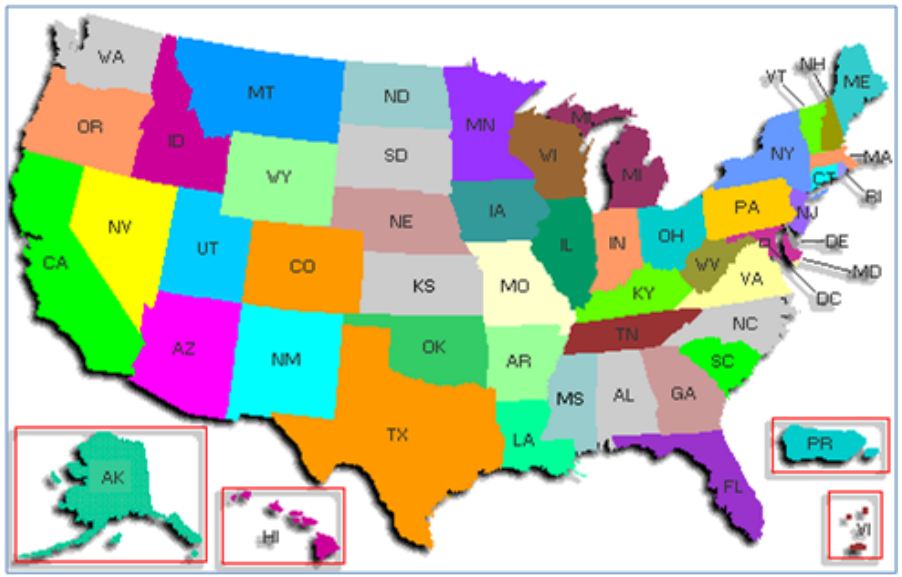
"The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusions"
John Maynard Keynes

Topics

1. Key macroeconomic phenomena: GDP, economic growth, business cycles.
2. What is macroeconomics?
3. Macroeconomic models.
4. Understanding recent and current macroeconomic events.

Considering the biggest economy in the world

Figure 1: The United States of America



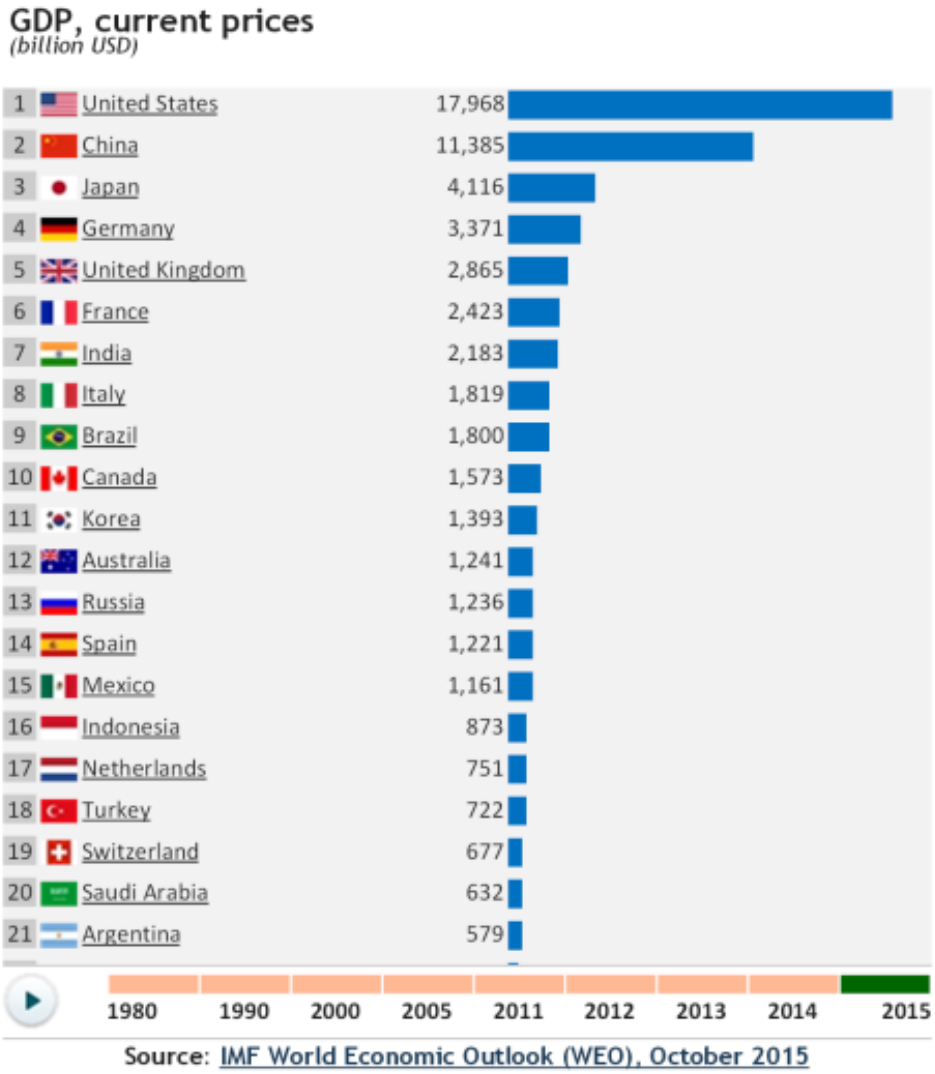
Quick Facts

- Land area: 3,500 mil square miles

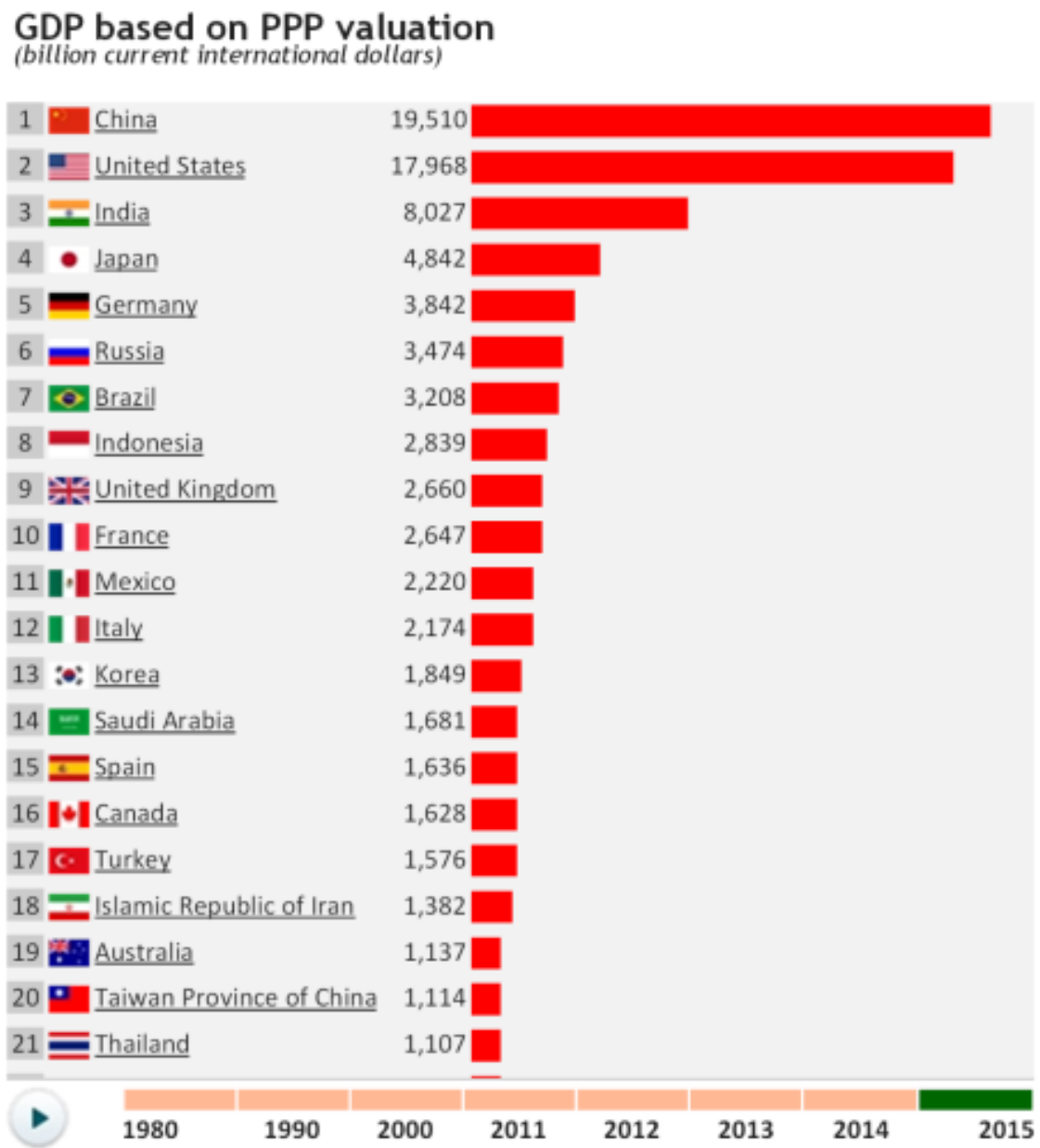
- Population: 320 mil people
- ˜113 mil households
- ˜27 mil firms

- GDP: $18.222 trillion (in 2016 USD)
- GDP per capita:≈ $55,000 (in 2016 USD)
- Gross Domestic Product (GDP): the quantity of goods and services produced within a country's borders over a particular period of time

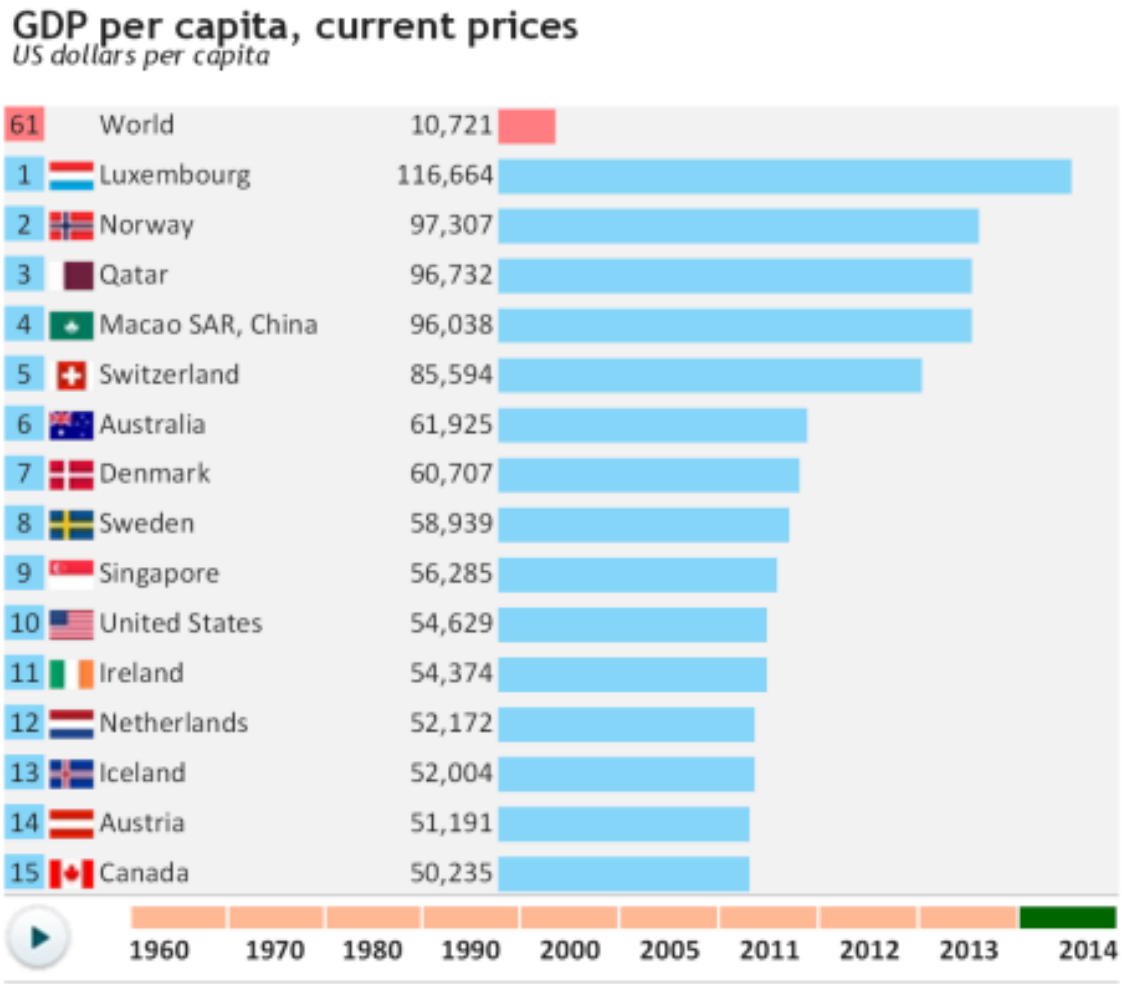
GDP


GDP, current prices
(billion USD)
1 United States 17,968
2 China 11,385
3 Japan 4,116
4 Germany 3,371
5 United Kingdom 2,865
6 France 2,423
7 India 2,183
8 Italy 1,819
9 Brazil 1,800
10 Canada 1,573
11 Korea 1,393
12 Australia 1,241
13 Russia 1,236
14 Spain 1,221
15 Mexico 1,161
16 Indonesia 873
17 Netherlands 751
18 Turkey 722
19 Switzerland 677
20 Saudi Arabia 632
21 Argentina 579
1980 1990 2000 2005 2011 2012 2013 2014 2015
Source: IMF World Economic Outlook (WEO), October 2015

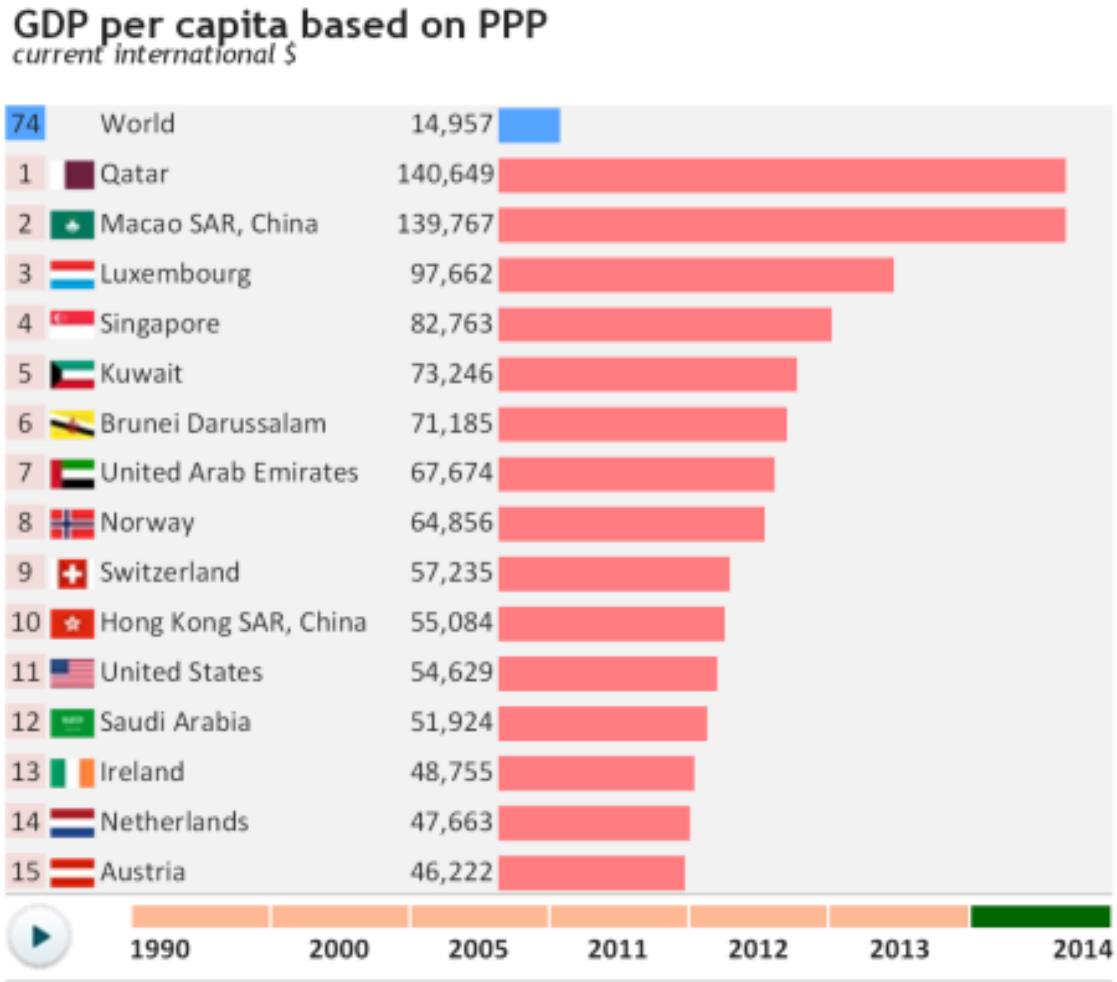
GDP - Purchasing Power Parity (PPP) Adjusted



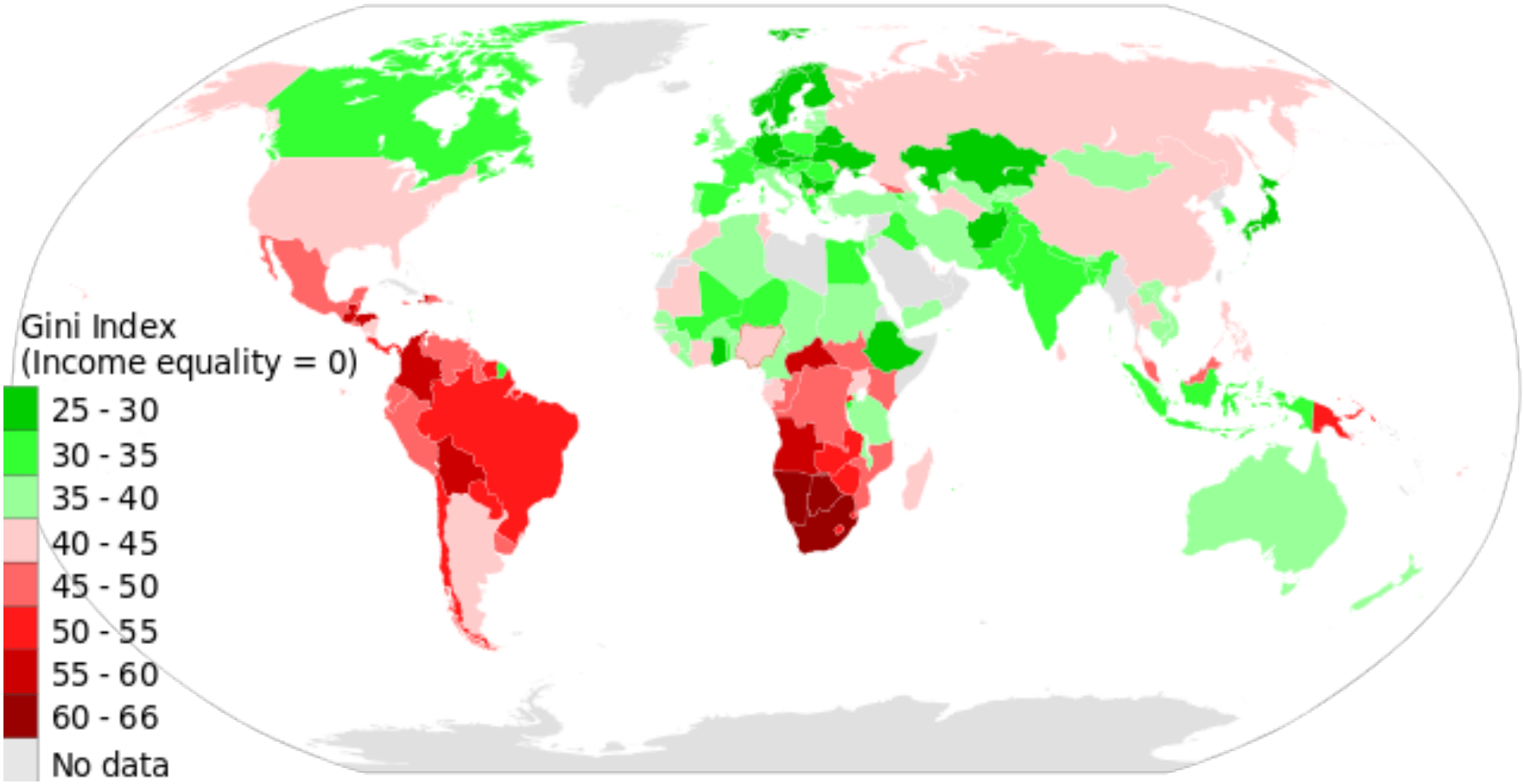
GDP - Per Capita



GDP - Per Capita PPP Adjusted



Gini Index


Gini Index
(Income equality = 0)
25 - 30
30 - 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 66
No data

Gini Index

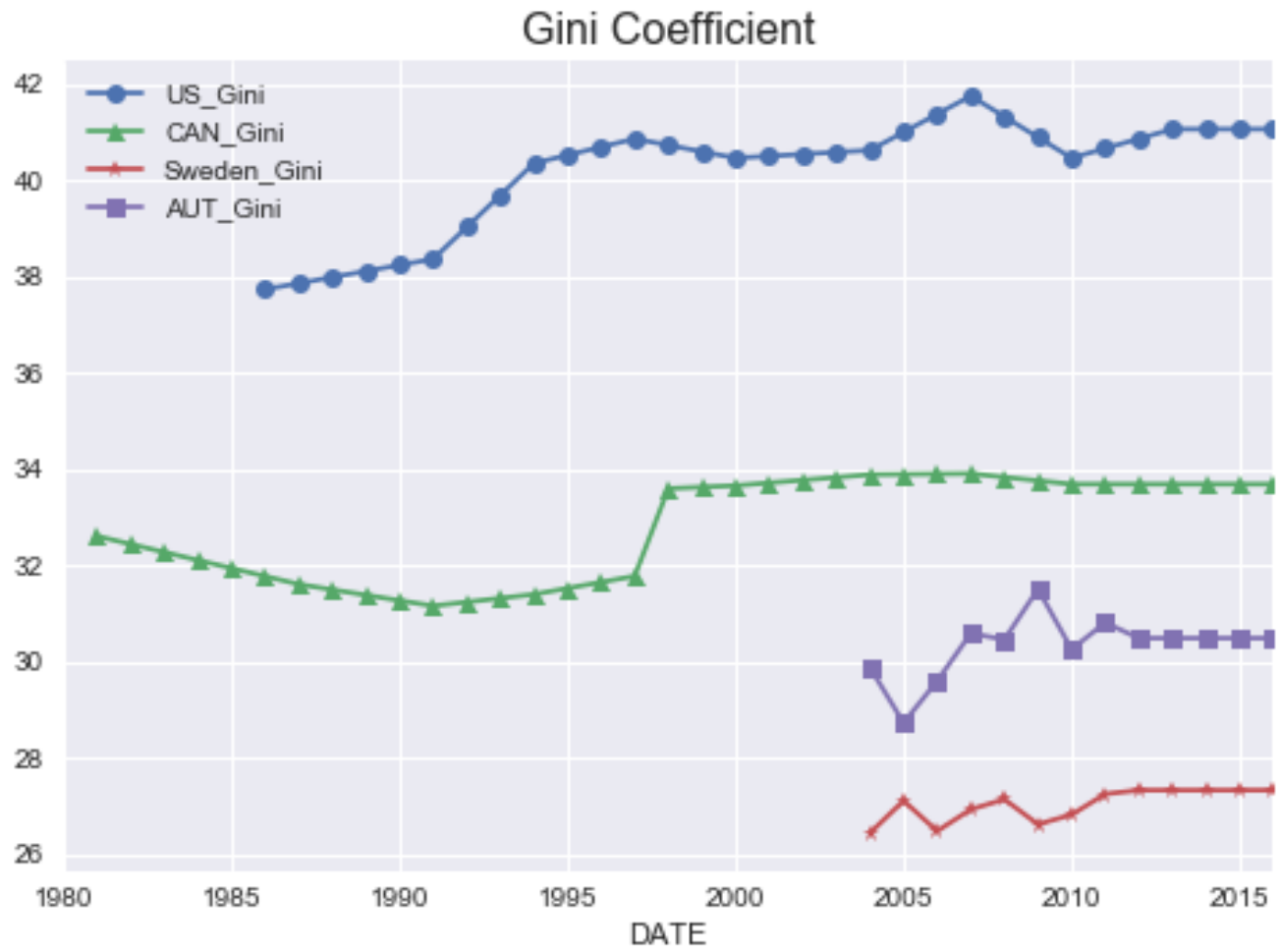

Gini Coefficient
US_Gini
CAN_Gini
Sweden_Gini
AUT_Gini
42
40
38
36
34
32
30
28
26
1980
1985
1990
1995
2000
2005
2010
2015
DATE

Figure 2: Per Capita Real GDP (2000 USD)

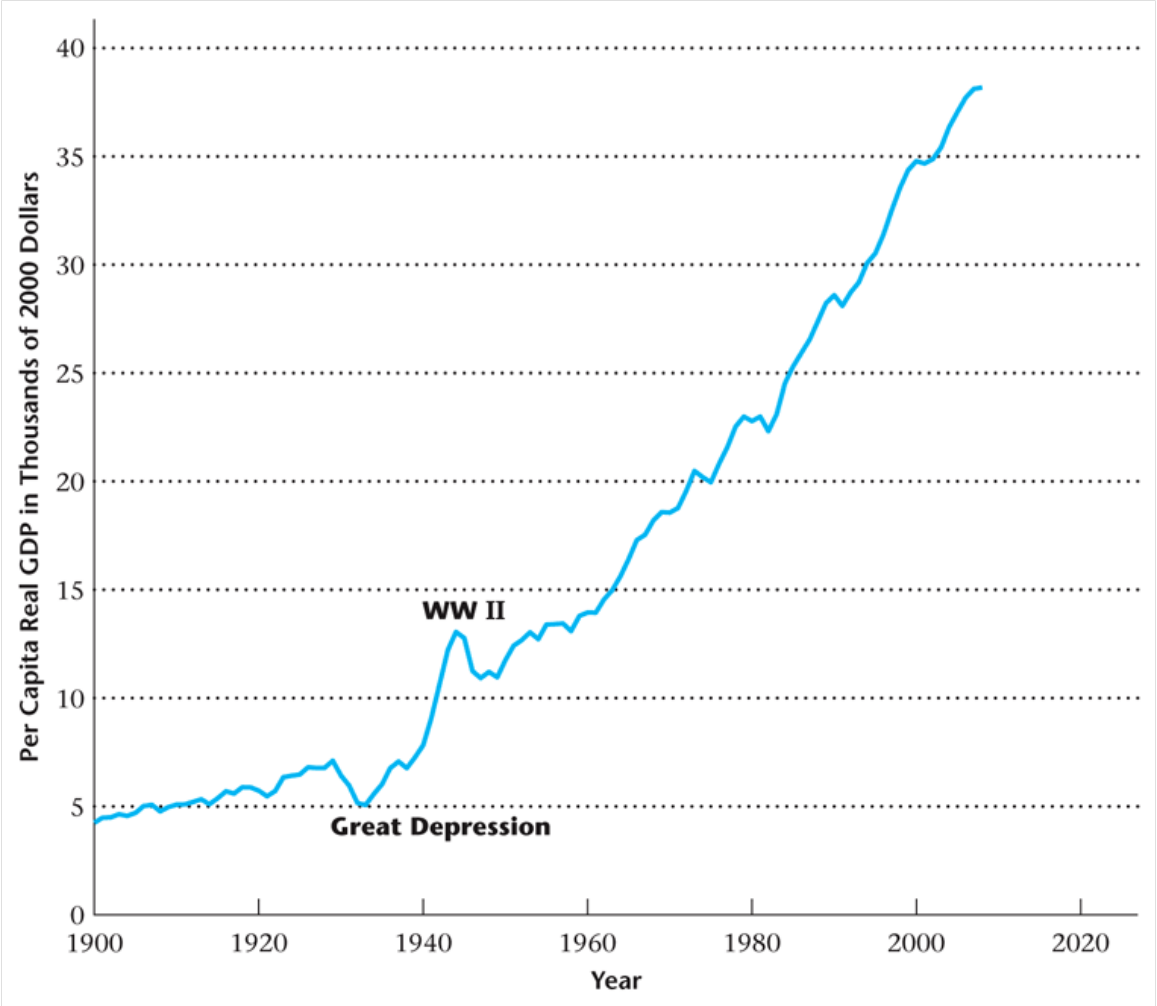


Figure 3: Natural Log of Per Capita Real GDP

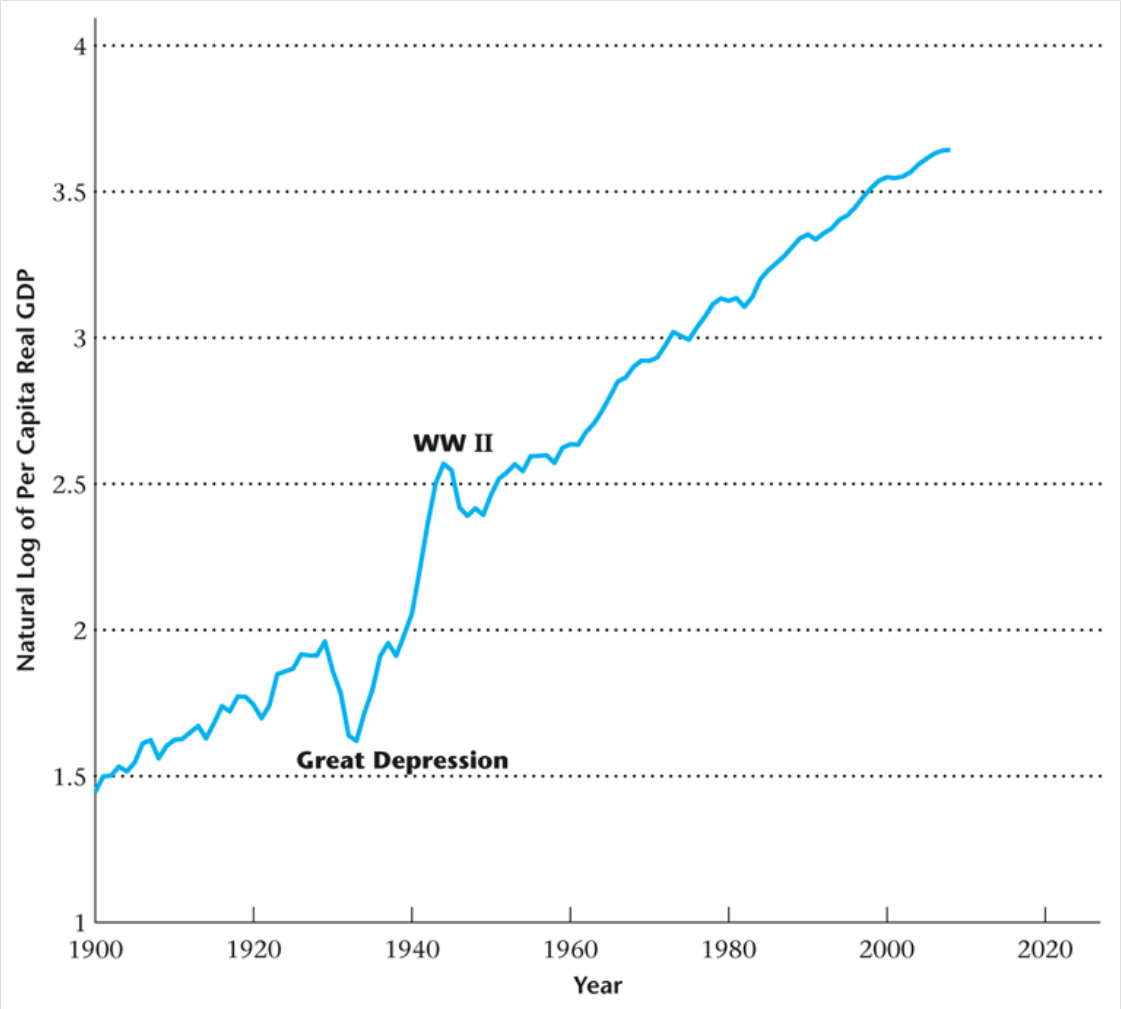


Figure 4: Natural Log of Per Capita Real GDP and Trend

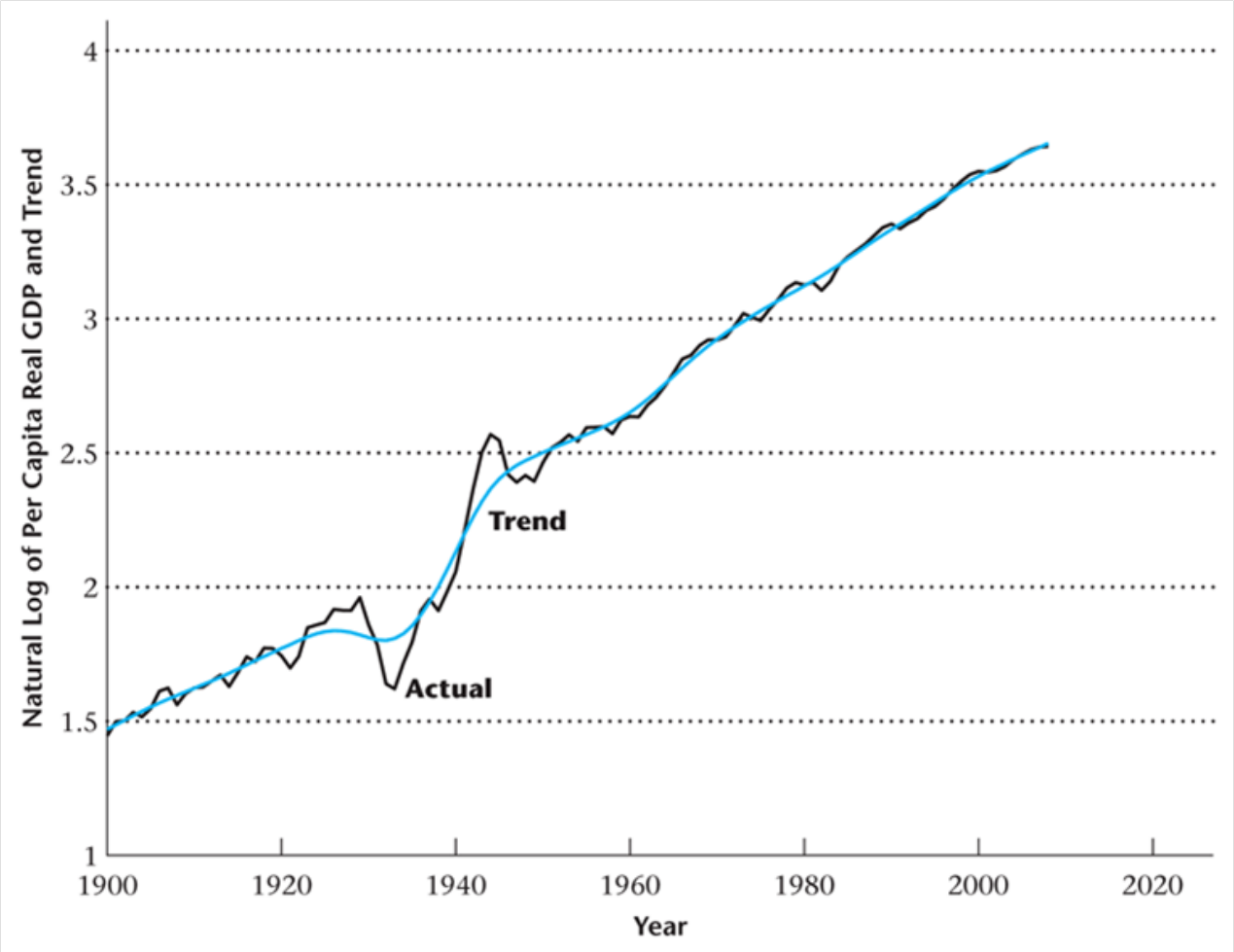
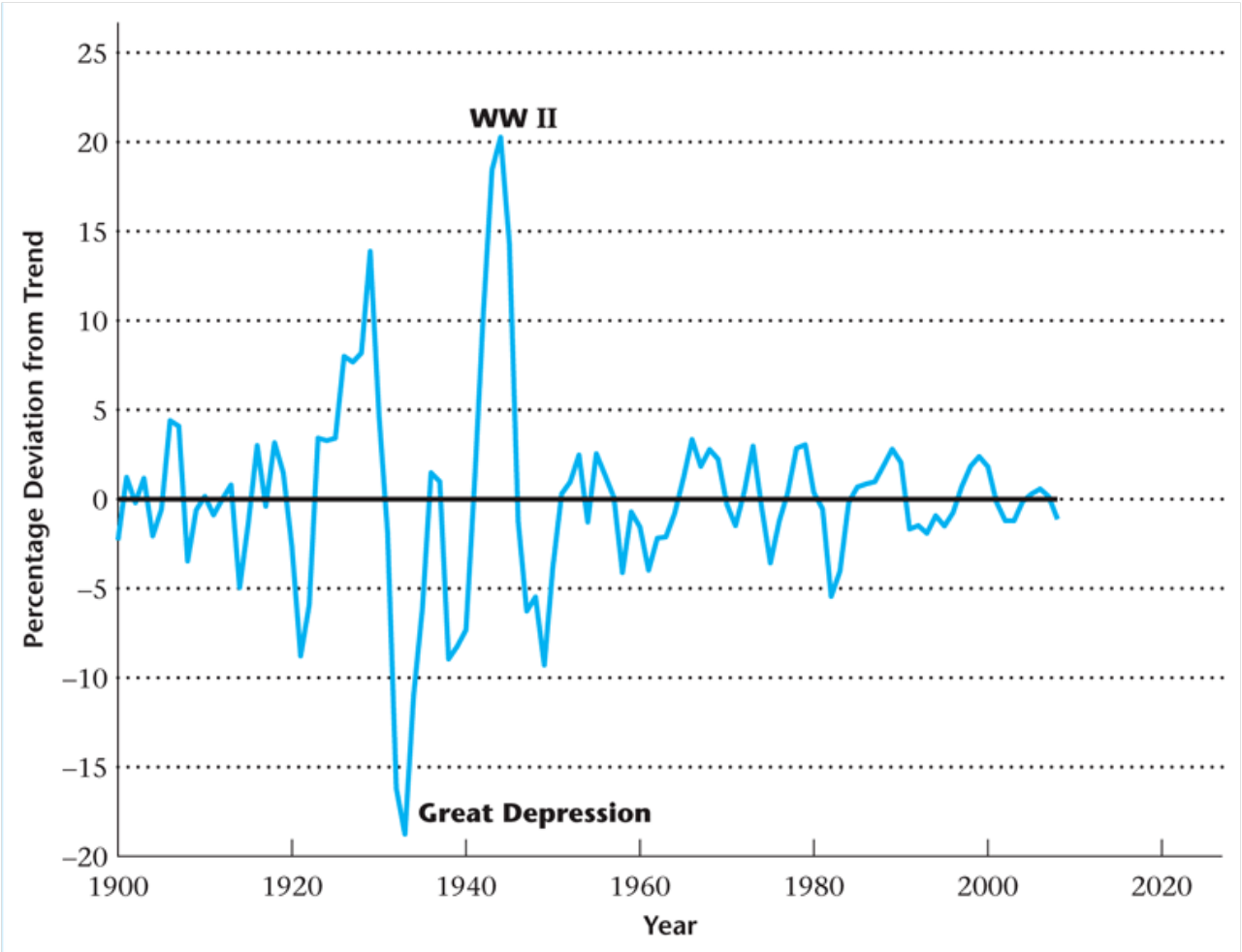


Figure 5: Percentage Deviations from Trend in Per Capita Real GNP



What Is Macroeconomics ?

- Models built to explain macroeconomic phenomena.
- The important phenomena are *long-run growth* and *business cycles*.
- Approach in this course is to build up macroeconomic analysis from microeconomic principles.

Some fundamental macro questions

1. What causes sustained economic growth?
2. Is economic growth indefinite *i.e.* limit to growth?
3. Can governments (policymakers) alter the rate of growth?
4. What causes business cycles?
5. Can the booms (expansions) and busts (recessions) be repeated?
6. Should governments (policymakers) smooth business cycles?

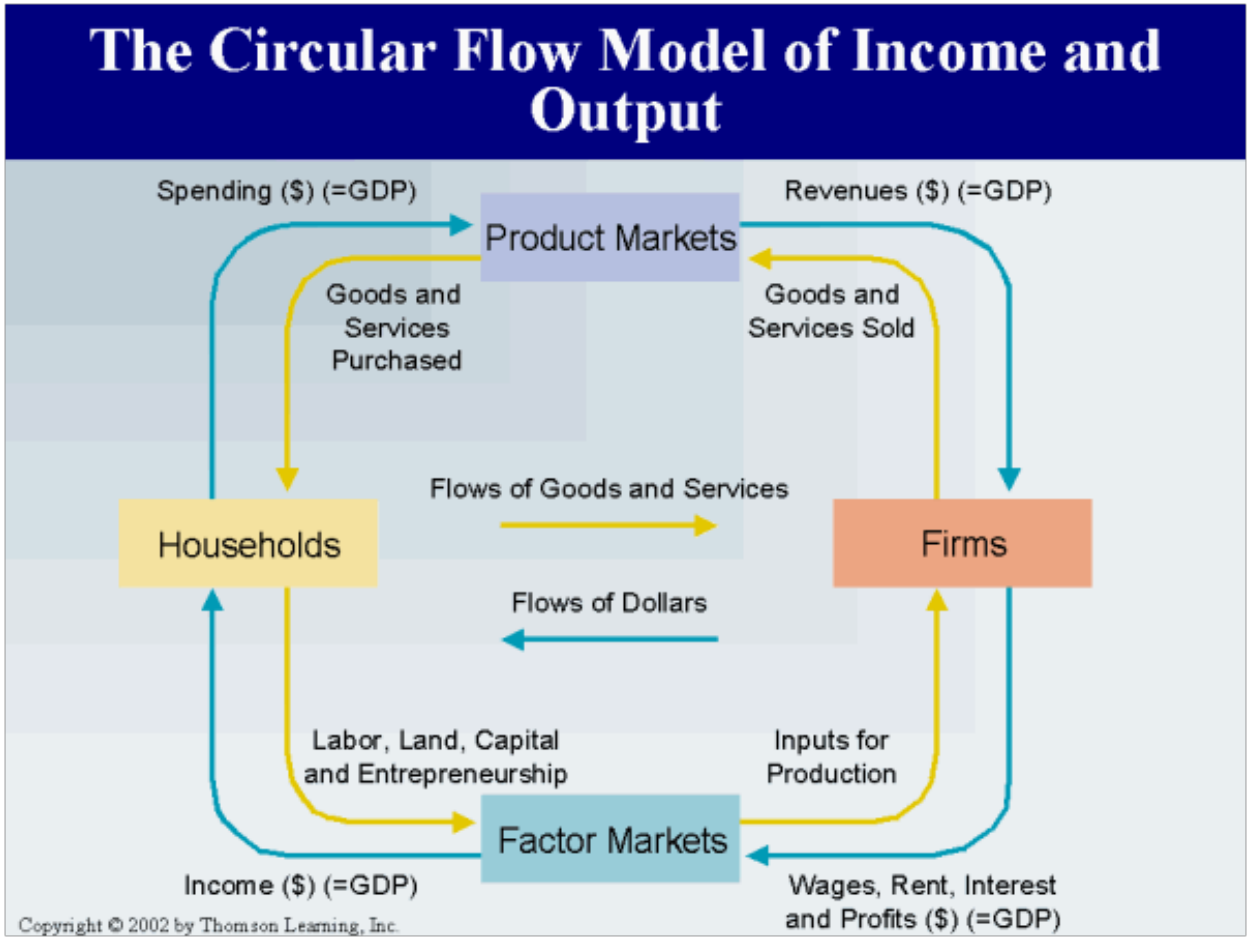
Macroeconomic Models

- A macroeconomic model
- captures the essential features of the world needed
- to analyze a particular macroeconomic problem.

- A macroeconomic model
- should be simple,
- but they need not be realistic (think about the car map example).

Basic Structure of a Macroeconomic Model

1. Agents: consumers and firms that interact in the economy.
2. Set of goods that consumers wish to consume.
3. Preferences: consumers' preferences over goods.
4. Technology: production methods available to firms for producing goods.
5. Endowment: resources available.


The Circular Flow Model of Income and Output
Spending ($) (=GDP)
Revenues ($) (=GDP)
Product Markets
Goods and Services Purchased
Goods and Services Sold
Flows of Goods and Services
Households
Firms
Flows of Dollars
Labor, Land, Capital and Entrepreneurship
Inputs for Production
Factor Markets
Income ($) (=GDP)
Wages, Rent, Interest and Profits ($) (=GDP)
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What we Learn from Macro Analysis

1. Production and consumption is jointly determined by economy's productive capacity and preferences of consumers
2. In free market economies, there are strong forces that tend produce social efficient outcomes
3. $\Uparrow$ standard of living are a result of LR technological progress

4. A tax cut is not a free lunch
5. Consumer and firm expectations are important for current macroeconomic events
6. Money takes many forms, it is better to have it. Changing its quantity ultimately does not matter

7. Business cycles may seem similar but they have different causes

What we Learn from Macro Analysis (cont.)

8. Gains from trade between countries but trade is source of shocks for the economy
9. In the LR, inflation is caused by growth in the money supply

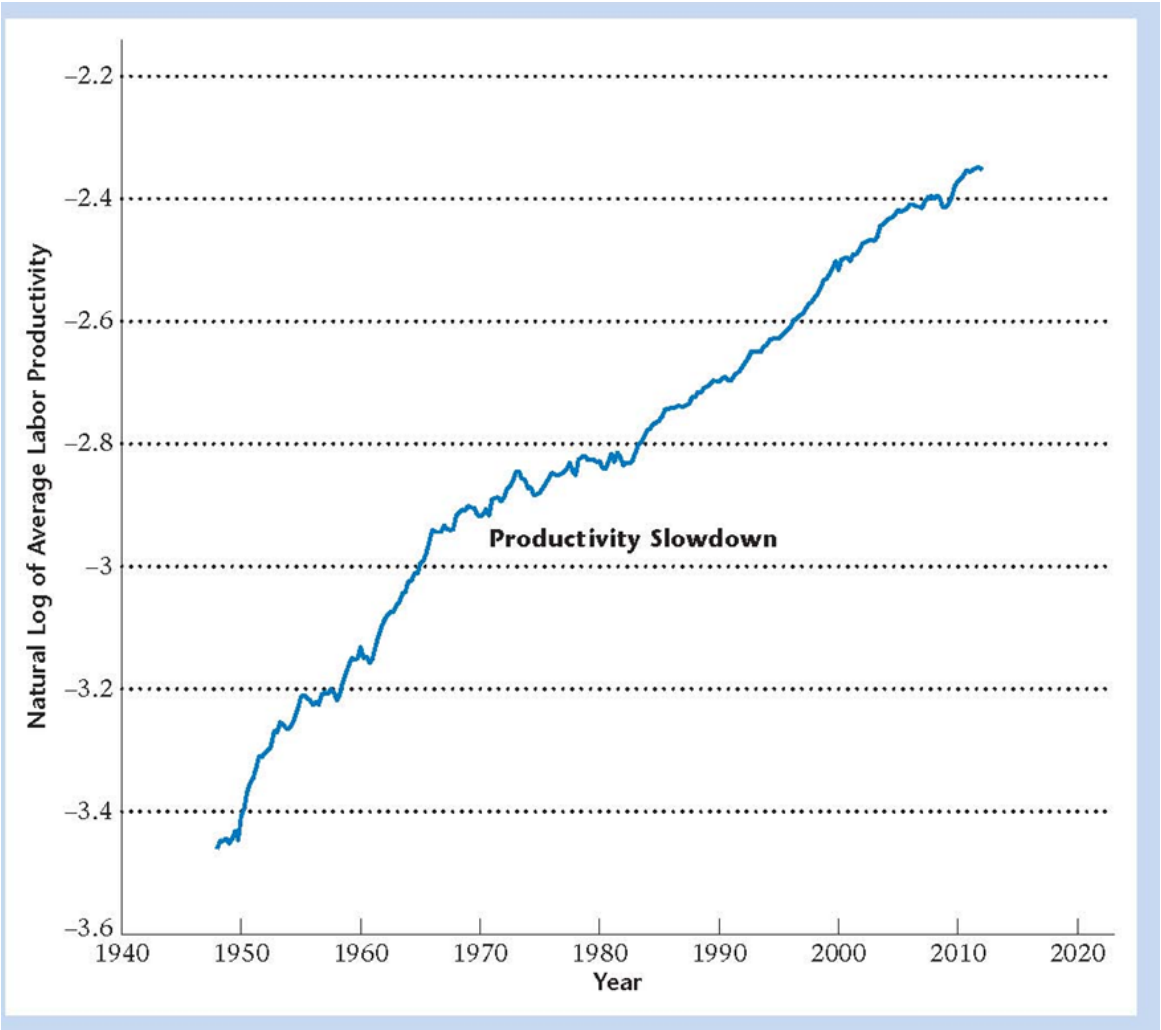
10. Unemployment is painful for the individual but it is necessary evil
11. Significant short-run trade-offs between output (Y) and inflation (π) In LR no trade-off other than inefficiencies caused by LR inflation.

Recent and Current Macroeconomic Events

- **Average labor productivity**: productivity slowdown (cause?)
- **Taxes, Government Spending, and Deficits**: crowding out, Ricardian Equivalence
- **Interest Rates**: nominal vs. real interest rates
- **Current Account and Government Surplus**: twin deficits
- **Inflation**: correlation with money growth rate
- **Unemployment**: 1) 1970 spike 2) volatile 3) tend increase until 80's drop then increase again

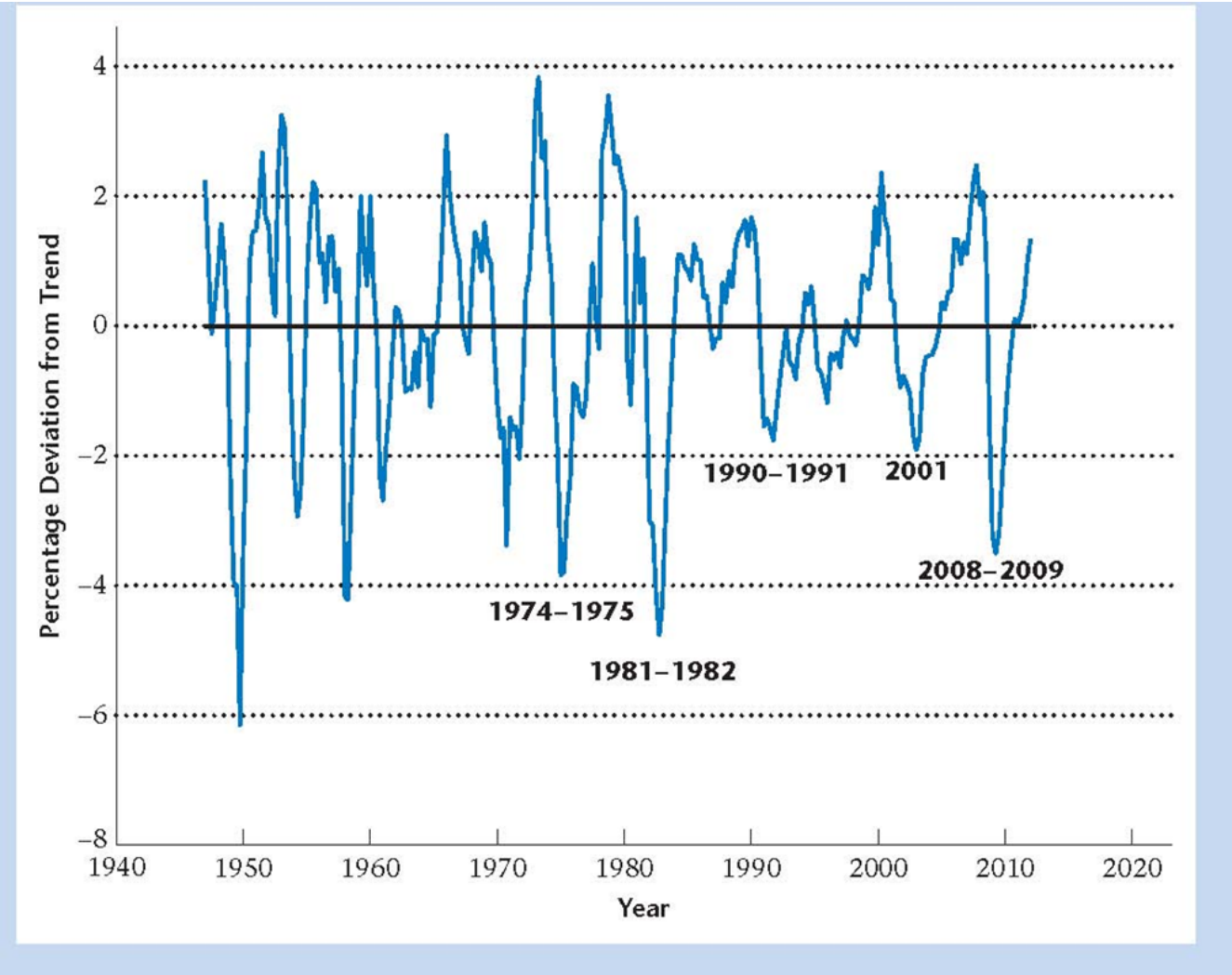
Figures

Figure 6: log(Average Labor Productivity)



Figures

Figure 7: Percentage Deviation from Trend in Real GDP, 1947-2009

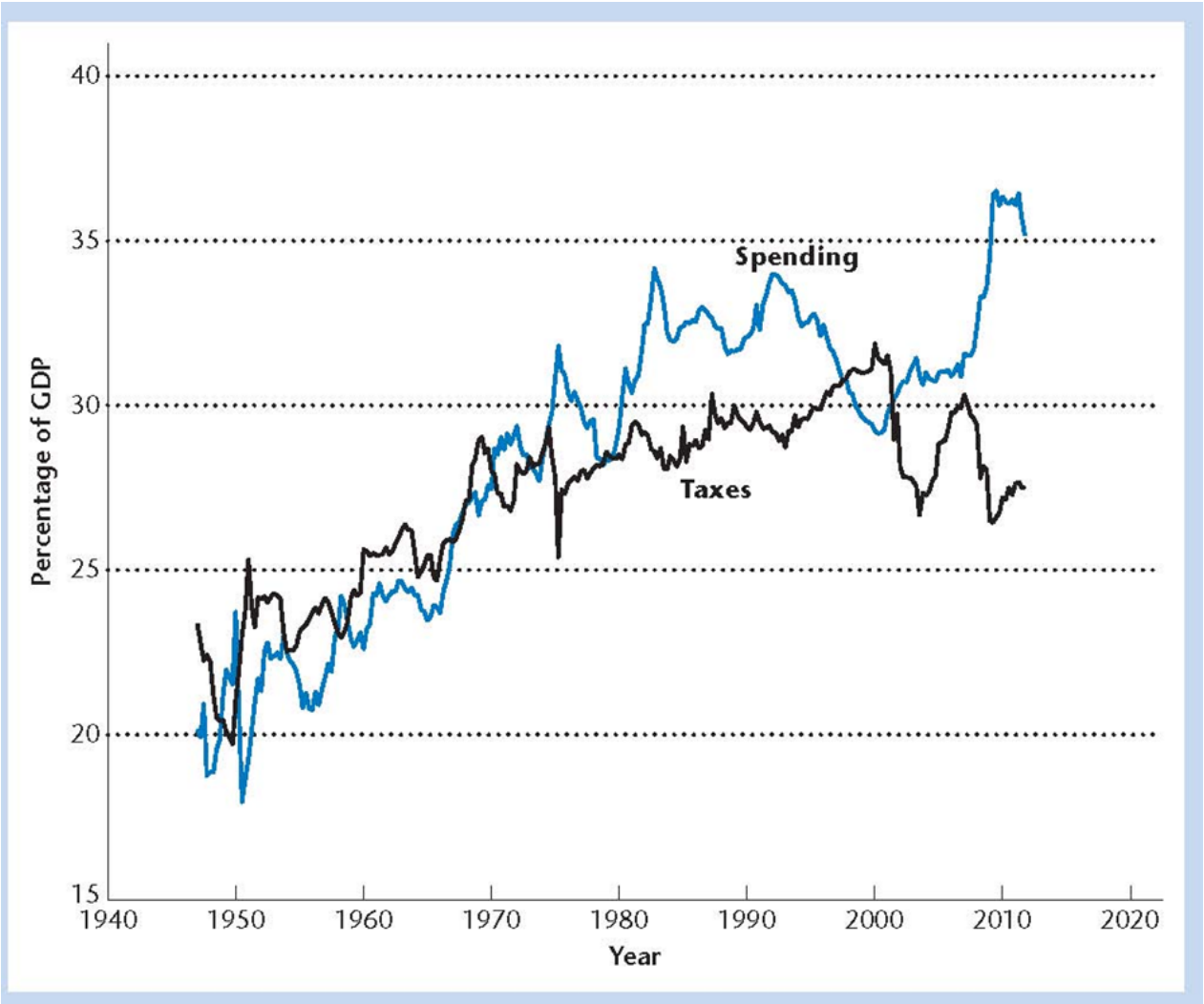


Recessions

1. 1974 – 1975: Oil price shock caused by OPEC restrictions
2. 1981 – 1982: Fight inflation using monetary policy i.e. high interest rates (Volcker rule)
3. 1990 – 1991: Gulf War, oil price high again
4. 2001: Burst of Dot.com bubble and loss of optimism $\rightarrow$ start of housing bubble (Greenspan rule)
5. 2008 – 2009: Burst of Housing bubble and financial crisis
6. 1982 – 2008: The Great Moderation $\rightarrow$ macro aggregates become less volatile

Figures

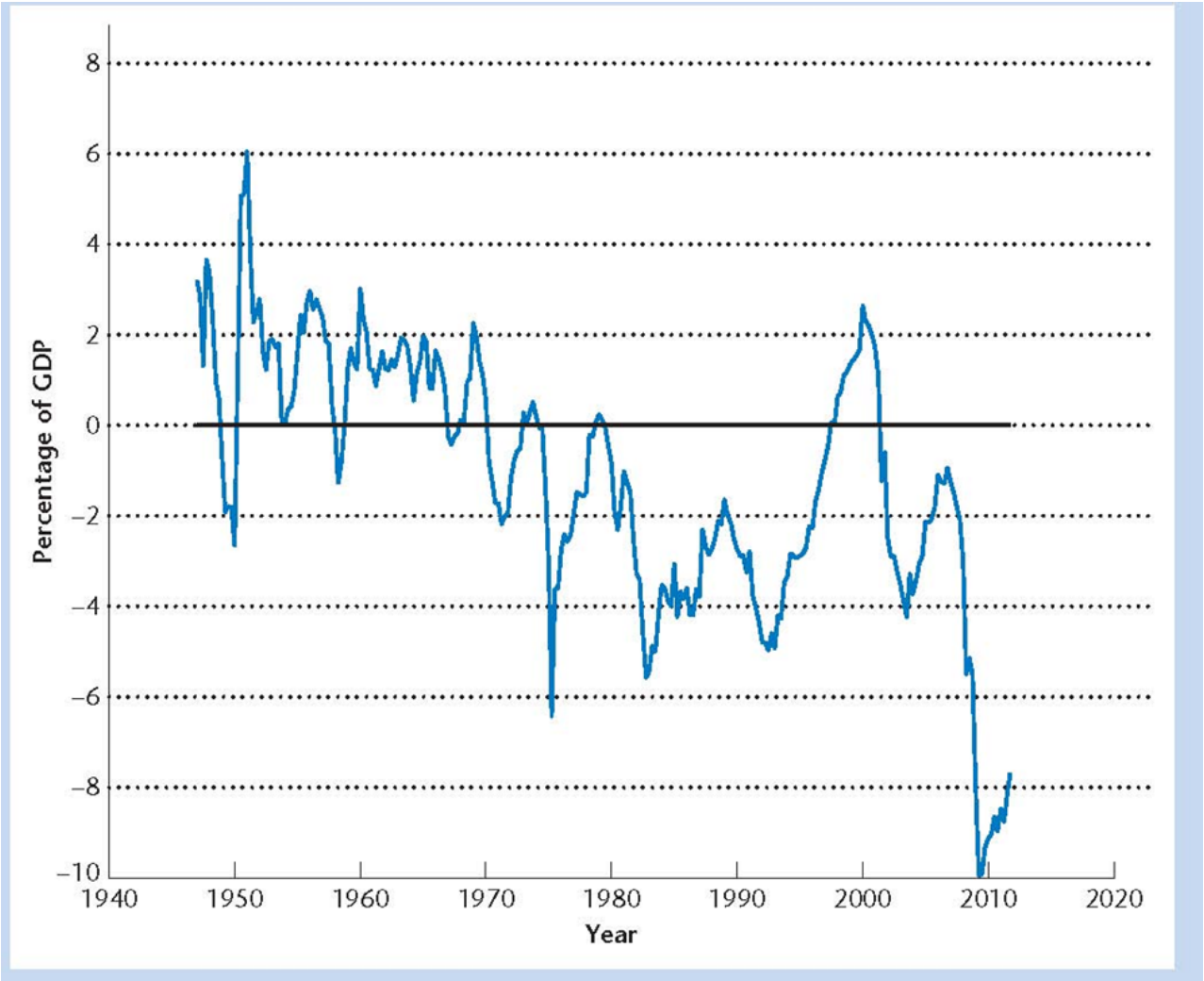
Figure 8: Total Taxes and Total Government Spending



Figures

Figures (cont.)

Figure 9: Government Surplus (Deficit) as fraction of GDP



Figures (cont.)

Figure 10: Nominal Interest Rate and Inflation Rates

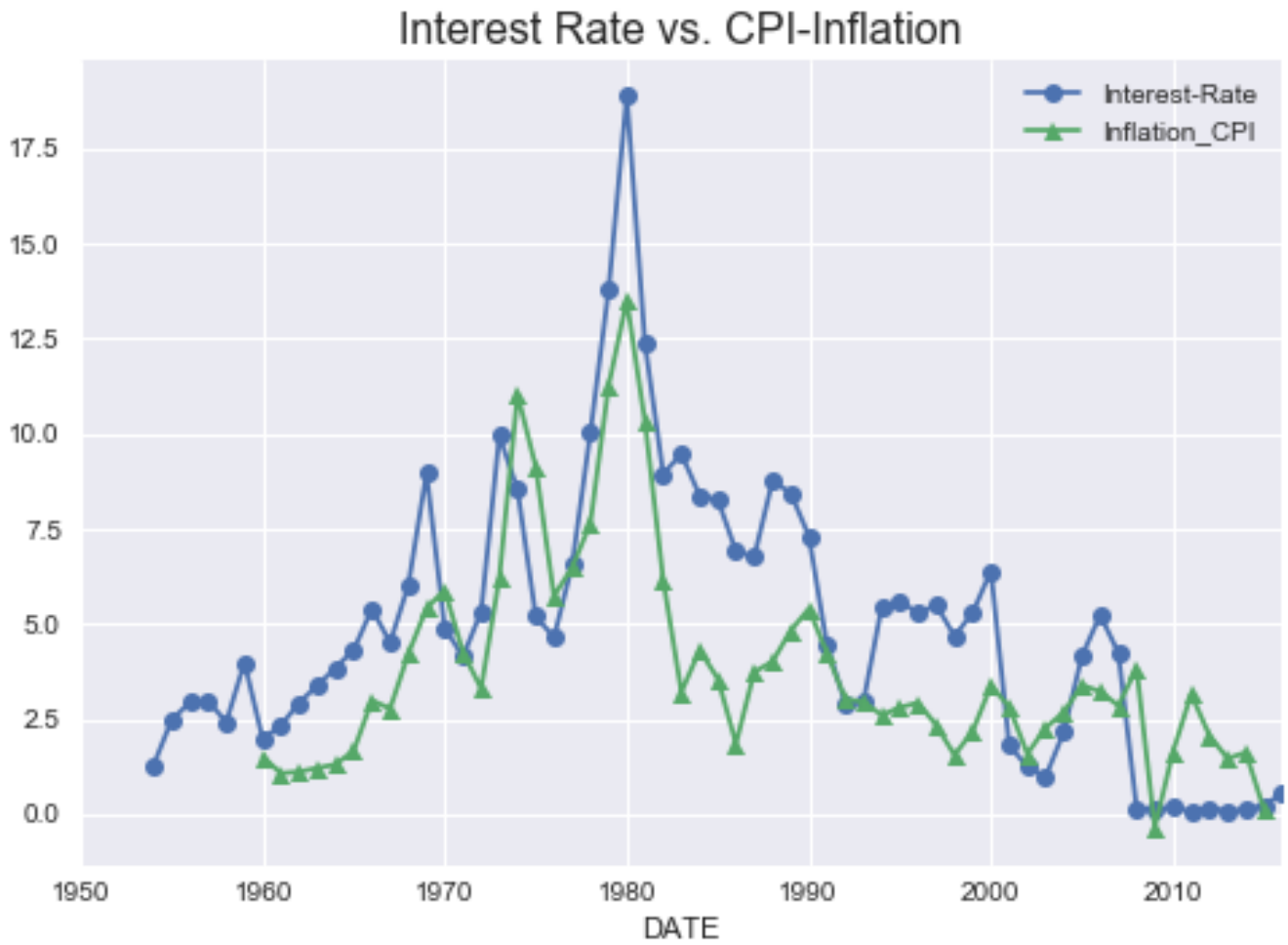


Figure 16: Deviations from Trend in the Unemployment Rate and Percentage Deviations from Trend in Real GDP

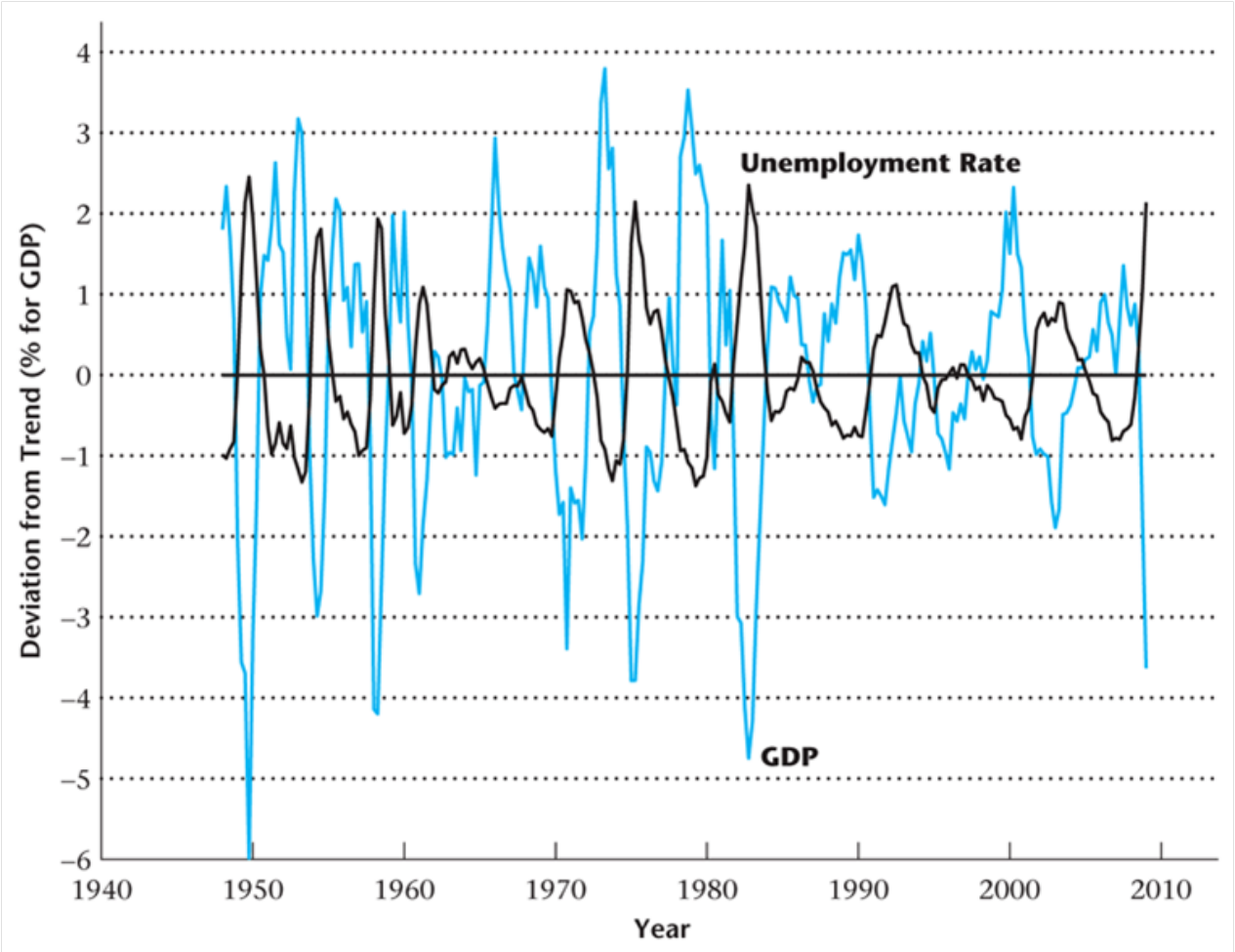
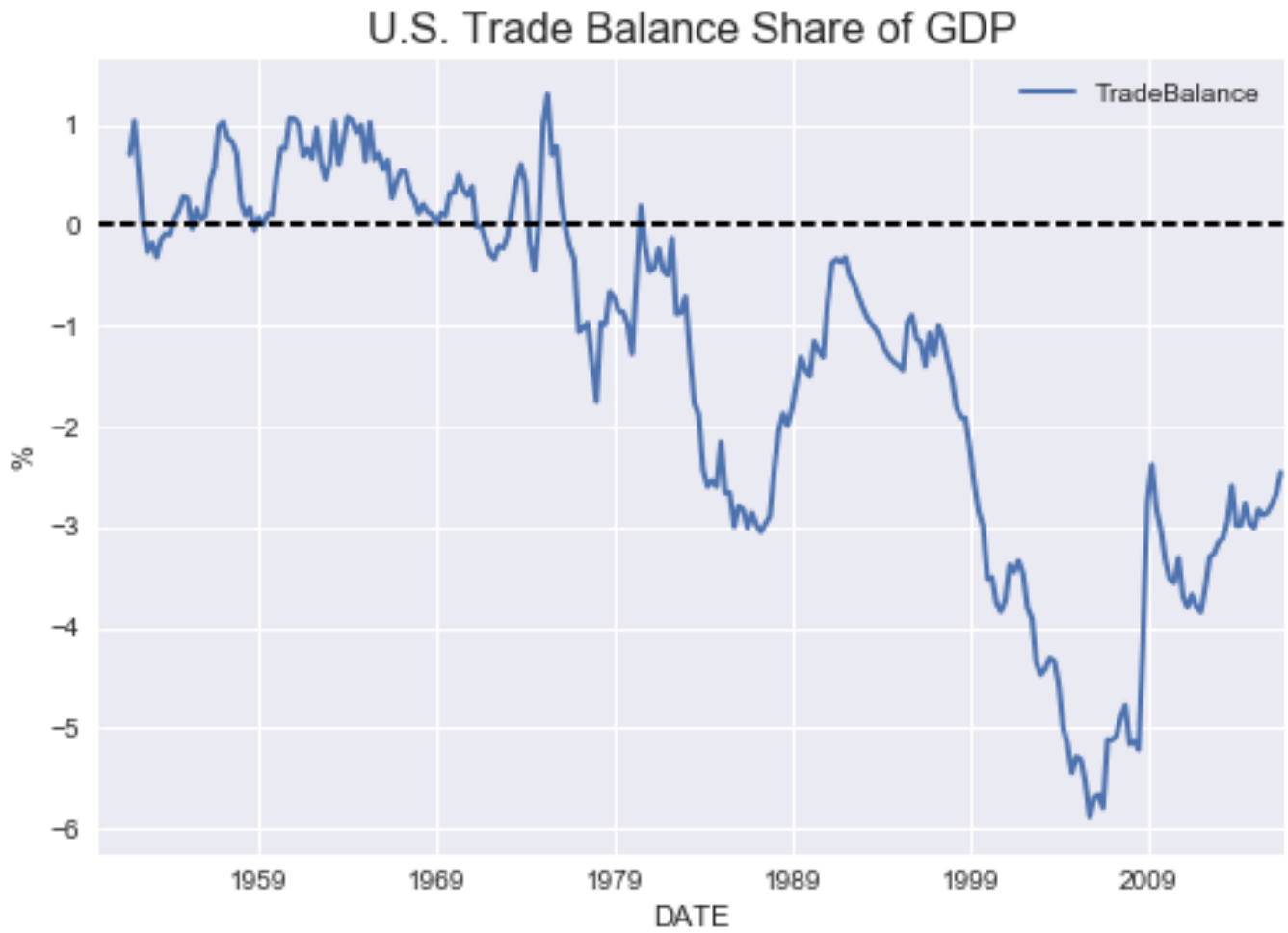


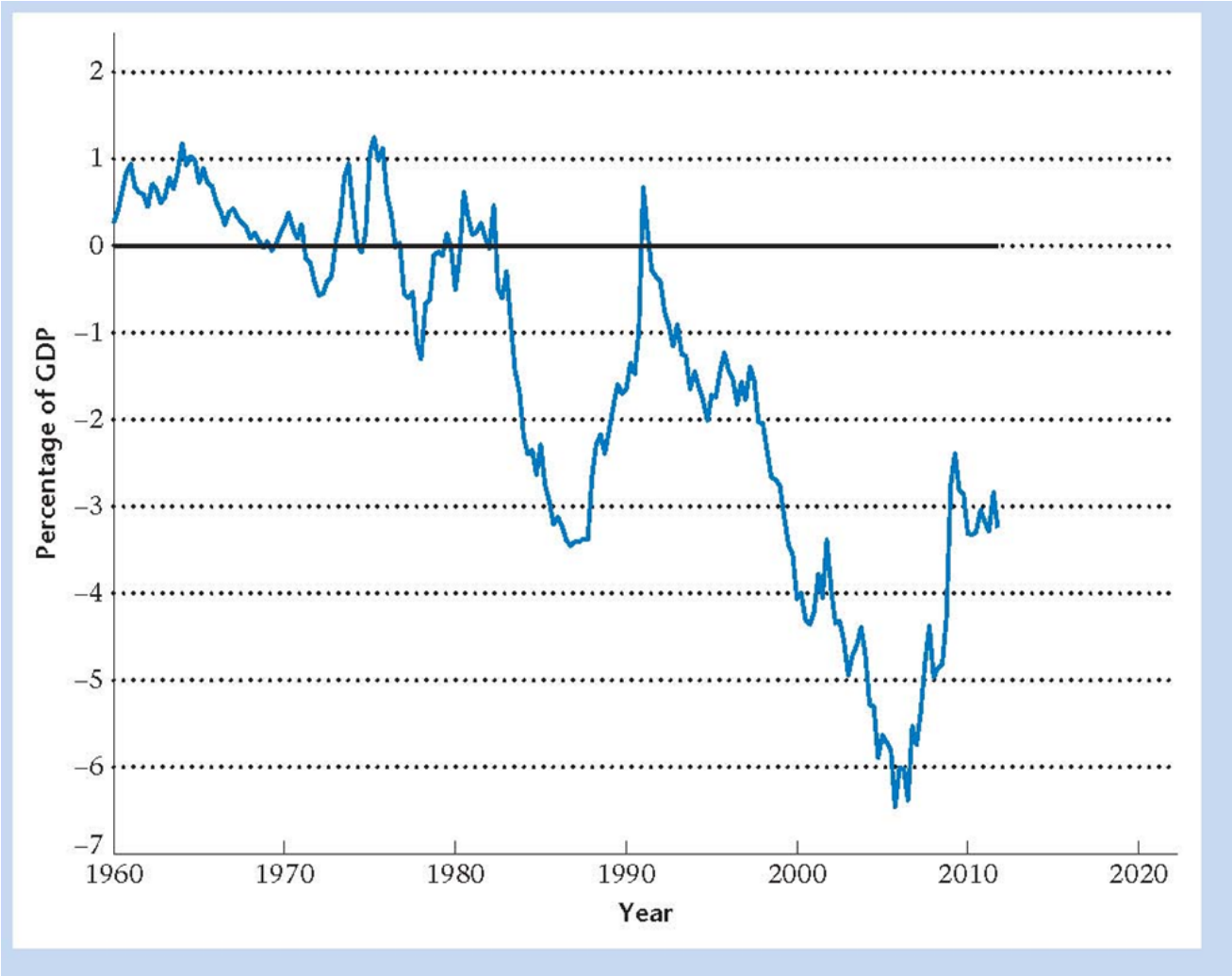
Figure 17: Relative Price of Housing


U.S. Exports and Imports Shares of GDP
ExportsGDP
ImportsGDP
%
18
16
14
12
10
8
6
4
1959
1969
1979
1989
1999
2009
DATE



- Note: Trade Balance = NX = Ex - Im

Figure 18: The Current Account Surplus



- Note: CA = NX + NFP