



ECON 310 - MACROECONOMIC THEORY

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Disclaimer

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These lecture notes are meant as complement to the textbook and not a substitute. They are created for pedagogical purposes to provide a link to the textbook. These notes can be distributed with prior permission. This version compiled August 29, 2016.

Chapter 1: Introduction

- Introduction to intermediate macroeconomics
- Look at some stylized facts

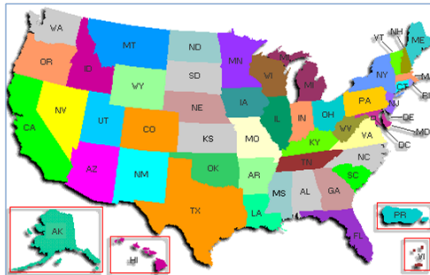
“The theory of economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusions”

John Maynard Keynes

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

Considering the biggest economy in the world

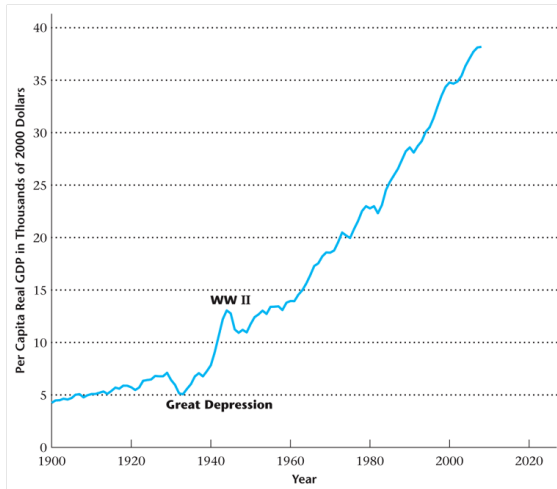
Figure 1: The United States of America



Quick Facts

- Land area: 3,500 mil square miles
- Population: 320 mil people
- ~113 mil households
- ~27 mil firms
- GDP: \$17.97 trillion (in 2015 USD)
- GDP per capita: \$54,629 (in 2015 USD)
- Gross Domestic Product (GDP): the quantity of goods and services produced within a country's borders over a particular period of time

Figure 2: Per Capita Real GDP (2000 USD)



Key Macroeconomic Facts

- Fact 1: Upward exponential trend
 - Between 1900 and 2002, average income increased eight-fold
 - Long-run growth
- Fact 2: Fluctuations around long term growth trend
 - Short-run cyclical components
 - Business cycle

Figure 3: Natural Log of Per Capita Real GDP

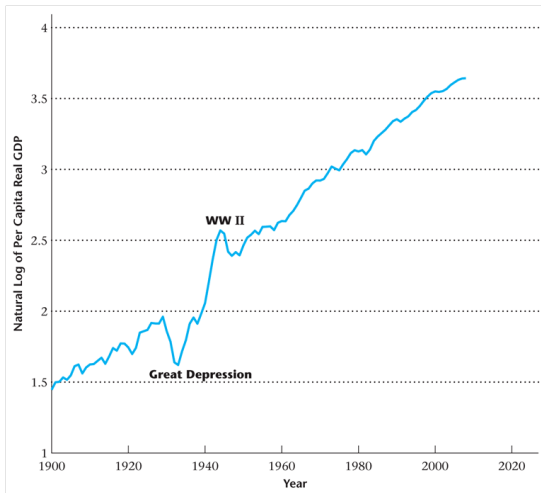


Figure 4: Natural Log of Per Capita Real GDP and Trend

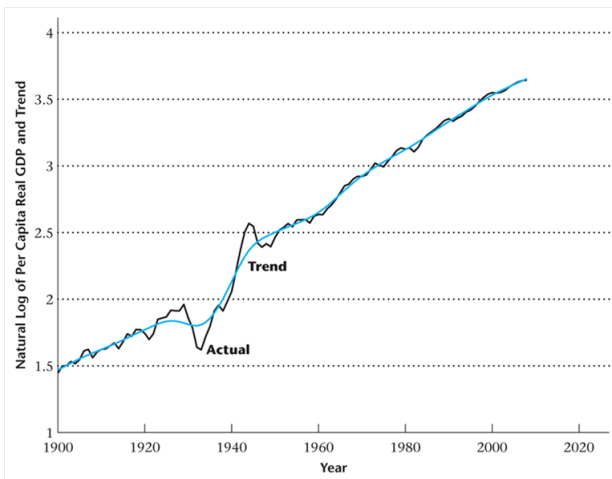
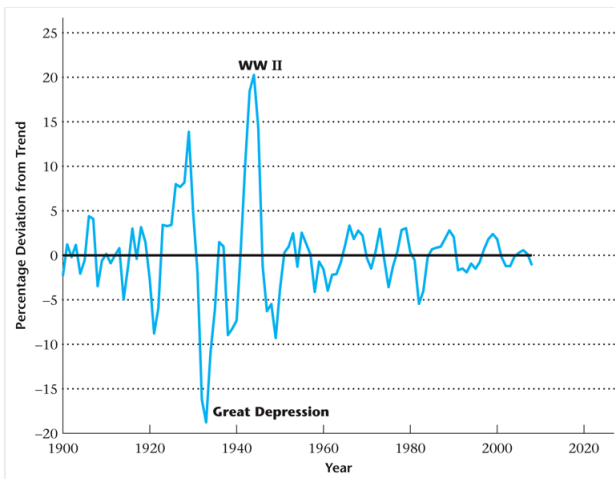


Figure 5: Percentage Deviations from Trend in Per Capita Real GNP



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.

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).

Agreement

- **Microfoundations:** focus on **Optimizing** behavior that results in a **competitive equilibrium**.
- **Agree:** Growth models (à la Solow) and endogenous growth. *For the most part.*

Causes of business cycles

- 1 Money surprise theory (late 60's and 70's) - Friedman and Lucas.
 - 2 Real Business Cycle theory (RBC) (early 1980's) - Kydland and Prescott.
 - 3 Keynesian coordination failure - inspired by Keynes.
 - 4 Sticky price models (early 1980's) - Blanchard, Fischer, and Taylor.
- A crude implication of these theories - role of policymakers!
 - Schools of thought: saltwater versus freshwater schools.
 - Vast Generalization!

Major Developments in Macroeconomics

- Macroeconomics became discipline during the Great Depression (post 1929 and pre WWII).
- John Maynard Keynes is generally credited for this distinction.
- Motivation: understand aggregate economies (*i.e.* countries).
- Microeconomics focus on the individual firm or household.
- Macroeconomics focus on behavior of large collection of economic agents.
- **Rational Expectations** revolution (1970's) blurred this distinction.
- Macroeconomics models are built from **Microfoundations**.
- Major distinction is the study of Long-Run (LR) growth versus business cycles.

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.
- 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 tradeoffs between output (Y) and inflation (π). In LR no tradeoff other than inefficiencies caused by LR inflation.

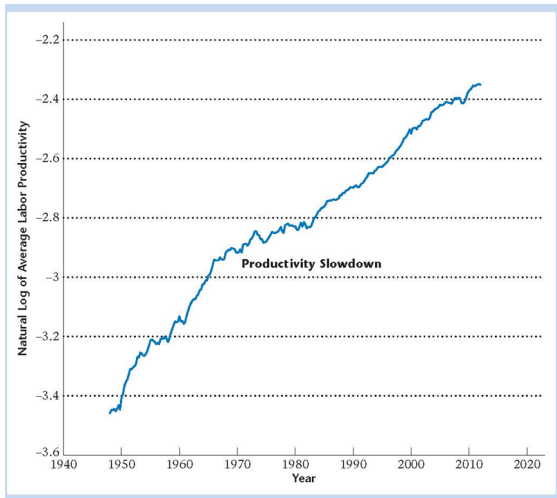
Recent and Current Macroeconomic Events

- **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

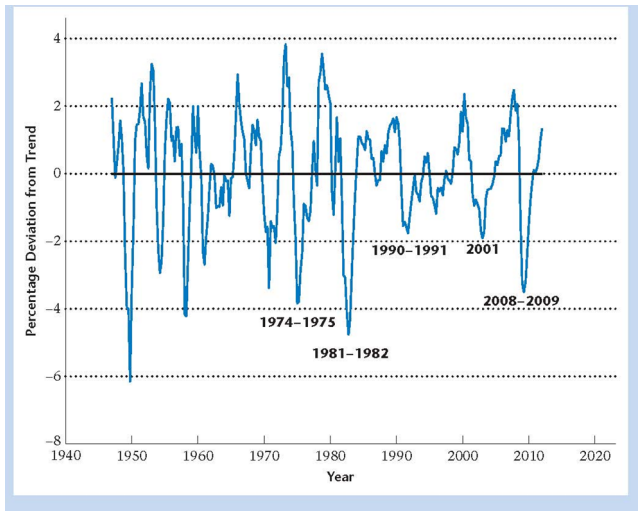
Figures (cont.)

Figure 6: $\log(\text{Average Labor Productivity})$



Figures (cont.)

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 → start of housing bubble (Greenspan rule)
- 5 2008 – 2009: Burst of Housing bubble and financial crisis
- 6 1982 – 2008: The Great Moderation → macro aggregates become less volatile

Figures

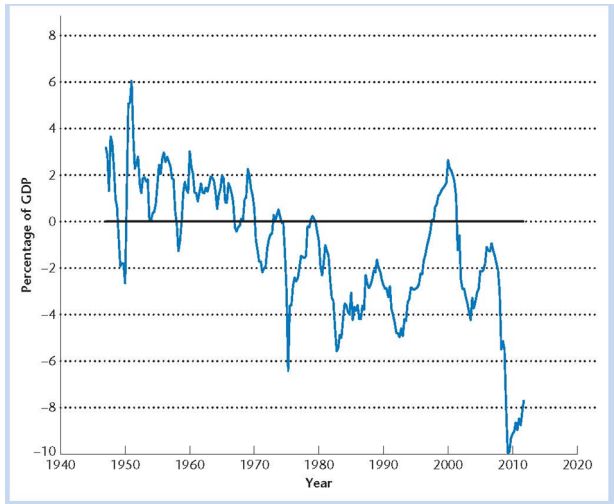
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Figure 8: Total Taxes and Total Government Spending



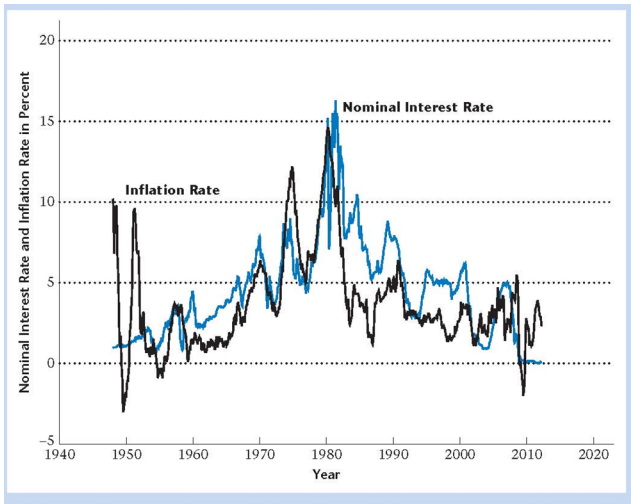
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Figure 9: Government Surplus (Deficit) as fraction of GDP



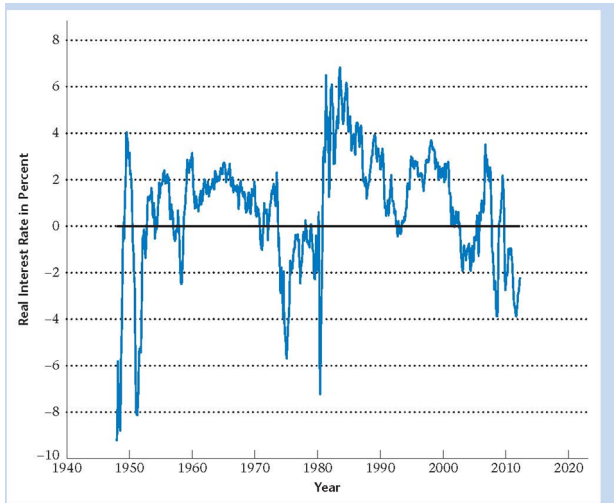
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Figure 10: Nominal Interest Rate and Inflation Rates



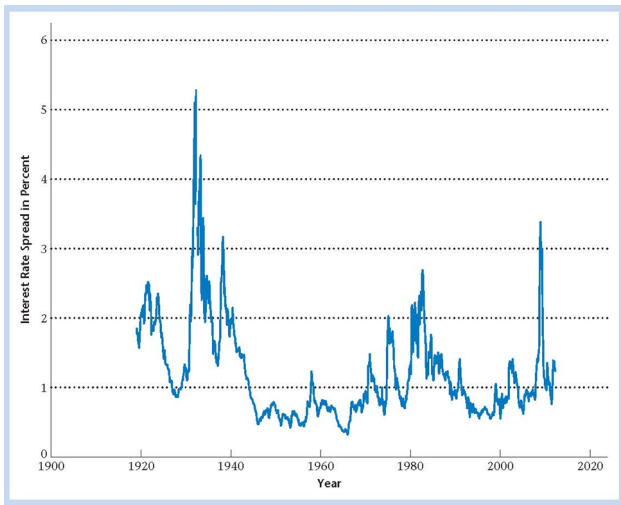
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Figure 11: Real Interest Rates



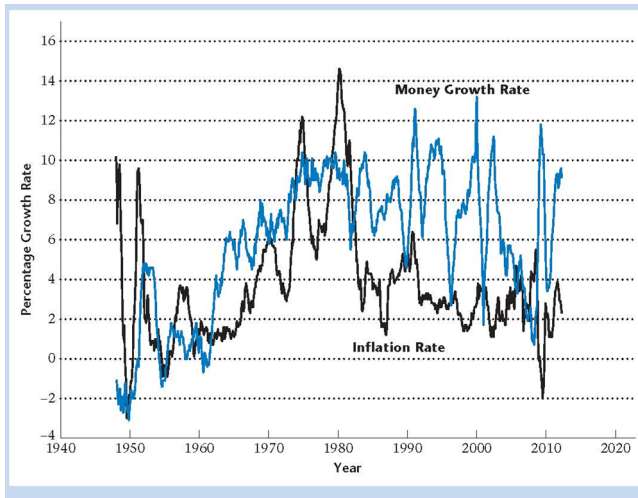
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Figure 12: Interest Rate Spread



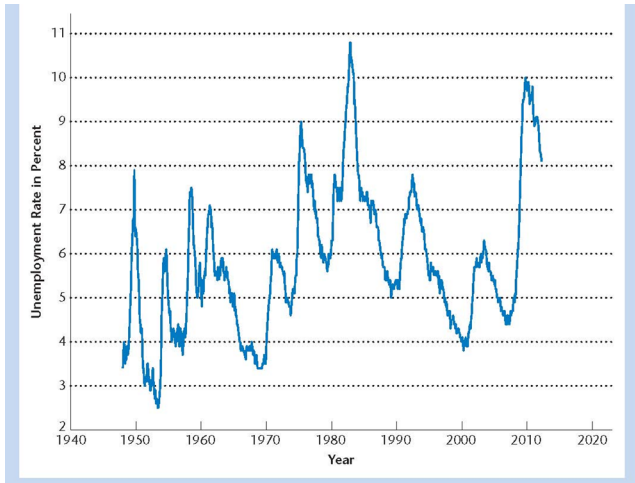
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Figure 13: The Inflation Rate and the Money Growth Rate



Figures (cont.)

Figure 14: The Unemployment Rate in the United States, 1948-2012



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Figure 15: The Beveridge Curve, 1948-2012

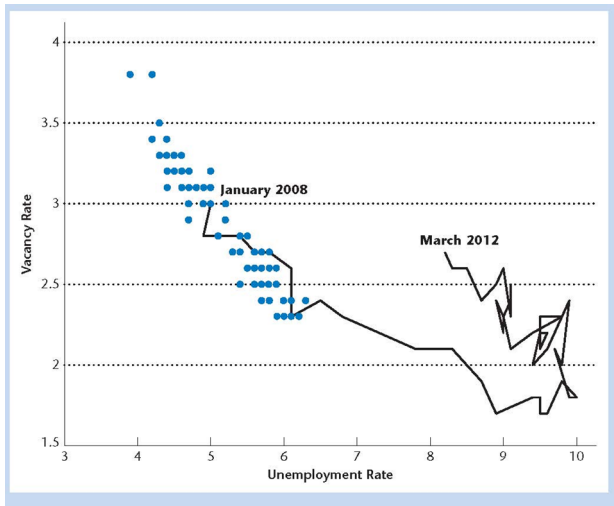


Figure 16: Deviations from Trend in the Unemployment Rate and Percentage Deviations from Trend in Real GDP

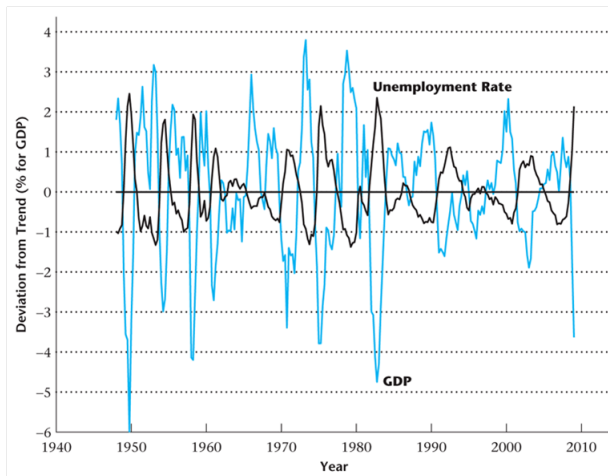


Figure 17: Relative Price of Housing



Figure 18: Exports and Imports of Goods and Services as Percentages of GDP

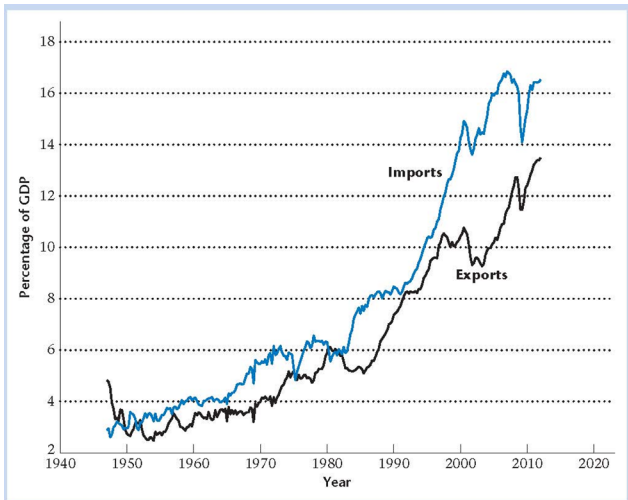


Figure 19: The Current Account Surplus

