

Advanced Macroeconomics

The Course

- Instructor: Zhang, Yu
- Email: yuzhang.xiamen@gmail.com
- Office: D314, Econ Building
- Office Hour: Tuesday 1:30-2:30pm (or by appointment)

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- Textbook: *Advanced Macroeconomics*, 4th edition, By David Romer
- References 1: *Macroeconomics*, 4th edition, By Stephen Williamson
- References 2: *Economic Growth*, 2nd edition, By Robert Barro and Xavier Sala-i-Martin
- How will you be evaluated?

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 - Problem Sets and Quizzes: 10%

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 - Mid-term Exam: 40%

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 - Problem Sets and Quizzes: 10%
 - Mid-term Exam: 40%
 - Final Exam: 50%

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- Bad News: This is going to be a tough semester to all of you!
- Good News: This is going to be the toughest semester to all of you!
- Advice: Whenever you have any concern or difficulty in this class, Do Come To Talk With Me! My office is always open to you!

The Course

- Some Suggestions:

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 - Read the text book before the class.

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 - Albert Einstein: “Do not worry about your difficulties in Mathematics. I can assure you mine are still greater.”

Topics Today

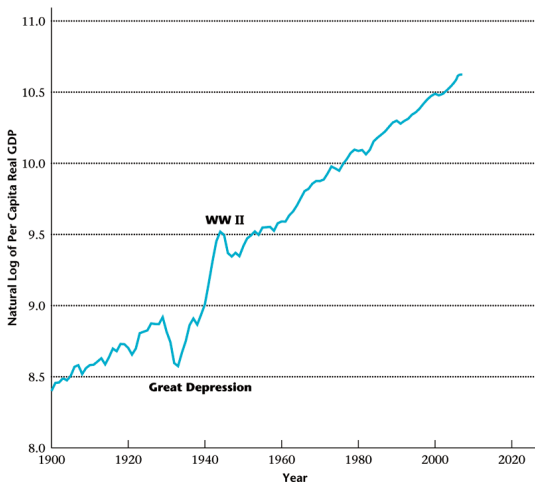
1. What is Macroeconomics?
2. Models To Be Learned.
3. An Introduction to Growth Theory
4. A Survey

What is Macroeconomics?

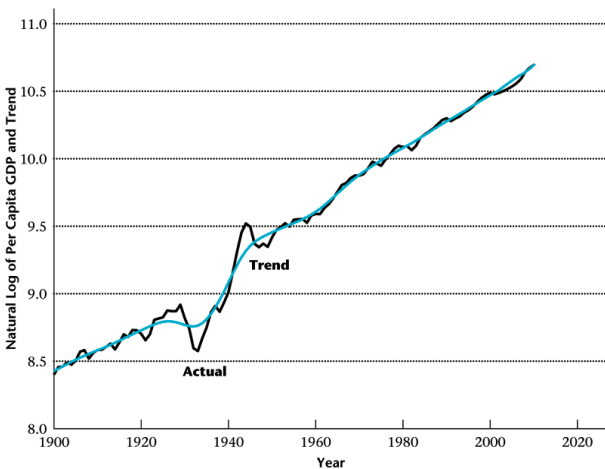
Generally speaking, Macro studies the economy activities as a whole. And it can be divided into several categories:

1. In terms of timing: long-run growth and short-run fluctuation
2. In terms of markets: goods market, asset market and labor market
3. In terms of concept: output, consumption, inflation, interest rate, investment, wage and unemployment
4. In terms of policy: monetary policy and fiscal policy

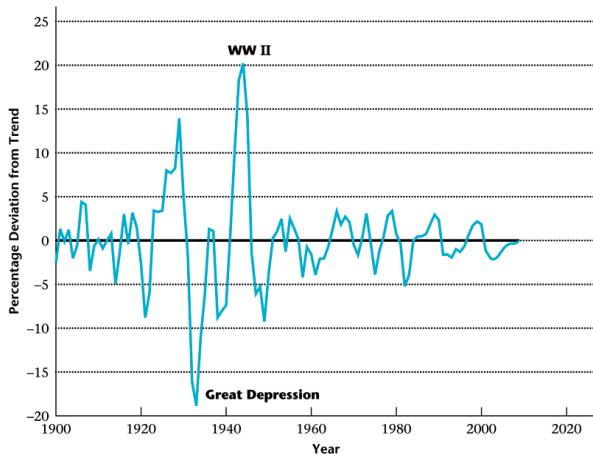
Longrun Growth V.S. Shortrun Fluctuations



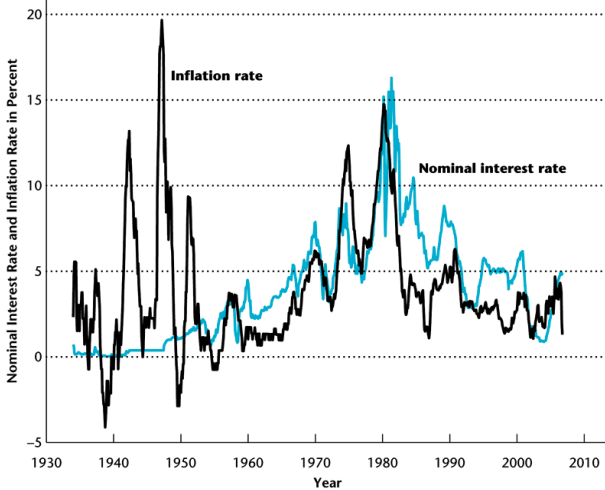
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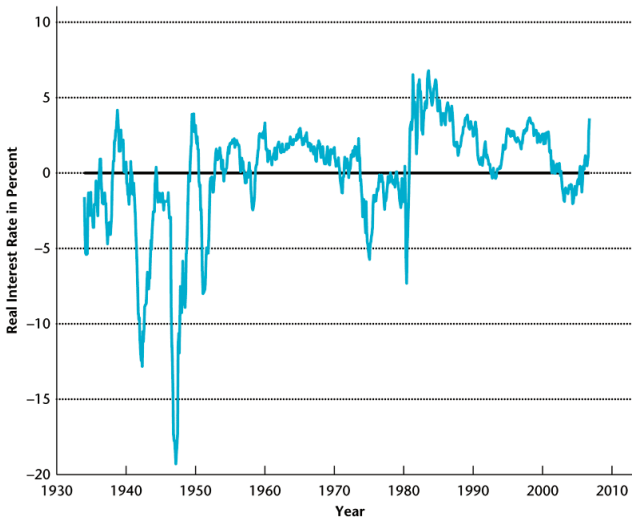
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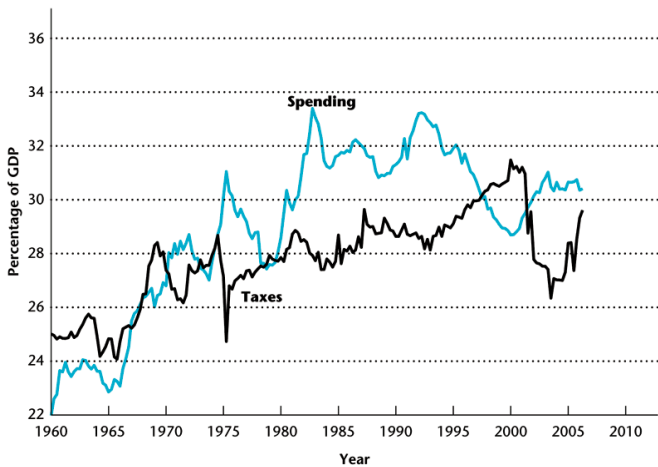
Interest Rate



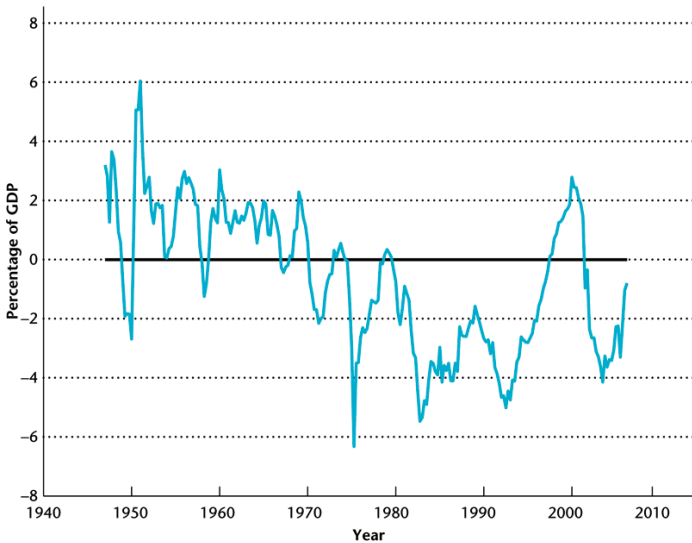
Interest Rate



Tax and Government Spending



Government Savings and Debt



Models To Be Learned This Semester

1. Long-run Growth Theories:

- Neoclassical Growth Theory:
 - The Solow Model (Chap.1)
 - RCK(Chap.2A), OG (Chap.2B)
- New Growth Theory
 - Endogenous Growth: R&D model, Learning-by-Doing (Chap.3A)
 - Human Capital, Social Infrastructure (Chap.3B)

2. Short-run Economic Fluctuation:

- RBC (Chap.5)
- New Keynesian Theories (Chap.6)

An Introduction to Growth Theory

“Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia’s or Egypt’s? If so, what, exactly? If not, what is it about the “nature of India” that makes it so? 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.”

—Robert E. Lucas, Jr. (1988)

An Introduction to Growth Theory

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 - If it had grown since 1870 at 0.8% per year, real GDP per capita of US would have been \$9450.
 - If it had grown since 1870 at 2.8% per year, real GDP per capita of US would have been \$127,000.

Stylized Facts on Economic Growth

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- 1. Per capita output grows over time, and its growth rate does not tend to diminish.
- 2. Physical capital per worker grows over time.
- 3. The rate of return to capital is nearly constant.

Stylized Facts on Economic Growth

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- 5. The shares of labor and physical capital in national income are nearly constant.
- 6. The growth rate of output per worker differs substantially across countries.

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- Per capita output grows over time, and its growth rate does not tend to diminish.

	GDP Per Capita (1985 \$US)	Ratio to U.S. GDP Per Capita	Growth Rate GDP Per Capita
Bangladesh			
1900	349	0.12	—
1913	371	0.10	0.0047
1950	331	0.05	-0.0031
1973	281	0.03	-0.0071
1987	375	0.03	0.0206
China			
1900	401	0.14	—
1913	415	0.11	0.0026
1950	338	0.05	-0.0055
1973	774	0.07	0.0360
1987	1748	0.13	0.0582
India			
1900	378	0.13	—
1913	399	0.11	0.0042
1950	359	0.05	-0.0029
1973	513	0.05	0.0155
1987	662	0.05	0.0182

Stylized Facts on Economic Growth

- Per capita output grows over time, and its growth rate does not tend to diminish.

Long-Term Growth Rates for Currently Developed Countries

Period	Growth Rate (percent per year)	Number of Countries
1830–50	0.9	10
1850–70	1.2	11
1870–90	1.2	13
1890–10	1.5	14
1910–30	1.3	16
1930–50	1.4	16
1950–70	3.7	16
1970–90	2.2	16

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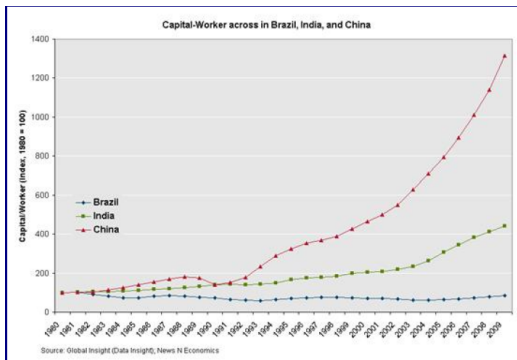
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Long-Term Growth Rates for Currently Less-Developed Countries

Period	Growth Rate (percent per year)	Number of Countries
1900-13	1.2	15
1913-50	0.4	15
1950-73	2.6	15
1973-87	2.4	15

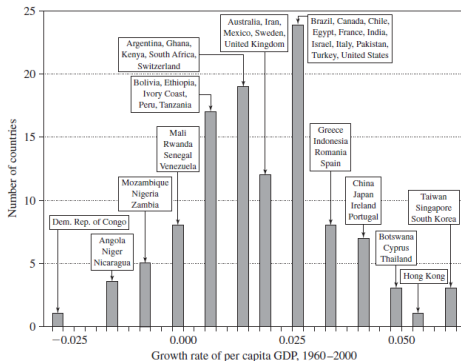
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- Physical capital per worker grows over time.



Stylized Facts on Economic Growth

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- The Lost Decade (1970s-mid 1980s):
- New Growth Theory (Endogenous Growth Models):
Learning-by-Doing, Human Capital, Romer(1990) (*Chapter 3*)

Next Time

- The Solow Model
- Read at least the assumptions in that model.