Economic Growth

ECO 120: Global Macroeconomics

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Goals

- Specific goals:
  - Appreciate the significance for economic growth.
  - Compare patterns of economic growth across countries.
  - Learn what factors affect economic growth.
- Learning objectives:
  - LO3: Evaluate the impact of macroeconomic policies on the long-run growth rate of an open economy.
  - LO5: Compare the US and other countries when discussing measures of unemployment, inflation, output, cyclical fluctuations, and economic growth.

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Long-Term Real GDP Growth

- Before the great depression, average growth rate was 1.4%
- After the great depression, average growth rate was 2.1%
- Real GDP per person in 1900 was approximately \$6,000 (using base year 2009)
- Real GDP per person in 2013 was approximately \$49,800 (base year 2009)
- Can you compute what GDP would be in 2014 if the average growth rate was always 1.4%?
  - Answer: $6000(1+0.014)^{113} = \$28,869.56$.
- What if the average growth rate was always 2.1%?
  - Answer: $6000(1+0.022)^{100} = \$62,814.53$.
- **Small differences in growth adds up to a lot!**

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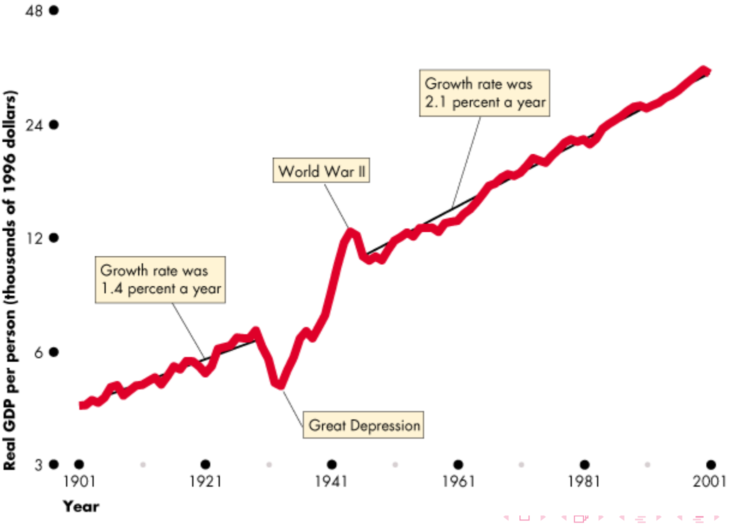
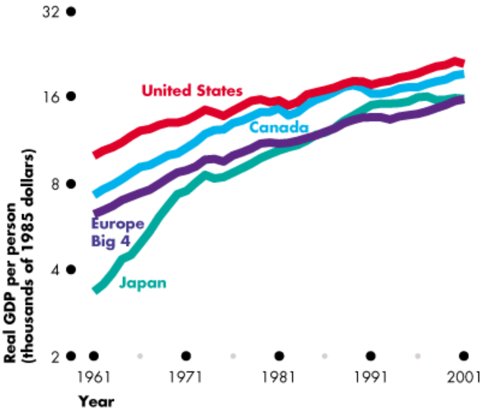
U.S. Trend


48
24
12
6
3
Real GDP per person (thousands of 1996 dollars)
Growth rate was
2.1 percent a year
World War II
Growth rate was
1.4 percent a year
Great Depression
1901
1921
1941
1961
1981
2001
Year

What happens in other developed countries?



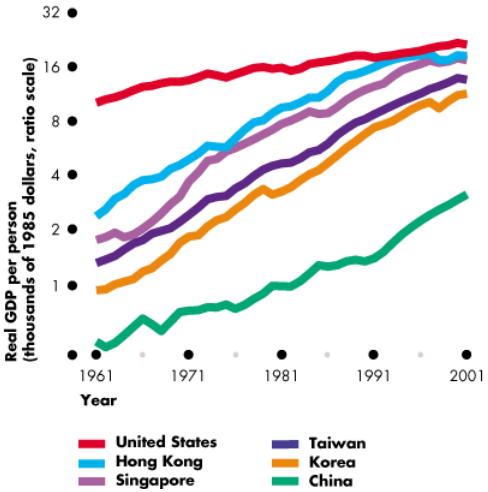
(a) Catch-up?

Rich countries, but low rates of growth $\approx$ 2%

After WW2, Japan was lesser-developed, but had a high growth rate

Now Japan is rich and has a low growth rate

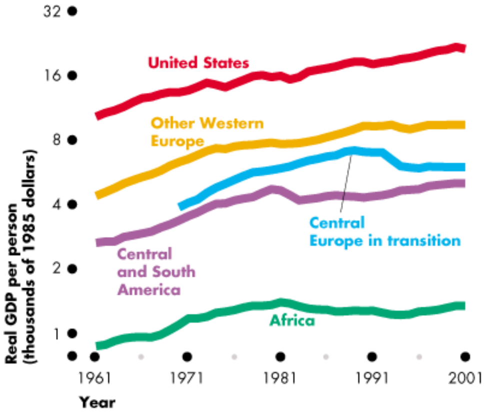
Developing Economies in Asia are catching up



Growth rates since 1990:

- Hong Kong ≈ 3%
- Singapore ≈ 5%
- Taiwan ≈ 5%
- Korea ≈ 5%
- China ≈ 10%

Some Lesser Developed Economies Not Catching Up



(b) No catch-up?

Need Proper Incentives

- Saving and investment in new capital
  - Savings is important for a sufficient equilibrium level of investment.
  - What happens if savings supply is low?
  - Higher levels of capital allows for higher levels of production.
  - and a higher marginal product of labor.
- Investment in human capital
  - Improved education increases the marginal product of labor.
  - Accumulation of knowledge has increasing returns.
- Discovery of new technologies
  - Technological progress drives economic growth in the long run.
  - There needs to be incentives to do research and development. What does the US do?
    - Patents on new products.
    - Fund research and development through grants and state universities.

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Preconditions for these incentives

- Markets
  - Enable buyers and sellers to meet.
  - Convey information through price.
- Property rights
  - Creates a profit incentive.
  - Intellectual property rights gives incentive for research and development
- Monetary exchange
  - Facilitates exchange.
  - Eliminates need for a "double coincidence of wants".

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Labor productivity Curve

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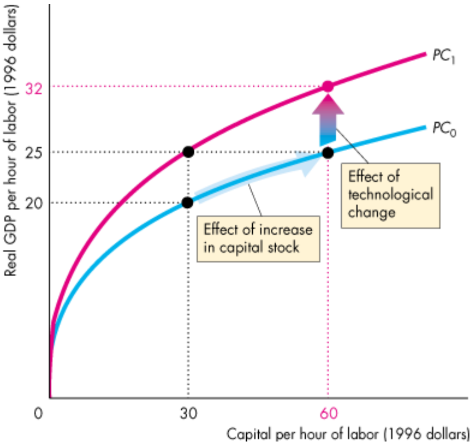
How labor productivity grows



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- Increases in capital correspond to *movements* along the curve.
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Catch-Up Theory

- Diminishing returns explains catch-up theory.
  - Lesser-developed countries have low levels of capital $\rightarrow$ high return to investing in new capital.
  - Developed countries (like the U.S.) have high levels of capital $\rightarrow$ low return to investing in new capital.
- Not all countries catch up. Preconditions for growth do not exist.
  - Poorly developed goods and services markets, financial markets.
  - Corruption and war threaten property rights.
  - Inflation out of control.

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How to achieve faster growth

- Stimulate savings. How?
  - Tax incentives: IRA accounts. Tax on consumption.
  - Tax on capital gains reduces savings incentive.
- Stimulate research and development.
  - Patents, research grants.
- Encourage international trade.
  - Fastest growing nations today are those with the fastest growing imports and exports.
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  - Invites foreign direct investment: global businesses create operations in new countries, invest in capital.
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