

EC132.02

Principles of Macroeconomics

Boston College

Tuesday, February 12

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Announcements and Reminders

Aplia homework on the CPI due this Friday, February 15, at 9am.

First midterm exam: next Thursday, February 21, 10:30 – 11:45am.

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10:30 – 11:45am.

Closed book exam, between 6 and 12 questions
(short-answer, with multiple parts) covering:

Ch 4 – The Market Forces of Supply and Demand

Ch 23 – Measuring a Nation's Income

Ch 24 – Measuring the Cost of Living

Ch 25 – Production and Growth

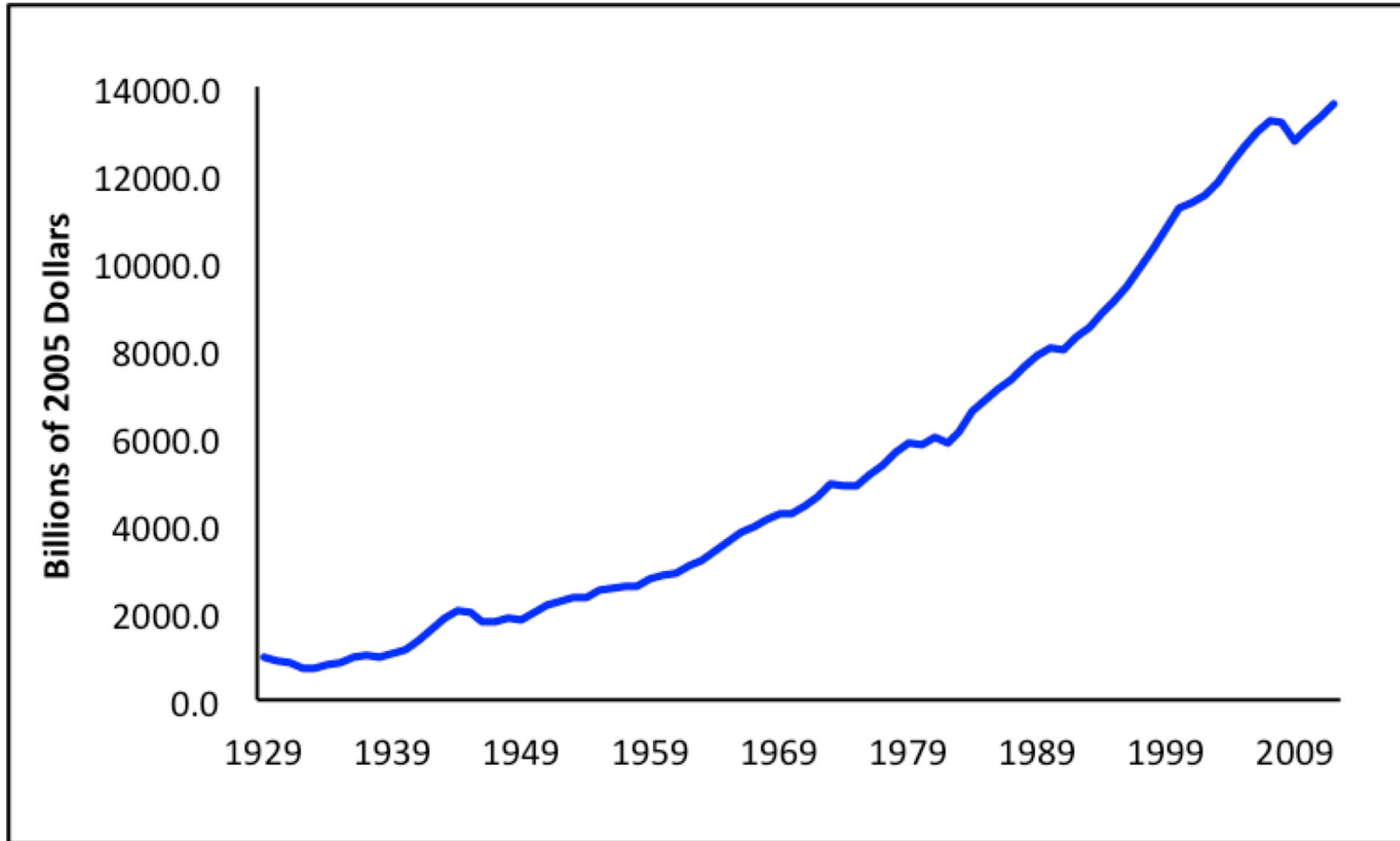
Announcements and Reminders

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Aplia homework on Production and Growth due Friday, March 1, at 9am.

Real Gross Domestic Product, US



3 Principles of Macroeconomics

1. The Classical Dichotomy

- Real versus nominal variables.

2. The Long-Run Neutrality of Money

- In the long run, changes in money affect nominal but not real variables.

3. The Phillips Curve

- But in the short run, there may be important linkages between real and nominal variables.

Course Outline

B. The Data of Macroeconomics

2. Measuring a Nation's Income (Ch.23)
3. Measuring the Cost of Living (Ch.24)

C. The Real Economy in the Long Run

4. Production and Growth (Ch.25)
5. Saving, Investment and the Financial System (Ch. 26)
6. Unemployment (Ch.28)

Ch 25 Production and Growth

1. Economic Growth Around the World

2. Productivity

- A. Why Productivity is So Important
- B. How Productivity is Determined
- C. The Aggregate Production Function

3. Economic Growth and Public Policy

Economic Growth Around the World

Country	Period	Real GDP/ Person - Beginning	Real GDP/ Person - End	Average Yearly Growth Rate
Japan	1890-2008	\$1,504	\$35,220	2.71%
China	1900-2008	\$716	\$6,020	1.99%
Mexico	1900-2008	\$1,159	\$14,270	2.35%
US	1870-2008	\$4,007	\$46,970	1.80%
India	1900-2008	\$675	\$2,960	1.38%
UK	1870-2008	\$4,808	\$36,130	1.47%
Bangladesh	1900-2008	\$623	\$1,440	0.78%

Real GDP per person in the US grows over long periods at a rate of about 2% per year.

That allows inflation-adjusted income per person to double across each generation.

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Income per person in the US is 8 times that in China and 16 times that in India.

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Income per person in India today is below what income per person in the US and UK were in 1870.

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Japan's income per person was comparable to Mexico's in 1890 or 1900.

But Japan's income per person today is comparable to the UK's.

Why Productivity is So Important

Consider Robinson Crusoe, alone on a desert island.

What determines Crusoe's standard of living?

His **productivity**: the quantity of goods and services produced by each worker (or “each unit of labor input”).

Why Productivity is So Important

Productivity, or output per worker, determines Crusoe's living standard.

But it also determines living standards in the US and elsewhere around the world.

How Productivity is Determined

What determines how many fish Crusoe eats?

His productivity: how many fish he catches.

But what determines Crusoe's productivity?

How Productivity is Determined

But what determines Crusoe's productivity?

1. How many fishing poles does he have?
2. How much training in fishing does he have?
3. How plentiful is the supply of fish near the island?
4. How effective is Crusoe at inventing new techniques for fishing?

How Productivity is Determined

But what determines Crusoe's productivity?

1. How many fishing poles does he have?

Workers are more productive when they have more tools.

Physical capital is the stock of equipment and structures that are used to produce goods and services.

Physical capital per worker is a key determinant of productivity in the US.

How Productivity is Determined

But what determines Crusoe's productivity?

2. How much training in fishing does he have?

Workers are more productive when they have better training.

Human capital is the stock of knowledge and skills that workers obtain through education and training.

Human capital per worker is a key determinant of productivity in the US.

How Productivity is Determined

But what determines Crusoe's productivity?

3. How plentiful is the supply of fish near the island?

Natural resources are inputs to production provided by nature. They may be **renewable** (like forests) or **nonrenewable** (like oil).

Natural resources per worker is a key determinant of productivity in the US.

Some countries, like Japan, have become quite productive even without access to a lot of natural resources.

How Productivity is Determined

But what determines Crusoe's productivity?

4. How effective is Crusoe at inventing new techniques for fishing?

Technological knowledge refers to society's understand of the best ways to produce goods and services. This knowledge can be **common knowledge** or **proprietary**.

A larger stock of technological knowledge raises productivity in the US.

How Productivity is Determined

What determines Crusoe's living standard?	What determines the US living standard?
His productivity (output per worker).	Our productivity (output per worker).
What determines Crusoe's productivity?	What determines US productivity?
Number of fishing poles.	Amount of physical capital per worker.
Amount of training in fishing.	Amount of human capital per worker.
Supply of fish.	Amount of natural resources per worker.
Invention of new fishing techniques.	Amount of technological knowledge.