

Course: Foundations of Economics
Lecture 5: Introduction to
Macroeconomic Problems

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Learning objectives

- Supply and Demand in Macroeconomics
- Gross Domestic Product
- Circular Flow of Income
- GDP and Economic Growth: business cycles
- Limitation of GDP

Drawing a Line Between Macro and Micro

- Microeconomics
 - How *individual* decision-making units behave
- Macroeconomics
 - Behavior of *entire* economies
 - Study economic aggregates such as price level, production, unemployment

Drawing a Line Between Macro and Micro

- **How would you measure domestic product – total production in an economy?**
- **Aggregation**
 - Process of combining many individual markets into one overall market
 - Add together the value of hot dogs, computers etc.
 - Abstraction

Macroeconomics: three main tasks

Three macroeconomic concerns

- Economic growth
- Low Unemployment
- Low inflation

Definition of GDP

Gross domestic product is

a measure of the total market value of final goods and services newly produced within a country's borders over a period of time

All goods sold in an economy share a common unit of measure: the price at which they are sold.



Sum up
the value
of goods

Gross Domestic Product (GDP)

- *GDP* is the sum of the value of new, final goods produced within the domestic borders of an economy.
- *Final goods are goods sold to their end-users*

GDP does not include:

- Intermediate goods which are sold from one firm to another for immediate transformation into other goods.
- financial transactions like buying stocks.
- purchases of used goods which have been sold before.
- goods produced overseas by domestic firms.

Measuring GDP

- Production approach
 - sums up the monetary value of all final goods and services produced in each national accounting sector
- Spending approach
 - who buys the final goods and services that have been produced
- Income approach
 - totals compensation received by everyone involved in production

Three Approaches of Measuring Gross Domestic Product

- Production
 - Market value of final goods and services
- Expenditure
 - Consumption, Investments, Government spending, exports, imports
- Income
 - Labor income, capital income

The Product Approach

- Measures the value of all final goods and services by their *market value* in respective currency
- Value-added approach: adds up all value-added contributions at each step in the production process
- Imputations are used to estimate values of components of GDP

Production approach

Business production

+ Households and institutions production

+ Government production

– Taxes less subsidies on products

= GDP

Household production

- Counted as household production:
 - Imputed rent of owner-occupied dwellings
- *Not* counted as household production:
 - Domestic and personal services produced and consumed within the same household (e.g. cleaning, preparation of meals or the care of sick and elderly)
 - Volunteer services that do not lead to the production of goods, e.g. care-taking or cleaning without payment

Expenditure approach

- Adds up the value of newly produced goods and services bought by the household and institution, business, foreign, and government sectors.
- Aggregate demand – **total spending on the goods and services made within the country**

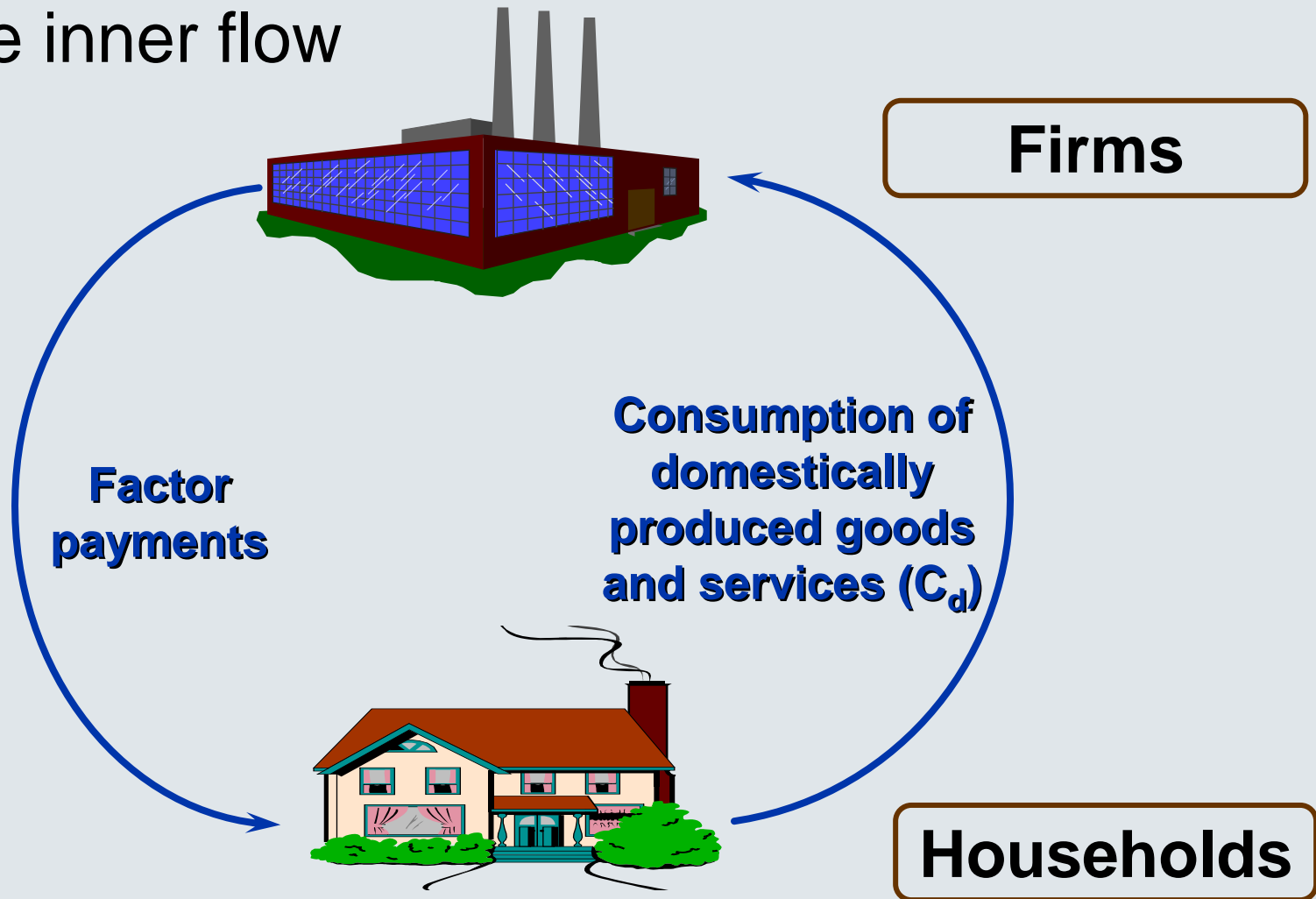
Understanding GDP with Circular flow of income model

*The circular flow model is an economic model that **presents how money, goods, and services move between sectors in an economic system.***

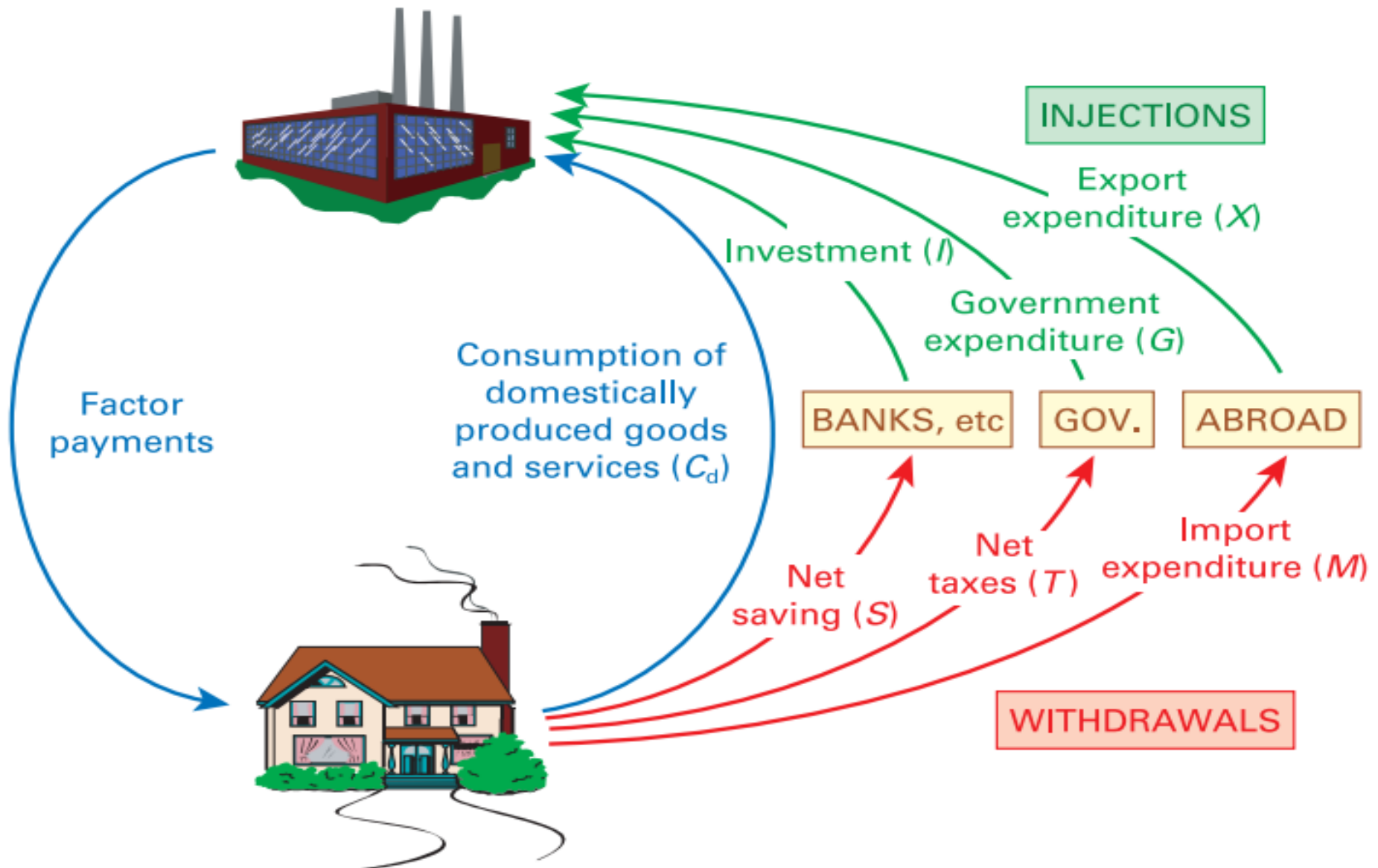
Circular Flow of National Income

Closed economy with no government

- The inner flow



The circular flow of income



The Circular Flow of Income

$$\square W = S + T + M$$

$$\square J = I + G + X$$

$$W = J$$
$$(S+T+M) = (I+G+X)$$

But it does NOT guarantee that

$$S = I$$
$$G = T$$
$$M = X$$

Aggregate demand

Aggregate demand – **total spending on the goods and services made within the country**

$$AD = C + I + G + X - M$$

or

$$AD = C_d + I + G + X$$

Circular flow of income and macroeconomic objectives

Rise in AD or Economic growth will lead to:

- Output ↑
 - Unemployment ↓
 - Inflation ↑
 - Import (M) ↑
- Balance of payments will deteriorate

The Income Approach

Production related incomes (wages, rents, and profits) earned by all people and organizations inside the economy are summed up in **national income**

- Income from *foreign* production received by domestic residents is *subtracted*
- Income from *domestic* production received by foreign residents is *added*
- Add depreciation
- Statistical discrepancy: results from income approach not exactly reconciles results from product and spending approaches

The Income Approach

National Income

– Net income payments from the foreign sector

+ Depreciation

= GDP

Limitations of Gross Domestic Product

- Not a measure of the nation's economic well-being
- Includes only market activity
 - ✦ Creates a problem when making international comparisons
 - ✦ Ignores the underground economy
 - ✦ Do people in poor countries really live on \$5/week?
- Places no value on leisure

Nominal vs. Real GDP

- **Nominal (current prices) GDP:** gross domestic product expressed in terms of current prices
- **Real GDP:** a measure of gross domestic product that seeks to reflect the actual value of goods and services produced, by removing the effect of changes in prices

Nominal vs. Real GDP

Nominal GDP

Total
Production
valued at
current prices

minus price
effect =

Real GDP

Actual value
of goods and
services
produced

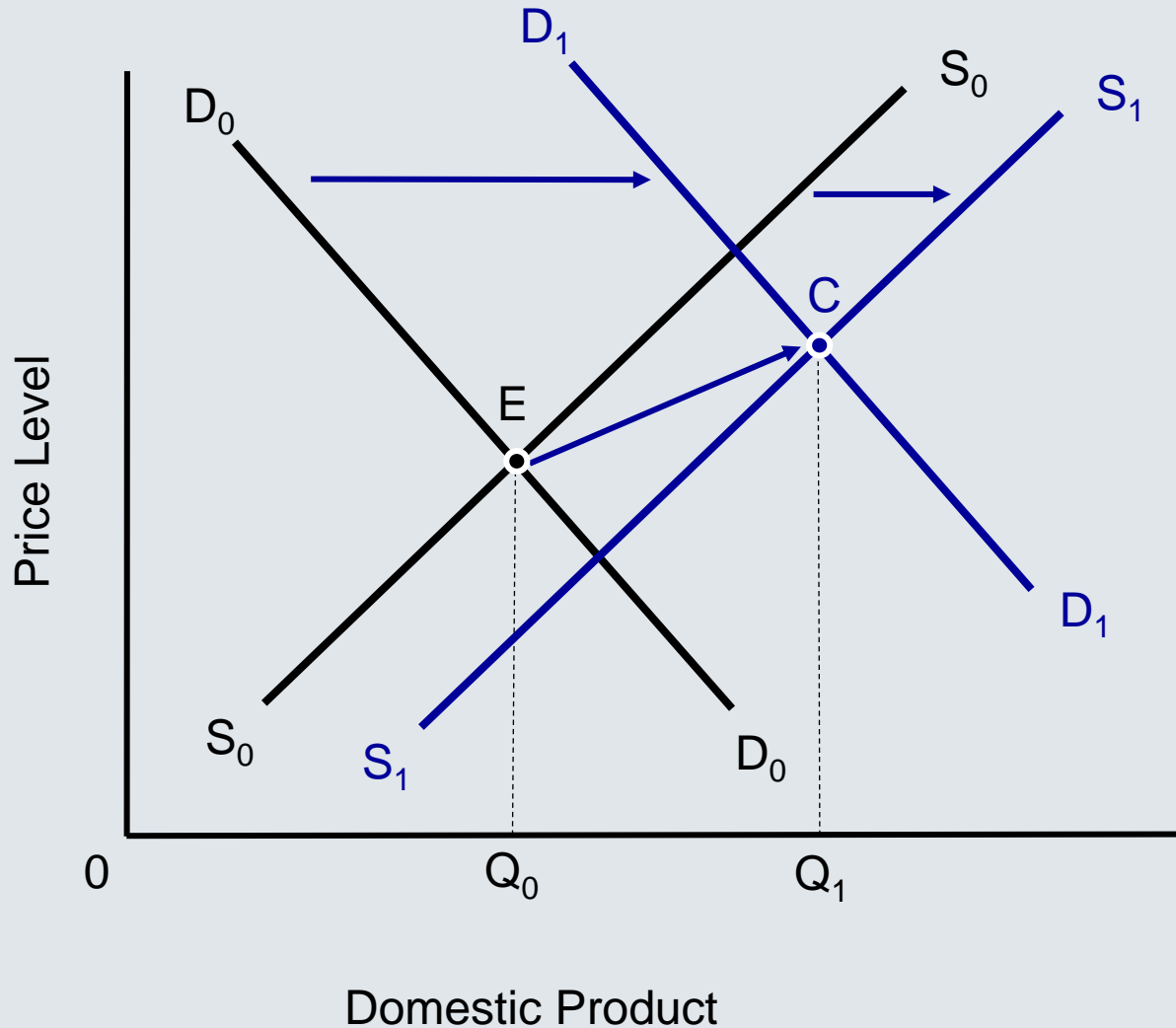
GDP Growth

Economic growth is an annual percentage increase of GDP

$$\text{Percentage change} = \frac{(\text{Value2} - \text{Value1})}{\text{Value 1}} \times 100$$

$$\text{Growth rate of GDP} = \frac{(\text{GDP2022} - \text{GDP2021})}{\text{GDP2022}} \times 100$$

GDP Growth graphical illustration

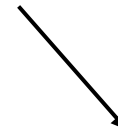


Economic Growth and the Business Cycle

Economic growth



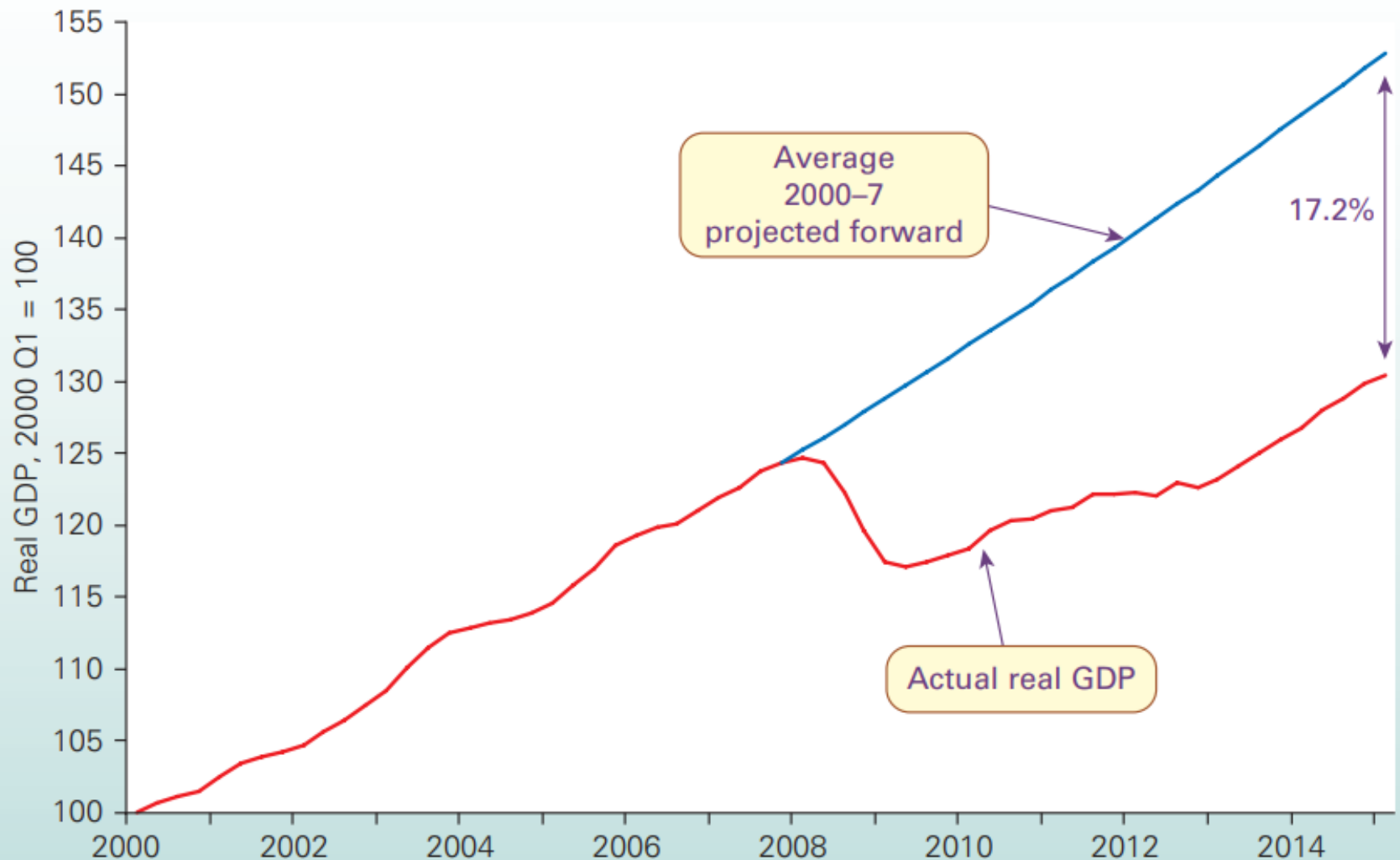
Actual



Potential

Output gap = Actual output – Potential output

Actual and potential growth in UK



Source: Key Economic Time Series Data, series ABMI (Office for National Statistics); authors' calculations

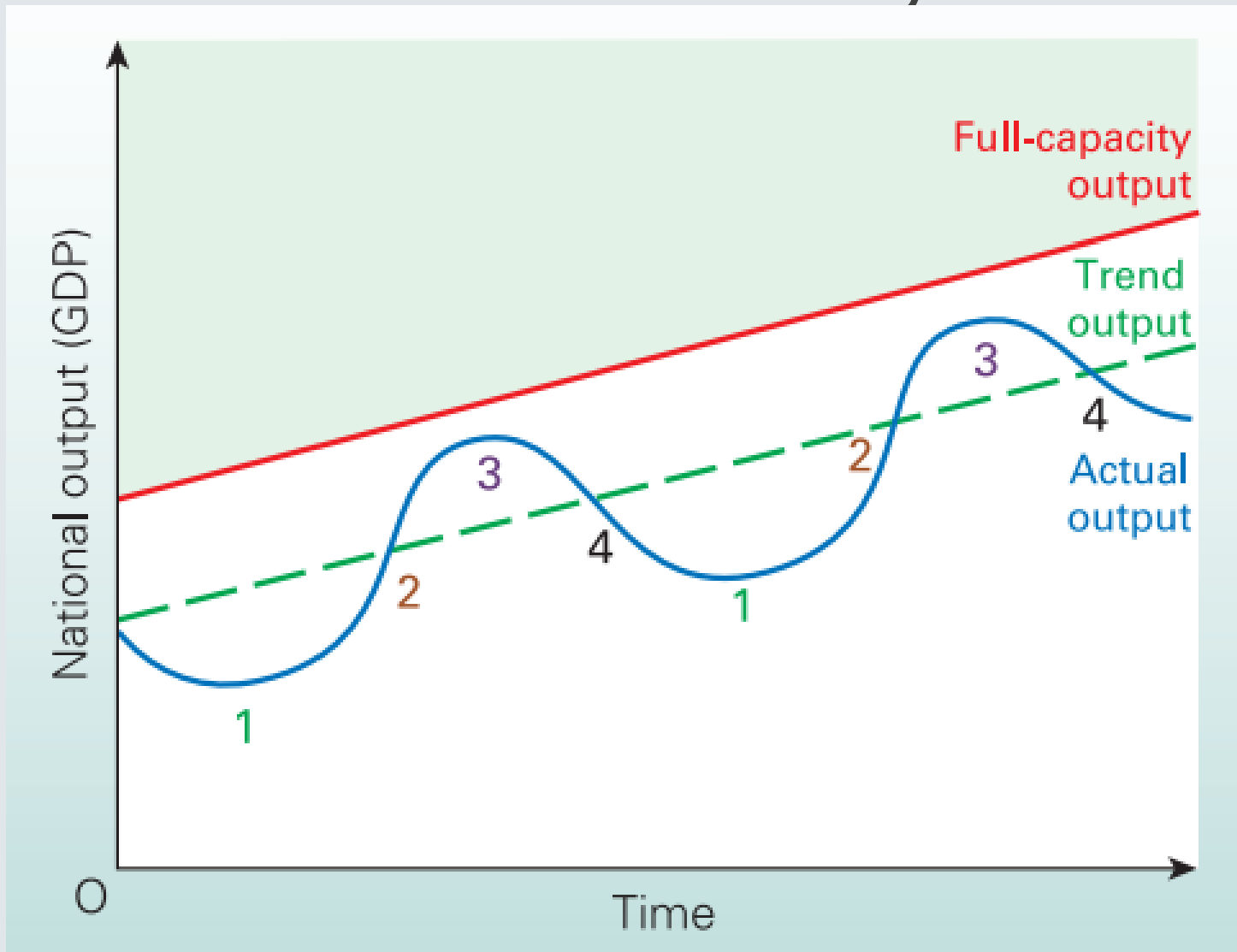
Actual economic growth and the business cycle

Business cycle – the periodic fluctuations of national output round its long-term trend

‘Phases’ of the business cycle:

1. The upturn
2. The rapid expansion
3. The peaking out
4. The slowdown, recession or slump

The Business Cycle



Expansion

- During a period of expansion:
 - Wages increase
 - Low unemployment
 - People are optimistic and spending money
 - High demand for goods
 - Businesses start
 - Easy to get a bank loan
 - Businesses make profits and stock prices increase

Peak

- When the economic cycle peaks:
 - The economy stops growing (reached the top)
 - GDP reaches maximum
 - Businesses can't produce any more or hire more people
 - Cycle begins to contract

Contraction

- During a period of contraction:
 - Businesses cut back production and layoff people
 - Unemployment increases
 - Number of jobs decline
 - People are pessimistic (negative) and stop spending money
 - Banks stop lending money

Trough

- When the economic cycle reaches a trough:
 - Economy “bottoms-out” (reaches lowest point)
 - High unemployment and low spending
 - Stock prices drop

But, when we hit bottom, no where to go but up!
UNLESS.....

Explanations of Business Cycle

- **Endogenous theories**
 - Innovation theory
 - Psychological theory
 - Inventory cycle theory
 - Monetary theory
 - Under-consumption theory
- **Exogenous theories**
 - Sunspot theory
 - War theory

REFERENCES

- John Sloman, (2016), Essentials of Economics, 7th ed, Prentice Hall.
- Irvin B. Tucker, (2018), Survey of Economics, 10th ed, Cengage learning.
- Karl Case, Ray Fair, (2004), Principles of Economics, 7/e, Prentice Hall Business Publishing.