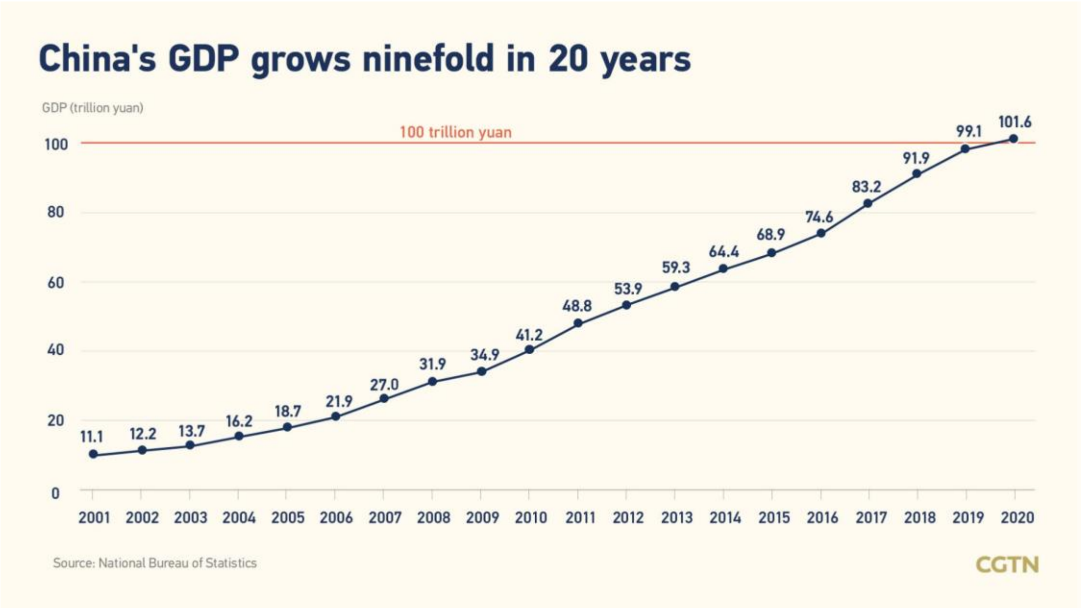
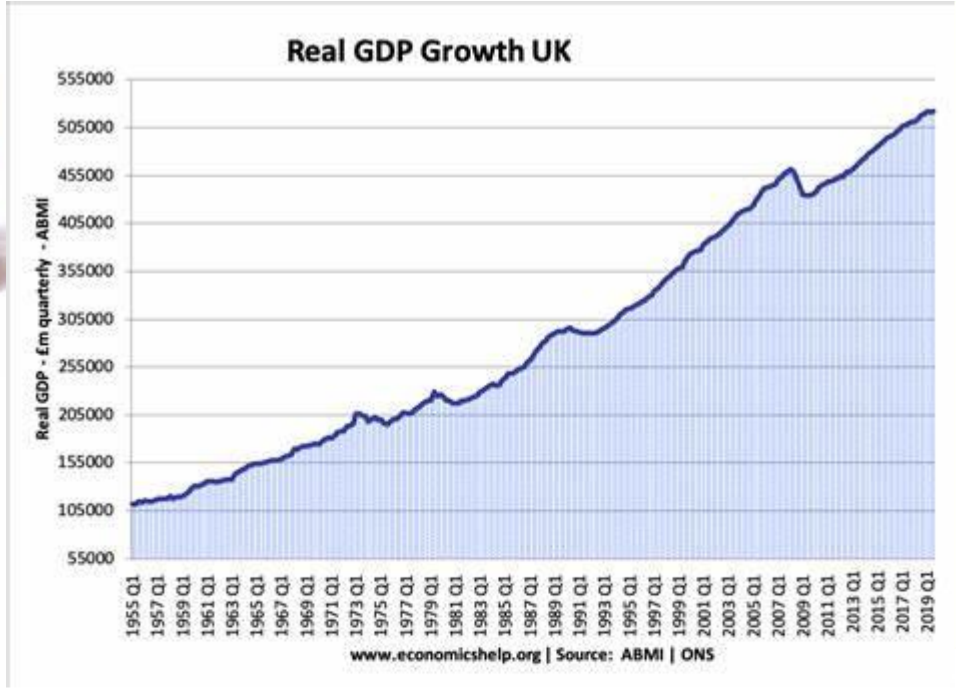
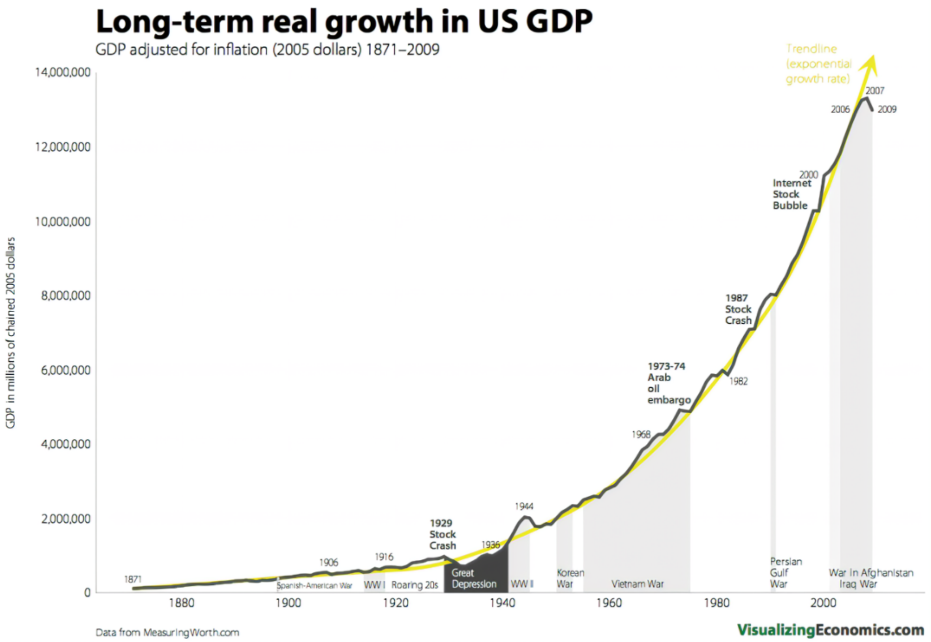

The Business Cycle

GDP (real output) in most countries around the world grows over long period of time.







But actually, output growth everywhere is uneven and irregular.

In some years(or months), real output may grow rapidly,
In other years(or months) more slowly,
Some times it may even fall……

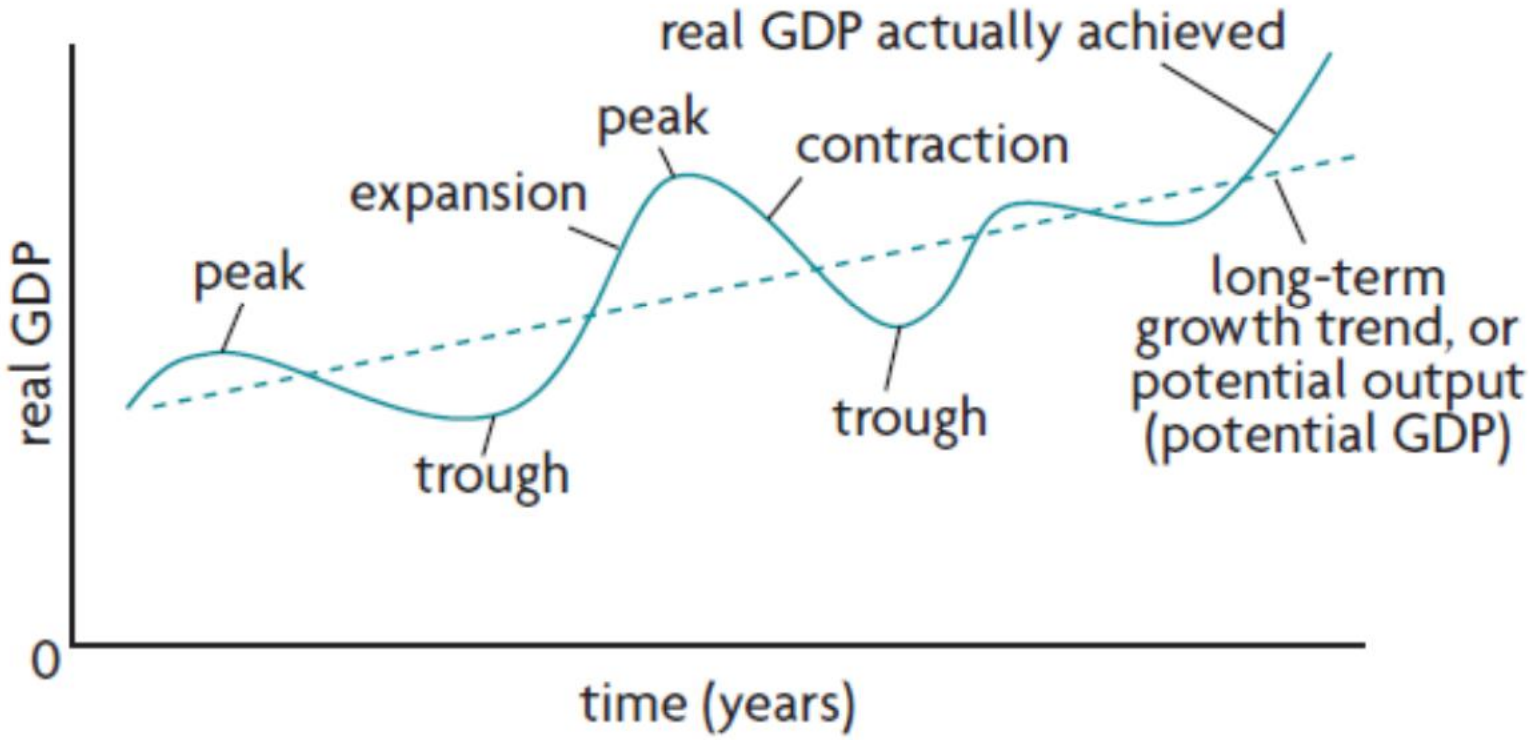
Business cycle

"Business cycles are a type of fluctuation found in the aggregate economic activity of nations…a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions…this sequence of changes is recurrent but not periodic."

--From *'Measuring Business Cycles'*

by Arthur F. Burns and Wesley C. Mitchell, 1946

Business cycle

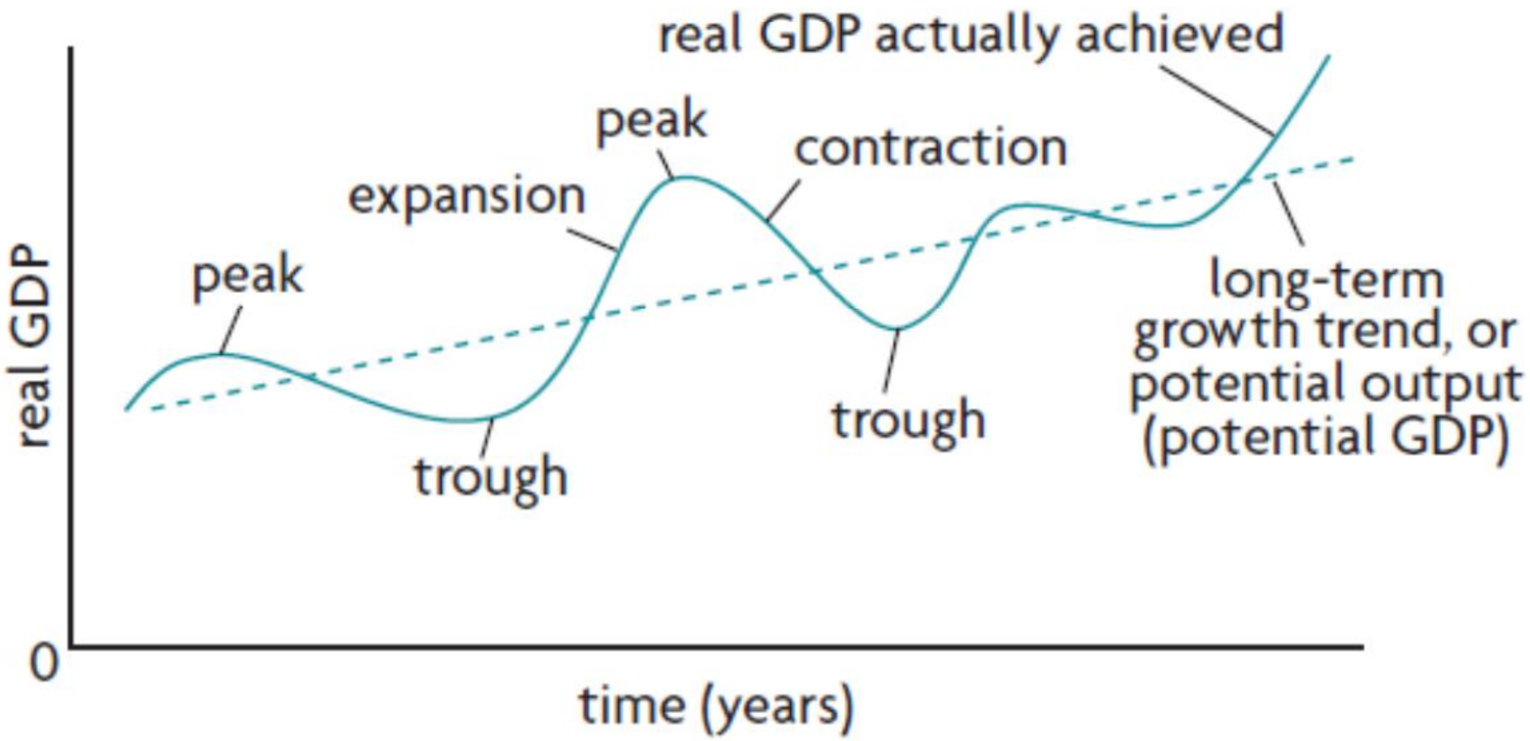


Business cycles： **Fluctuations** in the **growth of real output**, or real GDP, consisting of alternating periods of expansion (increasing real output) and contraction (decreasing real output)

- **Vertical axis: real GDP** – it measures changes in the <u>volume of output produced</u> after the influence of price-level changes has been eliminated.
- **Horizontal axis: time** (years)

→ The cyclical line shows actual output, or real GDP that is actually achieved over time.

Four Phases of Business cycle

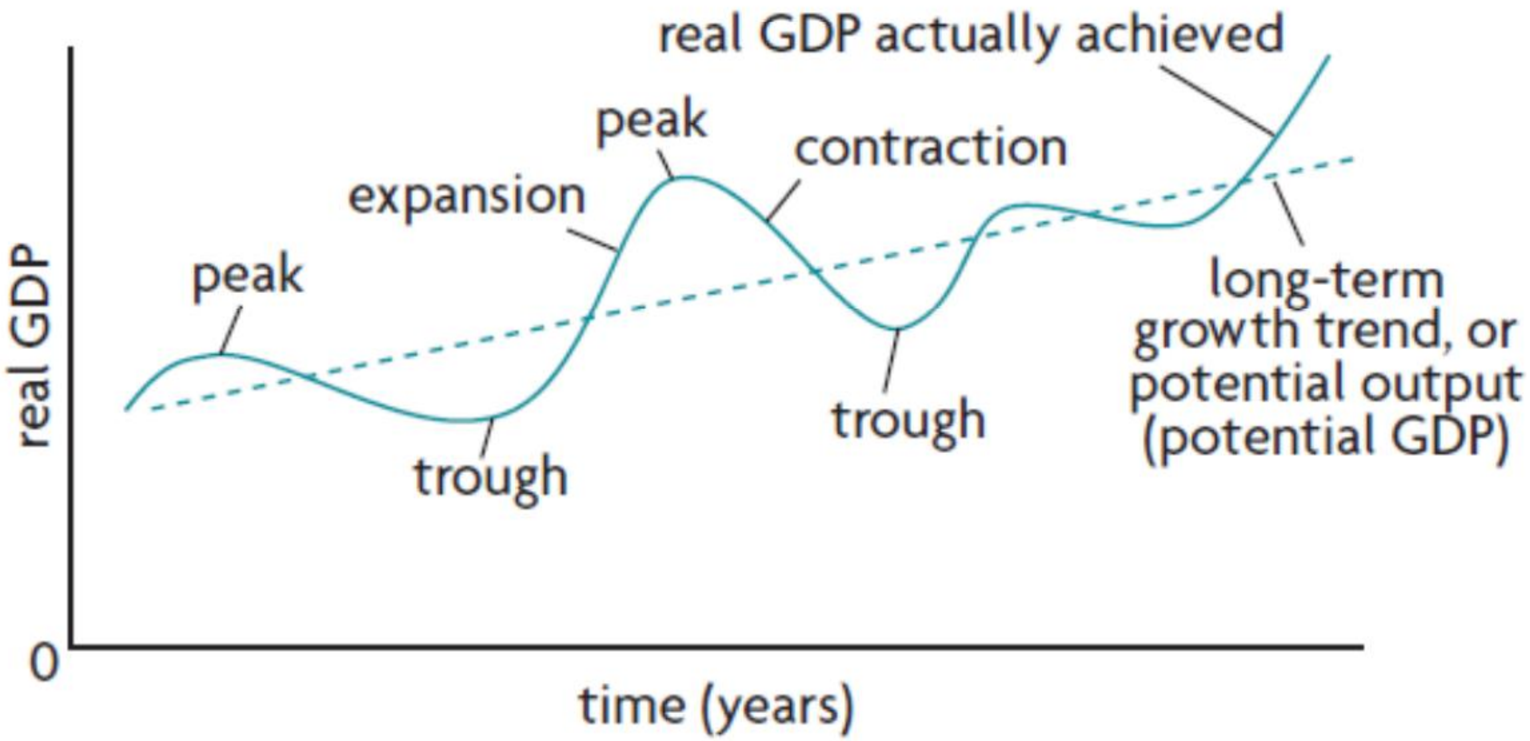


1. **Expansion:** an expansion occurs when there is **positive** growth in real GDP. – Upward sloping part of the curve.

- Increasing employment of resources
- General price level of the economy begins to rise rapidly.

An expansion begins at the trough (or bottom) of a business cycle and continues until the next peak.

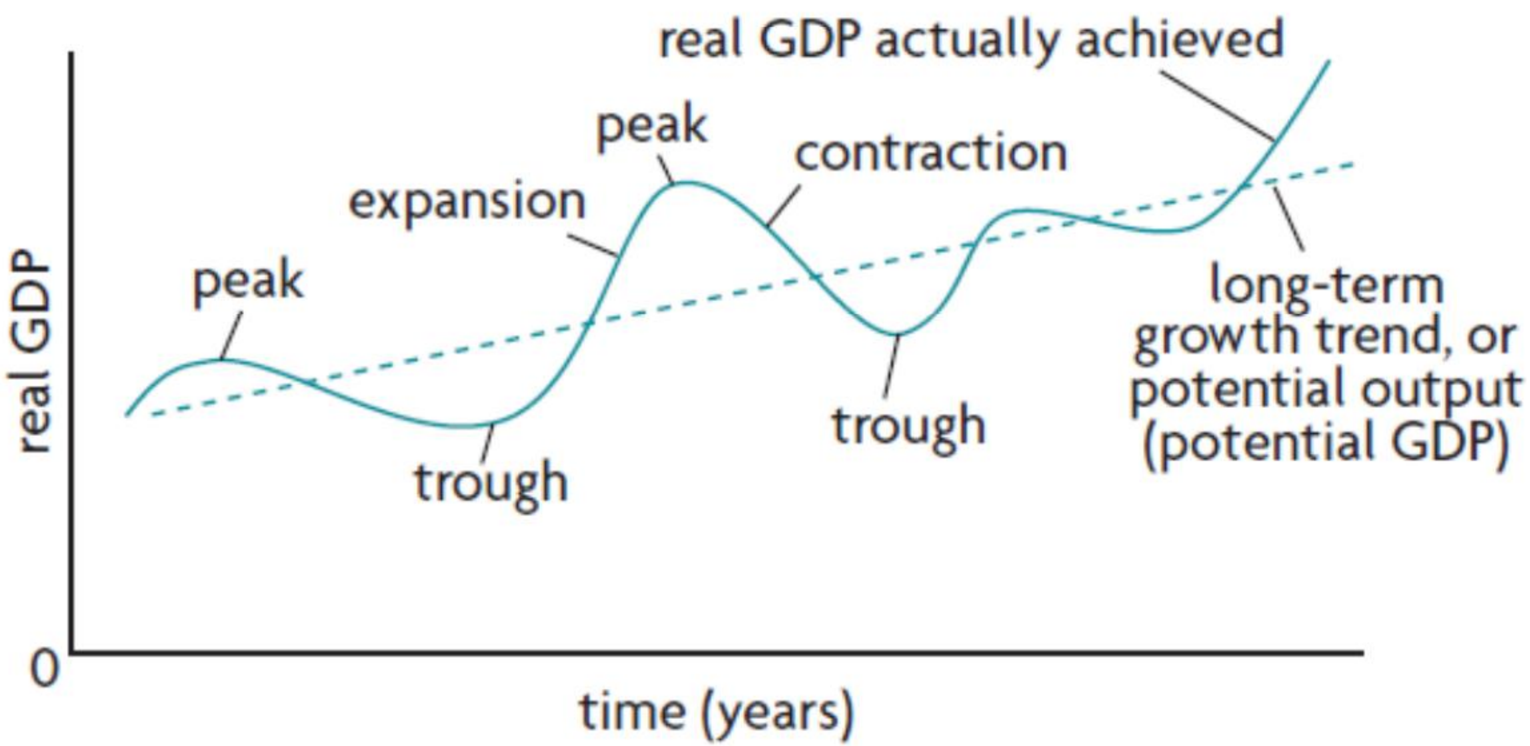
Four Phases of Business cycle



2. Peak: A peak represents the cycle's **maximum real GDP**, and marks the **end of the expansion**.

- When the economy reaches a peak, unemployment of resources has fallen substantially
- Rapid increase in price level (inflation)

Four Phases of Business cycle

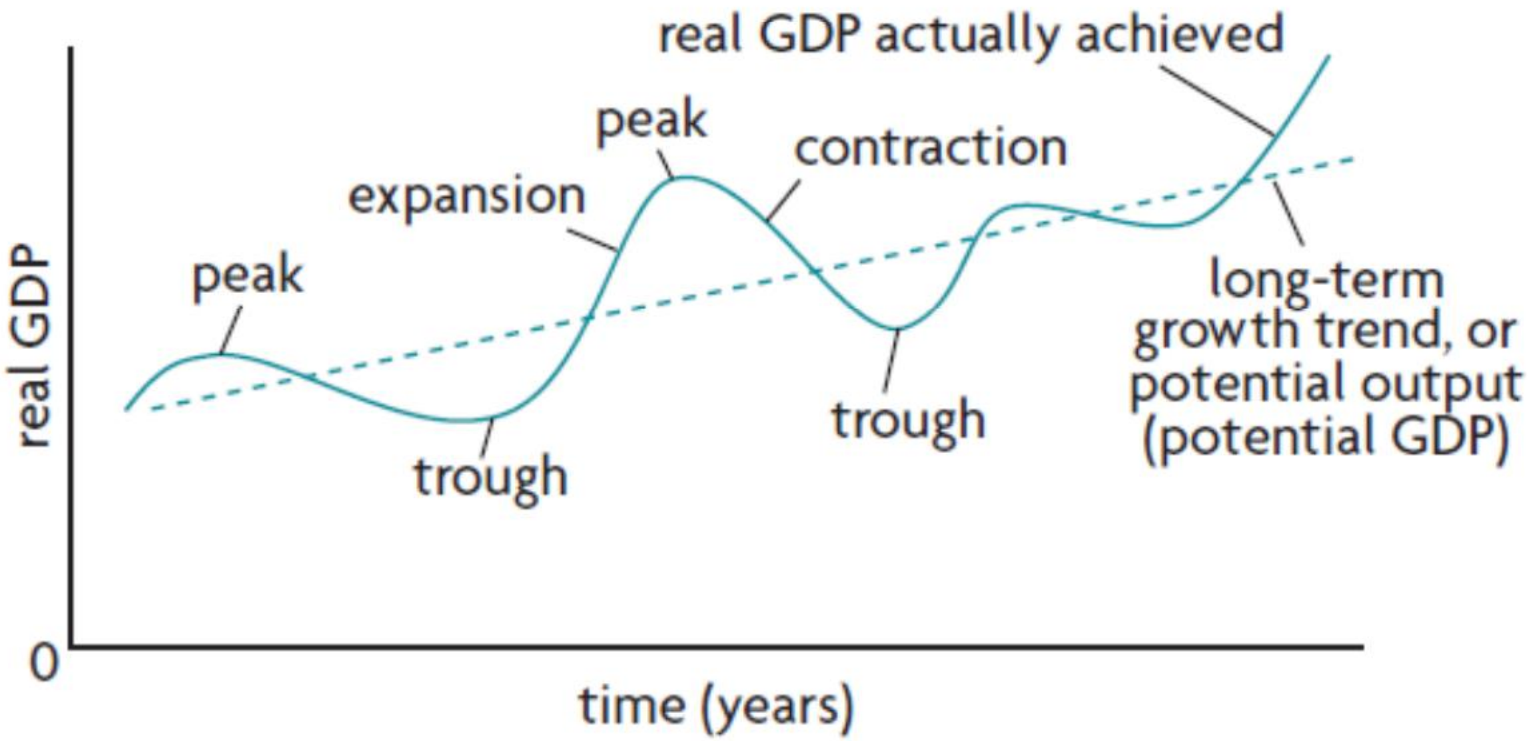


3. Contraction: falling real GDP (negative growth), shown by the downward-sloping part of the curve.

- Growing unemployment of resources
- Price level increase may slow down or even begin to fall.

while a contraction starts at the peak and continues until the following trough.

Four Phases of Business cycle



4. Trough: A trough represents the cycle's **minimum level of GDP**, or the **end of the contraction**.

- Widespread unemployment
- A trough is followed by a new period of expansion (recovery), making the beginning of a new cycle.

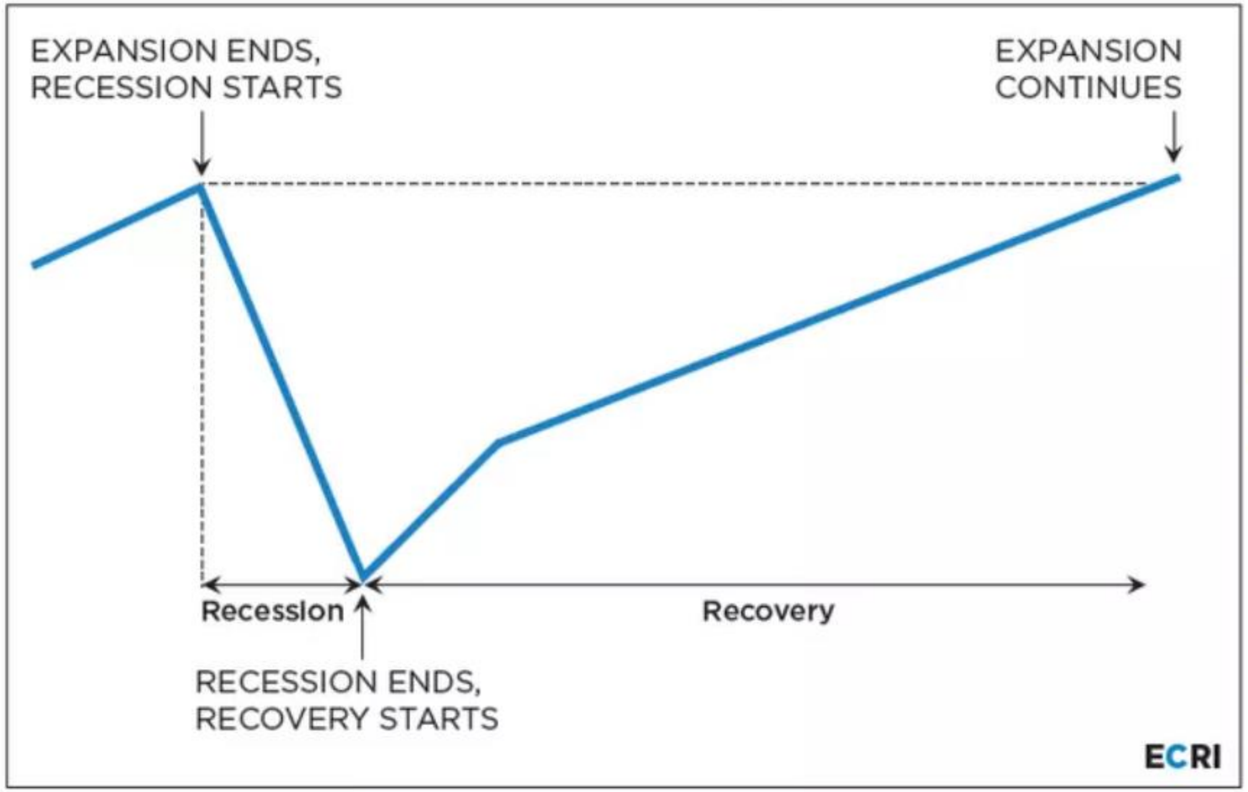
Short term economic fluctuations

- The term ‘business cycle’ suggests a phenomenon that is regular and predictable. Whereas business cycles are in factor both **irregular** and **unpredictable**.

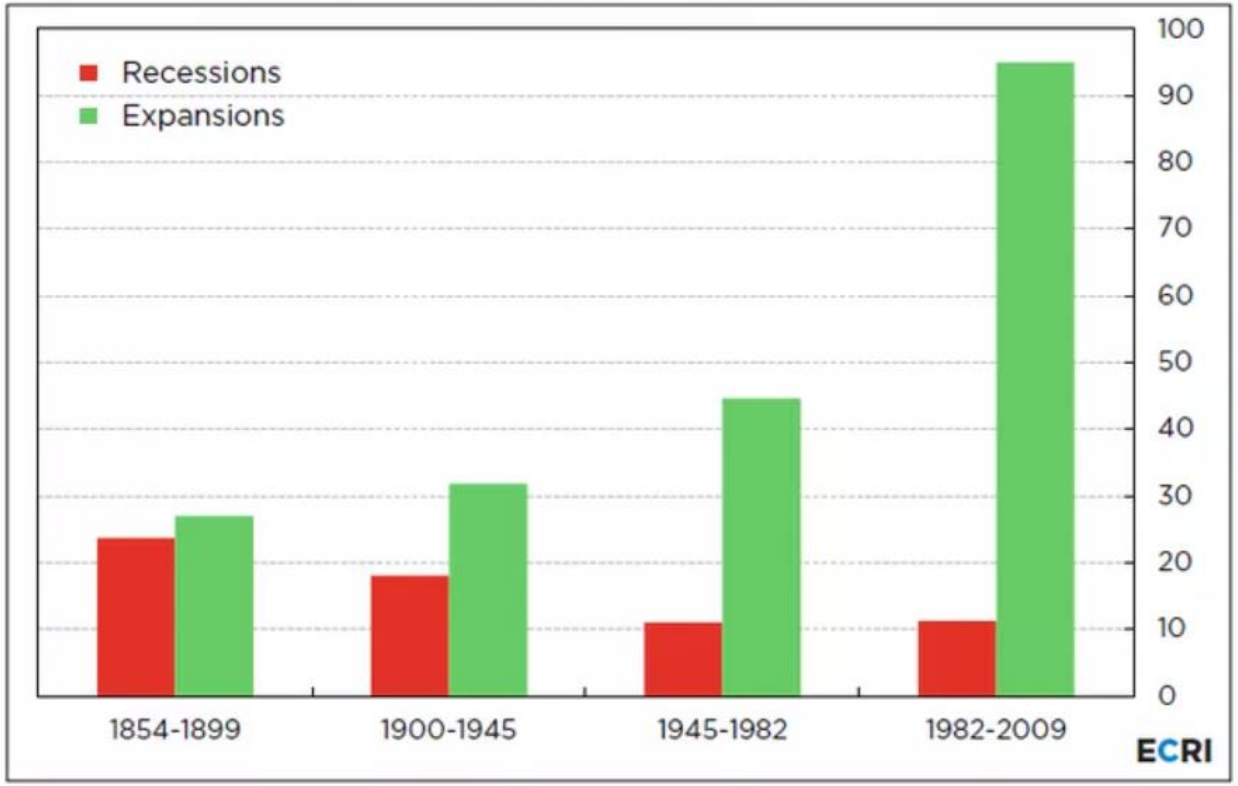
- Each business cycle lasts several years, there is wide variation in how long the cycle lasts, as well as in intensity. We cannot predict how strong the expansion is and how deep the contraction or recession is. **Those phases do not occur at regular time intervals**.
- Expansions usually last longer than contractions.

- Many economists prefer to call them ‘**short-term economic fluctuations**’.

Recession and Recovery



Average Durations of U.S. Recessions and Expansions (Months)



The recession

- If the contraction lasts six months or more, it is termed a recession.

- A recession is actually a specific sort of vicious cycle, with **cascading declines** in output, employment, income, and sales that feed back into a further drop in output, spreading rapidly from industry to industry and region to region.
- This domino effect is key to the diffusion of recessionary weakness across the economy, driving the comovement among these coincident economic indicators and the persistence of the recession.
- Recessions start at the peak of the business cycle—when an expansion ends—and end at the trough of the business cycle, when the next expansion begins.

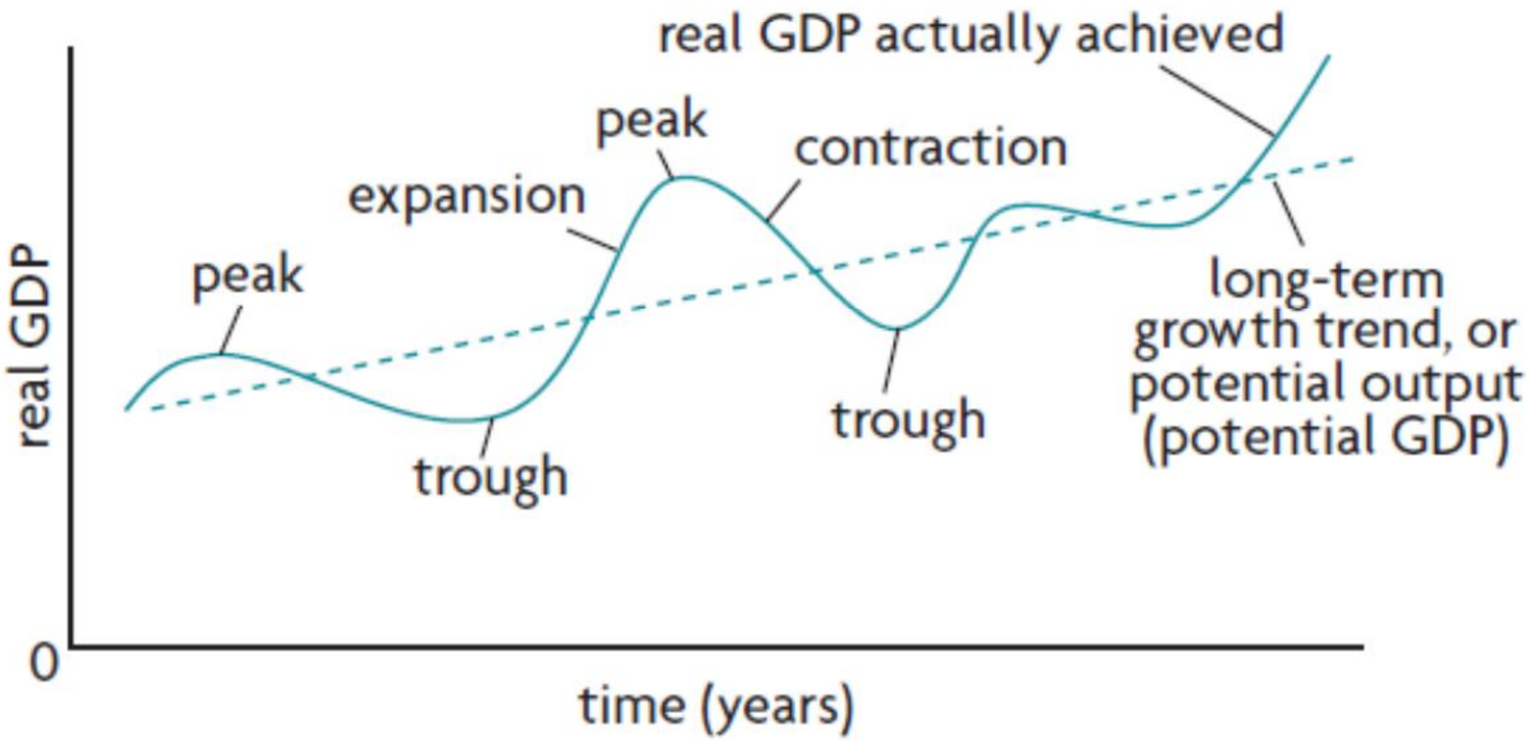
A Vicious Cycle

The boom

On the flip side, a business cycle **recovery** begins when that recessionary vicious cycle reverses and becomes a virtuous cycle, with rising output triggering job gains, rising incomes, and increasing sales that feed back into a further rise in output.

The recovery can persist and result in a sustained economic expansion only if it becomes self-feeding, which is ensured by this domino effect driving the diffusion of the revival across the economy.

The long term growth trend



Long-term growth trend: it refers to the line that runs through the business cycle curve, **representing average growth over long periods of time**; it is known as **potential output** or **potential GDP**.

- The real GDP fluctuates around the long-term growth trend.
- It shows how output grows over time when cyclical fluctuations are ironed out.

Unemployment and unemployment rate

- **Unemployment**: the number of unemployed people, defined as all people **above a particular age** (i.e. not children) who are **not working** and who are **actively looking for** a job.

- **Unemployment rate**: a measure of the amount of unemployment in an economy, expressed as a percentage, calculated by taking the total number of unemployed people in an economy and dividing by the labour force, and multiplying by 100.

Main types of unemployment

Seasonal

Regular seasonal changes in employment / labour demand

Structural

Arises from the mismatch of skills and job opportunities as the pattern of labour demand in the economy changes

Frictional

Transitional unemployment due to **people moving between jobs**

Cyclical

Caused by a **fall in aggregate demand** leading to a decline in GDP and employment

Natural unemployment

- there are always some people who are unemployed.
  - People who are in between jobs
  - People who are moving from one geographical area to another
  - People who are training or retraining to be able to get a new or better job
  - People who are temporarily out of job.

$$\boxed{\text{Natural employment}} = \boxed{\text{Structural unemployment}} + \boxed{\text{Frictional unemployment}} + \boxed{\text{Seasonal unemployment}}$$

The relationship between Real GDP and Unemployment

- In **expansion** phase:
  - Firms hire more labour (and other resources) to produce more output.

  →Real GDP increases

  →Unemployment falls

- In **contraction** phase:
  - Firms hire less labour (and other resources) and cut back on production

  →Real GDP decreases

  →Unemployment increases

Full employment level of output (GDP)

- For every economy, there is a level of real GDP at which the economy experiences ‘ **full employment**’.
- Full employment level of output is the level of output (real GDP) at which unemployment is equal to the **natural rate of unemployment**; the level of output (real GDP) where there is no deflationary or recessionary gap. Also known as **potential output (potential GDP)**

GDP gap and unemployment

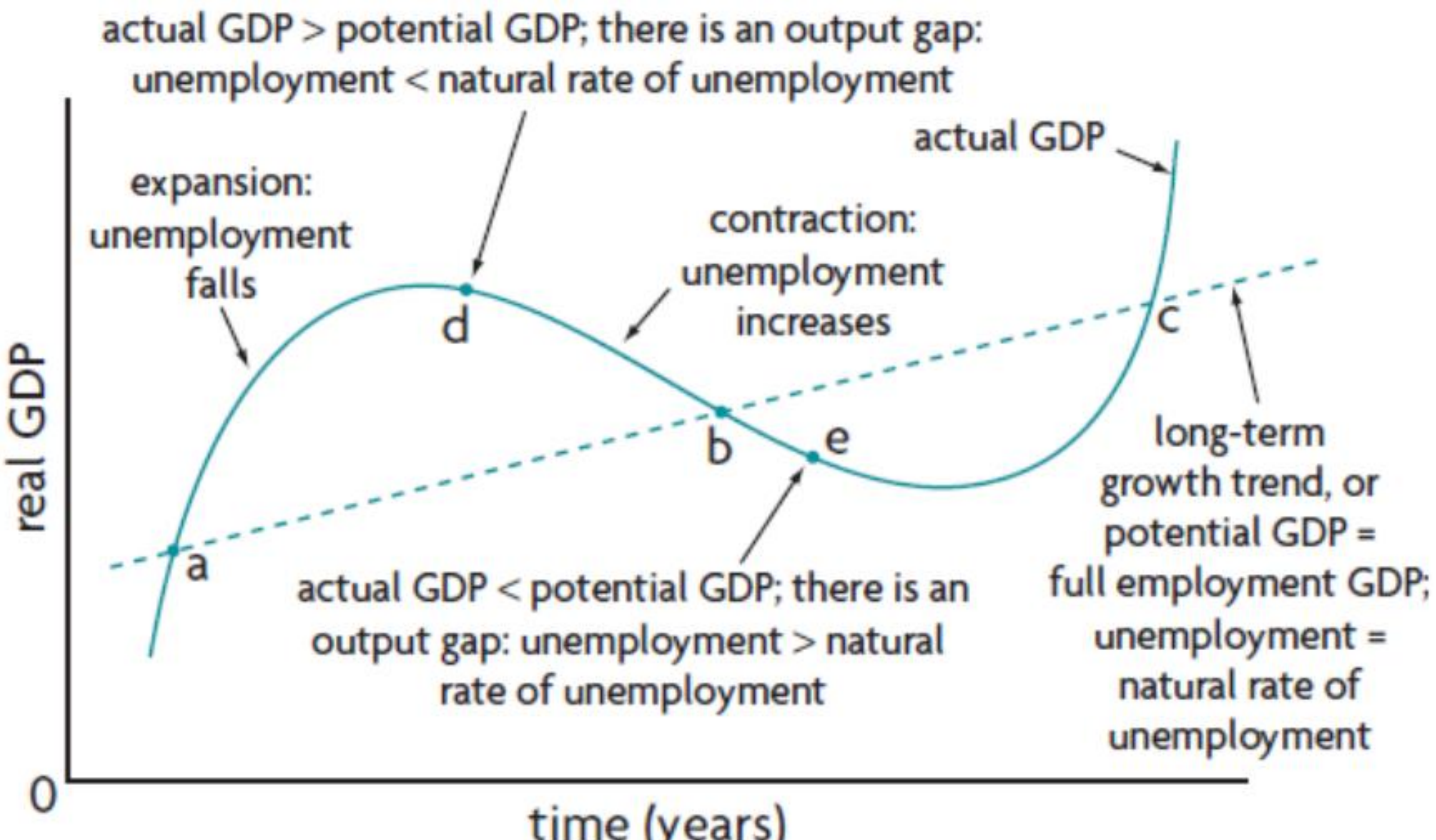
- **When actual GDP lies above or below potential GDP, there results a GDP gap(output gap).**
  - GDP gap = Actual GDP – Potential GDP (positive or negative)

- When actual GDP > potential GDP, unemployment is lower than the natural rate;
- When actual GDP < potential GDP, unemployment is greater than the natural rate.

GDP gap and unemployment

- The actual GDP fluctuates around full employment GDP (potential GDP)

- At point **a, b, c**, actual GDP=potential GDP, the economy is achieving **full employment**.
- At point **d**, output gap actual GDP>potential GDP; unemployment < natural rate
- At point **e**, output gap, actual GDP<potential GDP; unemployment > natural rate



Macroeconomic objectives

Macroeconomic objectives:

1. A steady rate of increase in national income, that is, **economic growth**
2. A low and sustainable **rate of unemployment** in the economy
3. Low and stable **rate of inflation**, that is, price stability
4. **balance of payment**

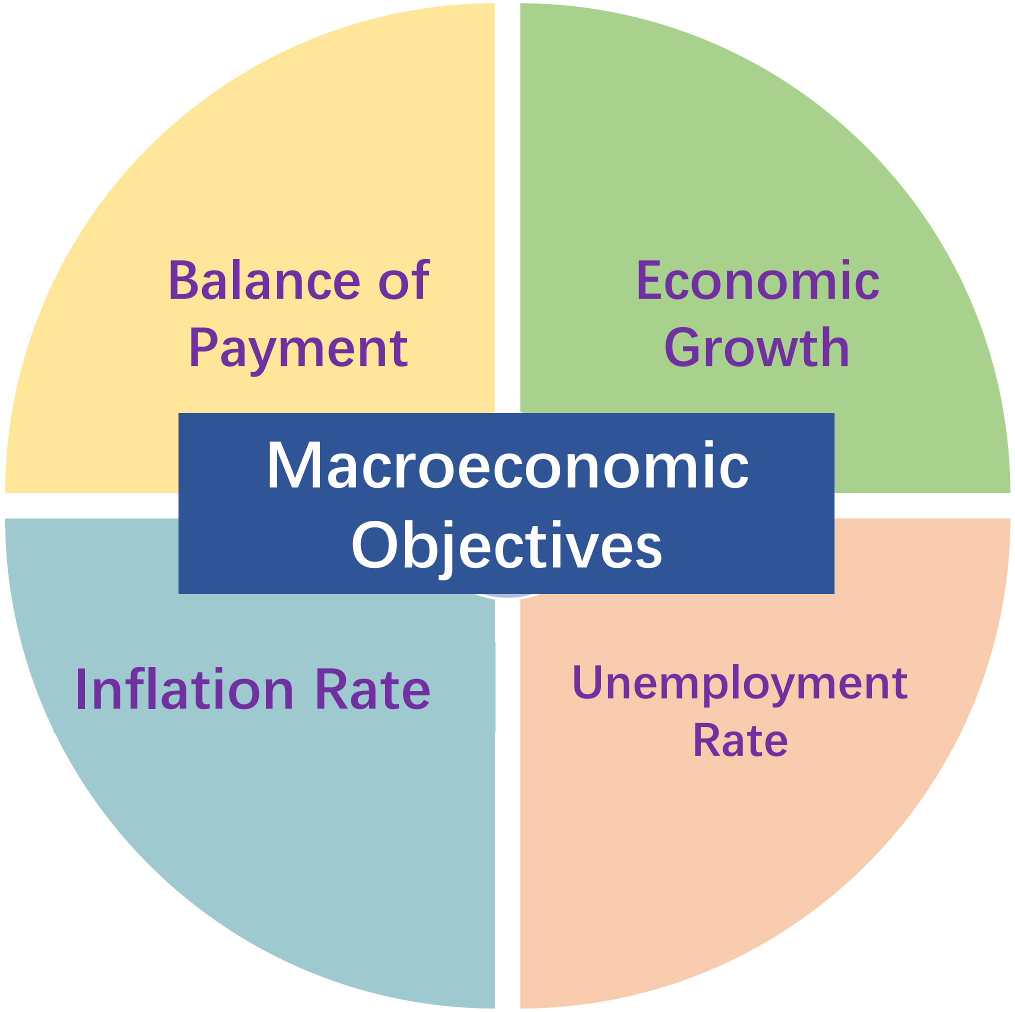
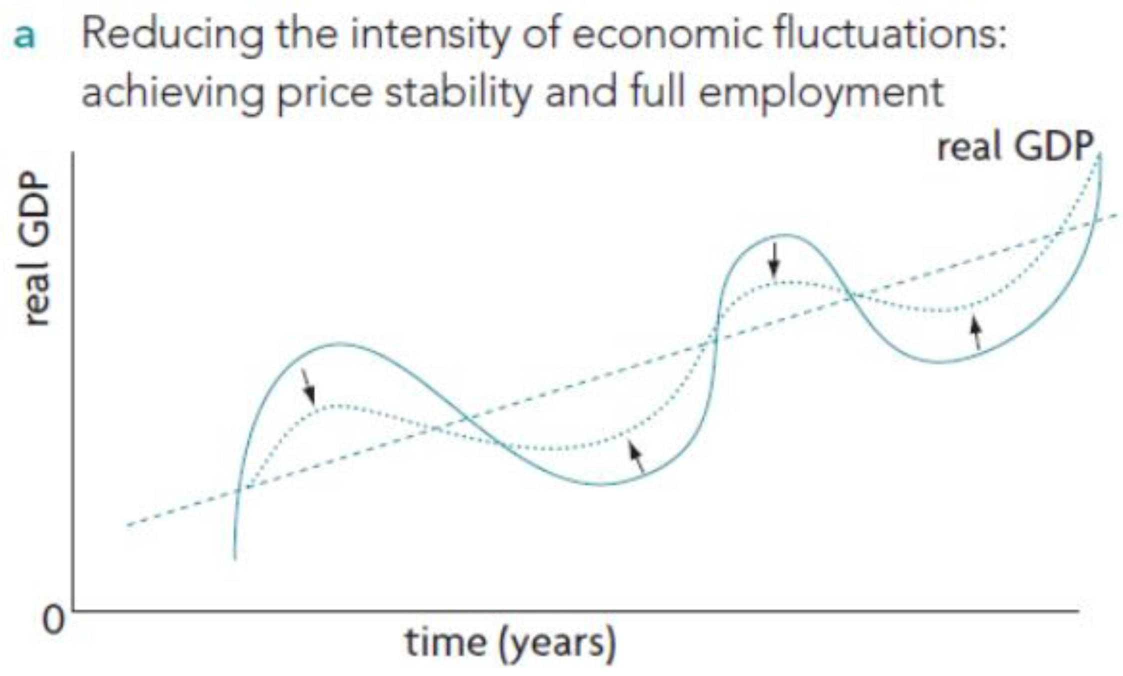


Illustration of macroeconomic objectives in business cycle



- Reducing the intensity of expansions and contractions → making output gaps as small as possible, by flattening the cyclical curve.
  - In Expansion: lower level of inflation
  - In Contraction: lower level of unemployment

- Increasing the steepness of the potential output line.
  - More rapid economic growth over long periods of time.