ECONOMIC FLUCTUATIONS AND UNEMPLOYMENT

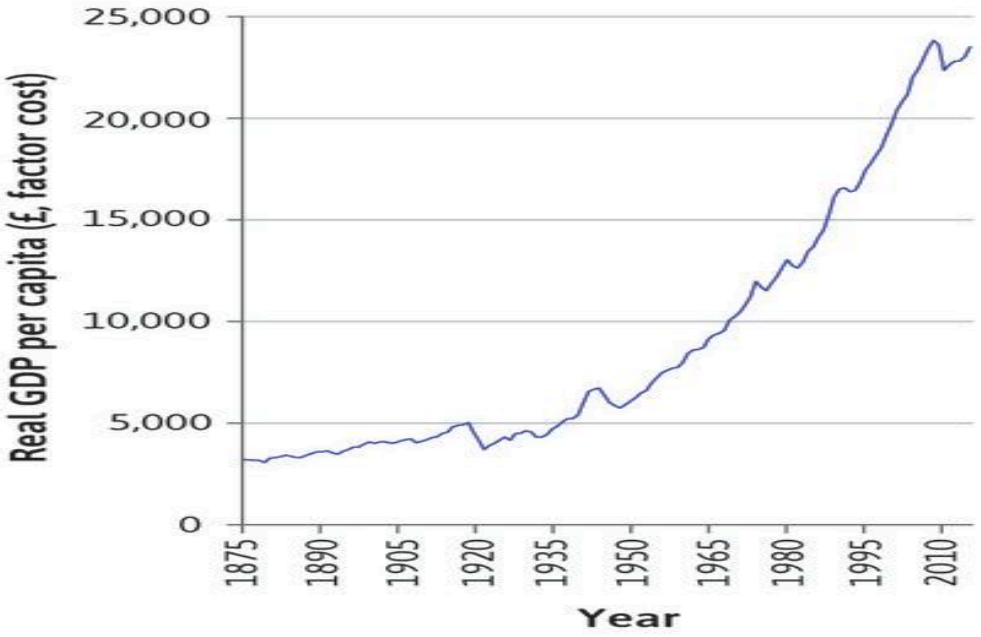
Lecture 9

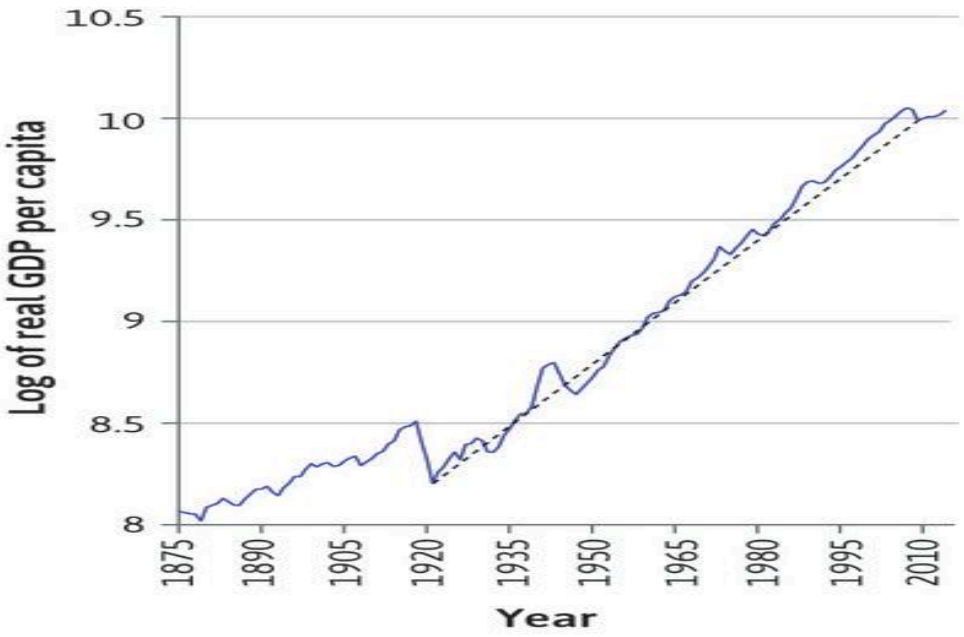
Unit 13 (13.1-13.7)

(Section 13.6 ignore the consumption smoothing diagrams)

(Section 13.7 ignore coordination game section)

Context
Large Increases in GDP/capita UK (1875-2010)





Increase 2% each year in GDP/capita – doubling each generation BUT GDP fluctuates in the short-term.

OUTLINE

A. The business cycle

B. Measuring the aggregate economy

C. Economic fluctuations and consumption

D. Economic fluctuations and investment

A. The business cycle

The business cycle

Economic growth is not a smooth process.

Business cycle = Alternating periods of positive and negative growth rates.

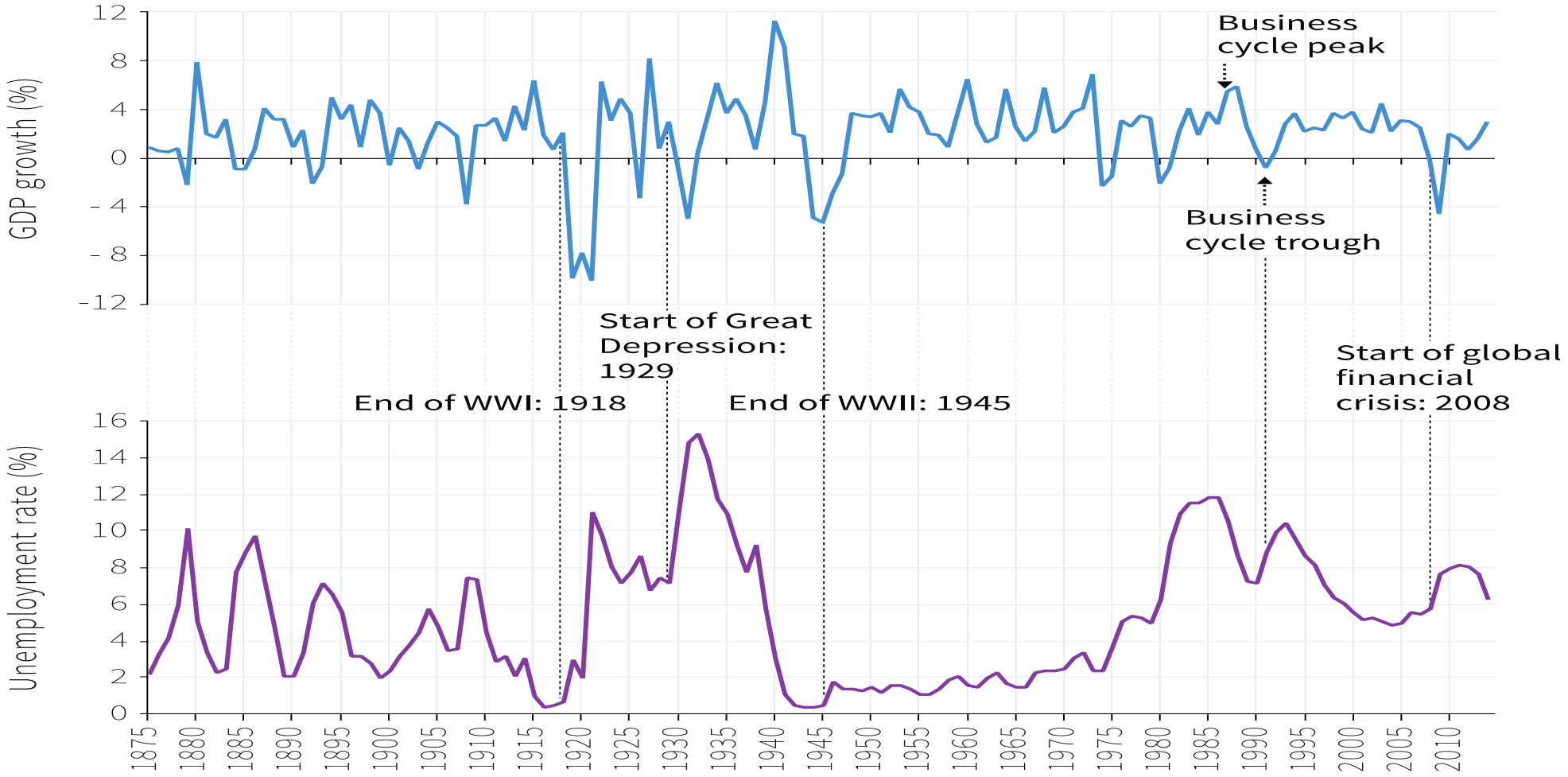
Recession

1. Period when output is declining or
2. Period when output is below its potential level.

There is no agreement on the appropriate definition for a recession.

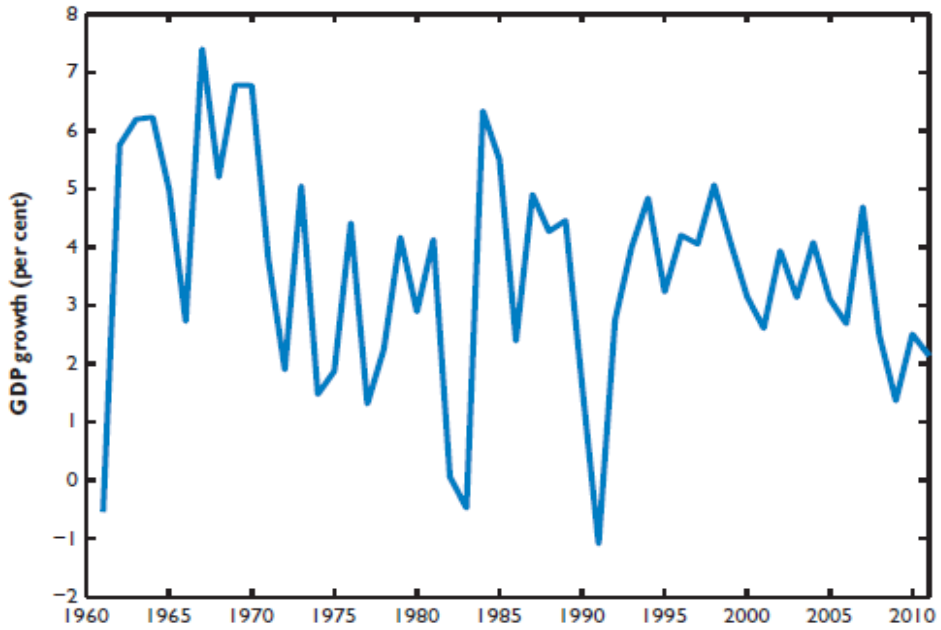
The business cycle affects labour market outcomes.

Fluctuations GDP & Unemployment in the UK



GDP data for most countries is not available prior to WW2.

Figure 2.2
Growth rate of Australian GDP, 1960–2011



Since 1960, the Australian economy has gone through a series of expansions, interrupted by short recessions. The most recent recession in 1990–91 was the most severe recession in the period from 1960 to 2011.

SOURCE: Calculated from RBA *Bulletin*, Table G10.

- ***GDP growth*** equals:

$$\frac{(Y_t - Y_{t-1})}{Y_{t-1}}$$

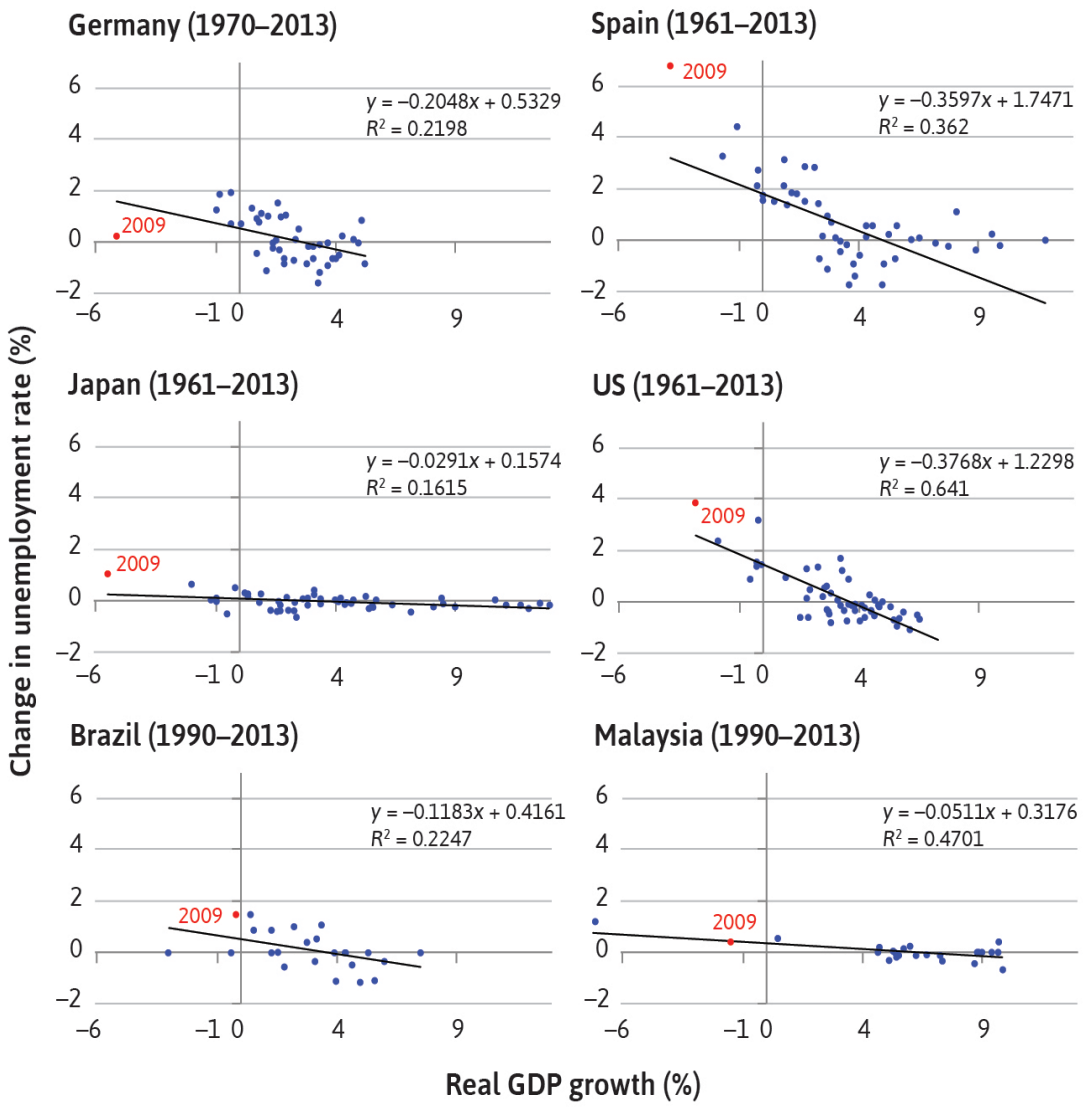
- Periods of positive GDP growth are called ***expansions***.
- Periods of negative GDP growth are called ***recessions***. (≥ 2 quarters)

Okun's Law

Okun's Law = a strong and stable relationship between unemployment and GDP growth.

Changes in the rate of GDP growth are negatively correlated with the unemployment rate.

Output falls → Unemployment rises → Well-being falls



Okun's coefficient = Degree of correlation

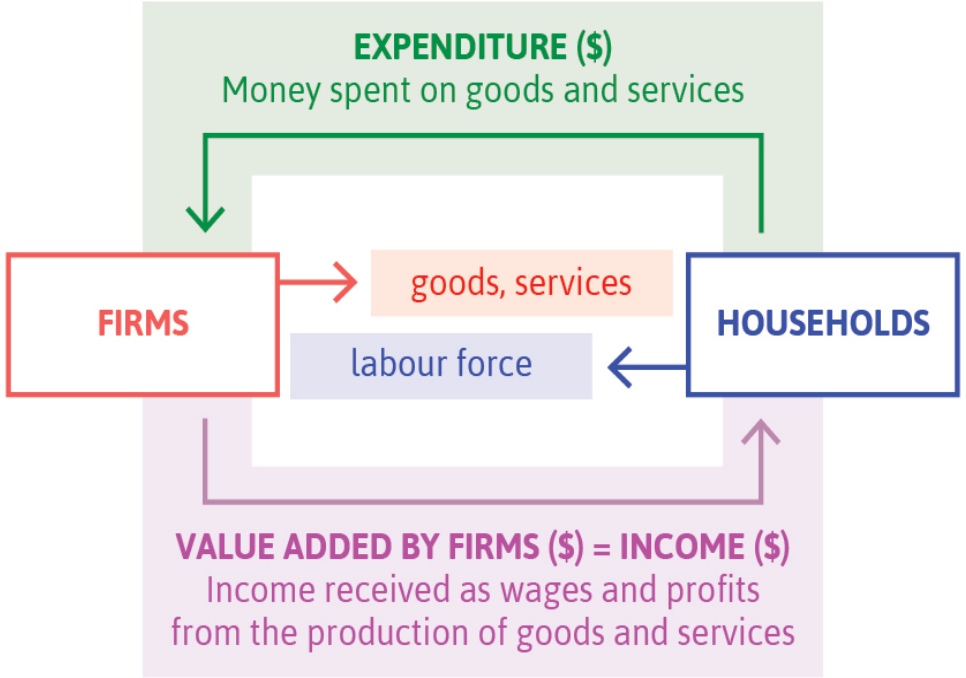
B. Measuring the aggregate economy

Measuring the aggregate economy

National accounts = system used to measure overall output and expenditure in a country.

3 equivalent ways to measure **GDP:**

1. Total <u>spending</u> on domestic products
2. Total domestic <u>production</u> (measured as **value added**)
3. Total domestic <u>income</u>



Circular flow model shows this equivalence

Exports, imports, and government

How do we account for international transactions?

• e.g. foreign production is domestic consumption (**imports**); or domestic production is foreign consumption (**exports**).

→ We include exports and exclude imports, so that GDP includes value added, income from, or consumption of, domestic production.

How do we incorporate government?

→ Treat it as another producer – public services are "bought" via taxes.

→ Government production is measured at the cost of production, so must assume that this captures the value added.

Components of GDP

- Consumption (**C**) = Expenditure on consumer goods and services
- Investment (**I**) = Expenditure on newly produced capital goods (incl. equipment, buildings, and inventories = unsold output)
- **Government spending (G)** = Government expenditure on goods and services (excluding transfers to avoid double-counting)
- Net exports (**trade balance**) = Exports (**X**) minus imports (**M**)

$$\mathbf{GDP = C + I + G + X - M}$$

(Also known as Y, or **aggregate demand**)

The Composition of Australian GDP, 2011

Table 3.1 The composition of Australian GDP, 2011

	Chain volume measures	Billions of dollars	Per cent of GDP
GDP (*Y*)		1335	100
1 Consumption (*C*)		747	56.0
2 Investment (*I*)		314	23.5
	Nonresidential	243	18.2
	Residential	71	5.3
3 Government spending (*G*)		321	24.1
4 Net exports		–49	–3.7
	Exports (*X*)	255	19.1
	Imports (*IM*)	–304	–22.8
5 Inventory investment		4	0.3

SOURCE: RBA, *Bulletin* Table G11.

Proportions have changed little in 2016, but GDP has risen to $1629bn (i.e. $1.629tr)

Components of GDP

	US	Eurozone (19 countries)	China
Consumption (C)	68.4%	55.9%	37.3%
Government spending (G)	15.1%	21.1%	14.1%
Investment (I)	19.1%	19.5%	47.3%
Change in inventories	0.4%	0.0%	2.0%
Exports (X)	13.6%	43.9%	26.2%
Imports (M)	16.6%	40.5%	23.8%

- In most countries, consumption is the largest share of GDP.
- Chinese statistics show size government small, but figures are considered unreliable as measurement methods opaque.

Measuring Government Expenditure

- Good expenditure only includes expenditure on the production of goods and services.

- Government expenditure excludes transfers (such as benefits and pensions). There is a great difference in the role of the government between Europe and the US also when it comes to transfers.

- In 2012, total government spending including transfers was 57% of GDP in France, compared to 40% of GDP in the US.

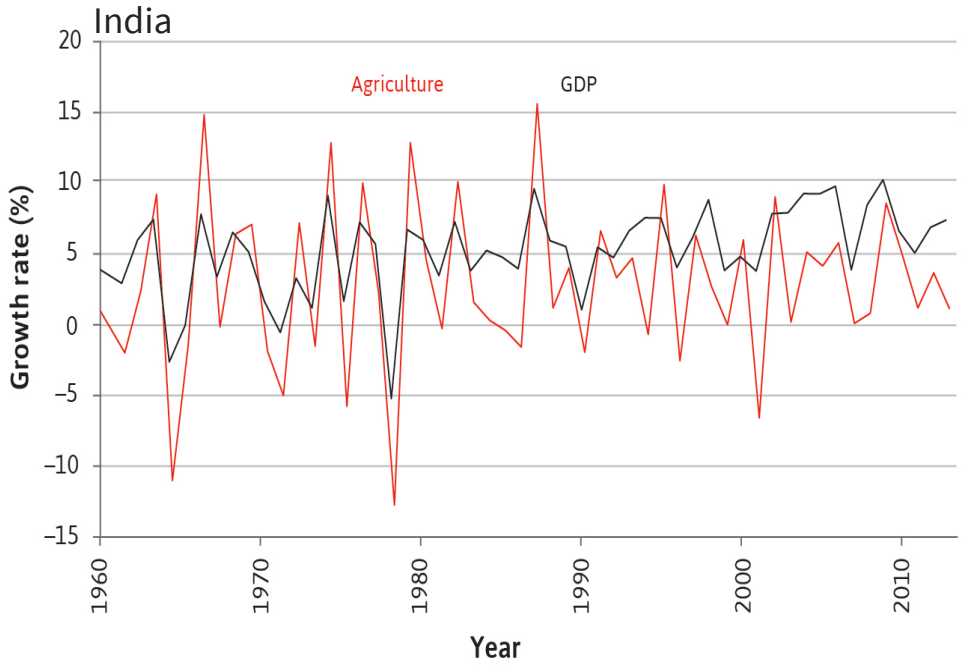
Components of GDP growth

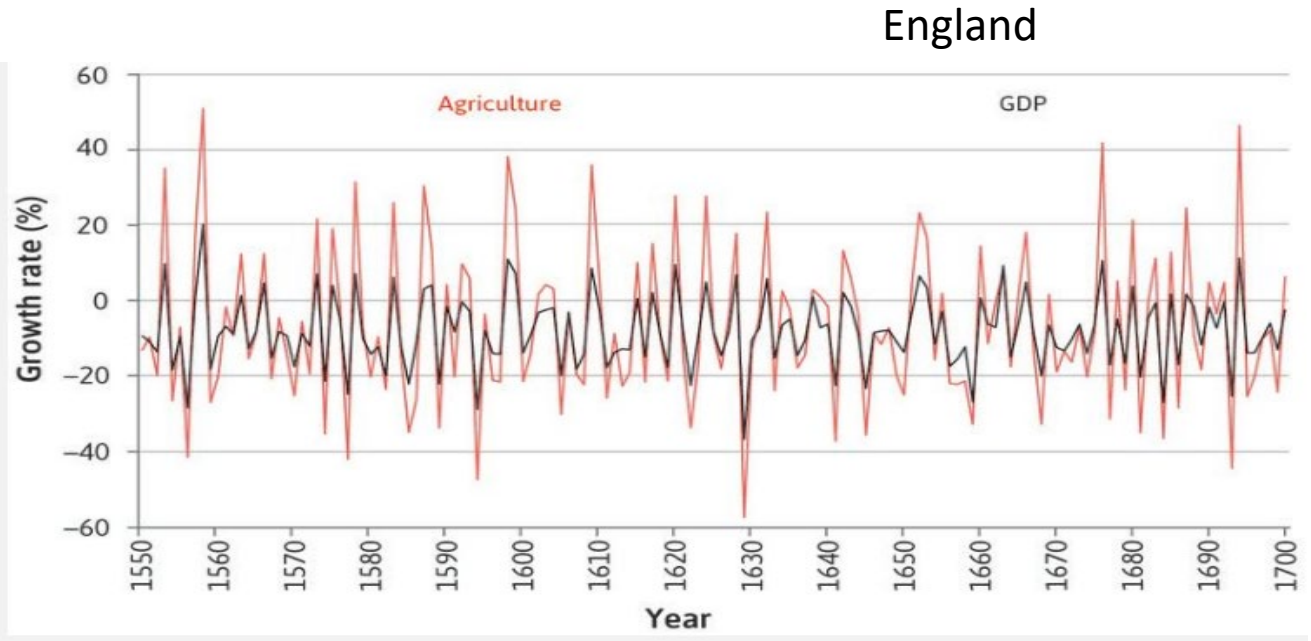
Percentage change in GDP = *(percentage change in consumption × share of consumption in GDP)* + *(percentage change in investment × share of investment in GDP)* + *(percentage change in government spending × share of government spending in GDP)* + *(percentage change in net exports × share of net exports in GDP)*

	GDP	CONSUMPTION	INVESTMENT	GOVERNMENT SPENDING	NET EXPORTS
2009	-2.8	-1.06	-3.52	0.64	1.14

Although consumption makes up about 70% of US GDP, the effect of investment on GDP was more than three times larger.

Economic fluctuations





- Economic fluctuations can be measured
  - on the expenditure side – C, I, G, NX
  - on the production side – agriculture, industry services

- Agriculture is highly volatile though less so than in the past.
- **We look at fluctuations on the expenditure side.**

C. Economic fluctuations and consumption

Shocks

Shock = an unexpected event (such as extreme weather) which causes GDP to fluctuate.

There are two broad types of shocks:

1. Good or bad fortune strikes the household.
2. Good or bad fortune strikes the entire economy.

Household shocks

People use two strategies to deal with shocks that are specific to their household:

1. **Self-insurance** –

- save during good times (spend during bad) & borrow during bad.
- Income protection insurance.

2. Co-insurance – support government and sometimes social network.

This reflects that households prefer to smooth their consumption, and that they are (to a degree) altruistic.

Economy-wide shocks

Co-insurance is less effective if the bad shock hits everyone at the same time.
But when these shocks hit, co-insurance is even more necessary.

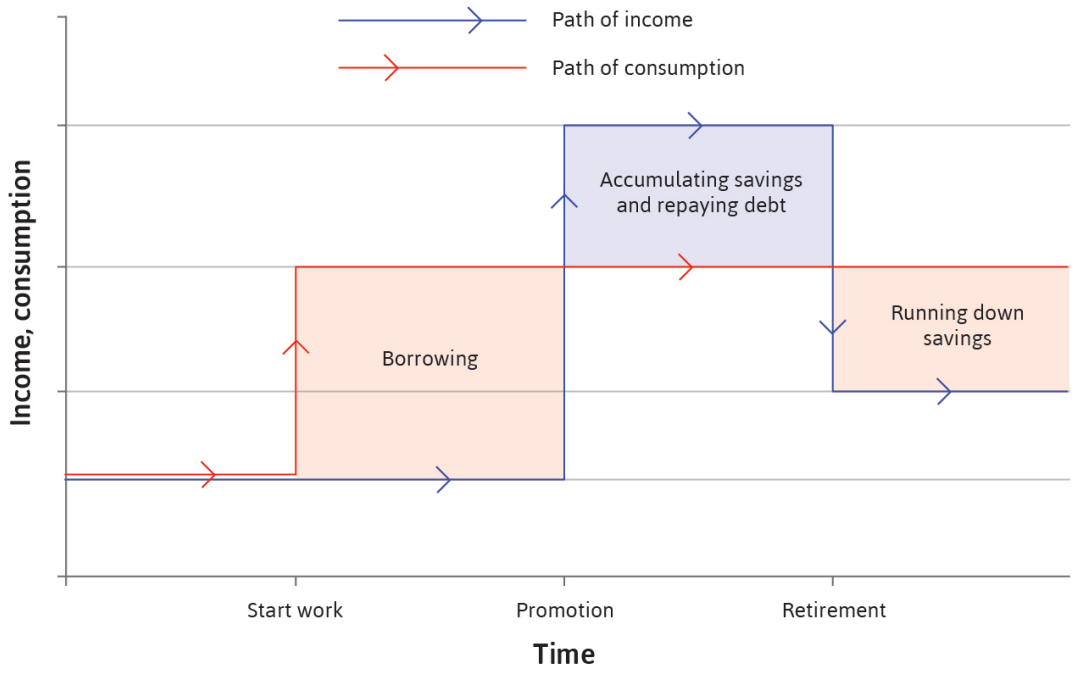
In farming economies of the past or peasant societies based in volatile climates, people practised co-insurance based on trust, reciprocity, and altruism.

Community co-insurance (at least in some countries) has been replaced with government safety nets such as unemployment benefits, pensions (aged, disability etc.).

Smoothing Consumption

Households make lifetime consumption plans based on expectations about the future, and react to shocks:

- Readjust long-run consumption (red line) if shocks are permanent.
- Do not change long-run consumption if shocks are temporary.



Consumption smoothing and the aggregate economy

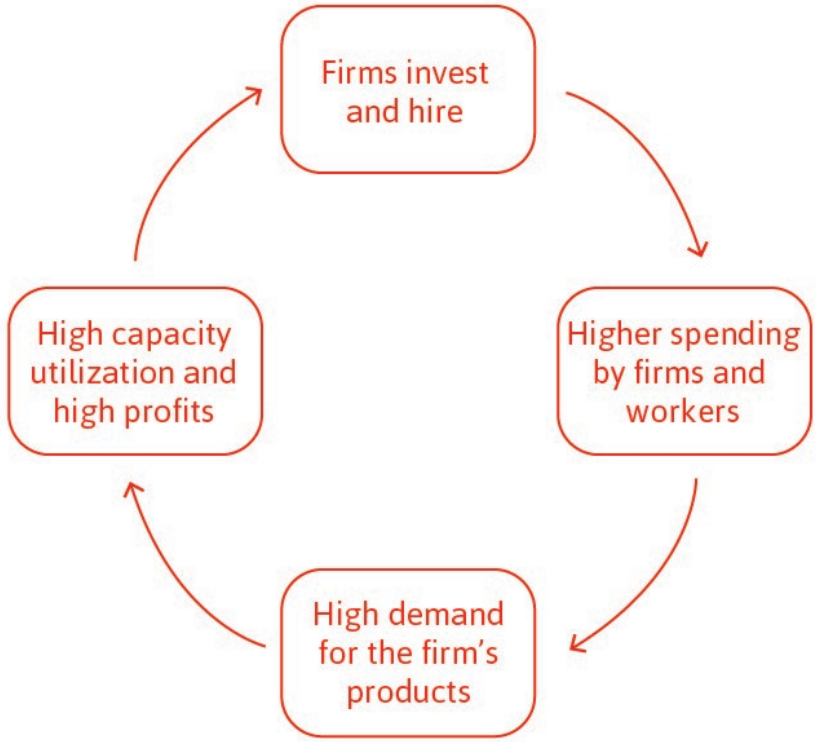
- Consumption smoothing is a basic source of stabilisation in an economy.
- Limitations to consumption smoothing mean it cannot always stabilise the economy; it may amplify the initial shock.
  - credit constraints – poor can't borrow during bad times.
  - weakness of will – people value the present over the future so don't save enough.
  - limited co-insurance – unemployment benefits are limited & in most countries they don't exist.
- This helps us understand the business cycle and how to manage it.

D. Economic fluctuations and investment

Volatile Investment

Firms don't have preferences for smoothing like households. Investment by one firm induces other firms to invest

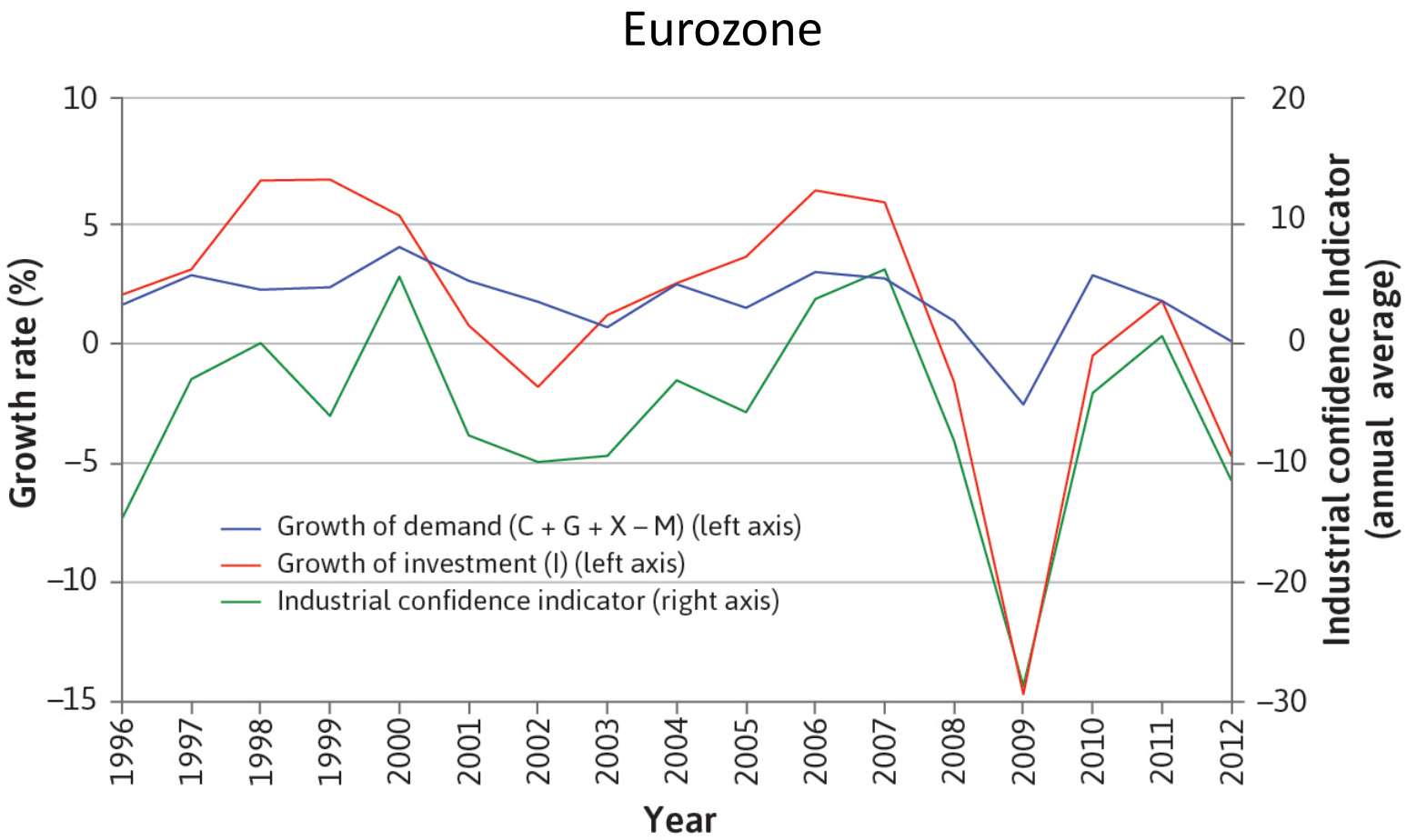
1. High (low) demand → high (low) **capacity utilization** → ↑(↓) investment → even higher (lower) demand.
2. Higher demand → higher profits → easier to borrow or outsiders to invest.
3. New technology can also induce firms to invest at the same time, if lowers cost &/or provides better goods & services to customers.



Business confidence

4. Investment decisions depend on firms' <u>expectations about future demand</u> –

Business confidence coordinates firms to invest at the same time.

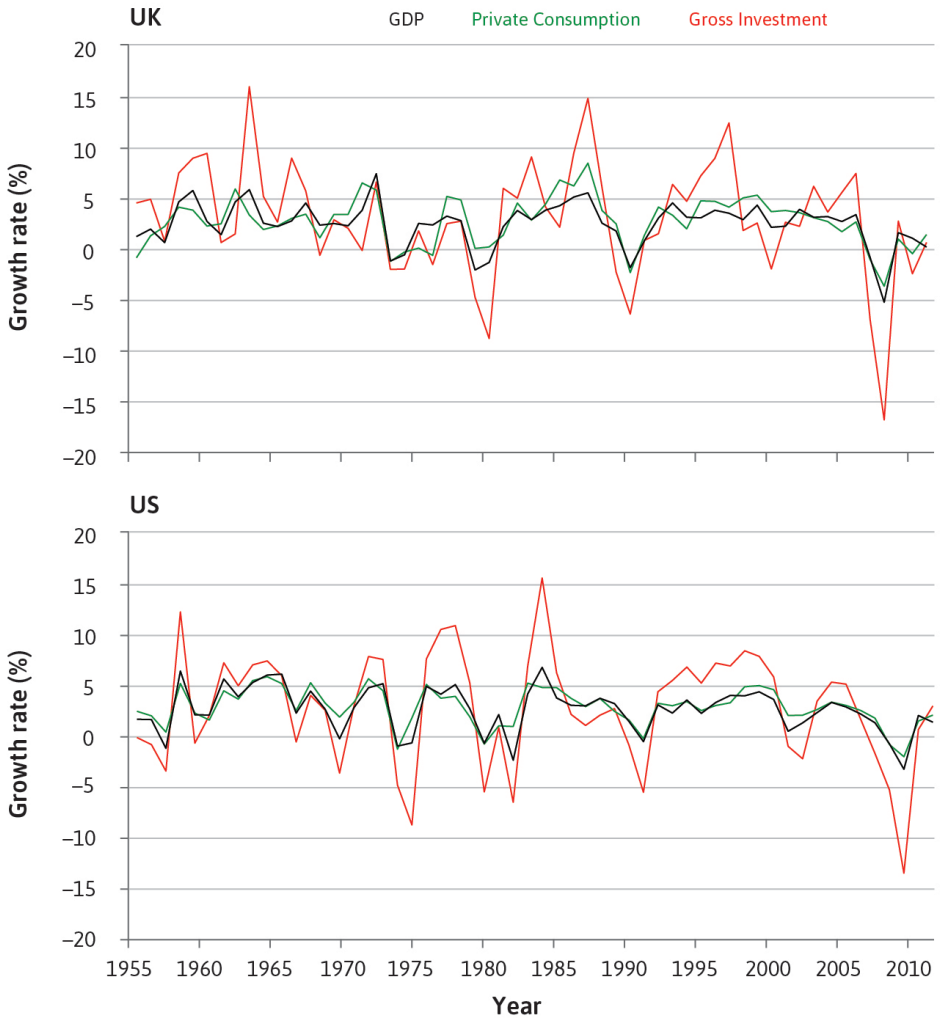


Investment and the aggregate economy

The benefits of coordinating investment makes cycles <u>self-reinforcing.</u>

Firms respond positively to the growth of demand in the economy.

This is why investment is <u>more volatile than GDP.</u>



Other components of GDP

- Government spending is less volatile than investment (does not depend on business confidence).
- Exports depend on demand from other countries, so will fluctuate according to the business cycles of major export markets.

Summary

1. Economic growth is not a smooth process – the economy goes through a **business cycle**
   - Households try to smooth their consumption over the business cycle (problem: credit constraints).
   - Investment is more volatile than GDP.

2. System of **national accounts** to measure the economy
   - **GDP = C + I + G + X – M**
   - Measuring GDP as <u>income, spending, production</u>

In the next unit

- The multiplier process: How limits on households' ability to save, borrow and share risks affect GDP.
- **Fiscal policy**: How government spending can help stabilize the economy.
- Limitations of fiscal policy: The consequences of being part of the world economy.