Unit 13

ECONOMIC FLUCTUATIONS AND UNEMPLOYMENT

OUTLINE

A. Introduction
B. The business cycle
C. Measuring the aggregate economy
D. Economic fluctuations and consumption
E. Economic fluctuations and investment
F. Inflation

A. Introduction

The Context for This Unit

Previously looked at how individuals make decisions about saving and consumption. (Unit 10)

These decisions also depend on economic conditions (prices, unemployment), and affect firms' decisions (investment).

- How do households and firms respond to economic conditions?
- What indicators can we use to measure economic conditions?

This Unit

- Measuring the size of an economy: GDP
- How households smooth fluctuations in their income
- The role of firms' investment decisions in the business cycle
- Understanding inflation

B. The business cycle

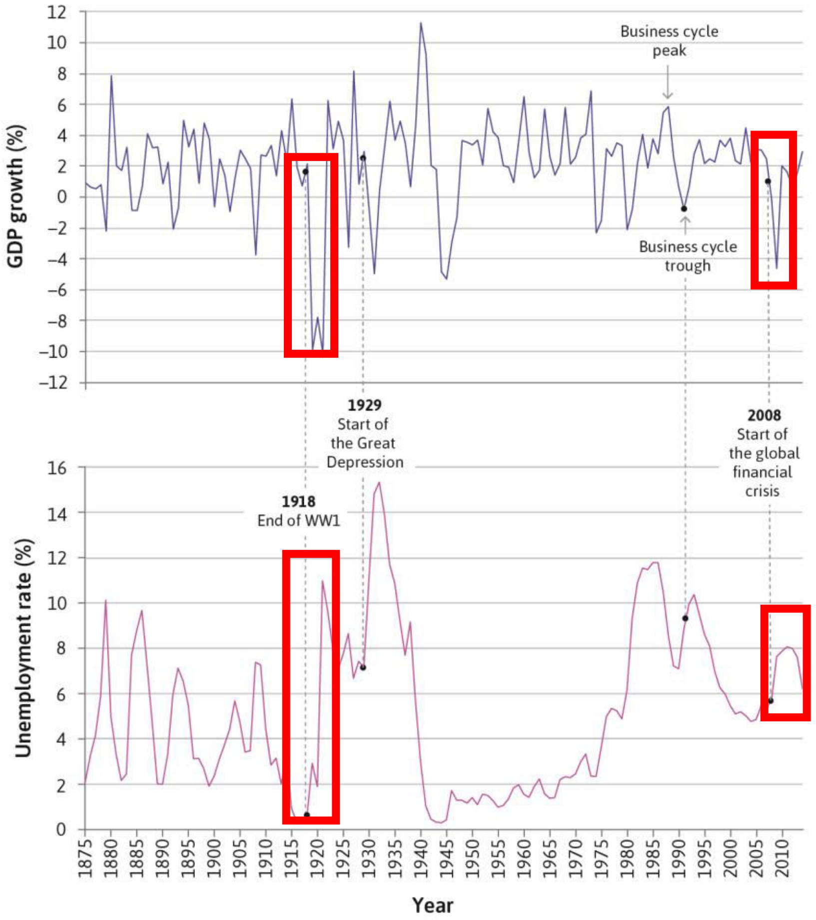
The business cycle

Economic growth is not a smooth process.

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

Recession = period when output is declining or below its potential level

The business cycle affects labour market outcomes.

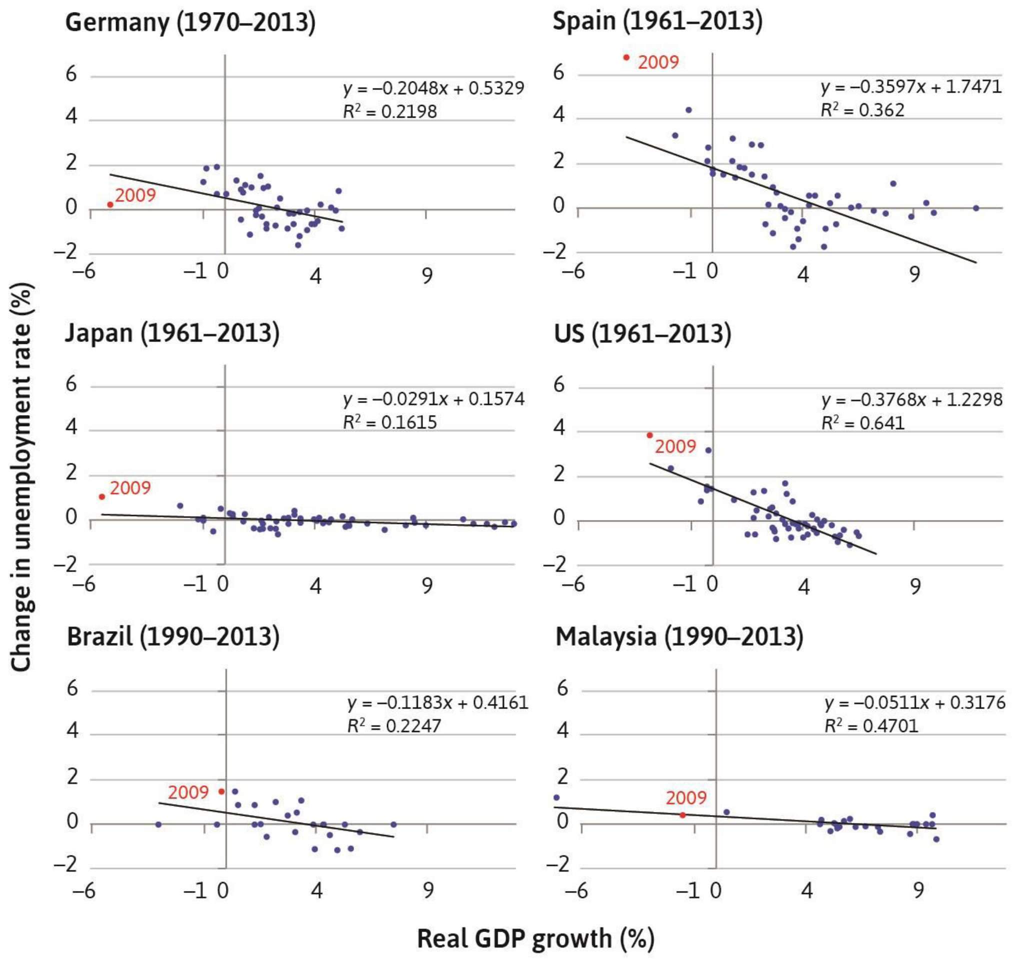


Okun’s Law

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



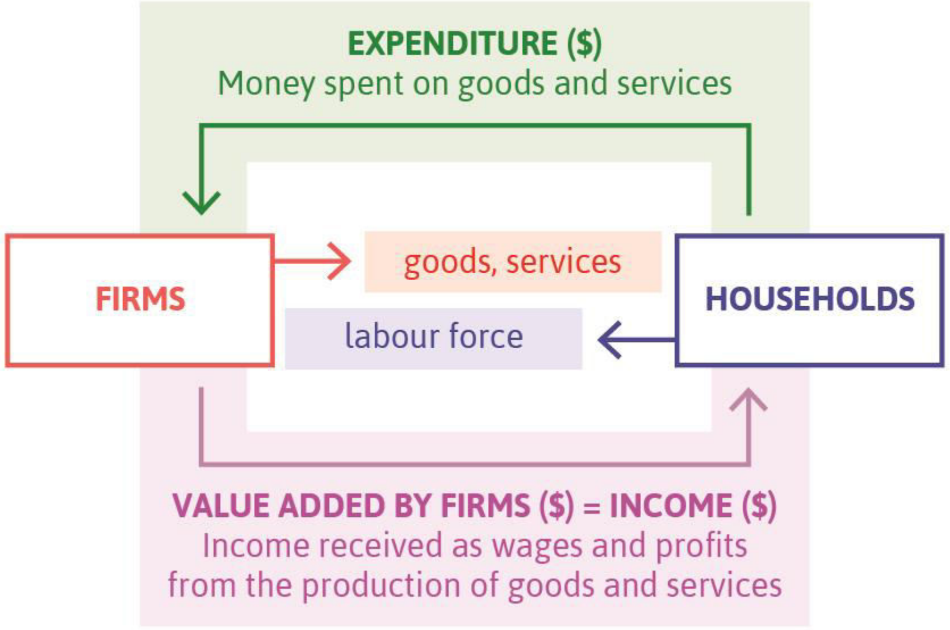
Okun’s coefficient = Degree of correlation

C. 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 spending on domestic products
2. Total domestic production (measured as **value added**)
3. Total domestic income



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

→ Assume that cost of production 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**)

GDP = C + I + G + X – M

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

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, private consumption makes up the largest share of GDP

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)*

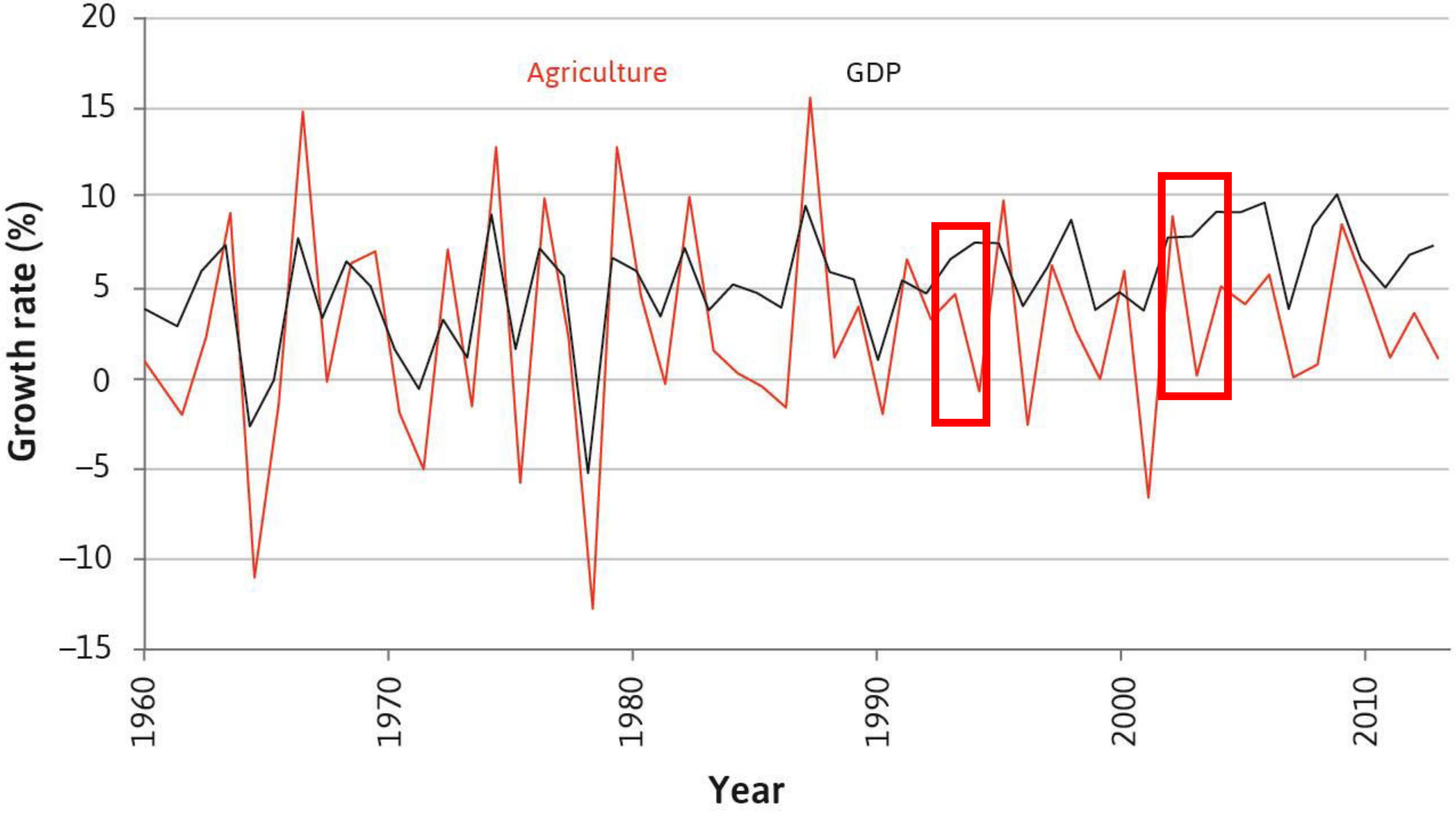
	GDP	CONSUMPTION	INVESTMENT	GOVERNMENT SPENDING	NET EXPORTS
2009	-2.8	-1.06	-3.52	0.64	1.14

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

D. Economic fluctuations and consumption

Economic fluctuations

India (1961–2014)



Economies fluctuate between good and bad times. This is true for industrialised as well as agrarian societies.

Shocks

Neutral in Economics

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 idiosyncratic shocks
2. Good or bad fortune strikes the entire economy aggregate shocks

Household shocks

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

1. **Self-insurance** – saving and borrowing. Other households are not involved.
2. **Co-insurance** – support from social network or government.

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.

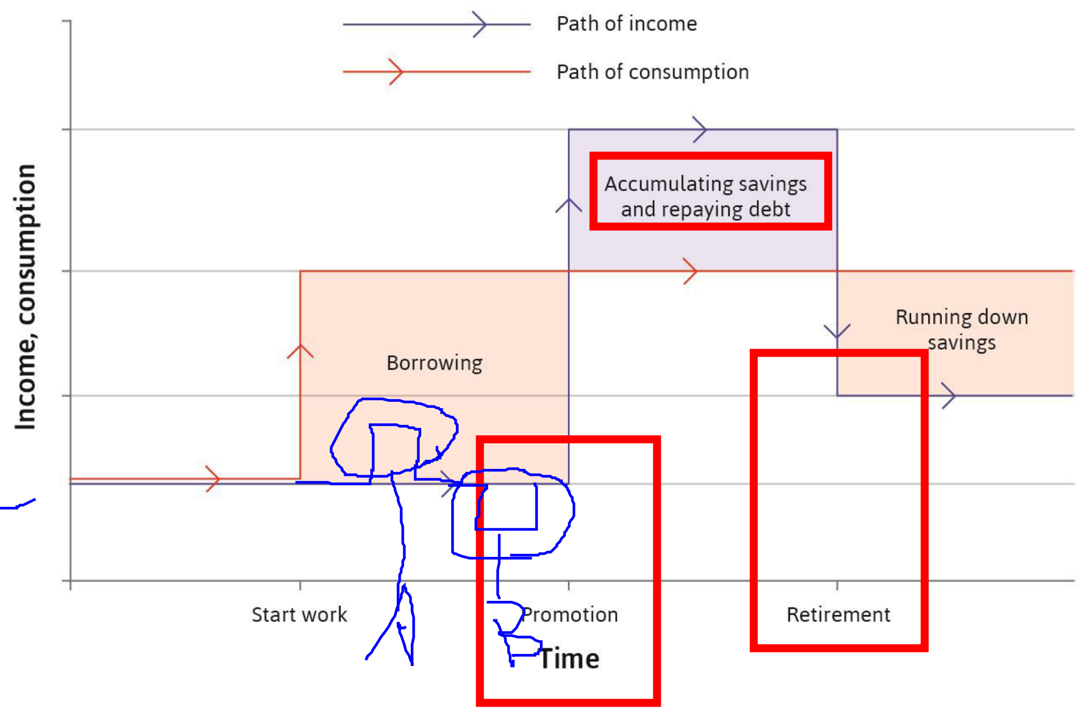
But when these shocks hit, co-insurance is even more necessary.

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

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.

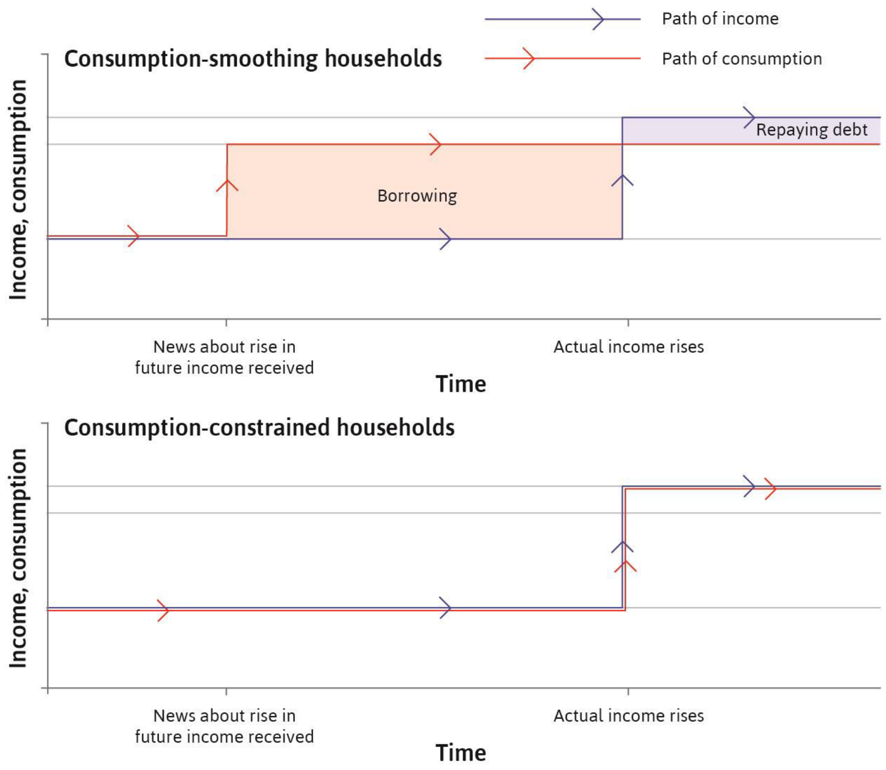
Limitations to consumption smoothing mean it cannot always stabilise the economy; it may amplify the initial shock.

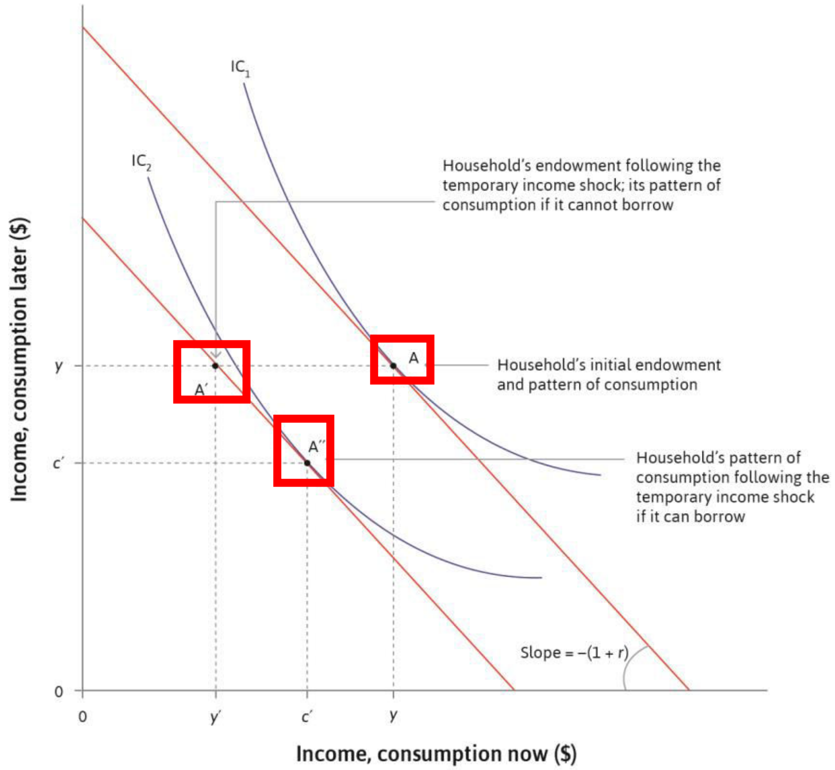
- credit constraints, weakness of will, limited co-insurance

This helps us understand the business cycle and how to manage it.

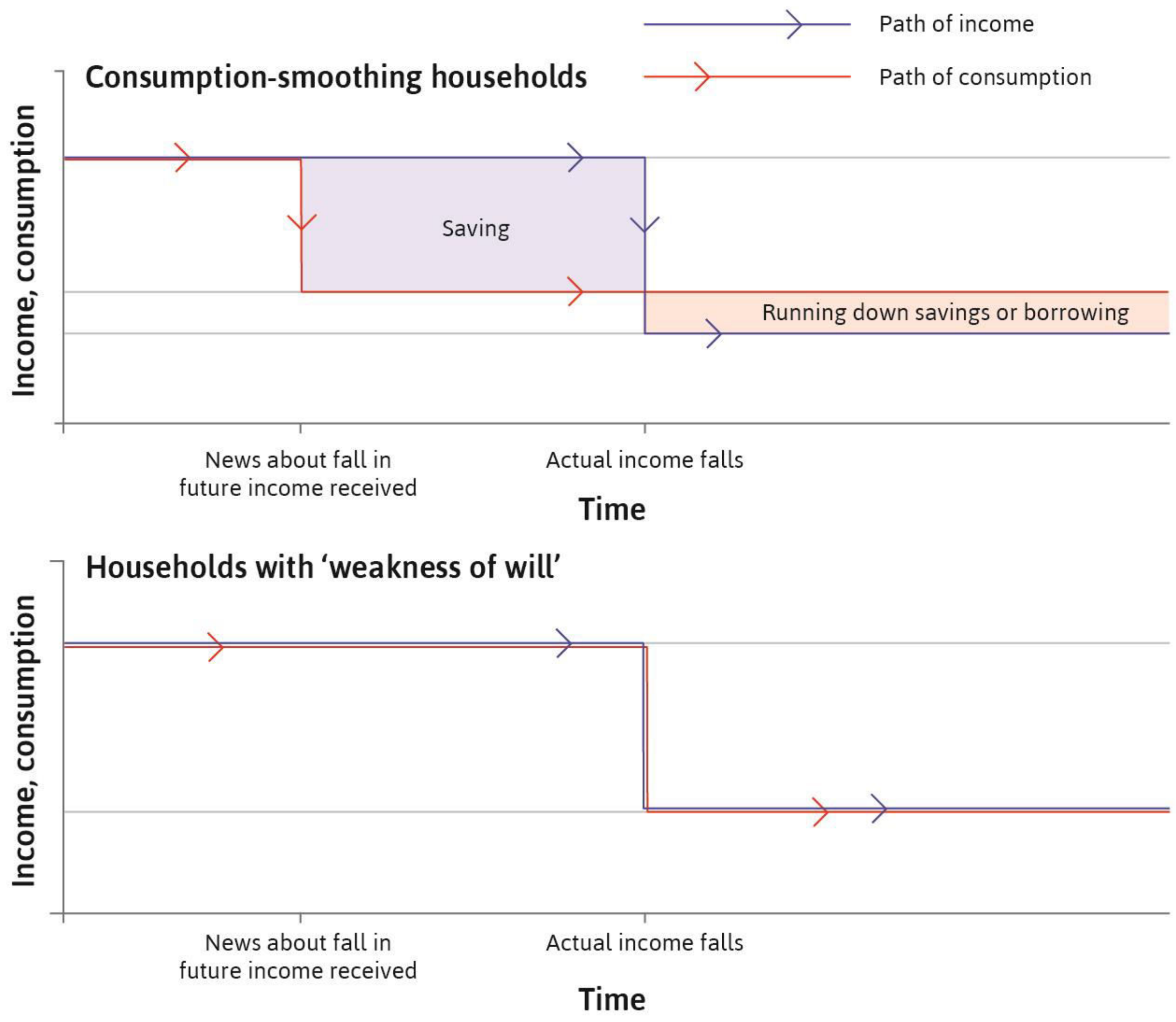
Limitations to smoothing: credit constraints

Credit constraints – limits on amount borrowed/ability to borrow. The households unable to adjust to a temporary income shock have lower welfare.





Limitations to smoothing: weakness of will



Weakness of will – inability to commit to beneficial future plans.

A household is able to smooth consumption but doesn't, and may regret it later.

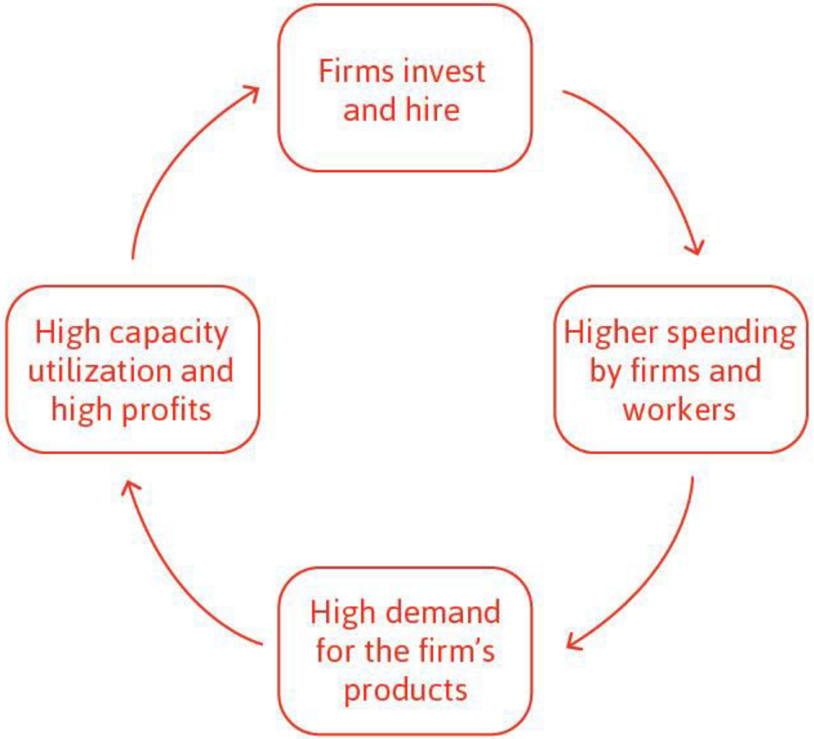
E. Economic fluctuations and investment

Volatile Investment

Firms don’t have preferences for smoothing like households. They adjust investment plans to both temporary and permanent shocks, to maximise their profits.

High demand → high **capacity utilisation**,
→ investment → even higher demand

Investment decisions depend on firms’ expectations about future demand



Investment: A coordination game

Actors: the two firms

Actions: Invest, or Do not invest

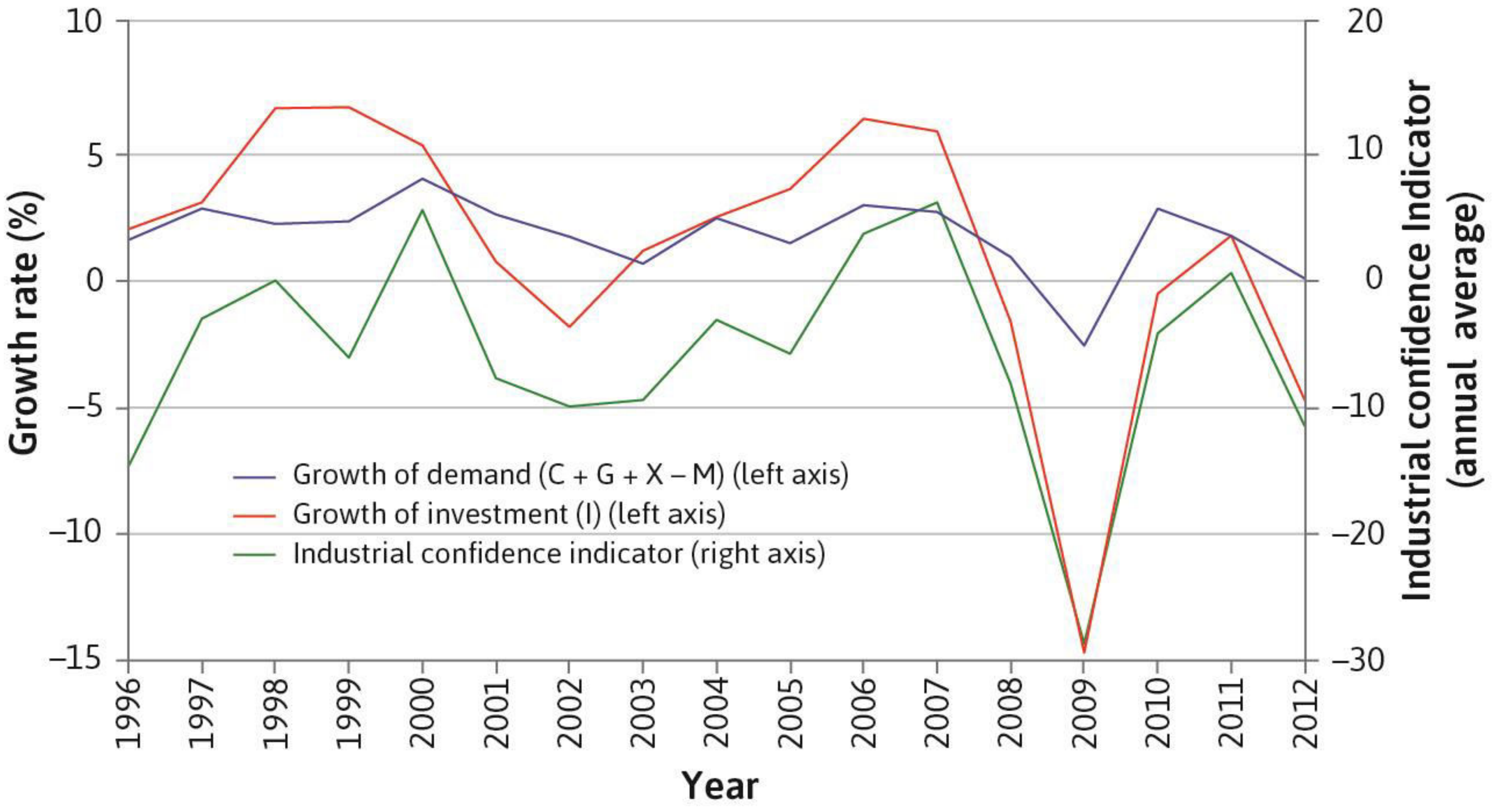
Information: they decide simultaneously

Payoff: profits from investment

		B's profit	
		B invests	B does not invest
A's profit	A invests	100 100	80 –40
	A does not invest	–40 80	10 10

Investment is the best response to other firms' investment **(coordination game).**

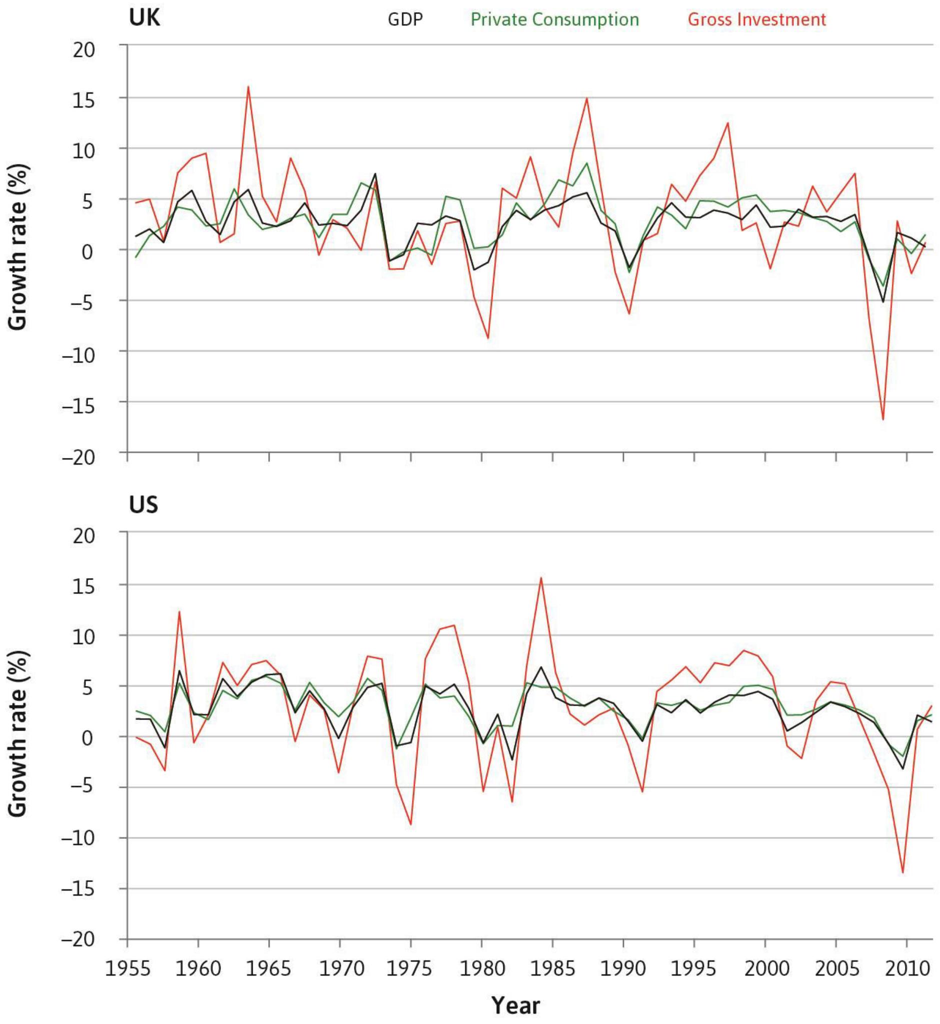
Business confidence



Business confidence coordinates firms to invest at the same time.

Investment and the aggregate economy

The benefits of coordinating investment makes cycles self-reinforcing.
Firms respond positively to the growth of demand in the economy.
This is why investment is more volatile than GDP.



Other components of GDP

- Government spending is less volatile than investment (does not depend on business confidence)

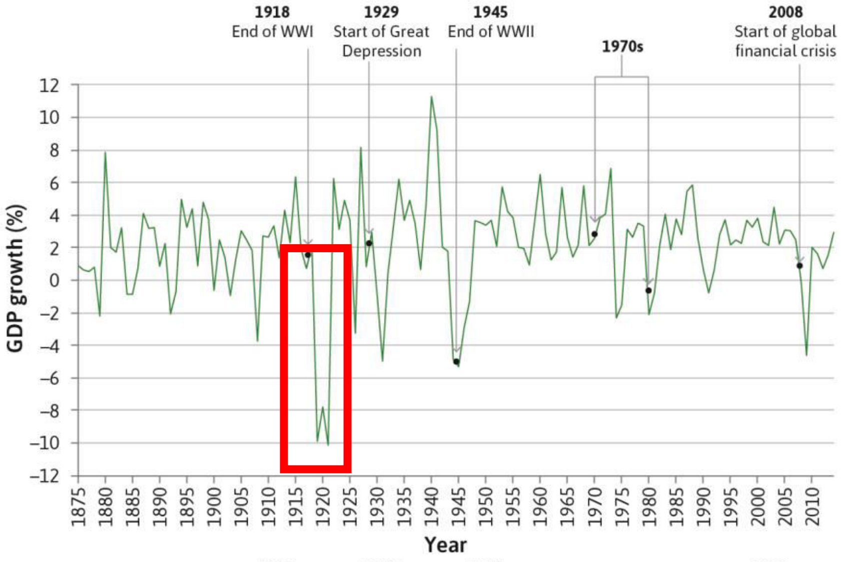
- Exports depend on demand from other countries, so will fluctuate according to the business cycles of major export markets.

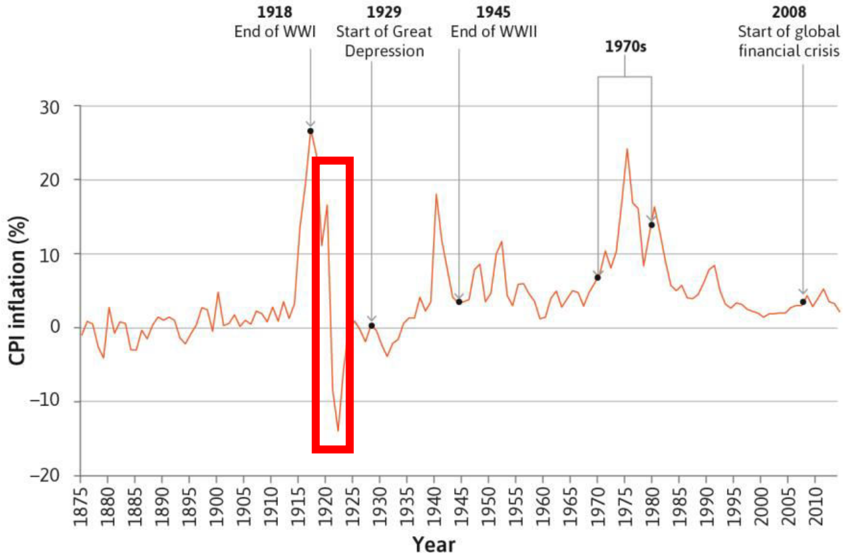
F. Inflation

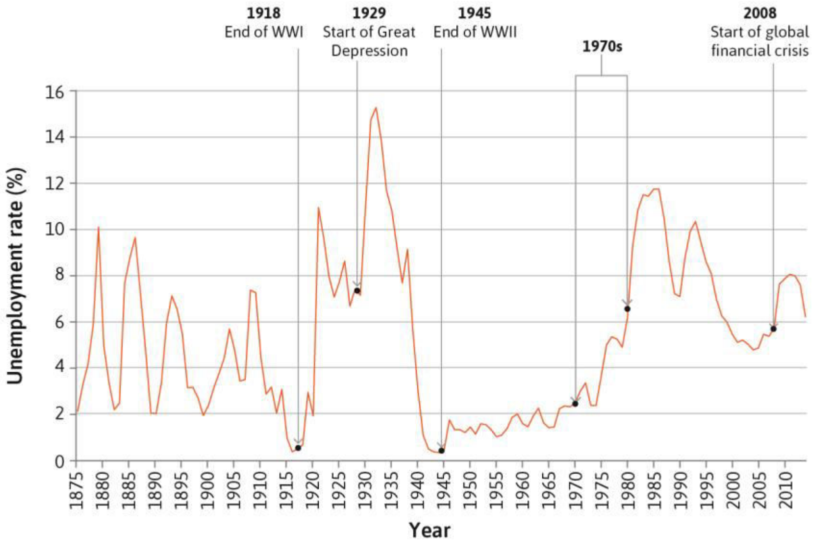
Inflation, GDP, and Unemployment

Inflation = an increase in the general price level in the economy

Inflation tends to be lower during recessions (high unemployment)







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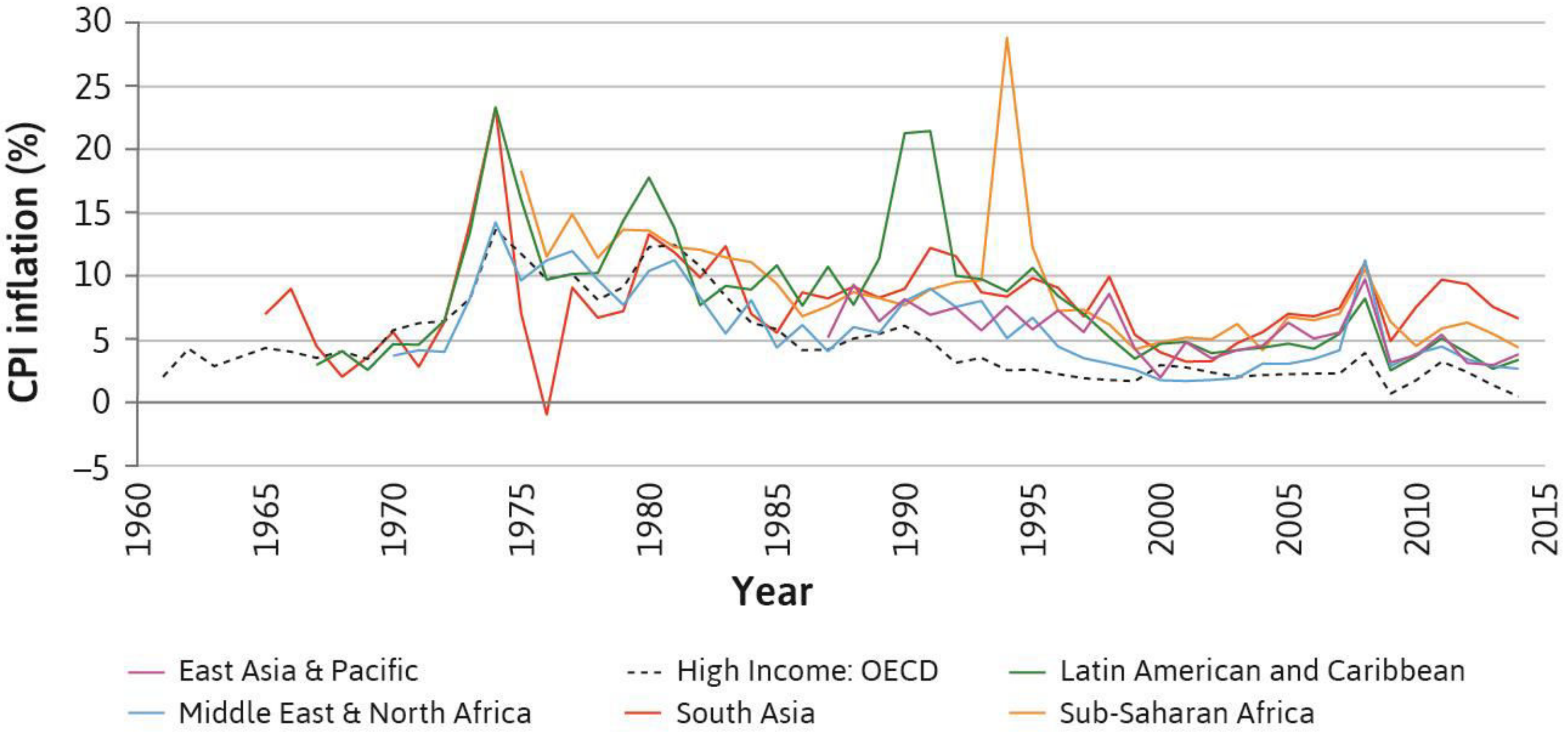
Trends in inflation



- Upward spikes in inflation during economic crises
- general downward trend since 1970s
- inflation tends to be higher in poor than in rich countries

Measuring inflation

The **Consumer Price Index** (**CPI**) measures the general level of prices that consumers have to pay for goods and services, including consumption taxes

- Based on a representative bundle of consumer goods – "cost of living"
- Common measure of inflation = change in CPI

GDP deflator = A measure of the level of prices for domestically produced output (ratio of **nominal** to **real GDP**)

- Tracks prices of components of GDP (C, I, G, NX)
- Allows GDP to be compared across countries and over time

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; the outcome of a self-reinforcing coordination game
   - Inflation moves with the business cycle
2. System of **national accounts** to measure the economy
   - **GDP = C + I + G + X – M**
   - Measuring GDP as income, spending, production

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