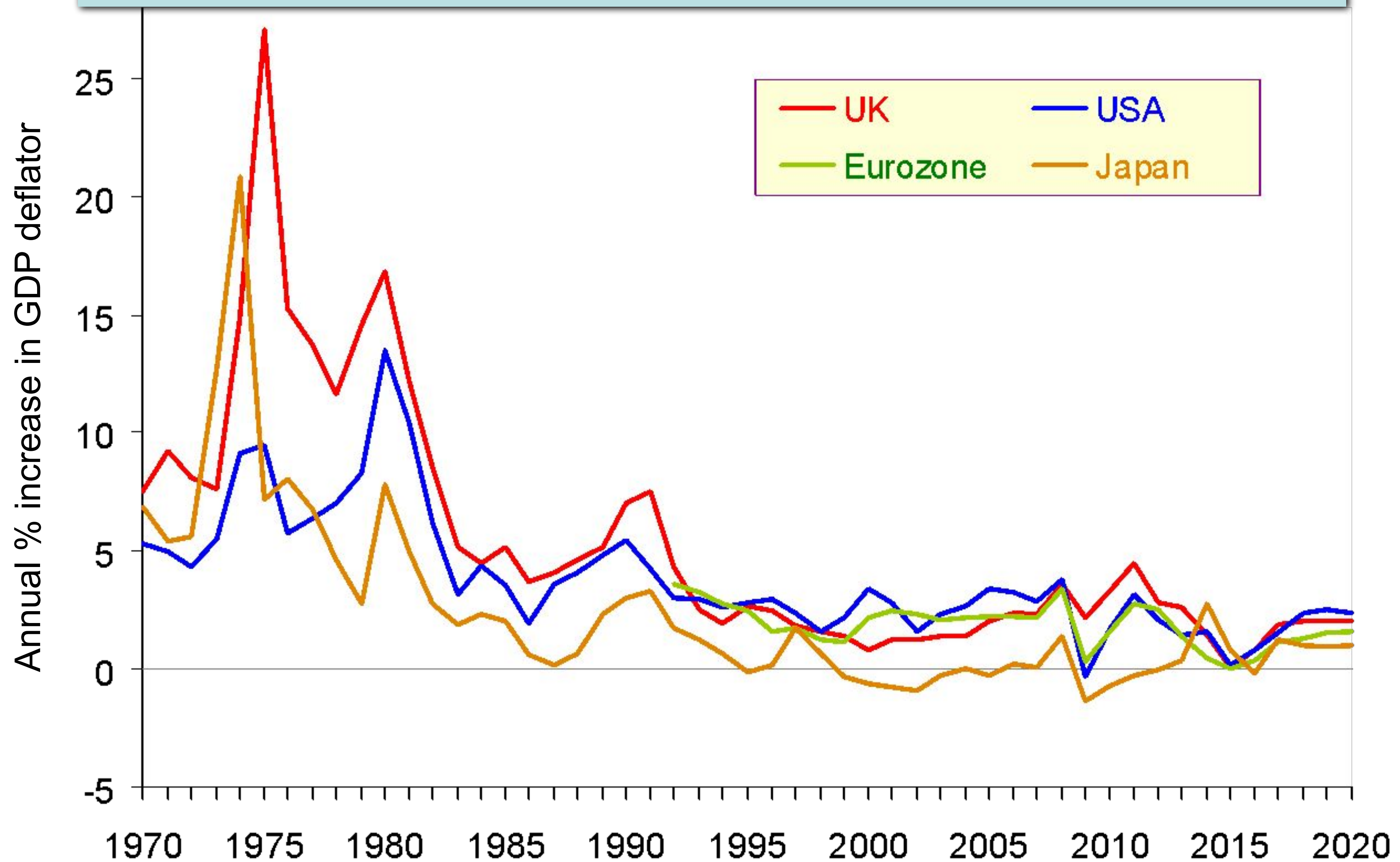
Inflation

- The rate of inflation measures the annual percentage increase in prices.
- Most commonly used measure:
  - consumer price inflation
    - the rate of inflation is the percentage increase in that index over the previous 12 months.
  - If there is negative inflation (falling prices) – deflation (Japan)
  - indices are published for other goods and services
    - commodity prices, food prices, house prices, import prices, prices after taking taxes into account, wages and so on.

Inflation

- Inflation in historical perspective
  - low inflation in 1950s and 60s
  - high inflation in 1970s and 80s
  - low inflation since mid 1990s
    - most developed countries gear monetary policy to achieving a low target rate of inflation
    - is this still the case since the financial crisis?

Inflation rates in selected industrialised economies



Notes: 2014 and 2015 based on forecasts; Eurozone = the 17 countries using the euro in 2013

Source: Based on data in *World Economic Outlook Database* (IMF) and *AMECO Database* (European Commission, DGECFIN)

The distinction between real and nominal values.

- Nominal figures are those using current prices, interest rates, etc. Real figures are figures corrected for inflation.
  - When there is inflation, we have to be careful in assessing how much national output, consumption, wages, etc. are increasing.
    - GDP in money terms may have risen by 5 per cent, but if inflation is 3 per cent, ***real growth in GDP*** will be only 2 per cent.
    - A rise or fall in ***inflation*** is different from a rise or fall in ***prices***.

Q In a period of rapid inflation which of the following would be the least desirable store of wealth?

A. Vintage wine.

B. Property

C. Money

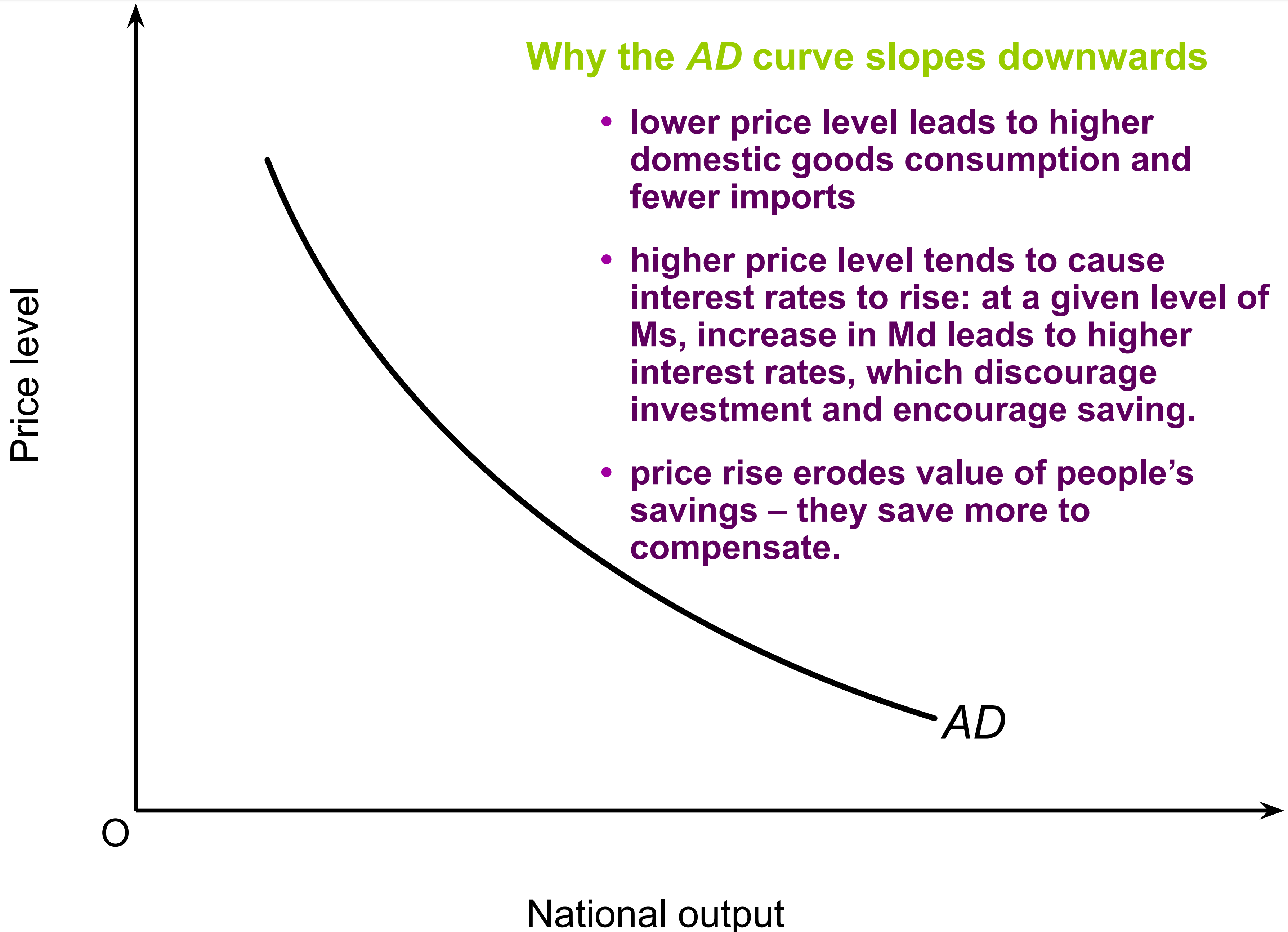
D. Land

E. Stocks and shares]

Inflation

- Aggregate demand & supply and prices
  - The level of prices in the economy is determined by the interaction of aggregate demand and aggregate supply.
  - Aggregate demand curve shows how much national output (real GDP) will be demanded at each level of prices.

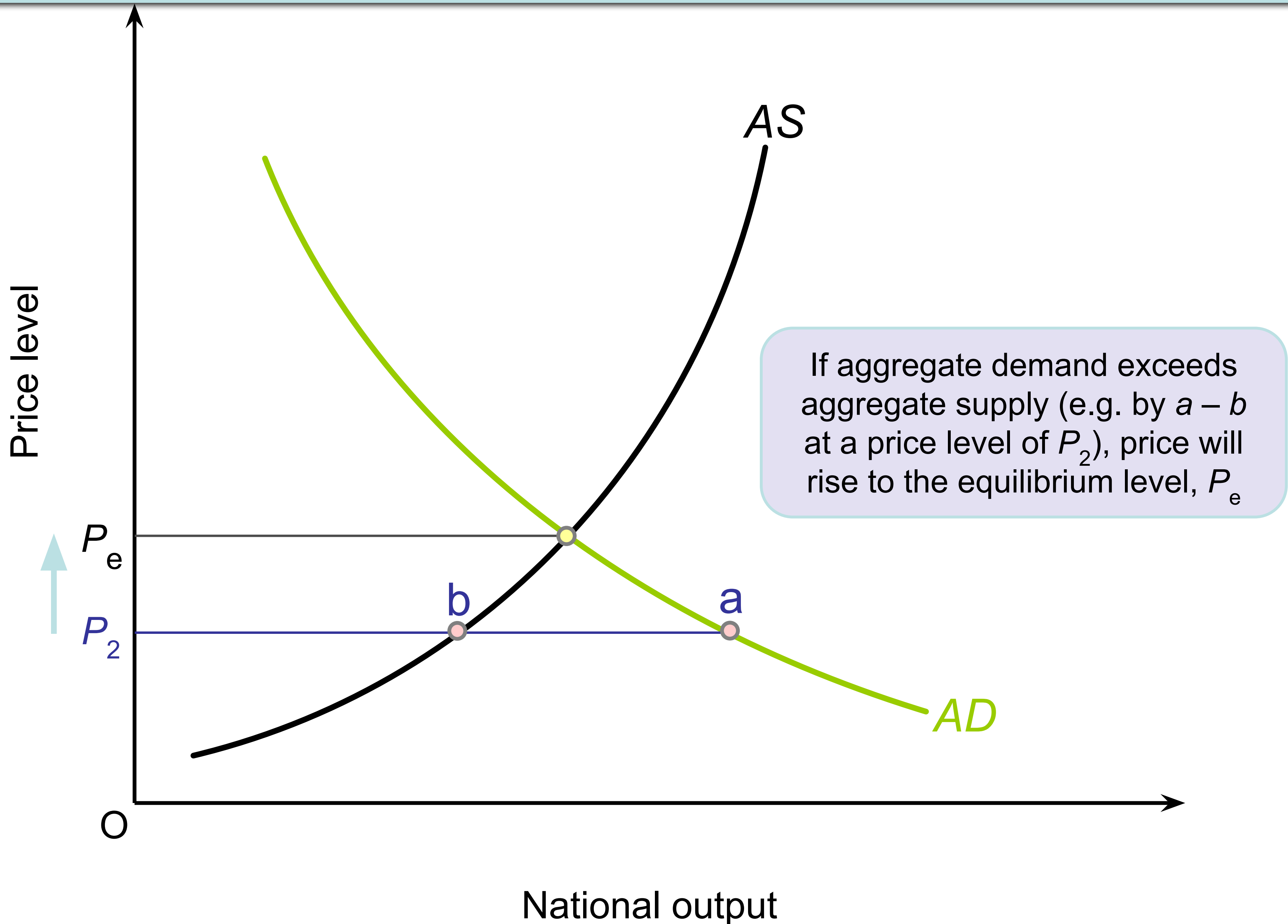
Aggregate demand



Inflation

- Aggregate demand & supply and prices
  - aggregate demand curve
  - aggregate supply curve
    - The aggregate supply curve slopes upwards – at least in the short run. In other words, the higher the level of prices, the more will be produced.

Aggregate demand and aggregate supply



Inflation

- Aggregate demand & supply and prices
  - aggregate demand curve
  - aggregate supply curve
    - why *AS* curves generally slope upwards
  - equilibrium
  - shifts in *AD* and *AS* curves
    - AD: if there is a change in any of its components
    - AS: if there is a rise in labour productivity or capacity of the economy

Q As the price level in the economy rises, which of the following occurs?

(i) The quantity of 'real money' decreases;

(ii) Real aggregate demand decreases;

(iii)Total spending in *money* terms decreases.

A. (i) only

B. (ii) only

C. (i) and (ii)

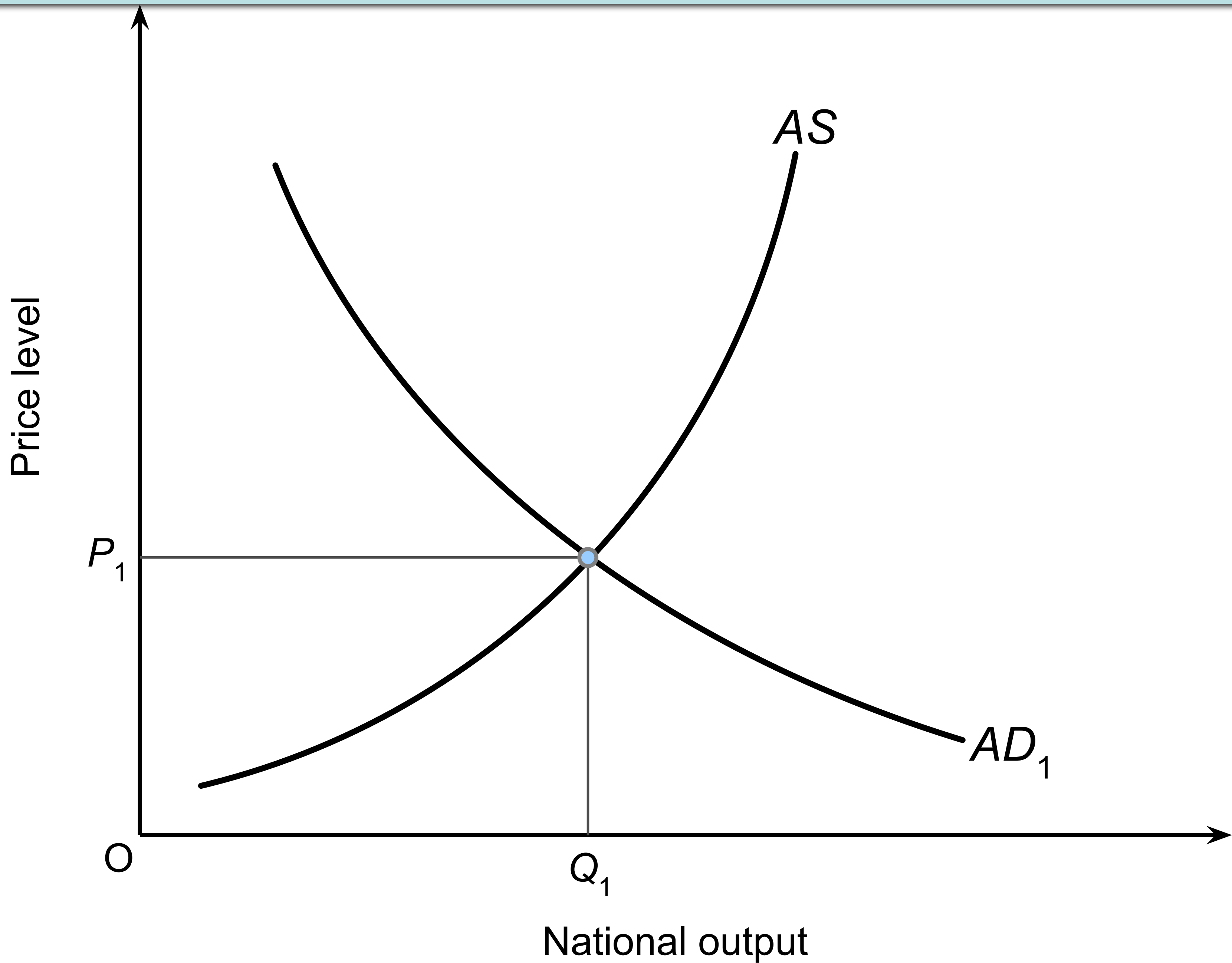
D. (i) and (iii)

E. (i), (ii) and (iii)

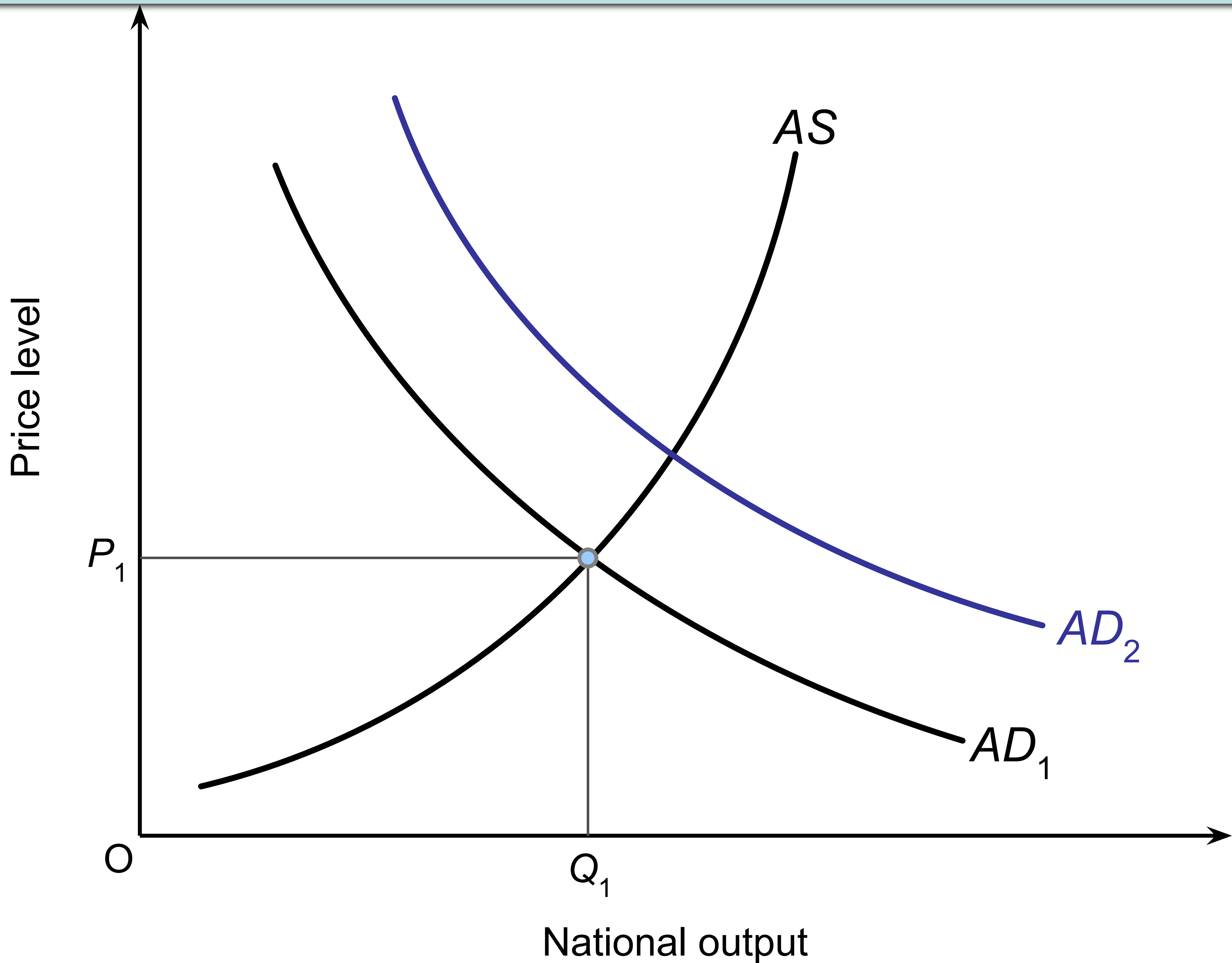
Inflation

- Causes of inflation
  - demand pull
    - When the *AD* curve shifts to the right, output will rise and unemployment may fall as a result.
    - However, at the same time, prices will rise.
    - Firms will respond to the rise in AD partly by raising prices (caused by costs rise as a result of increasing output), and partly by increasing output (there is a move upwards along the *AS* curve).
  - **Demand pull** inflation is caused by continuing rises in aggregate demand.

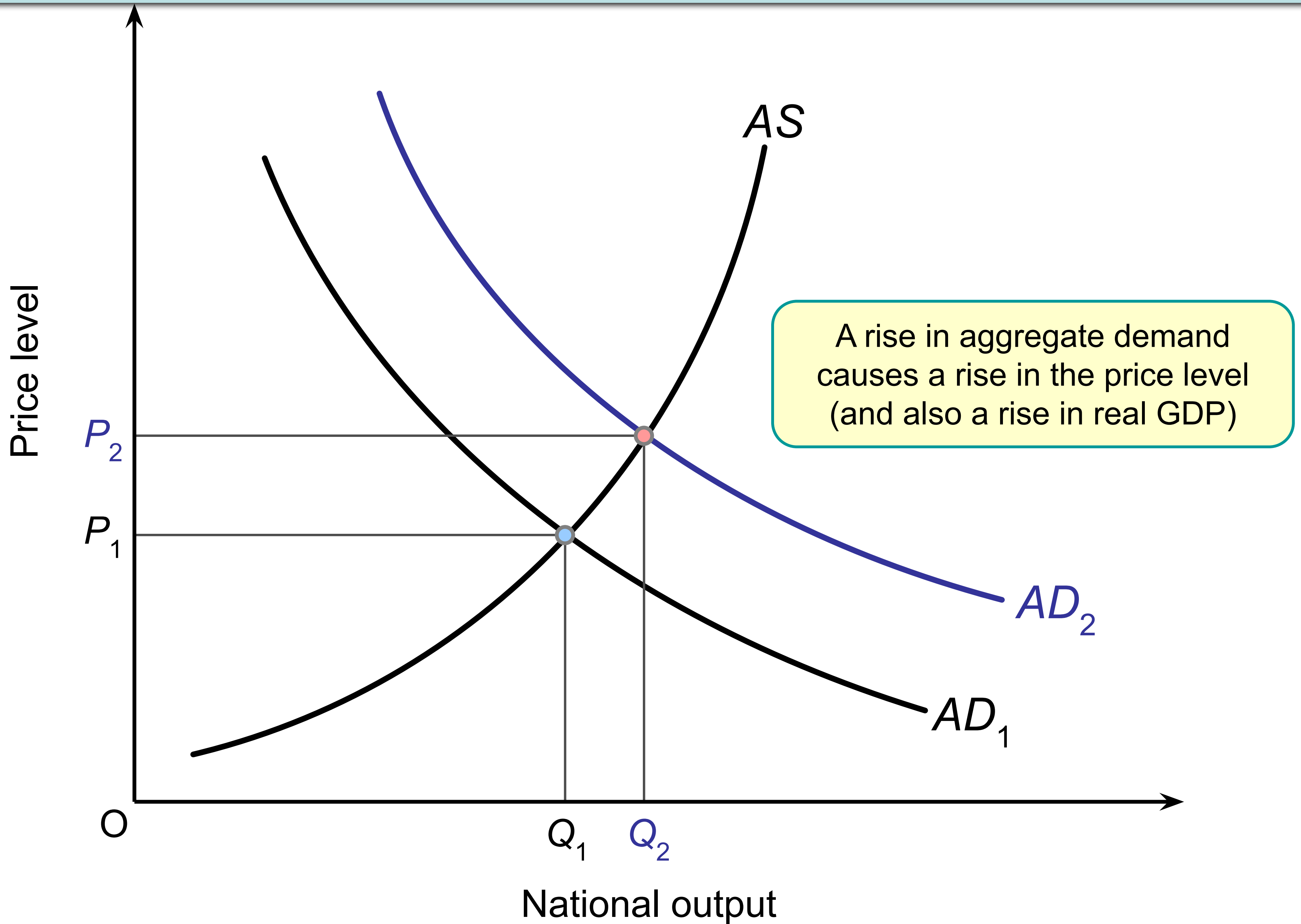
Demand-pull inflation



Demand-pull inflation



Demand-pull inflation



Inflation

- Causes of inflation
  - cost push inflation
    - is associated with continuing rises in costs and hence continuing leftward (upward) shifts in the AS curve.
    - Such shifts occur when costs of production rise independently of aggregate demand.
    - If firms face a rise in costs, they will respond partly by raising prices and passing the costs on to the consumer, and partly by cutting back on production.

Inflation

- Rise in costs may come from:
  - wage push
    - increase in wages due to trade unions activity independently of demand for labour
  - profit push
    - firms use their monopoly power to make bigger profits by pushing up prices independently of consumer demand
  - import-price push
    - prices rising independently of the level of AD (e.g. OPEC putting up oil prices)

Inflation

- In all these cases, inflation occurs because one or more groups are exercising economic power.
  - The problem is likely to get worse, therefore, if there is an increasing concentration of economic power over time (e.g. if firms or unions get bigger and bigger, and more monopolistic) or if groups become more militant.

Q Which one of the following would be the cause of cost-push inflation?

A. A cut in the rate of income tax.

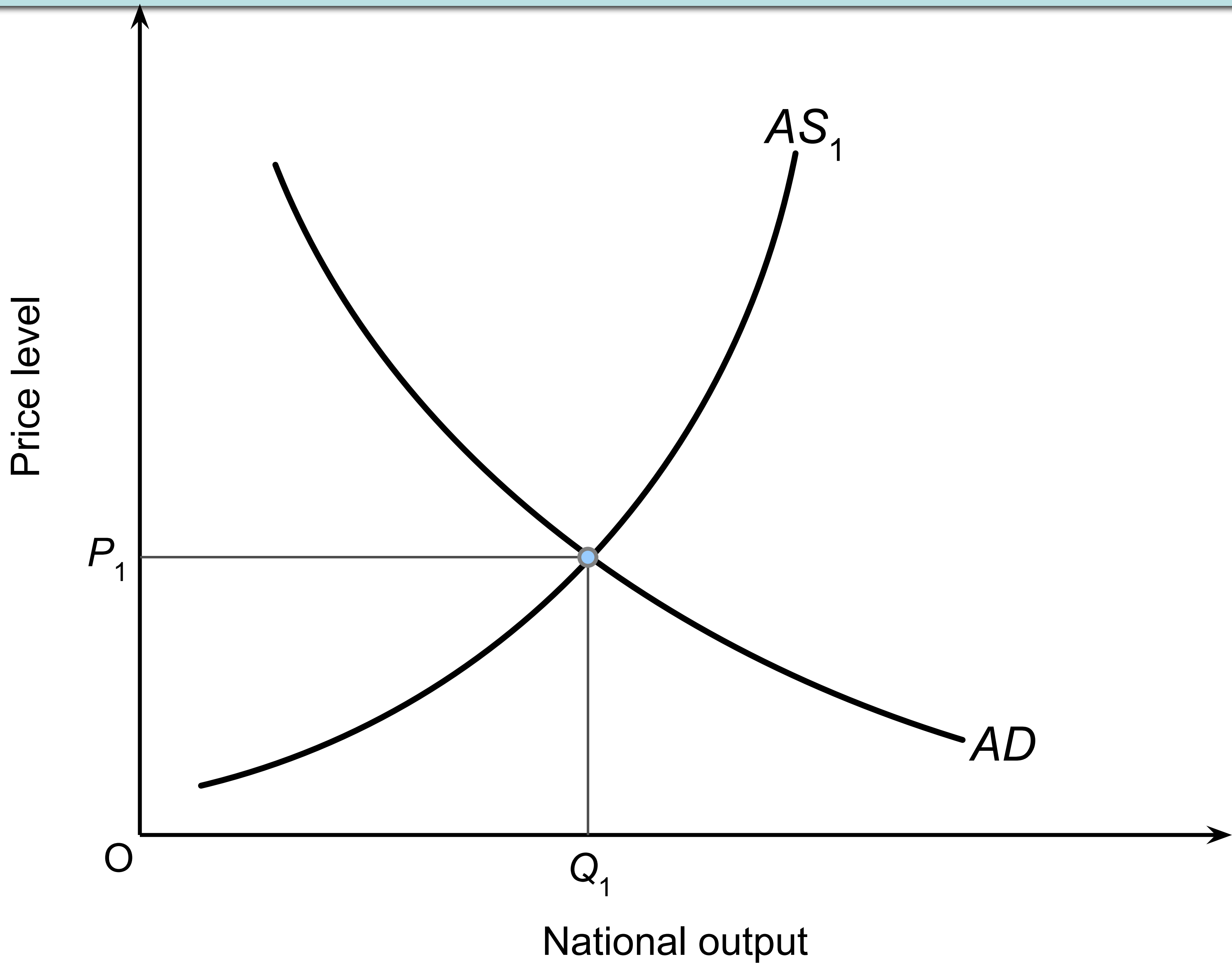
B. A cut in the rate of VAT

C. A cut in interest rates

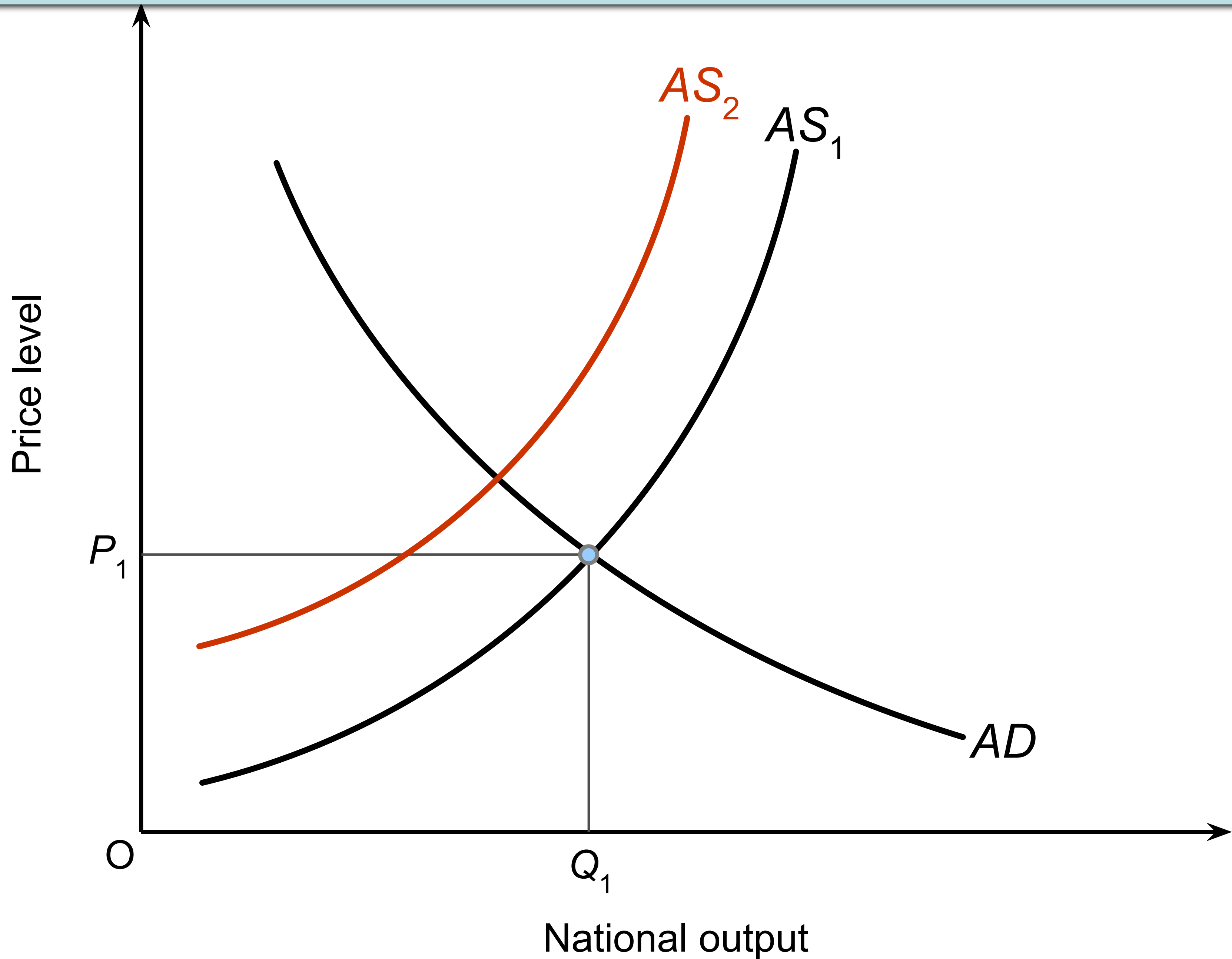
D. A rise in the exchange rate

E. A rise in the price of oil

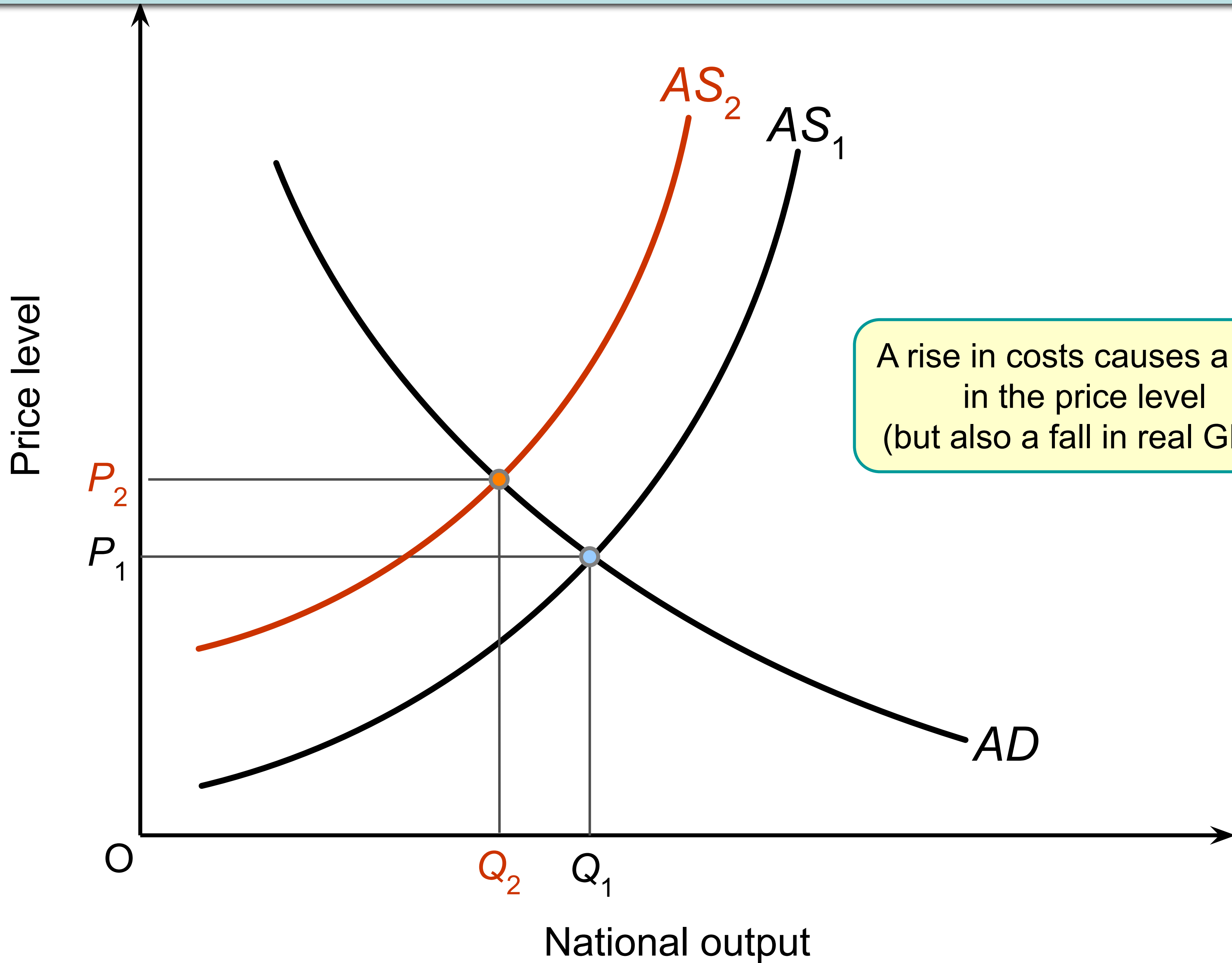
Cost-push inflation



Cost-push inflation



Cost-push inflation



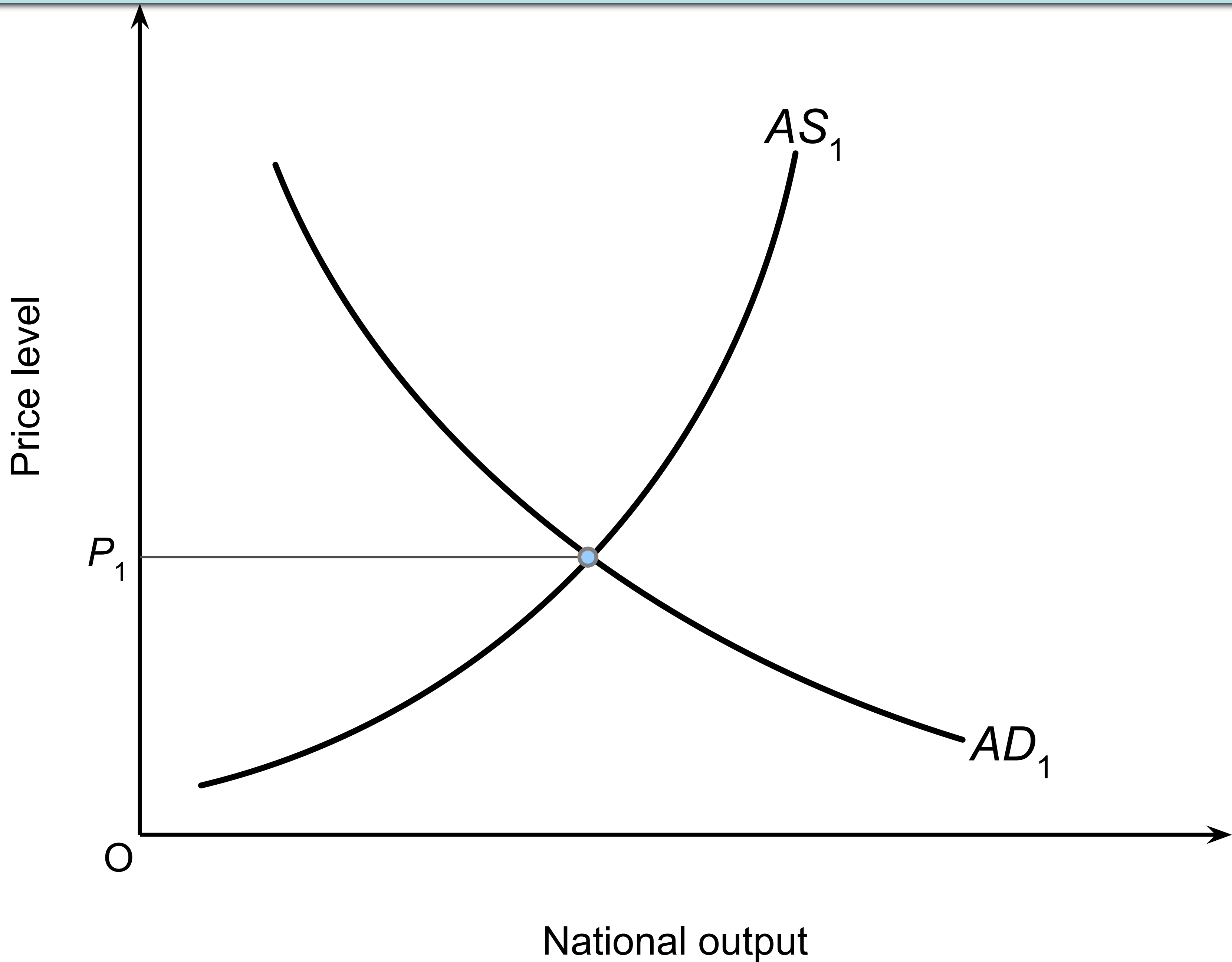
Inflation

- With the growth in demand for raw materials and food (China, India, Brazil) rising costs became more of a problem
- Thus, what starts with a rise in aggregate demand in these countries (demand-pull inflation), becomes cost-push inflation for other countries due to globalisation, having to pay higher prices for the commodities they import.

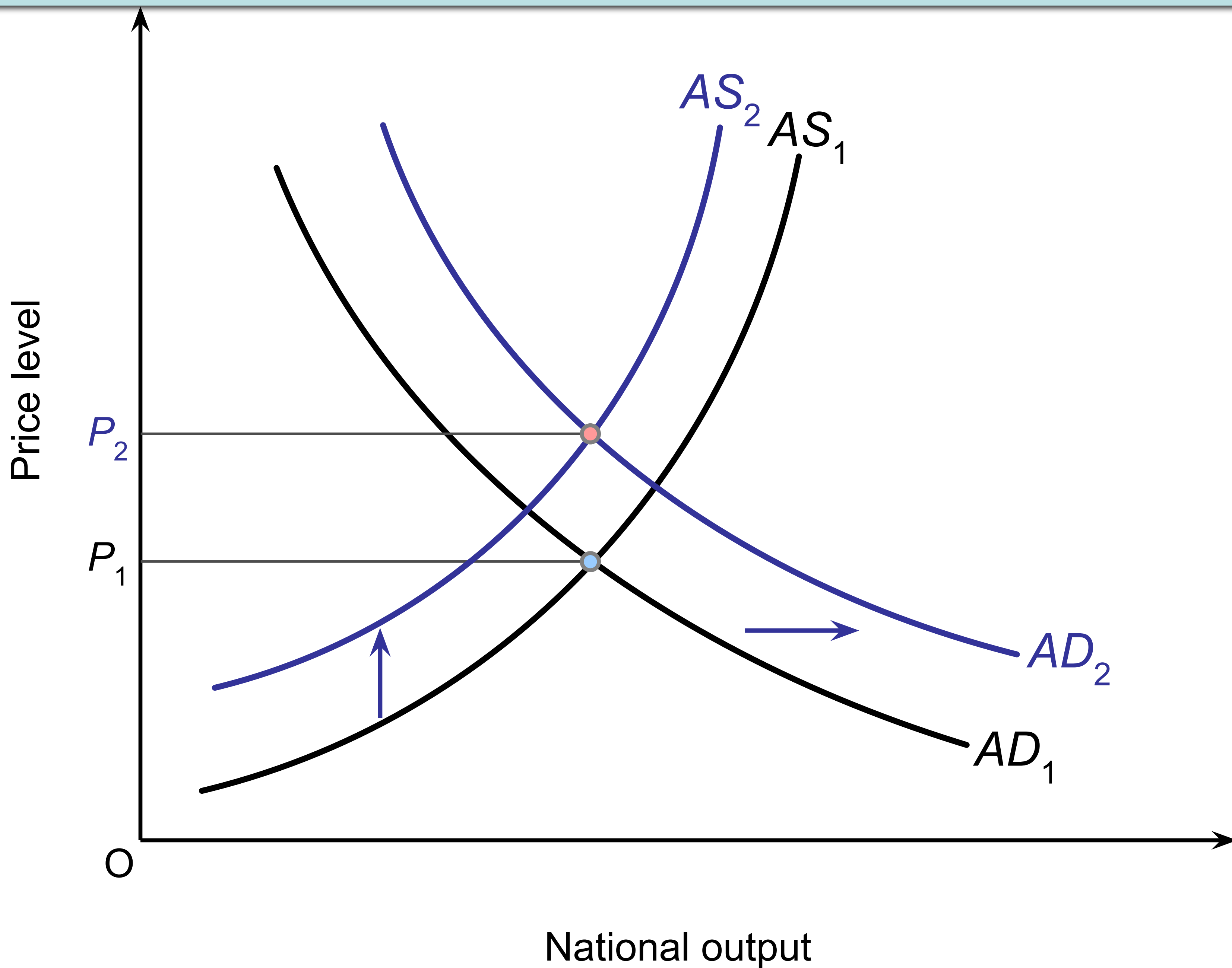
Inflation

- Demand-pull and cost-push inflation can occur together
  - since wage and price rises can be caused both by increases in aggregate demand
    - as well as by independent causes pushing up costs.
  - Even when an inflationary process *starts* as either demand-pull or cost-push, it is often difficult to separate the two.

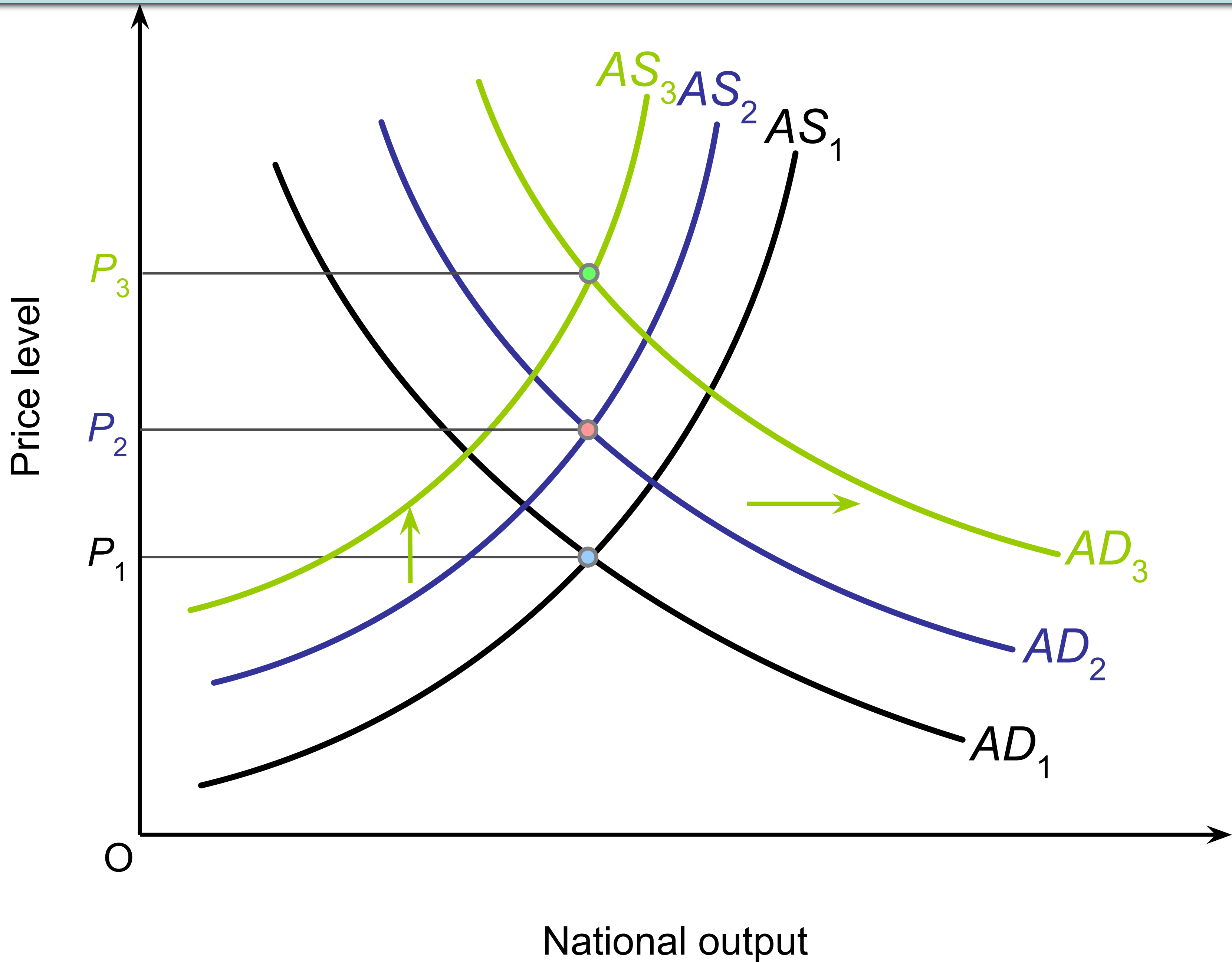
The interaction of demand-pull and cost-push inflation



The interaction of demand-pull and cost-push inflation



The interaction of demand-pull and cost-push inflation



Inflation

- **Expectations and inflation**
  - Workers and firms take account of the *expected* rate of inflation when making decisions.
    - The employers will be happy to pay a wage rise somewhat below 5 per cent.
    - After all, they can put their price up by 5 per cent
  - Realisation of expectations

Lecture 4.1

Fiscal and Monetary Policy

Aims of this session:

- Add Government spending and foreign trade as additional components of aggregate demand
- Explain what we mean by fiscal and monetary policy
- Show how fiscal and monetary policy may affect aggregate demand

Fiscal policy

- Fiscal policy is the government's decisions about spending and taxes.
- Automatic stabilisers reduce fluctuations in aggregate demand

UK government spending and taxes (% of GDP)

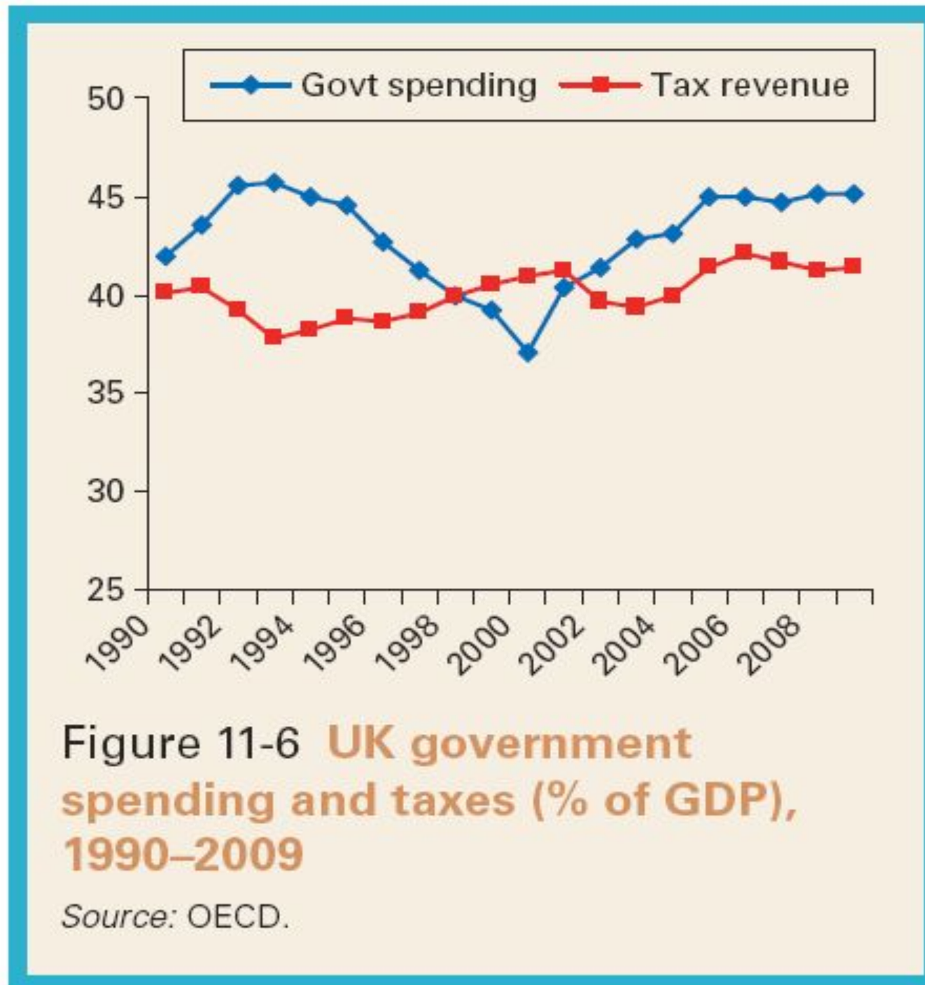


Figure 11-6 **UK government spending and taxes (% of GDP), 1990–2009**

Source: OECD.

Government and aggregate demand 1

- Government purchases (*G*) of final output add directly to aggregate demand:

  $AD = C + I + G$

- The level of government demand reflects how many hospitals the government wants to build, how large it wants defence spending to be, and so on.

Government and aggregate demand 2

Government levies taxes and pays out transfer benefits

- Tax revenue and benefit spending both vary with output.

How do taxes affect disposable income?

- Assume net taxes $NT = tY$
  - where t is the net tax rate

Households' disposable income YD is now:

$$YD = Y(1-t)$$

The open economy: foreign trade and output determination

Introducing exports (X) & imports (Z)

- **Trade balance**
  - the value of net exports (X - Z)
- **Trade deficit**
  - when imports exceed exports
- **Trade surplus**
  - when exports exceed imports
- **Aggregate demand**

AD = C + I + G + X – Z

In equilibrium AD is equal to output and income

UK Foreign trade (% of GDP)

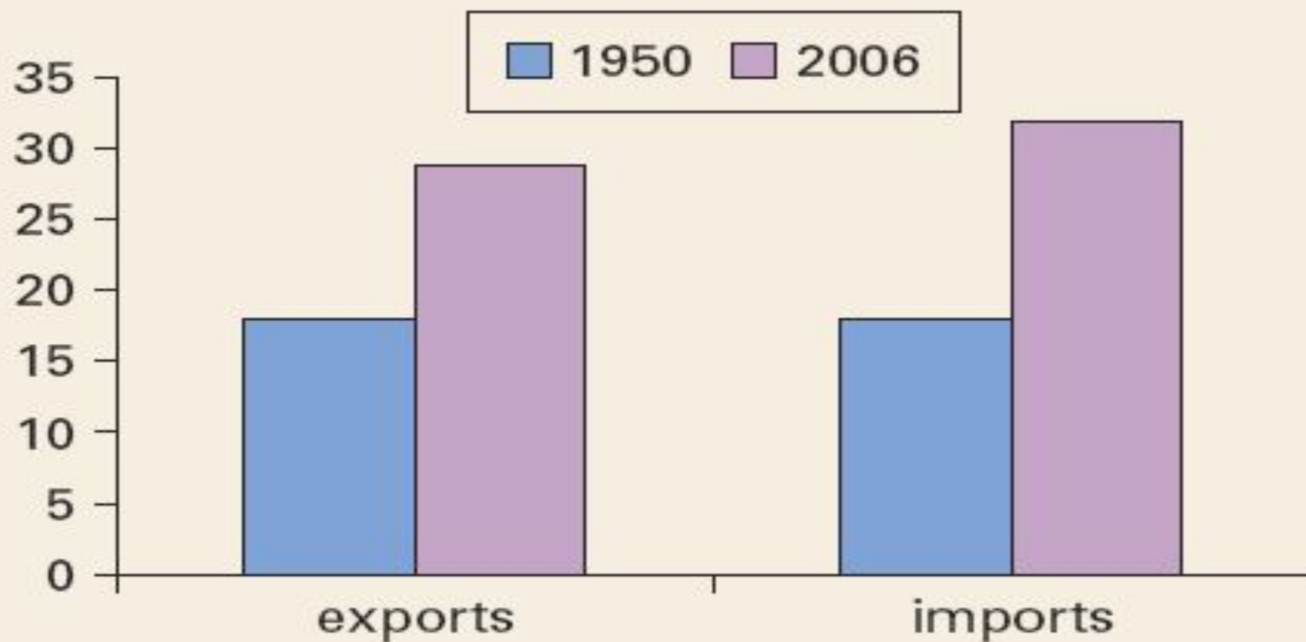


Figure 11-8 **UK foreign trade (% of GDP)**

Monetary Policy I

- Interest rates are the instrument of monetary policy
- The monetary instrument is the variable over which a central bank exercises day-to-day control

Monetary Policy II

Monetary policy is the decision by the Central Bank about what the interest rate to set.

- In the UK, the central bank is the Bank of England, which acts on behalf of the government. It has operational independence from the government to set interest rates.
- But the Chancellor has decided the Bank's ultimate objective is to set interest rates to try to keep inflation close to 2 per cent a year

Nominal vs Real Interest Rates

- The real interest rate is the difference between the nominal interest rate and inflation

Nominal and real UK interest rates (%)

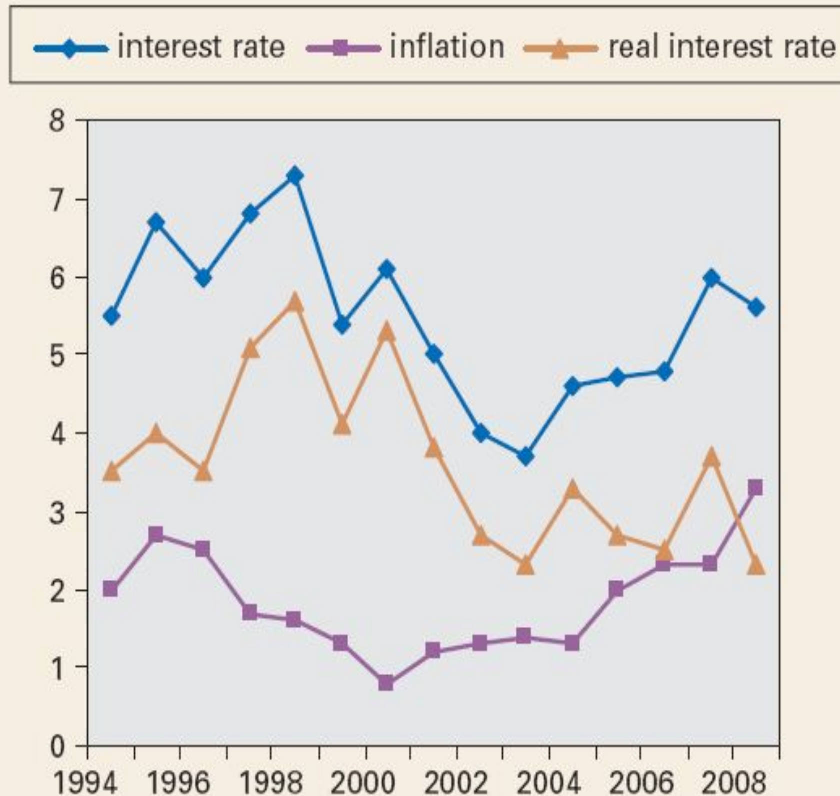


Figure 11-10 Nominal and real UK interest rates (%)

How interest rates affect the economy

Interest rates influence:

- personal consumption by changing the cost of borrowing for consumption

- investment demand by raising the opportunity cost of capital

Interest rates and investment demand

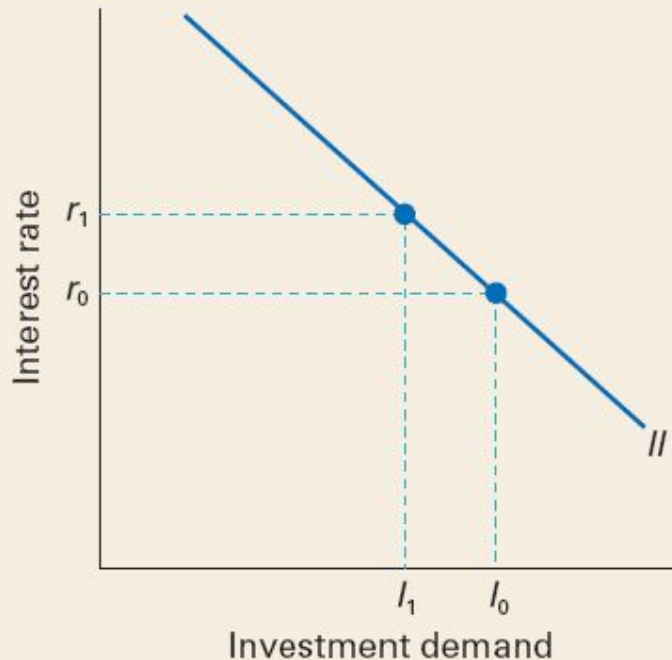


Figure 11-11 **The investment demand schedule**

- For a given rate of output growth the investment demand schedule *II* shows how a lower interest rate raises investment demand
  - If the interest rate rises from r_0 to r_1 desired investment falls from I_0 to I_1

Lower interest rates increase aggregate demand 1

- Lower interest rates induce an increase in personal consumption and investment demand increasing AD to AD_1 and output to Y_1
- Equivalently, lower interest rates increase desired investment at any output
- but also, by reducing desired consumption, they raise the desire to save at any output

Demand management and the policy mix

- Demand management is the use of monetary and fiscal policy to stabilize output near the level of potential output.
- The government can use fiscal and monetary policy to control demand
- loose fiscal policy can be used with tight monetary policy or vice versa
- the former suggests a large public sector; the latter a smaller public sector
- the mix of policies affects the composition of output