Business Cycles

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Business Economics Programme

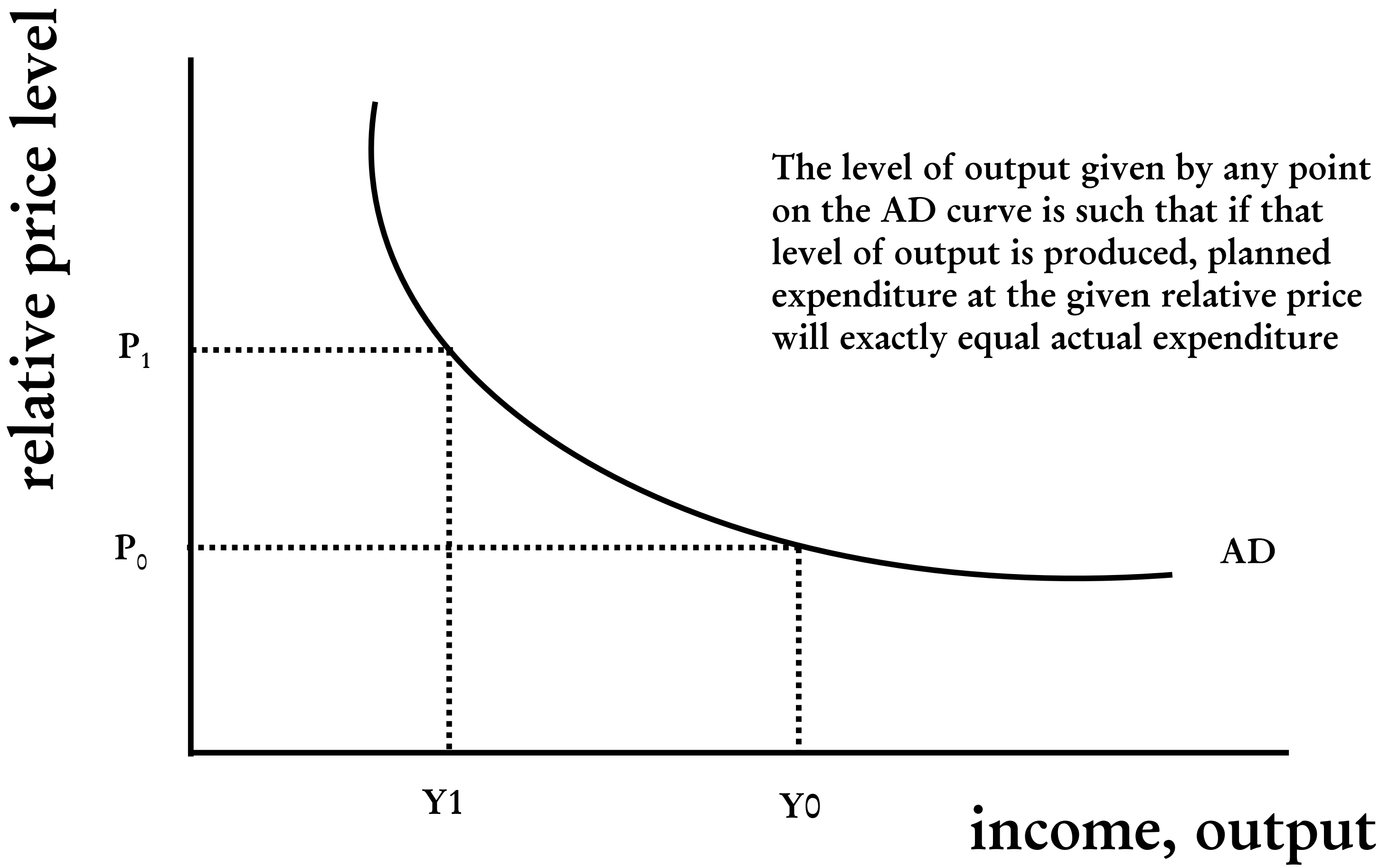
relative prices

- Phillips (1958) found relation an empirical relationship between unemployment and inflation in the UK – the Phillips curve.
- Original interpretation:
  - There is a trade-off between inflation and unemployment where prices are judged relative to the existing price level.
- Problem: after sustained inflation, the empirical relationship broke down.
- New interpretation:
  - There is a trade-off between unemployment and inflation where prices are judged relative to the existing price level plus expected inflation.

aggregate demand

- Aggregate demand comprises four components:
  - Consumption
  - Investment
  - Primary government spending (i.e. net of transfers)
  - Net exports
- The level of income is a major determinant of consumption, government spending and net exports.
- The real exchange rate is a major influence on net exports.
- The interest rate is an influence on consumption and investment (with the latter being also dependent upon output expectations and 'animal spirits').

the aggregate demand curve



The level of output given by any point on the AD curve is such that if that level of output is produced, planned expenditure at the given relative price will exactly equal actual expenditure

why does the AD curve slope down?

- Three reasons why the aggregate demand curve slopes downwards:
- The first is the Real Balance Effect. When prices rise unexpectedly, the real value of assets whose prices are fixed in nominal terms (such as some government bonds, money, and gold) falls. This leads to less consumer spending.
- The second is the real exchange rate. When prices rise unexpectedly, the real exchange rate appreciates (if the nominal exchange rate is fixed). This leads to an deterioration in the primary current account.
- The third is the Keynes effect. When prices rise unexpectedly, people need more money for day to day transactions and so try to switch their money balances from bonds and shares. This raises the interest rate and hence reduces interest-sensitive spending, such as investment.

long-run aggregate supply revisited

- We say that the labour market is in equilibrium when inflation is stable. At the equilibrium unemployment rate, there will be both voluntary unemployment (workers who do not wish to work at the current real wage) and involuntary unemployment (workers who would like to work but cannot find jobs at the current real wage).
- In the long-run, the economy should return to its equilibrium rate of output, 'money is neutral'. However, according to Keynes, '..in the long-run, we are all dead'. We can estimate the NAIRU from statistical models.
- However, three complications:
  - the NAIRU shifts over time and is hard to estimate precisely;
  - even when unemployment is above the NAIRU, very rapid rises in demand could still lead to increased inflation;
  - if unemployment is high for a very long time, the NAIRU may rise due to 'hysteresis'.

short-run aggregate supply revisited

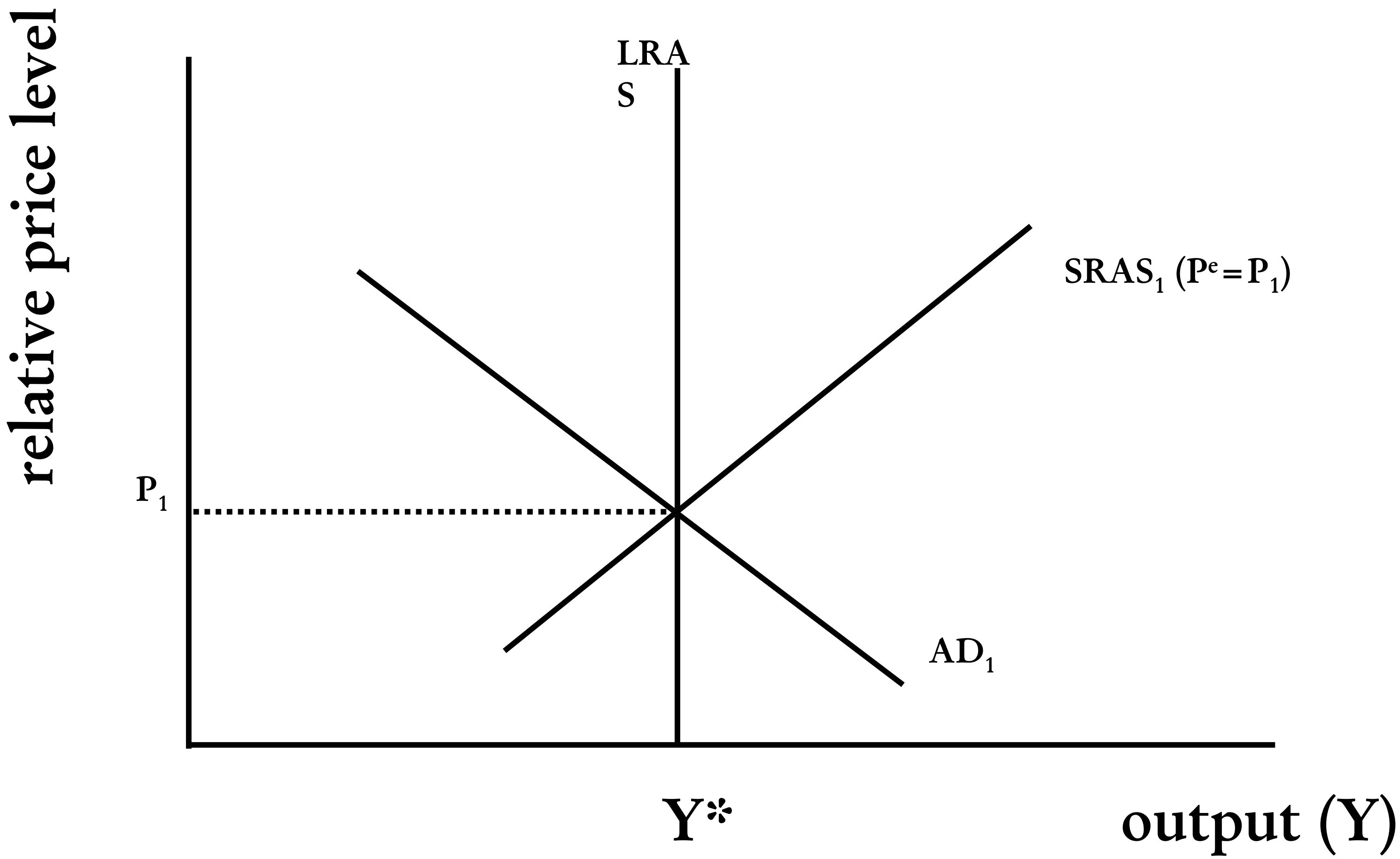
- In the short-run, there is no reason to expect actual output to equal its equilibrium rate.
- Here are four reasons why output can deviate from its equilibrium rate:
  - sticky-wages
  - worker-misperception
  - imperfect information
  - sticky-prices
- All of these lead to a 'surprise-supply' function, where output = equilibrium output + b(prices – expected prices)

taxonomy of aggregate supply models

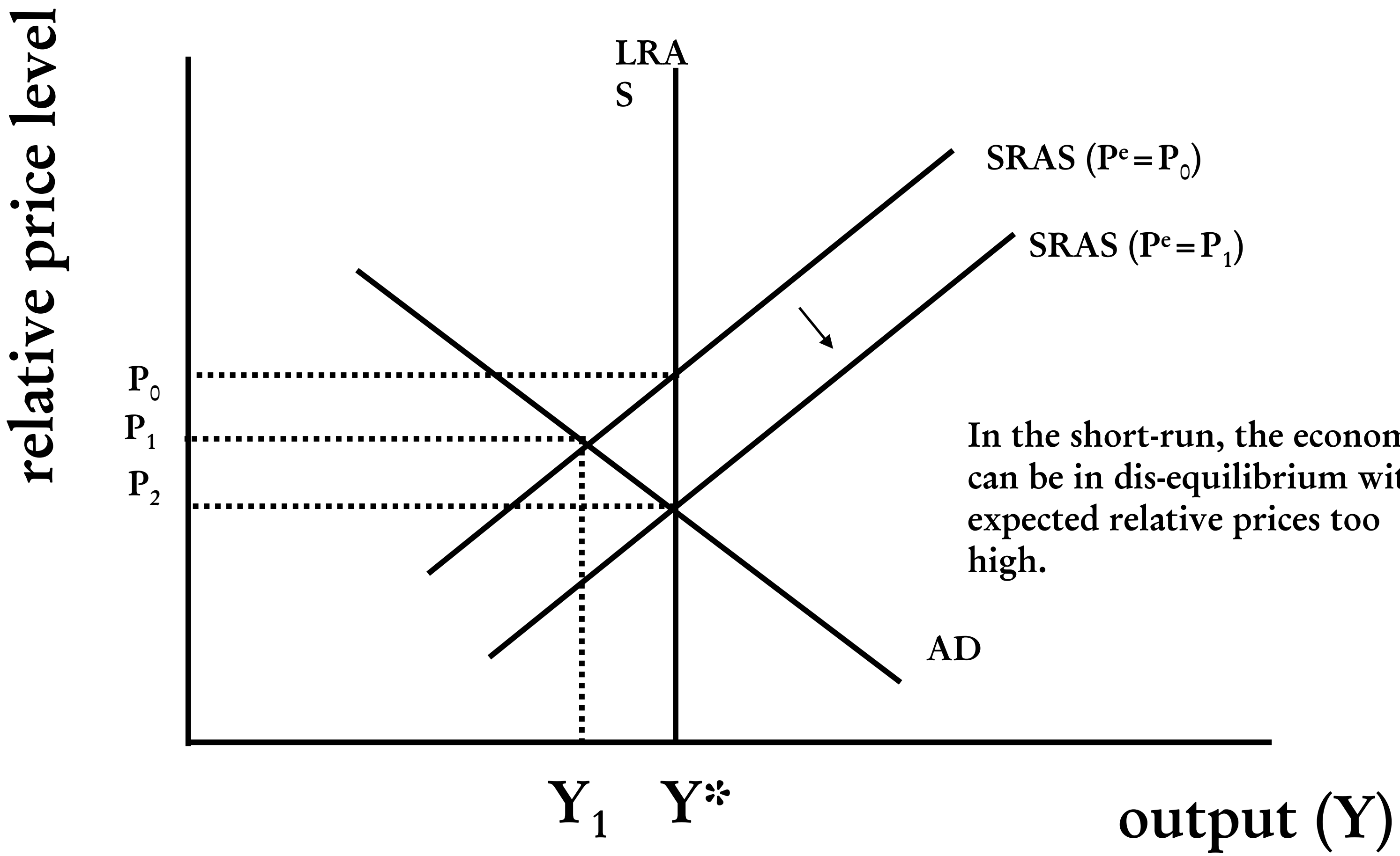
Markets clear?	Labour	Goods
Yes	Worker-Misperception model: workers confuse nominal wage changes with real changes	Imperfect-Information model: suppliers confuse changes in the price level with changes in their own prices
No	Sticky-Wage model: nominal wages adjust slowly	Sticky-Price model: The prices of goods and services adjust slowly

Market with imperfection

AS-AD in long-run equilibrium



AS-AD in dis-equilibrium

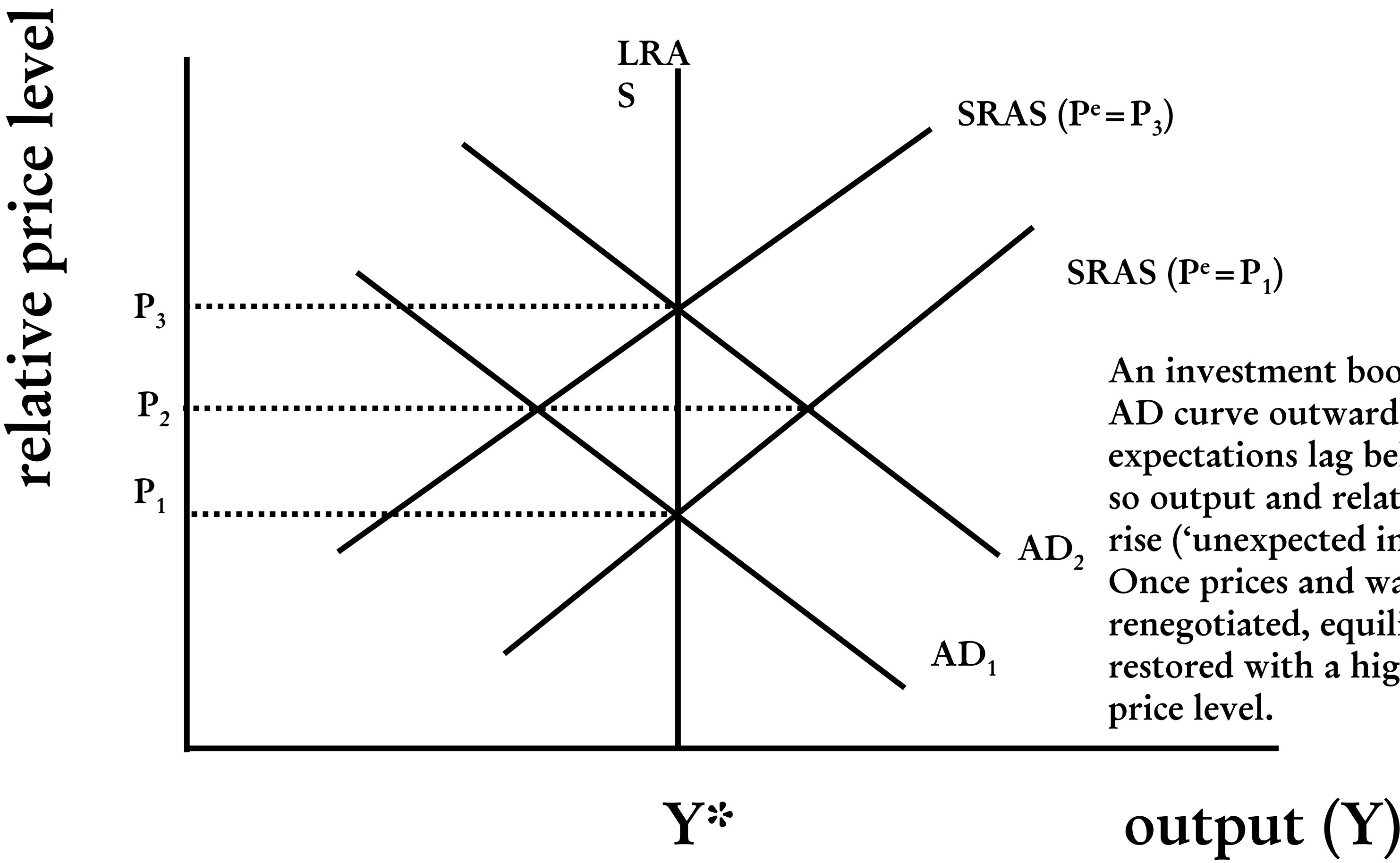


In the short-run, the economy can be in dis-equilibrium with expected relative prices too high.

shocks to the economy

- Why might the economy get ‘shocked’ away from equilibrium?
- Aggregate demand shocks
  - an investment boom
  - an imprudent government spending spree
  - a sudden rise in the real exchange rate
  - a consumer boom abroad
  - a boom in the housing market
  - an unexpected cut in interest rates
  - a slump in share prices
- Aggregate supply shocks
  - a sudden rise in oil prices
  - the invention and diffusion of a new technology

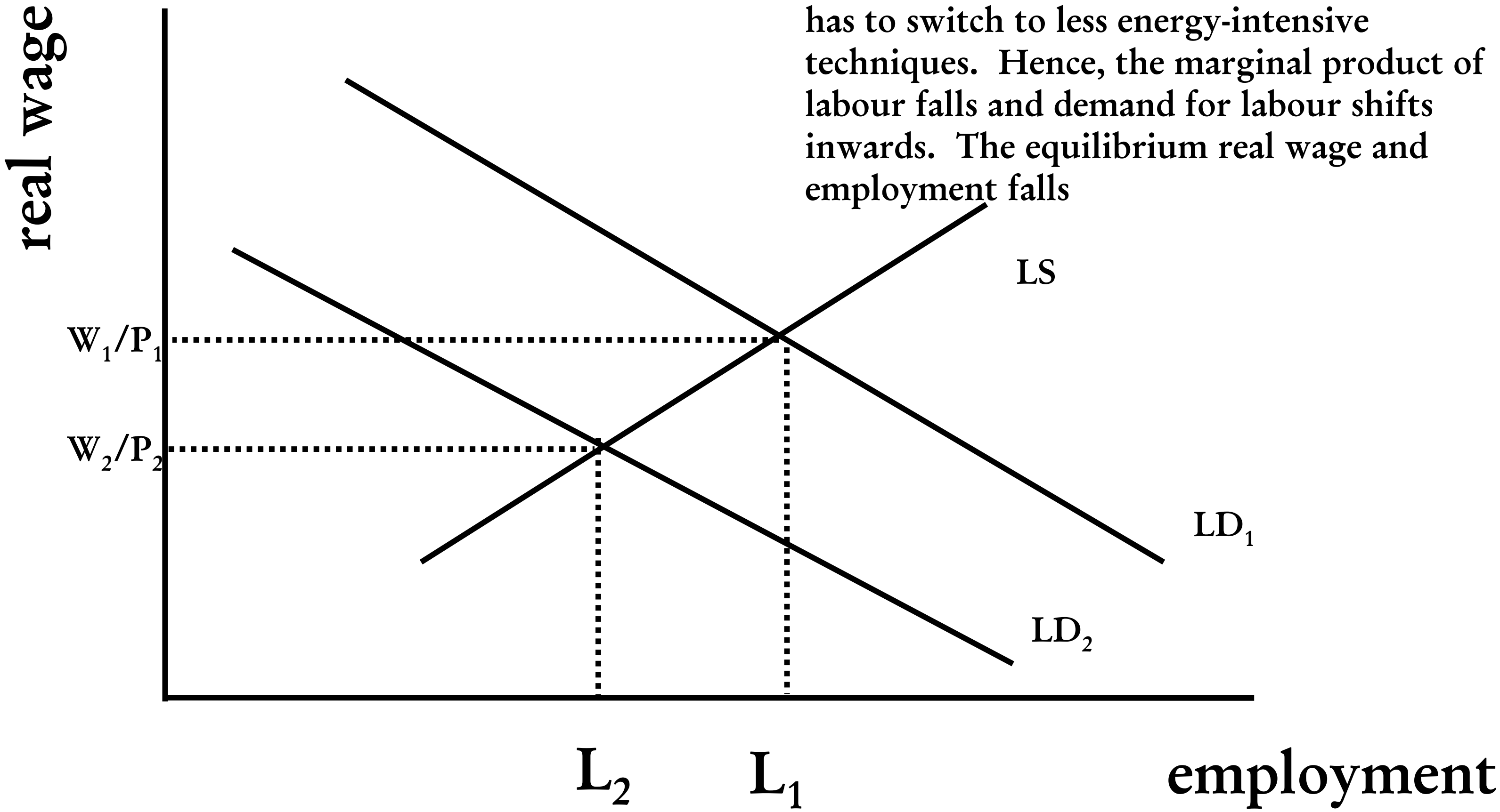
an investment boom



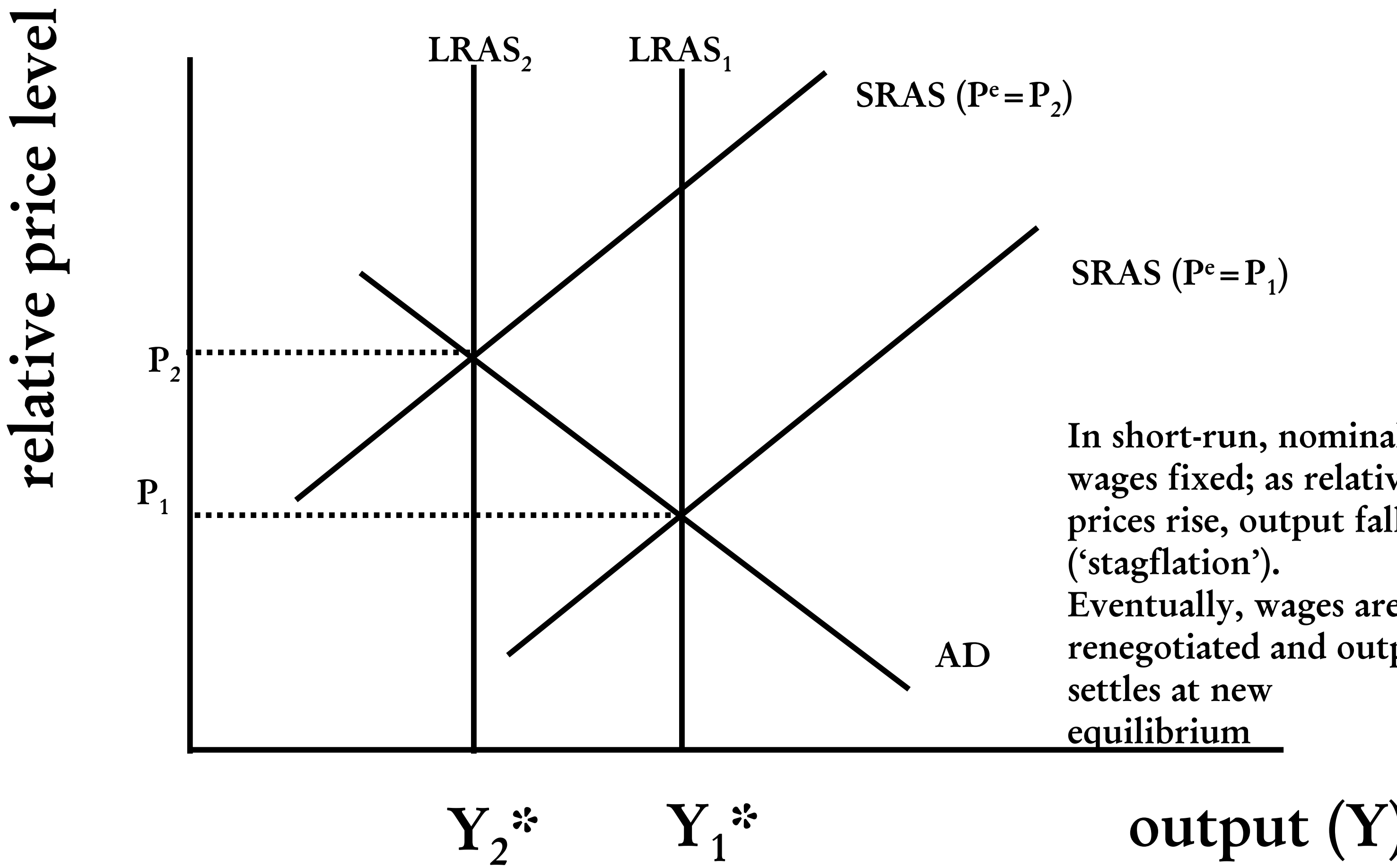
An investment boom shifts the AD curve outwards. At first, expectations lag behind events, so output and relative prices rise ('unexpected inflation'). Once prices and wages are renegotiated, equilibrium is restored with a higher relative price level.

oil price shocks & the labour market

Labour productivity falls since production has to switch to less energy-intensive techniques. Hence, the marginal product of labour falls and demand for labour shifts inwards. The equilibrium real wage and employment falls



an 'oil price shock' and AS-AD



In short-run, nominal wages fixed; as relative prices rise, output falls ('stagflation'). Eventually, wages are renegotiated and output settles at new equilibrium

fiscal policy

- ‘If the Treasury were to fill old bottles with bank notes, bury them at suitable depths in disused coal mines which are then filled up with town rubbish, and leave them to private enterprise… to dig them up again, there need be no more unemployment…’ J.M. Keynes.
- Changes in the government’s fiscal stance (that is, the difference between government spending and taxation) will shift the aggregate demand curve and will tend to push interest rates upwards.
- If economy is at equilibrium output, increases in spending (or tax cuts) will lead to an inflationary boom, which eventually will lead only to higher prices. In an open economy, these increases in spending will tend to push up the exchange rate as well, which will crowd-out net exports.
- If economy is below equilibrium output, increases in spending (or tax cuts) will tend to raise output (as well as prices) and shift the economy back towards equilibrium.

monetary policy

- 'Having regard to human nature and our institutions, it can only be a foolish person who would prefer a flexible wage policy to a flexible money policy, unless he can point to advantages from the former that are not obtainable from the latter' J.M.Keynes.
- Monetary policy can be implemented through either changes in the money supply or interest rate. A cut in the interest rate leads to a rise in the money supply.
- Changes in the interest rate will shift the aggregate demand curve.
- If economy is at equilibrium output, interest rate cuts will lead to an inflationary boom, which eventually will lead only to higher prices.
- If economy is below equilibrium output, interest rate cuts will tend to raise output (as well as prices) and shift the economy back towards equilibrium.

the credit channel

- In traditional models, asset prices do not matter for the real economy.
- But in markets with informational asymmetries, firms prefer to finance investments from internal rather than external funds due to the *external finance premium*.
- Why might investment be sensitive to the source of finance?
- The Cash Flow Channel
  - A positive (negative) monetary shock raises (reduces) current output and cash flow and hence reduces (increases) the proportion of investment that must be externally financed. This lowers (raises) the cost of capital and raises (reduces) investment
- The Asset Price Collateral Channel
  - A positive (negative) monetary shock raises (reduces) asset prices and hence raises (reduces) the value of collateral. The rise (fall) in the value of collateral reduces (raises) the external finance premium and hence raises (reduces) investment.

the limits to active policy

- But there are problems with the use of active policy:
  - Measurement of output: Where are we? Where are we going? How fast? Will we know when we get there?
  - Lags in the policy process: measurement, decision, execution, effectiveness.
  - What kind of fiscal policy? Spending (on what?) or tax cuts (for whom?)
  - Will spending (fiscal policy) 'crowd-out' other spending, either directly or indirectly?
  - Will policy affect other objectives? Such as the exchange rate, net exports, public services.
  - Fiscal policy is weak when investment is very sensitive to interest rates and when consumers pierce the veil and attempt to offset the actions of the government (Ricardian Equivalence).
  - Monetary policy is weak when consumers are willing to hold large quantities of money and unwilling to purchase more bonds ('liquidity trap').

summary

- Equilibrium in the economy is determined by the interaction of aggregate demand (the goods and money market) and aggregate supply (the labour market).
- In the long-run, a country's capacity to produce goods and services determines the standard of living of its citizens.
- In the short-run, aggregate demand influences the amount of goods and services the a country produces.
- In the long-run, the rate of money growth determines the rate of inflation but does not affect the rate of unemployment.
- In the short-run, policymakers face a trade-off between unemployment and unexpected changes in the price level.

syndicate topics

- Should policymakers try to stabilize the economy?
- How costly is inflation, and how costly is reducing inflation?
- How big a problem are government deficits?
- Can the economy get 'stuck' away from equilibrium?
- Might there be more than one equilibrium for the economy?
- How does a monetary policy shock affect asset prices, and what effect will this have on the real economy?