

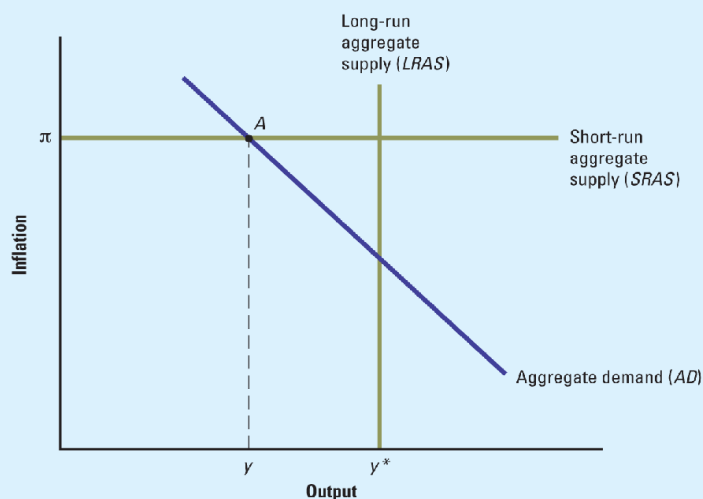
11.3 AGGREGATE DEMAND-AGGREGATE SUPPLY DIAGRAM

- Components:
 - *Long-run aggregate supply (LRAS) line*: a vertical line showing the economy's potential output y^*
 - *Short-run aggregate supply (SRAS) line*: a horizontal line showing the current rate of inflation, as determined by past expectations and pricing decisions
 - Also referred to as the *short-run inertial inflation line*: horizontal line showing the current rate of inflation in the economy
 - Relies on assumption that producers supply whatever output is demanded at the current inertial inflation rate
 - *AD curve*: shows how planned aggregate spending, and hence equilibrium output depends on the inflation rate
- Shows → adjustment of inflation in response to an output gap; level of output prevailing at any particular time
- *Short-run equilibrium*:
 - Situation in which inflation equals value determined by past expectations and pricing decisions and output equals the level of short-run equilibrium output that is consistent with that inflation rate
 - Graphically → intersection of AD and SRAS lines
 - Economy will not remain here if output gap exists

FIGURE 11.5

The aggregate demand–aggregate supply (AD–AS) diagram.

This diagram has three elements: the *AD* curve, which shows how equilibrium output depends on inflation; the long-run aggregate supply (*LRAS*) line, which marks the economy's potential output y^* ; and the short-run aggregate supply (*SRAS*) line, which shows the current value of inflation π . Short-run equilibrium output, which is equal to y here, is determined by the intersection of the *AD* curve and the *SRAS* line (point *A*). Because actual output y is less than potential output y^* , this economy has a recessionary gap.

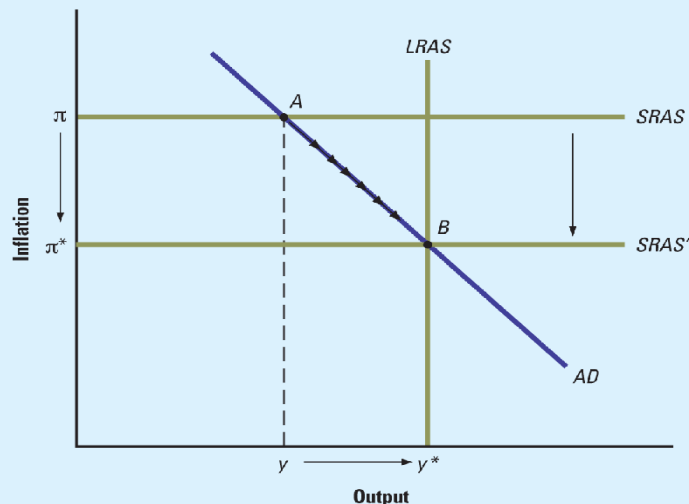


- *Long-run equilibrium*:
 - Actual output equals potential output ($y=y^*$)
 - Inflation rate is stable
 - Graphically → intersection of AD, SRAS and LRAS lines at single point
- Recessionary output gap:

- $y < y^*$ - output less than potential output (indicated by LRAS line)
- firms not selling as much so slow down rate at which they increase prices
- low level of AD causes inflation rate to fall
- As inflation declines, SRAS moves downward
 - Because of inflation inertia (slow adjustment of public's inflation expectations and the existence of long-term contracts) → inflation adjusts downwards only gradually
 - As long as a recessionary gap exists inflation will continue to fall and STAS line will move downward until it intersects the AD curve
- Eliminates output gap ($y = y^*$) and is at long-run equilibrium → no further pressure on inflation, stabilizes at the lower level
- Implications:
 - Recessionary gap → falling inflation rate
 - As inflation rises, SR equilibrium output rises from y to y^* → source of increase is behaviour of RBA (lowers real IR as inflation falls, stimulating aggregate demand) and reduced uncertainty
 - As output rises, cyclical unemployment (which by Okun's law is proportional to the output gap) also declines
 - Process → falling inflation, falling real IRs, rising output, falling unemployment → leads to full employment at LR equilibrium

FIGURE 11.6

The adjustment of inflation when a recessionary gap exists. At the initial short-run equilibrium point *A*, a recessionary gap exists, which puts downward pressure on inflation. As inflation gradually falls, the *SRAS* line moves downward until it reaches *SRAS'*, and actual output equals potential output (point *B*). Once the recessionary gap has been eliminated, inflation stabilises at π^* , and the economy settles into long-run equilibrium at the intersection of *AD*, *LRAS* and *SRAS'* (point *B*).



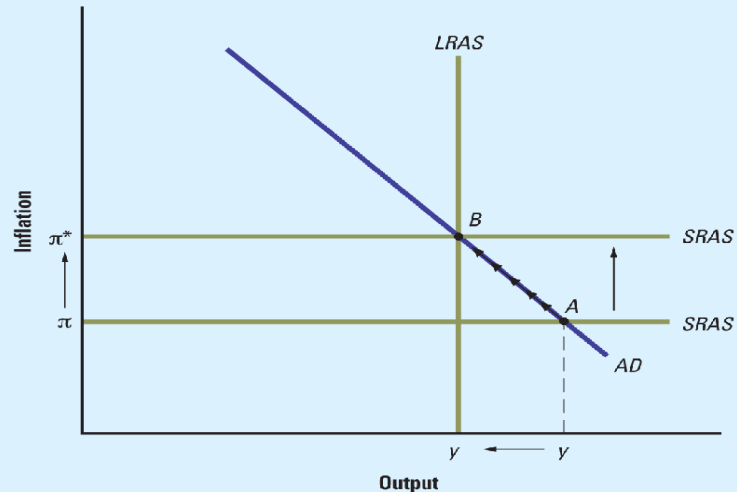
- Expansionary output gap:
 - $y > y^*$ - output greater than potential output
 - inflation rises as firms respond to higher demand by raising prices more rapidly than costs are rising
 - SRAS line moves upward over time
 - SR equilibrium output falls → result of RBA increasing real interest rate when inflation rises

- Inflation and SRAS line rise until long-run equilibrium point ($y = y^*$)
- No output gap, stable inflation

FIGURE 11.7

The adjustment of inflation when an expansionary gap exists.

At the initial short-run equilibrium point A, an expansionary gap exists. Inflation rises gradually (the *SRAS* line moves upward) and output falls. The process continues until the economy reaches long-run equilibrium at point B, where inflation stabilises and the output gap is eliminated.



11.3.1 SELF-CORRECTING ECONOMY

- Economy tends to be self-correcting in long run → given enough time, output gaps tend to disappear without changes in monetary and fiscal policy (other than the change in the real interest rate embodied in the RBA's policy reaction function)
- Rule:
 - Expansionary output gaps eliminated by rising inflation
 - Recessionary output gaps eliminated by falling inflation
- Contrasts to basic Keynesian model:
 - Difference in results is explained by the fact that the basic Keynesian model concentrates on the short-run period, during which prices do not adjust, and does not take into account the changes in prices and inflation that occur over a longer period
- Timing:
 - If self-correction takes place very slowly so that actual output differs from potential output for protracted periods → then active use of monetary and fiscal policy can help to stabilize output
 - If self-correction is rapid → active stabilization policies are probably not justified in most cases, given the lags and uncertainties that are involved in policy-making, may end up doing more harm (i.e. causing actual output to overshoot potential output, reopening an output gap)
 - Speed of self correction depends on various factors:
 - Prevalence of long-term contracts
 - Efficiency and flexibility of product and labour markets

- Conclusions:
 - Greater the initial output gap, the longer the process of self-correction will take
 - Stabilisation policies should not be used actively to try and eliminate relatively small output gaps
 - Policy makers' attempts to eliminate output gaps likely to be more helpful when the output gap is large

11.4 SOURCES OF INFLATION

11.4.1 EXCESSIVE AGGREGATE SPENDING

- 'Too much spending chasing too few goods'

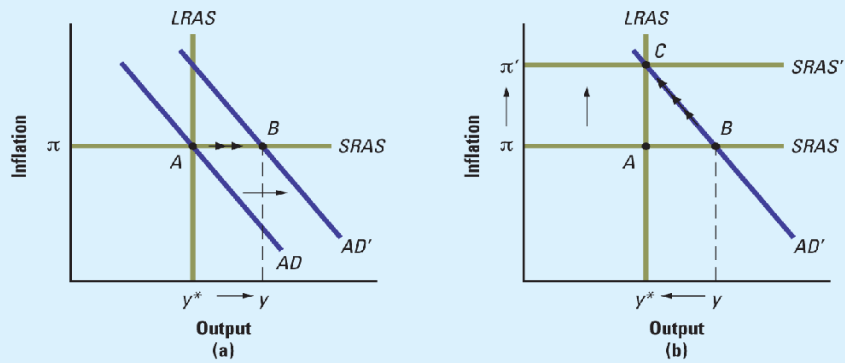
Military build-ups and inflation

- Associated with increased inflation → increased spending on military hardware raises total demand relative to the economy's productive capacity
- Rising sales → firms increase prices more quickly (raises inflation rate)
- Process 1:
 - Long-run equilibrium → $y = y^*$, stable inflation
 - Increase in gov purchases (G) = exogenous increase in spending
 - For a given level of inflation, an exogenous increase in spending raises equilibrium output → shift AD curve to right
 - New SR equilibrium point where new AD line intersects SRAS
 - Now: $y > y^*$ = expansionary gap created
 - Because inflation is inertial and does not change in SR, immediate effect is only to increase output
- Process 2:
 - Expansionary gap exists → inflation gradually begins to increase
 - SRAS moves upwards to eliminate output gap → long-run equilibrium
 - Increase in output was only temporary
 - In long run, actual output returned to level of potential output but at higher rate of inflation
- RBA can mitigate effects of excessive aggregate spending:
 - Set a higher real interest rate at any given level of inflation → upward shift in policy reaction function shifts AD curve to left
 - Aggressively tighter monetary policy as military build-up proceeds → reverses AD curve shift to right
 - Avoids expansionary gap with its inflationary consequences → reduction in private spending (C/I) offsets increase in government spending
 - However this is not costless to society
 - Private sector is giving up resources so more of output can be devoted to military purposes
 - Reduction in resources reduces both current living standards (reducing C) and future living standards (reducing I)

FIGURE 11.8

War and military build-up as a source of inflation.

- (a) An increase in military spending shifts the AD curve to the right, from AD to AD' . At the new short-run equilibrium point B , actual output has risen above potential output y^* , creating an expansionary gap.
- (b) This gap leads to rising inflation, shown as an upward movement of the $SRAS$ line, from $SRAS$ to $SRAS'$. At the new long-run equilibrium point C , actual output has fallen back to the level of potential output, but at π' inflation is higher than it was originally.



- Stagflation:
 - Simultaneous occurrence of high inflation and high unemployment;
 - Upward movement in the $SRAS$ curve caused by inflationary pressures is so large that intersection of $SRAS$ with AD coincides with level of GDP that is below potential GDP