# Macroeconomics: Shocks to Aggregate Demand & Supply

In the long run, we care about how an economy will recover from a recessionary or inflationary gap and re-attain equilibrium at potential GDP output, Y^*. There will have to be adjustments to the market to compensate for shocks to AD or SAS.

Shocks to Aggregate Demand

There are two types of shocks: (1) expansionary and (2) contractionary. An **expansionary shock** means an increase in aggregate demand, raising both the price level (P^0 to P^1) and real GDP (Y^* to Y) [indicated by black arrow]. Once this occurs, the economy is in an inflationary gap with overutilization of factors. The demand for labor and input materials is so great that laborers will be able to negotiate an increase in wages and resource input prices will rise. This will shift the SAS curve to the left [blue-grey arrow]. Output GDP falls back to the potential output GDP, but the overall price level has risen to P_2.
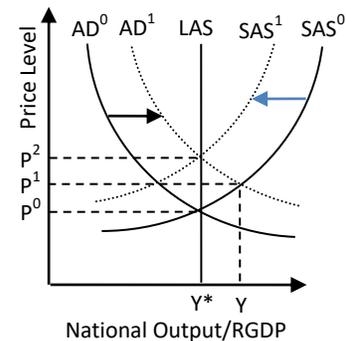
A **contractionary shock** means a decrease in aggregate demand, decreasing both the price level (P^0 to P^1) and real GDP (Y^* to Y) [indicated by black arrow]. Once this occurs, the economy is in a recessionary gap with underutilization of factors. The demand for labor and input materials is so low that laborers will be willing to work for less and input prices will fall. This will shift the SRAS curve to the right [blue-grey arrow]. Output GDP rises back to the potential output GDP, but the overall price level has fallen to P_2.
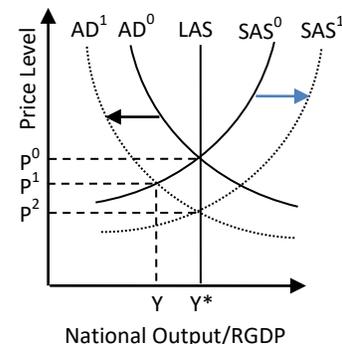
Shocks to Aggregate Supply

There can also be expansionary or contractionary shocks to short-run aggregate supply. An expansionary shock may result from a decrease in the price of some input factor. This causes the SAS curve to shift to the right [indicated by black arrow]. Price will be lower (P^1) and actual output (Y) will be larger than potential output. From this inflationary gap, wages will rise and factor inputs will rise, shifting the SAS curve back to its original position of price, P^0, and potential output, Y^* [blue-grey arrow].

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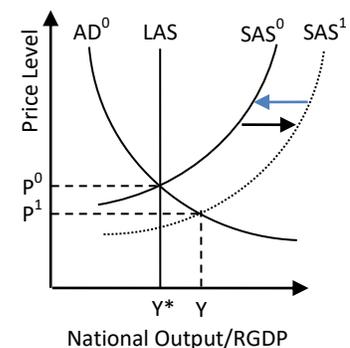
A specific economic condition known as **stagflation** (contractionary shock to SAS) results from a leftward shift in the SAS when an economy is in long-run equilibrium. This means the new equilibrium is at a higher price, but a lower output. Stagflation generally occurs as a result of increasing input prices (like the price of oil rising). However, the time for the SAS to re-adjust will be longer. This is because of the "sticky wages" effect. It takes much longer for wages to fall in a recessionary period than for wages to rise in an inflationary period.

Practice Problems

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1. True or false: When an economy at full employment experiences a contractionary supply shock and finally adjusts back to full employment, only the price level and not the level of real GDP will be affected. Draw a graph(s) to demonstrate.
2. Consider an economy currently in full employment. Which one of the following changes occurs as a result of a fall in aggregate demand?
   a) The price level increases
   b) The level of real GDP rises in the long run
   c) An inflationary gap occurs
   d) Resource prices will fall in the long run
   e) The long-run aggregate supply curve shifts to the left
3. True or false: If an economy is at full employment in equilibrium, an increase in aggregate demand will increase the price level and leave the level of output unchanged in the long run. Explain using a graph(s).

Solutions

1. False. In the short run, a contractionary supply shock results in higher prices and an actual output less than potential GDP. This means that demand for factors (or inputs) will be low, and there will be pressure for those input prices to fall. In the long run, as those prices fall, the SAS curve will shift outwards and return to the original long-term equilibrium with the same price and real GDP at the potential GDP level.
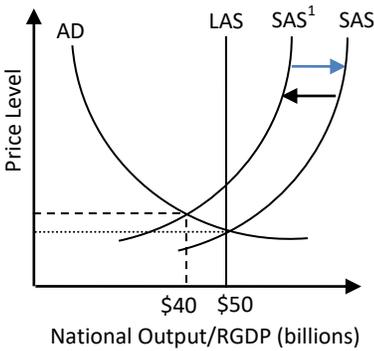
2. D

3. True. In the short run, a positive shock to AD will shift the curve to the right, resulting in a higher price and an actual output greater than potential GDP. This means that demand for factors will be high and there will be pressure for input prices to rise. In the long run, as those prices rise, the SAS curve will shift inwards, and the economy will operate at full equilibrium again, but at a higher price than before.