

Applying the Concept: Is it a Recessionary Gap or a fall in Potential Output?

Throughout the 1960s, GDP growth had averaged more than 4 percent per year. But then in 1974, the economy contracted by nearly 3½ percent. That's a very severe recession. At the same time, inflation rose dramatically, from 3 percent in 1973 to nearly 12 percent in 1975. What is the appropriate policy response in this sort of situation?

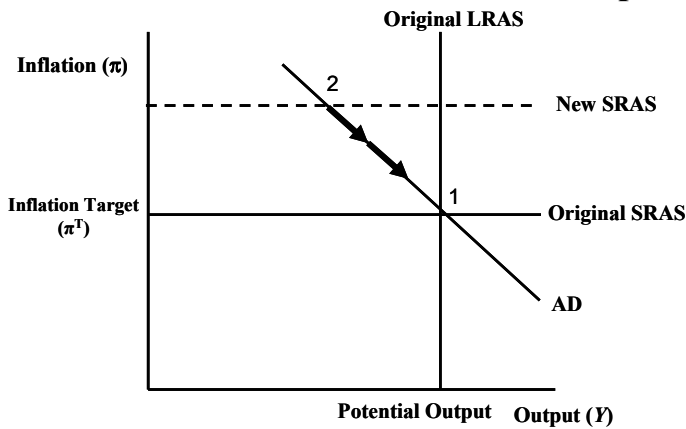
It depends! The immediate cause of the episode was a tripling of the price of oil, from \$3.56 to \$11.16 a barrel. That's a huge inflation shock. It's no wonder that inflation rose and output fell. But the right reaction depends crucially on what happened to potential output at the time. In retrospect we know that, as oil prices rose, the productive capacity of the economy fell. But at the time, policymakers didn't realize that. Instead, they thought lower output reflected a recessionary gap. As a result, inflation went higher and stayed there for longer than it should have.

We can use the dynamic aggregate demand and aggregate supply apparatus to understand the importance of recognizing changes in potential output. Let's look at two cases. In the first one, an inflation shock drives inflation up and output down, but potential output is unchanged. This is shown in Figure A, which is very similar to Figure 22.12 on page 603. Here's what happens. The inflation shock drives the economy from the point labeled "1" to the point labeled "2" – output is lower and inflation higher. At this point, policymakers have a choice. They can leave their inflation target as it is, and simply react by raising interest rates along an unchanged monetary policy reaction curve. The recessionary gap at "2" will force inflation down, moving the economy along the AD curve until inflation and output return to where they started at "1". Alternatively, if policymakers choose to increase their inflation target, they could shift their monetary policy reaction curve to the right, which shifts the AD curve to the right. This would close the recessionary gap immediately, at the cost of permanently higher inflation.

If, however, the inflation shock happens to come along with a decline in potential output, things would be very different. This is the case that is shown in Figure B (which combines Figures 22.12 and 22.13). The inflation shock, coupled with a decline in potential output shifts the economy from "1" to "2". Initially, things look the same as before: Output is lower and inflation

higher. But this time, there is no recessionary gap. If policymakers want inflation to fall, they will have to increase interest rates by more than is indicated along a fixed monetary policy reaction curve. That is, to force inflation back to its original target level, central bankers need to understand that the long-run real interest rate is now higher (because potential output is lower) so maintaining the same inflation target means shifting the monetary policy reaction curve to the left, raising the interest rate at every level of inflation. This, in turn, shifts the aggregate demand curve as shown in the figure, and moves the economy to the point labeled “3”.

Figure A. The Impact of an Inflation Shock with Potential Output Unchanged



1. Start at Long-Run Equilibrium

$Y = \text{Potential Output}$
 $\pi = \text{Target Inflation}$

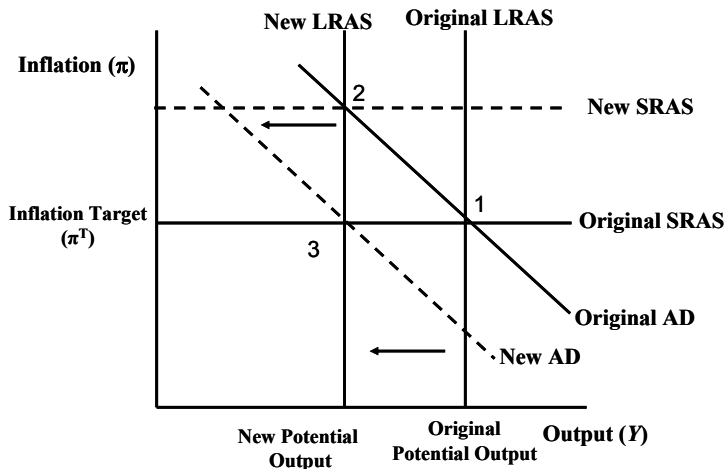
2. Inflation Shock

SRAS shifts up, and the economy moves to 2. Inflation is higher and output lower.

3. Self-Correcting Mechanism

The recessionary gap drives inflation down along the aggregate demand curve, returning to 1.

Figure B. The Impact of an Inflation Shock coupled with a decline in Potential Output



1. Start at Long-Run Equilibrium

$Y = \text{Potential Output}$
 $\pi = \text{Target Inflation}$

2. Inflation Shock

+ Fall in Potential Output

SRAS shifts up and LRAS shifts left. The economy moves from 1 to 2.

3. Policy Response

The long-run real interest rate has risen, so policymakers need to shift raise interest rates at every level of inflation, shifting the AD to the left. The new long-run equilibrium is at 3.

By the end of the 1970s, inflation had been over 6 percent for 5 straight years. The Fed realized at that point that their estimate of potential output was too high, and that they would need to raise interest rates to keep inflation from rising. Over the next few years, tighter monetary policy eventually had the desired impact, so that by 1985 inflation was back down below 5 percent.

