Practice with the Phillips Curve

Helpful Hints

- Δ AD...DON’T shift SRPC
- ΔSRAS...SHIFT SRPC
- It is helpful to think of the short-run Phillips curve as a mirror image to the short-run aggregate supply curve. Anything that shifts SRAS left will shift SRPC to the right. Anything that shifts SRAS to the right will shift SRPC to the left.
- Anything that shifts AD causes movement along the SRPC because it causes movement along a given SRAS curve.

Movement along the Short-Run Phillips Curve

↑ AD causes a(n) (increase/decrease) in inflation and a(n) (increase/decrease) in unemployment. This results with movement (up/down) the SRPC.

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Shifting the Short-Run Phillips Curve

↑ SRAS causes a(n) (increase/decrease) in inflation and a(n) (increase/decrease) in unemployment. This results with a shift of the SRPC to the (left/right).

↓ SRAS causes a(n) (increase/decrease) in inflation and a(n) (increase/decrease) in unemployment. This results with a shift of the SRPC to the (left/right).

Supply shocks are not the only thing that will shift the short-run Phillips curve. The expected rate of inflation will also cause the short-run Phillips curve to shift. When workers expect inflation they bargain for higher wage rates, and employers are more willing to grant higher wage rates when they expect to sell their product for higher prices in the future. Expectations for inflation lead to changes in actual inflation—like a self-fulfilling prophecy.

When the expected rate of inflation is increases, the SRPC shifts to the (left/right) and the actual rate of inflation (increases/decreases).

When the expected rate of inflation is decreases, the SRPC shifts to the (left/right) and the actual rate of inflation (increases/decreases).

Practice Problems

1. If the government increases spending, how does it affect inflationary expectations? Explain.
   As a result of an ↑G, AD will shift to the right and rise price level. As a result, inflationary expectations will rise.

2. If people are confident that a new Federal Reserve policy will achieve and maintain price stability, how does it affect inflationary expectations? Explain.
   People are confident in the Fed’s ability to control inflation so they do not expect inflation.

3. What will happen to the actual rate of inflation if people expect a higher inflation rate in the future? What will happen to the actual rate of inflation if people expect a lower inflation rate in the future? Explain.
   If people expect inflation, they build the inflationary expectations into their decisions and actual inflation rises in the future. If expectations for inflation lower, then this too will be build into decision making and actual inflation will decrease.

4. What does the slope of the LRPC indicate about the trade-off between the inflation rate and the unemployment rate? Explain.
   In the long run there is no trade off between inflation and unemployment. People’s wages eventually adjust to the gap between inflationary expectations and the actual rate of inflation. This is the same concept as nominal wages adjusting to real wages in the long run.
Figure 1: The Phillips Curve and Accelerating Inflation

5. What change in inflationary expectations is shown by the shift in the short-run Phillips curve from SRPC₀ to SRPC₁ in the Figure 1. 
Inflationary expectations increase.

6. At point A on the graph, the actual inflation is (greater than/less than) the expected rate of inflation, which will cause the SRPC to shift to the (left/right).

7. Label point B on the graph where the economy will be in long-run equilibrium after the change in inflationary expectations.

8. Label point C on the graph where the economy will be if policy makers attempt to keep the unemployment rate where it was at point A after the change in inflationary expectations. If the government continues to drive down the unemployment rate below the natural rate, what trend will continue to occur? Explain.
In the long run, the unemployment rate cannot be maintained below the natural rate of unemployment due to self-correcting characteristics of the economy. As a result, any policy meant to keep unemployment below the natural rate will create accelerated inflation as individuals continue to build their expectations of inflation, which results in an increase in actual inflation.

Practice Multiple Choice

9. Suppose there is supply shock due to a fall in commodity prices, the short-run Phillips curve will:
   A. shift down.
   B. show an upward movement along the same curve.
   C. not be affected at all.
   D. shift up.
   E. show a downward movement along the same curve.

10. Suppose that commodity prices across the economy begin to fall and consumers and firms begin to expect a lower rate of future inflation. What do we expect to happen to the SRAS curve and short-run Phillips curve?
   A. The SRAS curve will shift to the left, and the short-run Phillips curve will shift downward.
   B. **The SRAS curve will shift to the right, and the short-run Phillips curve will shift downward.**
   C. The SRAS curve will shift to the left, and the short-run Phillips curve will shift upward.
   D. The SRAS curve will shift to the right, and the short-run Phillips curve will shift upward.
   E. The LRAS curve will shift to the right, and the short-run Phillips curve will shift upward.
11. Use the Figure 2. Suppose that this economy currently has an unemployment rate of 6%, inflation of 0%, and no expectation of future inflation. If the central bank increases the money supply such that aggregate demand shifts to the right and unemployment falls to 4%, then inflation would:
A. decrease to −2%.
B. not change.
C. increase to 2%.
D. increase to 4%.
E. increase to 8%.

12. Use the Figure 2. Suppose that this economy currently has an unemployment rate of 6%, inflation of 0%, and no expectation of future inflation. If the central bank decreases the money supply such that aggregate demand shifts to the left and unemployment rises to 8%, then inflation would:
A. decrease to −2%.
B. not change.
C. increase to 2%.
D. increase to 4%.
E. decrease to −4%.

13. When workers and firms become aware of a rise in the general price:
A. they will not do anything, because they know they are powerless to counter any economic changes.
B. they will negotiate lower prices of goods, services, and wages.
C. firms with sticky prices will ultimately adjust their prices downward.
D. they will agree to renegotiate wage contracts downward.
E. they will incorporate higher prices into their expectations of future prices.

14. The long-run Phillips curve is vertical at the NAIRU because
A. any unemployment rate below the NAIRU will lead to ever-accelerating inflation.
B. an unemployment rate equal to NAIRU will always lead to zero inflation.
C. any unemployment rate above the NAIRU will lead to ever-accelerating inflation.
D. any unemployment rate below the NAIRU will lead to ever-decelerating inflation.
E. any unemployment rate equal to the NAIRU will lead to ever-decelerating inflation.

15. Suppose the economy is currently in long-run equilibrium. The government has just decided to lower income taxes. The long-run impact of this policy will be:
A. a decrease in the natural rate of unemployment and an increase in inflation.
B. a decrease in the natural rate of unemployment and no change in inflation.
C. no change in the natural rate of unemployment and an increase in inflation.
D. no change in the natural rate of unemployment and no change in inflation.
E. no change in the natural rate of unemployment and a decrease in inflation.