Effects of Inflation

Unanticipated Inflation in the Labor Market

Unanticipated inflation has two main consequences in the labor market:

- Redistribution of income
- Departure from full employment
Effects of Inflation

Higher than anticipated inflation lowers the real wage rate and employers gain at the expense of workers.

Lower than anticipated inflation raises the real wage rate and workers gain at the expense of employers.

Higher than anticipated inflation lowers the real wage rate, increases the quantity of labor demanded, makes jobs easier to find, and lowers the unemployment rate.

Lower than anticipated inflation raises the real wage rate, decreases the quantity of labor demanded, and increases the unemployment rate.
Effects of Inflation

Unanticipated Inflation in the Market for Financial Capital

Unanticipated inflation has two main consequences in the market for financial capital: it redistributes income and results in too much or too little lending and borrowing.

If the inflation rate is unexpectedly high, borrowers gain but lenders lose.

If the inflation rate is unexpectedly low, lenders gain but borrowers lose.
Effects of Inflation

When the inflation rate is higher than anticipated, the real interest rate is lower than anticipated, and borrowers want to have borrowed more and lenders want to have loaned less.

When the inflation rate is lower than anticipated, the real interest rate is higher than anticipated, and borrowers want to have borrowed less and lenders want to have loaned more.
Effects of Inflation

Forecasting Inflation

To minimize the costs of incorrectly anticipating inflation, people form expectations about the inflation rate.

A *rational expectation* is one based on all relevant information and is the most accurate forecast possible, although that does not mean it is always right; to the contrary, it will often be wrong. It does mean that the forecasts will not be systematically wrong. In particular, it suggests that policymakers should act as though the public correctly anticipates the effects of policies on inflation.
Effects of Inflation

Anticipated Inflation

Figure 12.7 illustrates an anticipated inflation. Aggregate demand increases, but the increase is anticipated, so its effect on the price level is anticipated.
Effects of Inflation

The money wage rate rises in line with the anticipated rise in the price level.

The $AD$ curve shifts rightward and the $SAS$ curve shifts leftward so that the price level rises as anticipated and real GDP remains at potential GDP.
Effects of Inflation

Unanticipated Inflation

If aggregate demand increases by more than expected, inflation is higher than expected.

Money wages do not adjust enough, and the SAS curve does not shift leftward enough to keep the economy at full employment.

Real GDP exceeds potential GDP.

Wages eventually rise, which leads to a decrease in the SAS.
Effects of Inflation

The economy experiences more inflation as it returns to full employment.

This inflation is like a demand-pull inflation.
Effects of Inflation

If aggregate demand increases by less than expected, inflation is less than expected.

Money wages rise too much and the SAS curve shifts leftward more than the $AD$ curve shifts rightward.

Real GDP is less than potential GDP.

This inflation is like a cost-push inflation.
Effects of Inflation

The Costs of Anticipated Inflation

Anticipated inflation occurs at full employment with real GDP equal to potential GDP.

But anticipated inflation, particularly high anticipated inflation, inflicts three costs

- Transactions costs
- Increased uncertainty (Higher average inflation rates tend to be associated with higher inflation volatility.)
Inflation and Unemployment: The Phillips Curve

A **Phillips curve** is a curve that shows the relationship between the inflation rate and the unemployment rate.

There are two time frames for Phillips curves:

- The short-run Phillips curve
- The long-run Phillips curve
Inflation and Unemployment: The Phillips Curve

The Short-Run Phillips Curve

The short-run Phillips curve shows the tradeoff between the inflation rate and unemployment rate holding constant:

- The expected inflation rate
- The natural unemployment rate
Inflation and Unemployment: The Phillips Curve

Figure 12.8 illustrates a short-run Phillips curve (SRPC)—a downward-sloping curve.

If the unemployment rate falls, the inflation rate rises.

And if the unemployment rate rises, the inflation rate falls.
The negative relationship between the inflation rate and unemployment rate is explained by the AS-AD model.

Figure 12.9 shows how.
Inflation and Unemployment: The Phillips Curve

An anticipated increase in aggregate demand from $AD_0$ to $AD_1$ brings a 10 percent inflation at full employment.

Point $A$ shows this outcome.
Inflation and Unemployment: The Phillips Curve

A larger than anticipated increase in aggregate demand from $AD_0$ to $AD_2$ raises the inflation rate to 13 percent.

Real GDP increases above potential GDP and the unemployment rate falls below the natural rate—a movement along a short-run Phillips curve.
Inflation and Unemployment: The Phillips Curve

A smaller than anticipated increase in aggregate demand—remains at $AD_0$—lowers the inflation rate to 7 percent. Real GDP falls below potential GDP and the unemployment rate rises above the natural rate—a movement along a short-run Phillips curve.
Inflation and Unemployment: The Phillips Curve

The Long-Run Phillips Curve

The long-run Phillips curve shows the relationship between inflation and unemployment when the actual inflation rate equals the expected inflation rate.
Inflation and Unemployment: The Phillips Curve

Figure 12.10 illustrates the long-run Phillips curve (LRPC) which is vertical at the natural rate of unemployment.

Along the long-run Phillips curve, because a change in the inflation rate is anticipated, it has no effect on the unemployment rate.
Inflation and Unemployment: The Phillips Curve

Figure 12.10 also shows how the short-run Phillips curve shifts when the expected inflation rate changes.

A lower expected inflation rate shifts the short-run Phillips curve downward by an amount equal to the fall in the expected inflation rate.
Inflation and Unemployment: The Phillips Curve

Changes in the Natural Unemployment Rate

A change in the natural unemployment rate shifts both the long-run and short-run Phillips curves. Figure 12.11 illustrates.
Figure 12.12(b) interprets the date as four separate short-run Phillips curves.
Interest Rates and Inflation

Interest rates and inflation rates are correlated, although they differ around the world.

Figure 12.13(a) shows a positive correlation between the inflation rate and the nominal interest rate over time in the United States.
Interest Rates and Inflation

Figure 12.13(b) shows a positive correlation between the inflation rate and the nominal interest rate across countries.
Interest Rates and Inflation

How Interest Rates are Determined

The *real* interest rate is determined by investment demand and saving supply in the global capital market.

The real interest rate adjusts to make the quantity of investment equal the quantity of saving.

National rates vary because of differences in risk.

The *nominal* interest rate is determined by the demand for money and the supply of money in each nation’s money market.
Interest Rates and Inflation

Why Inflation Influences the Nominal Interest Rate

Inflation influences the nominal interest rate to maintain an equilibrium real interest rate.