

Using Policy to Stabilize the Economy

- Since the Employment Act of 1946, economic stabilization has been a goal of U.S. policy.
- Economists debate how active a role the gov't should take to stabilize the economy.

The Case for Active Stabilization Policy

- Keynes: "animal spirits" cause waves of pessimism and optimism among households and firms, leading to shifts in aggregate demand and fluctuations in output and employment.
- Also, other factors cause fluctuations, e.g.,
 - booms and recessions abroad
 - stock market booms and crashes
- If policymakers do nothing, these fluctuations are destabilizing to businesses, workers, consumers.

The Case for Active Stabilization Policy

- Proponents of active stabilization policy believe the gov't should use policy to reduce these fluctuations:
 - when GDP falls below its natural rate, should use expansionary monetary or fiscal policy to prevent or reduce a recession
 - when GDP rises above its natural rate, should use contractionary policy to prevent or reduce an inflationary boom

Keynesians in the White House

1961:

John F. Kennedy pushed for a tax cut to stimulate agg demand. Several of his economic advisors were followers of Keynes.



2001:

George W. Bush pushed for a tax cut that helped the economy recover from a recession that had just begun.

The Case Against Active Stabilization Policy

- Monetary policy affects economy with a long lag:
 - firms make investment plans in advance, so I takes time to respond to changes in r
 - most economists believe it takes at least 6 months for mon policy to affect output and employment
- Fiscal policy also works with a long lag:
 - Changes in G and T require Acts of Congress.
 - The legislative process can take months or years.

The Case Against Active Stabilization Policy

- Due to these long lags, critics of active policy argue that such policies may destabilize the economy rather than help it: By the time the policies affect agg demand, the economy's condition may have changed.
- These critics contend that policymakers should focus on long-run goals, like economic growth and low inflation.

Automatic Stabilizers

- **Automatic stabilizers:** changes in fiscal policy that stimulate agg demand when economy goes into recession, without policymakers having to take any deliberate action

Automatic Stabilizers: Examples

- The tax system
 - Taxes are tied to economic activity. When economy goes into recession, taxes fall automatically.
 - This stimulates agg demand and reduces the magnitude of fluctuations.

Automatic Stabilizers: Examples

- Govt spending
 - In a recession, incomes fall and unemployment rises.
 - More people apply for public assistance (e.g., unemployment insurance, welfare).
 - Govt outlays on these programs automatically increase, which stimulates agg demand and reduces the magnitude of fluctuations.

CONCLUSION

- Policymakers need to consider all the effects of their actions. For example,
 - When Congress cuts taxes, it needs to consider the short-run effects on agg demand and employment, and the long-run effects on saving and growth.
 - When the Fed reduces the rate of money growth, it must take into account not only the long-run effects on inflation, but the short-run effects on output and employment.

CHAPTER SUMMARY

- In the theory of liquidity preference, the interest rate adjusts to balance the demand for money with the supply of money.
- The interest-rate effect helps explain why the aggregate-demand curve slopes downward: An increase in the price level raises money demand, which raises the interest rate, which reduces investment, which reduces the aggregate quantity of goods & services demanded.

CHAPTER SUMMARY

- An increase in the money supply causes the interest rate to fall, which stimulates investment and shifts the aggregate demand curve rightward.
- Expansionary fiscal policy – a spending increase or tax cut – shifts aggregate demand to the right. Contractionary fiscal policy shifts aggregate demand to the left.

CHAPTER SUMMARY

- When the government alters spending or taxes, the resulting shift in aggregate demand can be larger or smaller than the fiscal change:
 - The multiplier effect tends to amplify the effects of fiscal policy on aggregate demand.
 - The crowding-out effect tends to dampen the effects of fiscal policy on aggregate demand.

CHAPTER SUMMARY

- Economists disagree about how actively policymakers should try to stabilize the economy. Some argue that the government should use fiscal and monetary policy to combat destabilizing fluctuations in output and employment. Others argue that policy will end up destabilizing the economy, because policies work with long lags.

In this chapter, look for the answers to these questions:

- How are inflation and unemployment related in the short run? In the long run?
- What factors alter this relationship?
- What is the short-run cost of reducing inflation?
- Why were U.S. inflation and unemployment both so low in the 1990s?

35 The Short-Run Trade-off Between Inflation and Unemployment

PRINCIPLES OF ECONOMICS FOURTH EDITION

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PowerPoint® Slides
by Ron Cronovich

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Introduction

- In the long run, inflation & unemployment are unrelated:
 - The inflation rate depends mainly on growth in the money supply.
 - Unemployment (the “natural rate”) depends on the minimum wage, the market power of unions, efficiency wages, and the process of job search.
- In the short run,
society faces a trade-off between inflation and unemployment.



The Phillips Curve

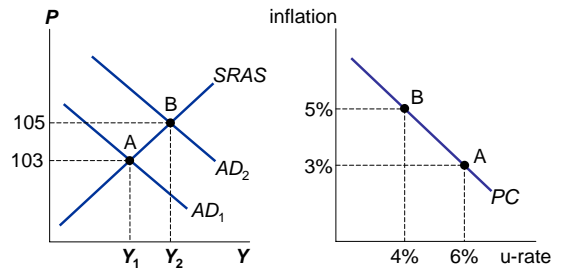
- **Phillips curve:** shows the short-run trade-off between inflation and unemployment
- 1958: A.W. Phillips showed that nominal wage growth was negatively correlated with unemployment in the U.K.
- 1960: Paul Samuelson & Robert Solow found a negative correlation between U.S. inflation & unemployment, named it “the Phillips Curve.”

Deriving the Phillips Curve

- Suppose $P = 100$ this year.
- The following graphs show two possible outcomes for next year:
 - Agg demand low, small increase in P (i.e., low inflation), low output, high unemployment.
 - Agg demand high, big increase in P (i.e., high inflation), high output, low unemployment.

Deriving the Phillips Curve

A. Low agg demand, low inflation, high u-rate

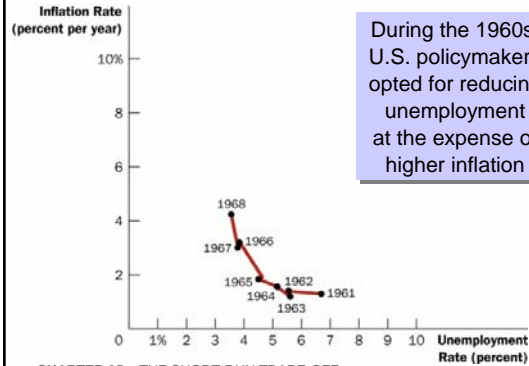


B. High agg demand, high inflation, low u-rate

The Phillips Curve: A Policy Menu?

- Since fiscal and mon policy affect agg demand, the PC appeared to offer policymakers a menu of choices:
 - low unemployment with high inflation
 - low inflation with high unemployment
 - anything in between
- 1960s: U.S. data supported the Phillips curve. Many believed the PC was stable and reliable.

Evidence for the Phillips Curve?

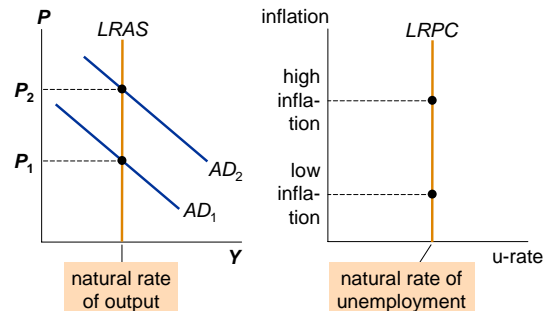


The Vertical Long-Run Phillips Curve

- 1968: Milton Friedman and Edmund Phelps argued that the tradeoff was temporary.
- Natural-rate hypothesis:** the claim that unemployment eventually returns to its normal or "natural" rate, regardless of the inflation rate
- Based on the classical dichotomy and the vertical $LRAS$ curve.

The Vertical Long-Run Phillips Curve

In the long run, faster money growth only causes faster inflation.



Reconciling Theory and Evidence

- Evidence (from '60s):
PC slopes downward.
- Theory (Friedman and Phelps' work):
PC is vertical in the long run.
- To bridge the gap between theory and evidence, Friedman and Phelps introduced a new variable: **expected inflation** – a measure of how much people expect the price level to change.

The Phillips Curve Equation

$$\text{Unemp. rate} = \text{Natural rate of unemp.} - a (\text{Actual inflation} - \text{Expected inflation})$$

Short run

Fed can reduce u-rate below the natural u-rate by making inflation greater than expected.

Long run

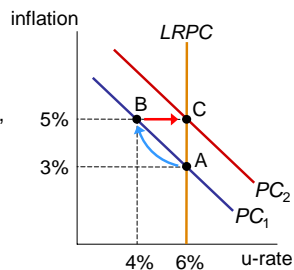
Expectations catch up to reality, u-rate goes back to natural u-rate whether inflation is high or low.

How Expected Inflation Shifts the PC

Initially, expected & actual inflation = 3%, unemployment = natural rate (6%).

Fed makes inflation 2% higher than expected, u-rate falls to 4%.

In the long run, expected inflation increases to 5%, PC shifts upward, unemployment returns to its natural rate.



ACTIVE LEARNING 1: Exercise

Natural rate of unemployment = 5%

Expected inflation = 2%

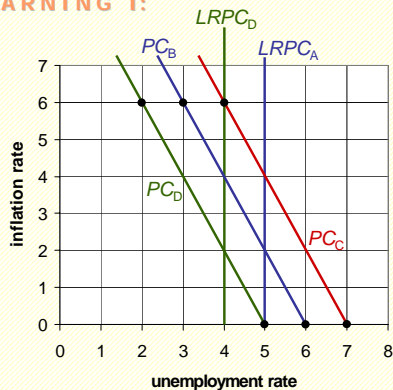
Coefficient a in PC equation = 0.5

- Plot the long-run Phillips curve.
- Find the u-rate for each of these values of actual inflation: 0%, 6%. Sketch the short-run PC.
- Suppose expected inflation rises to 4%. Repeat part B.
- Instead, suppose the natural rate falls to 4%. Draw the new long-run Phillips curve, then repeat part B.

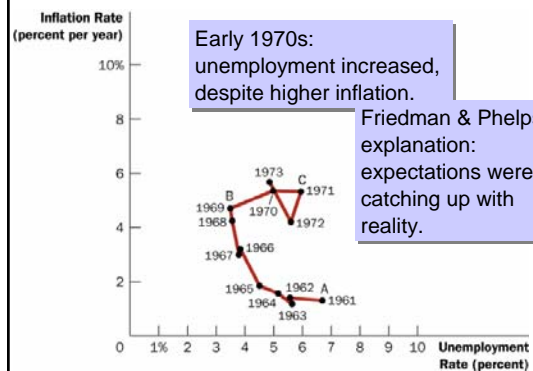
ACTIVE LEARNING 1: Answers

An increase in expected inflation shifts PC to the right.

A fall in the natural rate shifts both curves to the left.



The Breakdown of the Phillips Curve

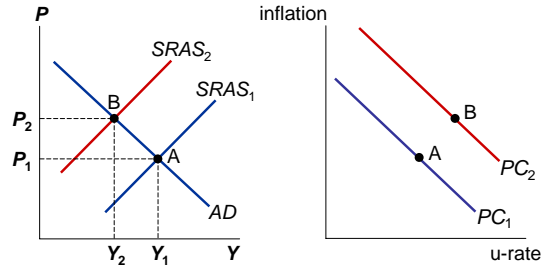


Another PC Shifter: Supply Shocks

- **Supply shock:** an event that directly alters firms' costs and prices, shifting the AS and PC curves
- Example: large increase in oil prices

How an Adverse Supply Shock Shifts the PC

SRAS shifts left, prices rise, output & employment fall.



Inflation & u-rate both increase as the PC shifts upward.

The 1970s Oil Price Shocks

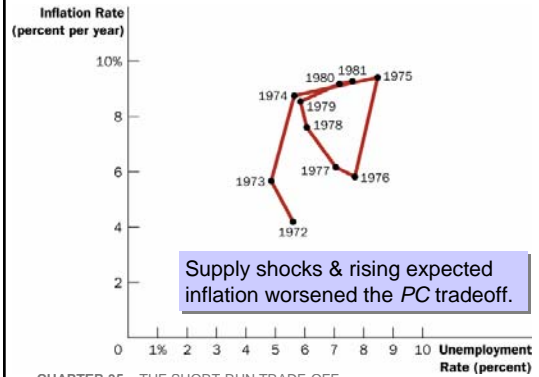
Oil price per barrel	
1/1973	\$ 3.56
1/1974	10.11
1/1979	14.85
1/1980	32.50
1/1981	38.00

The Fed chose to accommodate the first shock in 1973 with faster money growth.

Result:
Higher expected inflation, which further shifted PC.

1979:
Oil prices surged again, worsening the Fed's tradeoff.

The 1970s Oil Price Shocks



The Cost of Reducing Inflation

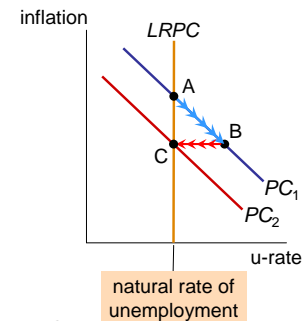
- **Disinflation:** a reduction in the inflation rate
- To reduce inflation, Fed must slow the rate of money growth, which reduces aggregate demand.
- Short run: output falls and unemployment rises.
- Long run: output & unemployment return to their natural rates.

Disinflationary Monetary Policy

Contractionary monetary policy moves economy from A to B.

Over time, expected inflation falls, PC shifts downward.

In the long run, point C:
the natural rate of unemployment, and lower inflation.



The Cost of Reducing Inflation

- Disinflation requires enduring a period of high unemployment and low output.
- **Sacrifice ratio:** the number of percentage points of annual output lost in the process of reducing inflation by 1 percentage point
- Typical estimate of the sacrifice ratio: 5
 - Reducing inflation rate 1% requires a sacrifice of 5% of a year's output.
- This cost can be spread over time. Example: To reduce inflation by 6%, can either
 - sacrifice 30% of GDP for one year
 - sacrifice 10% of GDP for three years

Rational Expectations, Costless Disinflation?

- **Rational expectations:** a theory according to which people optimally use all the information they have, including info about govt policies, when forecasting the future
- Early proponents: Robert Lucas, Thomas Sargent, Robert Barro
- Implied that disinflation could be much less costly...

Rational Expectations, Costless Disinflation?

- Suppose the Fed convinces everyone it is committed to reducing inflation.
- Then, expected inflation falls, the short-run PC shifts downward.
- Result: Disinflation can cause less unemployment than the traditional sacrifice ratio predicts.

The Volcker Disinflation

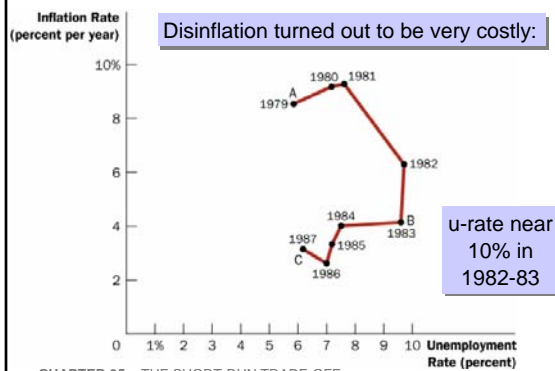
Fed Chairman Paul Volcker

- appointed in late 1979 under high inflation & unemployment
- changed Fed policy to disinflation

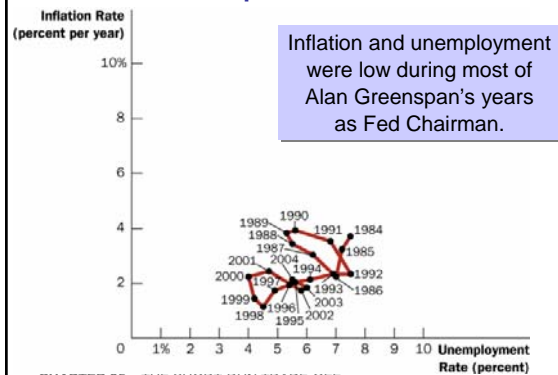
1981-1984:

- Fiscal policy was expansionary, so Fed policy needed to be very contractionary to reduce inflation.
- Success: Inflation fell from 10% to 4%, but at the cost of high unemployment...

The Volcker Disinflation



The Greenspan Era: 1987-2006



1990s: The End of the Phillips Curve?

- During the 1990s, inflation fell to about 1%, unemployment fell to about 4%. Many felt *PC* theory was no longer relevant.
- Many economists believed the Phillips curve was still relevant; it was merely shifting down:
 - Expected inflation fell due to the policies of Volcker and Greenspan.
 - Three favorable supply shocks occurred.

Favorable Supply Shocks in the '90s

- Declining commodity prices (including oil)
- Labor-market changes (reduced the natural rate of unemployment)
- Technological advance (the information technology boom of 1995-2000)

CONCLUSION

- The theories in this chapter come from some of the greatest economists of the 20th century.
- They teach us that inflation and unemployment
 - are unrelated in the long run
 - are negatively related in the short run
 - are affected by expectations, which play an important role in the economy's adjustment from the short-run to the long run.

CHAPTER SUMMARY

- The Phillips curve describes the short-run tradeoff between inflation and unemployment.
- In the long run, there is no tradeoff: Inflation is determined by money growth, while unemployment equals its natural rate.
- Supply shocks and changes in expected inflation shift the short-run Phillips curve, making the tradeoff more or less favorable.

CHAPTER SUMMARY

- The Fed can reduce inflation by contracting the money supply, which moves the economy along its short-run Phillips curve and raises unemployment. In the long run, though, expectations adjust and unemployment returns to its natural rate.
- Some economists argue that a credible commitment to reducing inflation can lower the costs of disinflation by inducing a rapid adjustment of expectations.