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 government 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 government 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 aggregate 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 the economy with a long lag:
  - firms make investment plans in advance, so monetary policies take time to respond to changes in interest rates
  - most economists believe it takes at least 6 months for monetary policy to affect output and employment
- Fiscal policy also works with a long lag:
  - Changes in government spending and taxation 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 aggregate 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 aggregate demand when the 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 the economy goes into recession, taxes fall automatically.
  - This stimulates aggregate demand and reduces the magnitude of fluctuations.

- **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 aggregate 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 aggregate 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.

- 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?

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:
  A. Agg demand low, small increase in $P$ (i.e., low inflation), low output, high unemployment.
  B. Agg demand high, big increase in $P$ (i.e., high inflation), high output, low unemployment.

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.

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.
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

\[
\text{Unemp. rate} = \text{Natural rate of unemp.} - \alpha (\text{Actual inflation} - \text{Expected inflation})
\]

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 \( \alpha \) in PC equation = 0.5
A. Plot the long-run Phillips curve.
B. Find the u-rate for each of these values of actual inflation: 0%, 6%. Sketch the short-run PC.
C. Suppose expected inflation rises to 4%. Repeat part B.
D. 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

Early 1970s: unemployment increased, despite higher inflation.
Friedman & Phelps’ explanation: expectations were catching up with reality.
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

<table>
<thead>
<tr>
<th>Year</th>
<th>Oil price per barrel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1973</td>
<td>$3.56</td>
</tr>
<tr>
<td>1/1974</td>
<td>10.11</td>
</tr>
<tr>
<td>1/1979</td>
<td>14.85</td>
</tr>
<tr>
<td>1/1980</td>
<td>32.50</td>
</tr>
<tr>
<td>1/1981</td>
<td>38.00</td>
</tr>
</tbody>
</table>

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 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.
CHAPTER 35
THE SHORT-RUN TRADE-OFF

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...

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...


Inflation and unemployment were low during most of Alan Greenspan’s years as Fed Chairman.
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:
    - 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.