

The Influence of Monetary and Fiscal Policy on Aggregate Demand

CHAPTER

34

The Short-Run Trade-off between Inflation and Unemployment

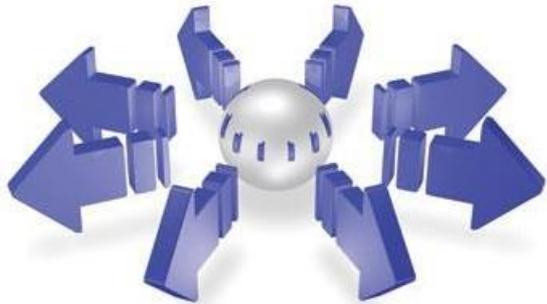
CHAPTER

35

Fiscal Policy (FP)

- ❑ ***Fiscal policy***: is the use of government purchases, taxes, and transfer payments to alter(change) *RGDP and the price level*.

Expansionary Fiscal Policy



Contractionary F. Policy



Chapters 34 and 35

Fiscal Policy and the AD/AS Model

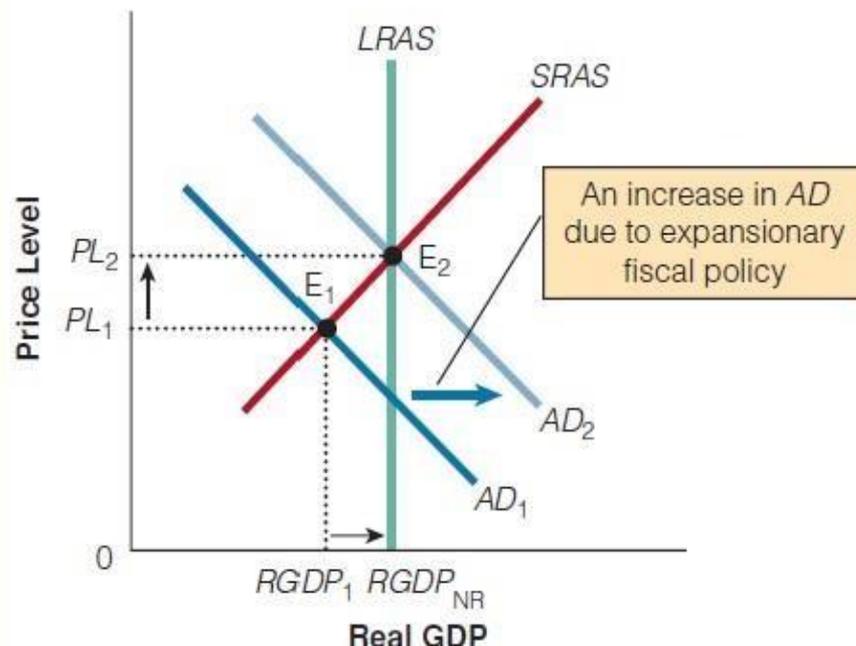
- Government can use fiscal policy as either an expansionary or contractionary tool to help close a recessionary or an inflationary gap.

When government purchases more, taxes less and/or increases transfer payments, the size of the government's budget deficit will grow, and the adverse will slow.

Expansionary FP to Close a Recessionary Gap

section 26.2
exhibit 1

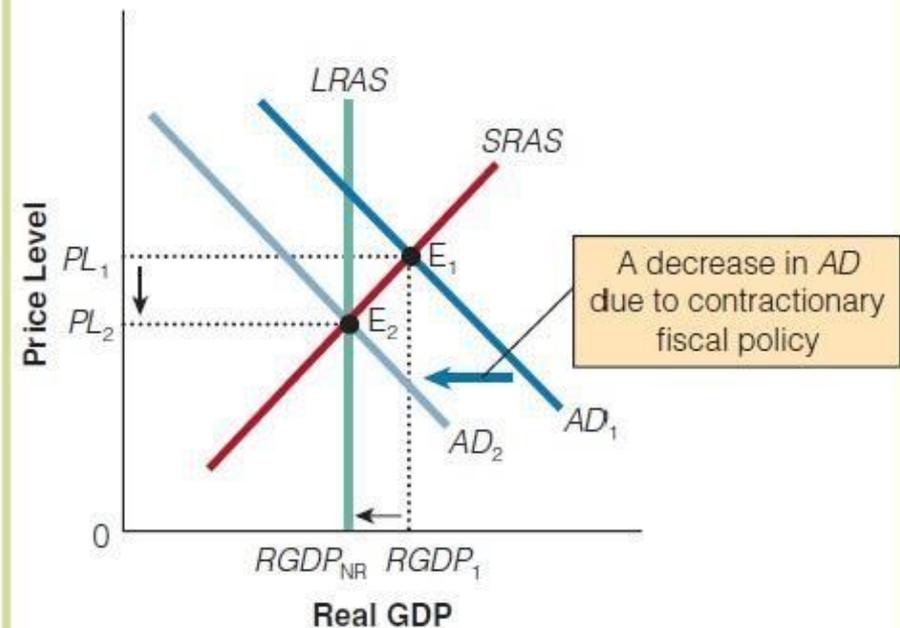
Expansionary Fiscal Policy
to Close a Recessionary Gap



Contractionary FP to close Inflationary Gap

section 26.2
exhibit 2

section 26.2
exhibit 2



Active Stabilisation- Case for

- If government raises taxes $>$ AD falls $>$ Output and employment fall in the short run
- Central bank (Fed Reserve in textbook) may try to counter by increasing money supply
- Net effect may be neutral
- Most (if not all economies) would like economic stability- Explicit goal of US policy since 1946
- Keynes- AD fluctuates due to irrational waves of pessimism and optimism (animal spirits) therefore government/central banks can adjust monetary/fiscal policy to stabilise the economy

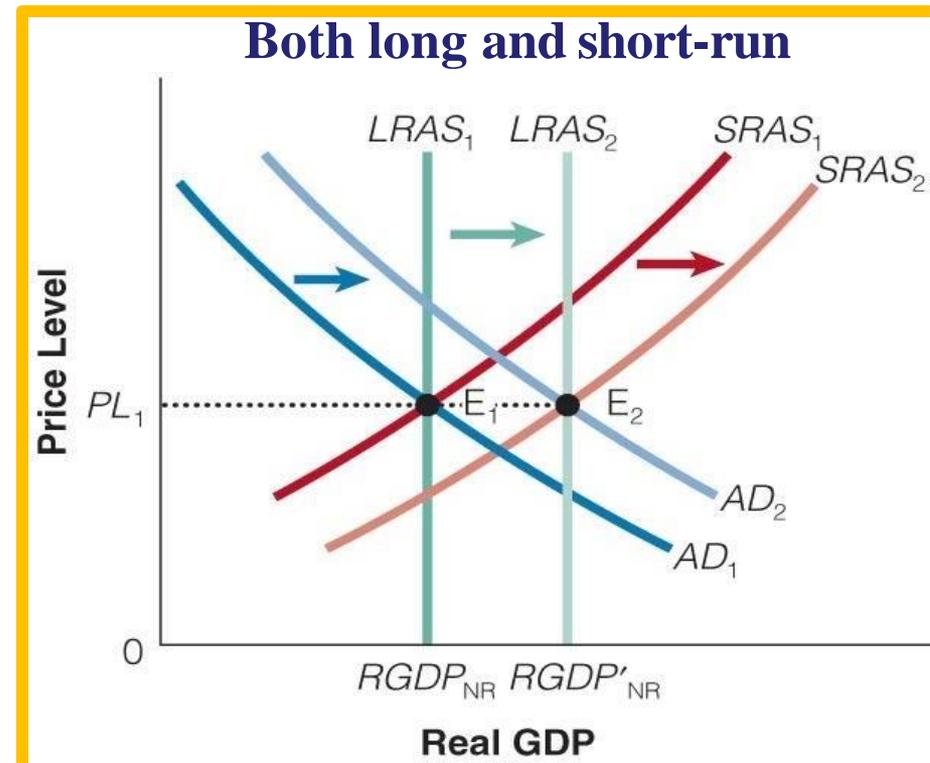
Active Stabilisation- Case against

- Policy instruments should be set to achieve long-run goals (economic growth and low inflation) and let the economy deal with short-term fluctuations
- Active monetary and fiscal policies have a long lag in affecting the economy
- Moreover, once these effects occur, they might last a long time
- Cause rather than cure of economic fluctuations?
- Fiscal policy lag usually a result of political/bureaucratic processes (may take months/years to implement)
- Final issue- inaccuracy of economic forecasting
- Case of **Automatic Stabilisers**- Tax system (automatically decreases during recession due to lower incomes) and government spending (automatically increases during recessions due to unemployment, welfare payments)

Chapters 34 and 35

Supply-Side Effects of Tax Cuts

- Stabilization of economy \Rightarrow traditional focus \Rightarrow through **demand-side policies**.
- But there are economists who believe that we should be focusing on the **supply side** of the economy as well, especially in the long run.
- ✓ **R&D** = Some economists believe that investment in R&D will have **long-run benefits** for the economy;
 - New Technology
 - New Knowledge
 - Better Quality
 - Use of Educational Institutions (universities, labs etc.,).
 - Government Supports R&D activities by tax breaks and subsidies.
- ❖ **Challenge: productive R&D**
- ❖ Some economist are skeptical about



Possible Obstacles to Effective Fiscal Policy

- ❖ The multiplier effect of an increase in government purchases implies that the increase in aggregate demand will tend to be greater than the initial fiscal stimulus, other things equal.
- ❖ However, this may not be true because all other things will not tend to stay equal in this case.

❑ The Crowding-Out Effect

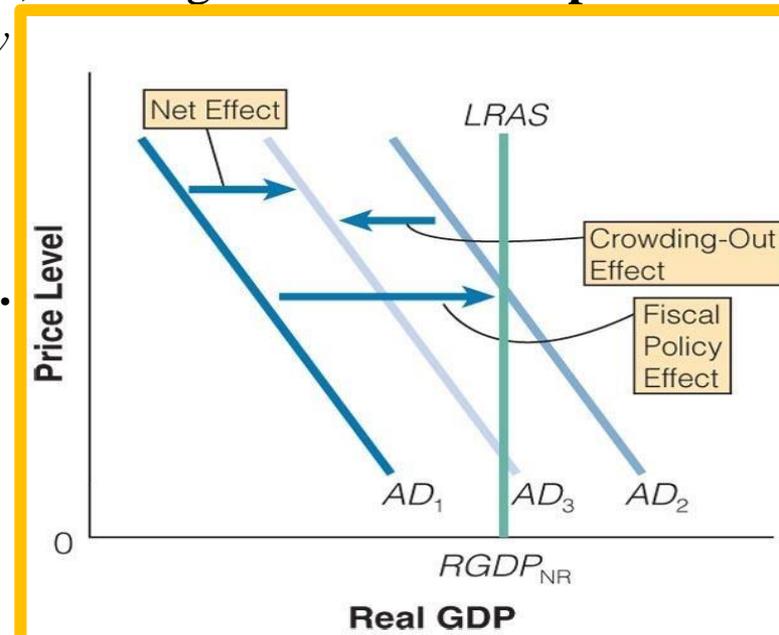
- ❑ When the government borrows money to finance a deficit, it increases the overall demand for money in the money market, driving **interest rates up**.

Money demand ↑ = *interest rate* ↑ = *capital inflow*

- ❑ The higher interest rate will choke off private spending on goods and services, and as a result, the impact of the increase in **government purchases may be smaller than we first assumed**.

- ❑ Economists call this the *crowding-out effect*.

- ❖ *Critics: increase in government purchases, particularly when the economy is severely recessive, may actually improve consumer and business expectations and encourage private investment spending.*



Chapters 34 and 35

- ❑ But, If the government wishes to dampen an economic boom by reducing AD , it will:
 - ✓ Reduce its purchases of goods and services.
 - ✓ Increase taxes.
 - ✓ Reduce transfer payments.
 - ✓ Use some combination of these approaches.
- Thus, ***contractionary fiscal policy***, will tend to create or expand a budget surplus, or reduce a budget deficit, if one exists.

Summary of Fiscal Policy Tools

Macroeconomic Problem	Fiscal Policy Prescription	Fiscal Policy Tools
Unemployment (Slow or negative RGDP growth rate—below $RGDP_{NR}$)	Expansionary fiscal policy to increase aggregate demand	Cut taxes Increase government purchases Increase government transfer payments
Inflation (Rapid RGDP growth rate—beyond RGDP)	Contractionary fiscal policy to decrease aggregate demand	Raise taxes Decrease government purchases Decrease government transfer payments

Fiscal Stimulus Affects The Budget

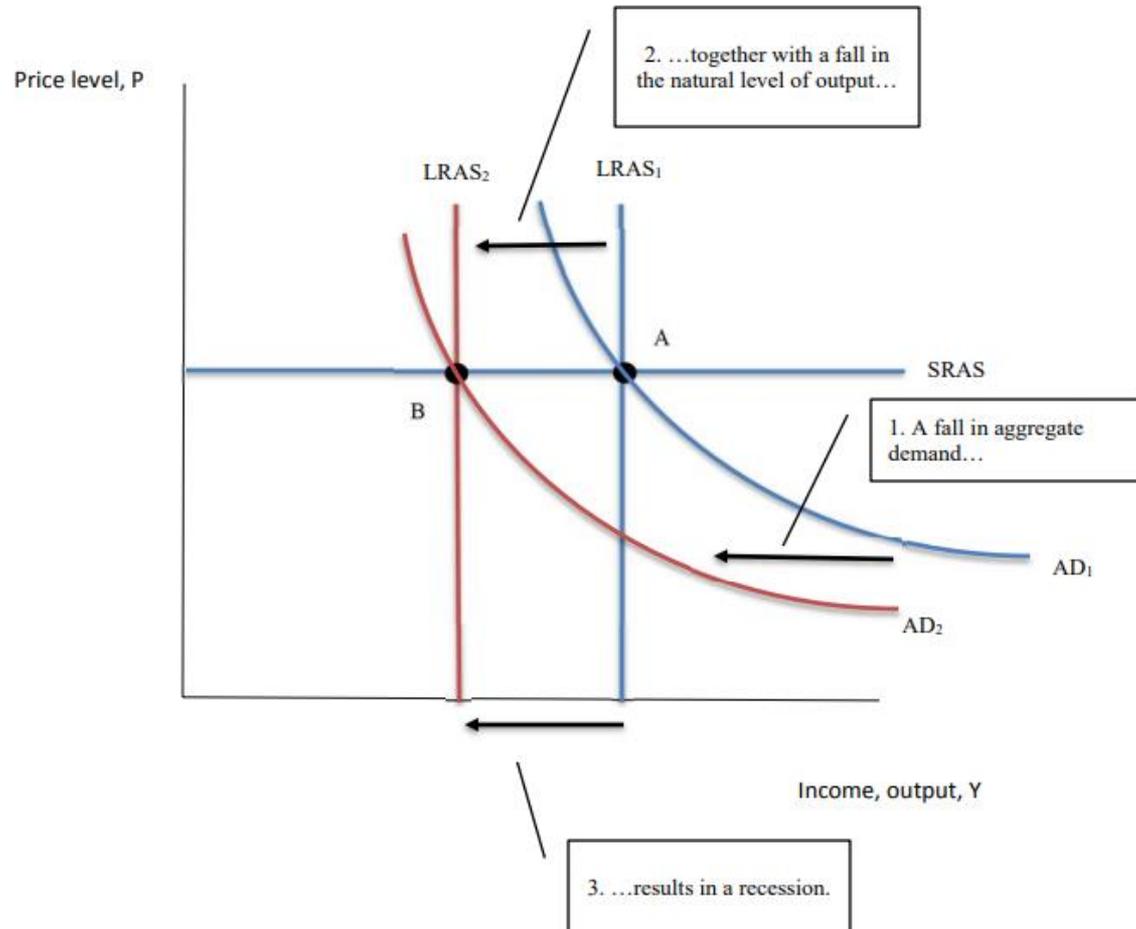
- ❖ When government spending (for purchases of goods and services and transfer payments) exceeds tax revenues ($G.s > T.r$), there is a ***budget deficit***.
- ❖ When tax revenues are greater than government spending ($T.r > G.s$), a ***budget surplus*** exists.
- ❑ When government wishes to stimulate the economy by increasing AD , it will:
 - ✓ Increase government purchases of goods and services.
 - ✓ Increase transfer payments.
 - ✓ Lower taxes.
 - ✓ Use some combination of these approaches.
- Any of those options will increase the budget deficit (reduce budget surplus).
- Thus, ***expansionary fiscal policy*** is associated with increased government budget deficits.

Recession by accident v recession by design

Modelling the recession in an AD-AS framework

- AD: Lockdowns > decreased velocity of money (each Dollar remains in the people's wallets longer) > lower quantity demanded at every price level i.e. AD shifted to the left
- AS:
 - SRAS > No immediate effect on prices, hence unchanged.
 - LRAS > Sudden increase in the natural rate of unemployment, the LRAS was diminished temporarily

The Covid-19 Recession of 2020



Source: https://scholar.harvard.edu/sites/scholar.harvard.edu/files/mankiw/files/covid-19_recession_of_2020_aug2020.pdf

The Covid-19 Recession of 2020: Policy Response

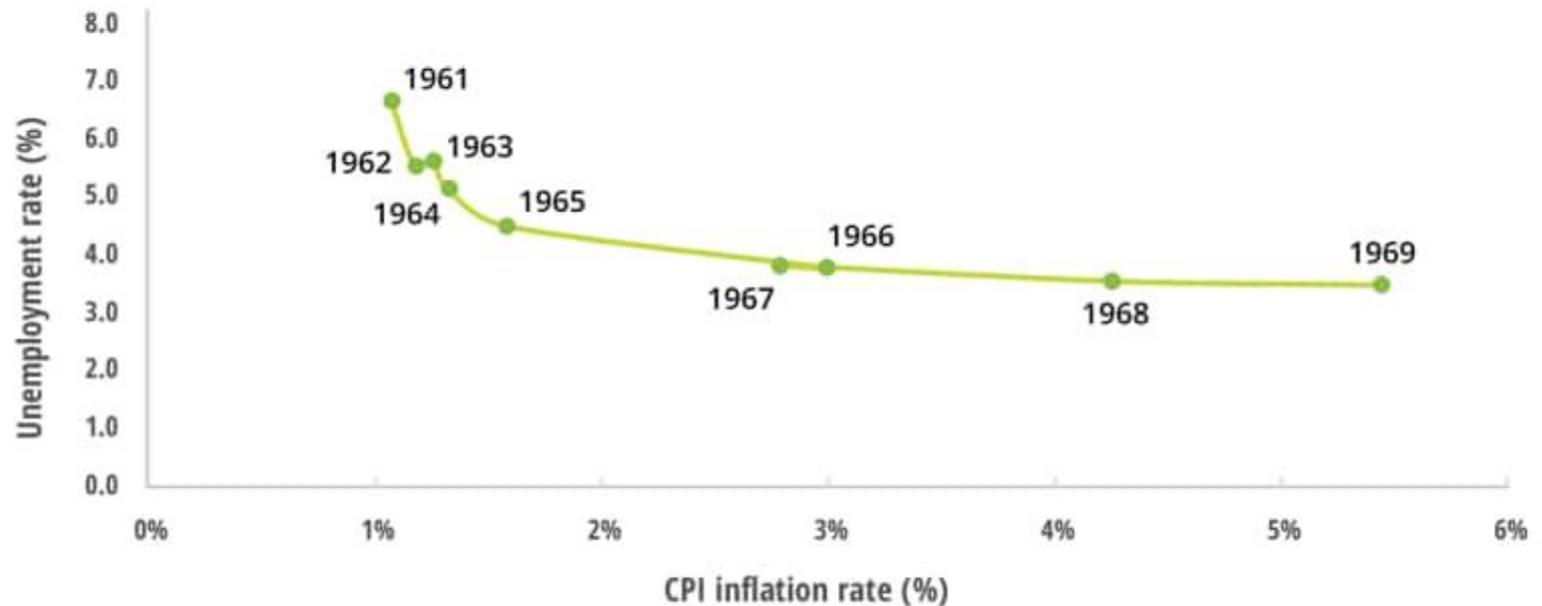
- March 2020: Coronavirus Aid, Relief and Economic Security (CARES) act
 - Spending increases and tax reduction of \$2 trillion, 10% of US GDP
 - “Stimulus bill” but to cushion the impact of designed recession
- On the other hand?
 - Increased unemployment insurance paid more than original salary-  incentive to return to work?
 - Unjustified windfall for some companies, and not for others
 - ‘Crony capitalism’
 - Increased budget deficit (about \$ 3.7 trillion, largest imbalance since WWII)
- *Monetary v Fiscal Policy?*
- *Efficiency v efficacy*
- *Speed of transmission*

The story of stagflation

High inflation plus rising unemployment

FIGURE 1

Inflation-unemployment tradeoff for the United States 1961–1969



Source: BLS/Haver Analytics.

Deloitte Insights | deloitte.com/insights

Source: <https://www2.deloitte.com/xe/en/insights/economy/spotlight/stagflation-inflation-and-unemployment-rate-relationship.html>

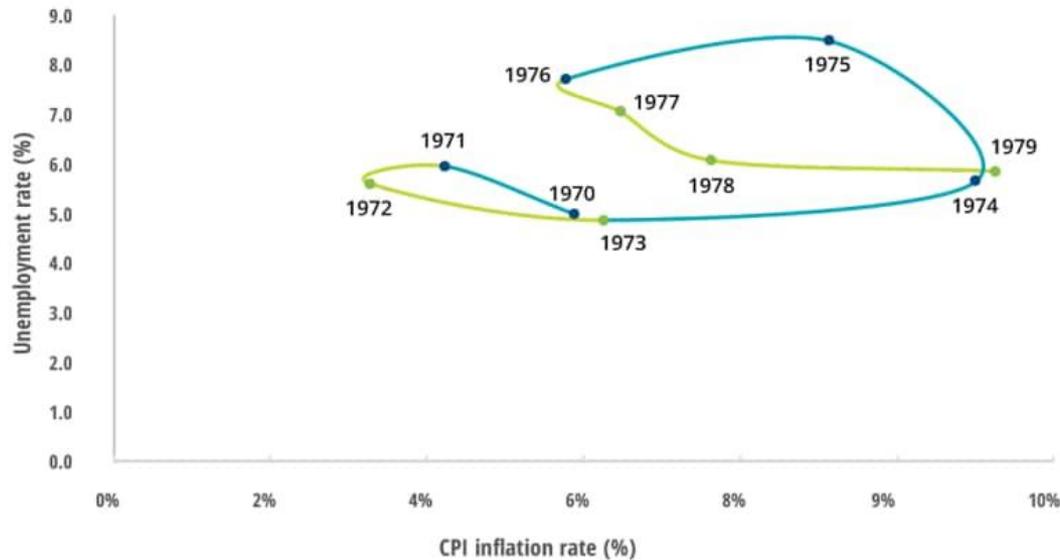
The Covid-19 Recession of 2020

- 1969: the FED implemented ‘tightening’ policy aka contractionary policies
- Unemployment increased from 3.5% to 5%
- Inflation increased by 0.5% - contrary to Phillips curve

FIGURE 2

Phillips curves in the 1970s

■ Phillips curve as expected ■ Phillips curve not as expected



Source: https://scholar.harvard.edu/sites/scholar.harvard.edu/files/mankiw/files/covid-19_recession_of_2020_aug2020.pdf

The story of stagflation

- *Phillips Curve Dynamics*: Market realities differ from idealized economic models, with prices taking time to adjust to changes.
- *Delayed Adjustments*: Businesses, consumers, and workers require time to negotiate new prices and wages in response to economic shifts.
- *Inertia Effect*: Past inflation influences current pricing behaviour, causing inflation to persist despite economic softening.
- *Stagflation*: Short-term phenomenon where recession coincides with high or rising inflation, challenging traditional economic theory.
- *Inflation Expectations*: Experience of higher inflation leads to baked-in expectations, influencing future wage contracts and pricing decisions.

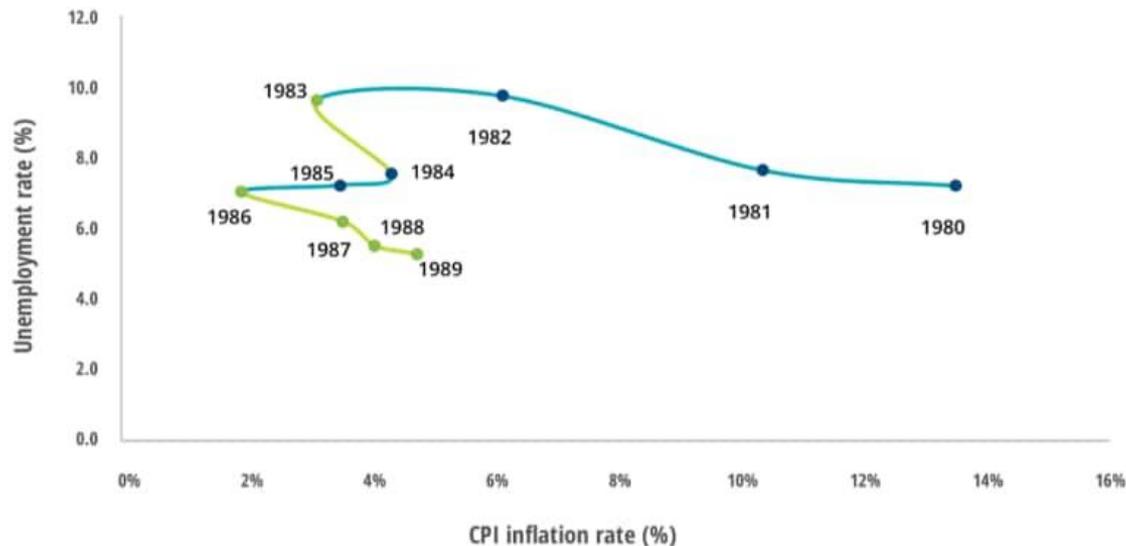
The story of stagflation- changing expectations

- Led by Paul Volcker, restrictive monetary policies were implemented to combat inflationary expectations.
- Strategy: Initially raising unemployment to lower inflation, proved effective in the early 1980s.
- Inflation fell without a rise in unemployment as expectations declined, marking a reverse of stagflation.
- By the late 1980s, a new Phillips curve emerged, reflecting lower inflation rates for a given level of unemployment.

FIGURE 3

Phillips curves in the 1980s

■ Phillips curve as expected ■ Phillips curve not as expected



MONETARY POLICY

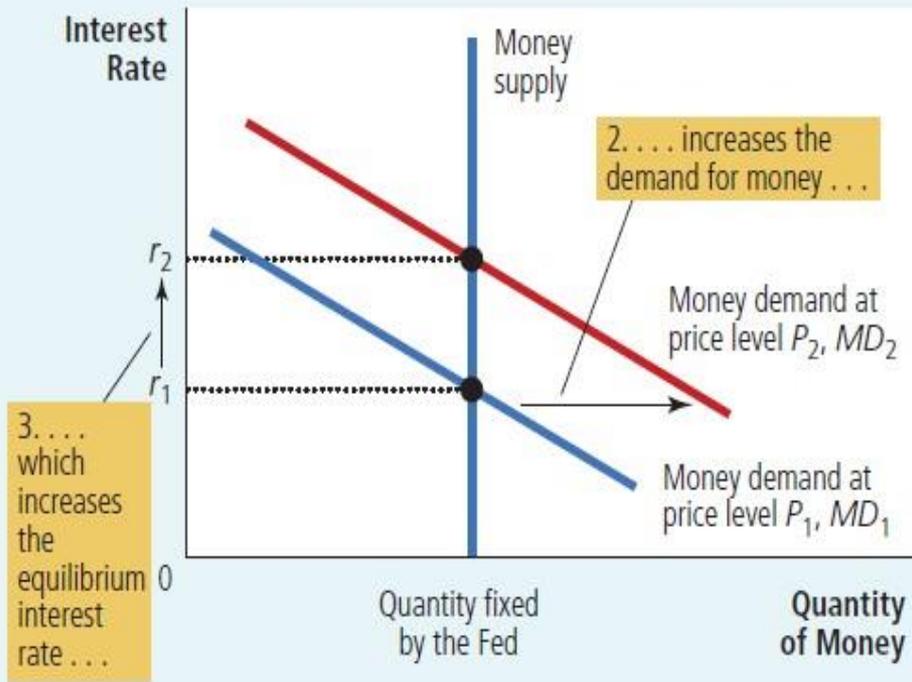
By Central Banks (Fiscal Policy is by Government)

1. Expansionary Monetary policy tools – Increase Money Supply

- decrease the discount rates (interest rates)
- buying more bonds (or other financial securities)
- decreasing the reserve requirement ratio

2. The opposite of these above are for **Contractionary Monetary Policy**

(a) The Money Market



(b) The Aggregate-Demand Curve

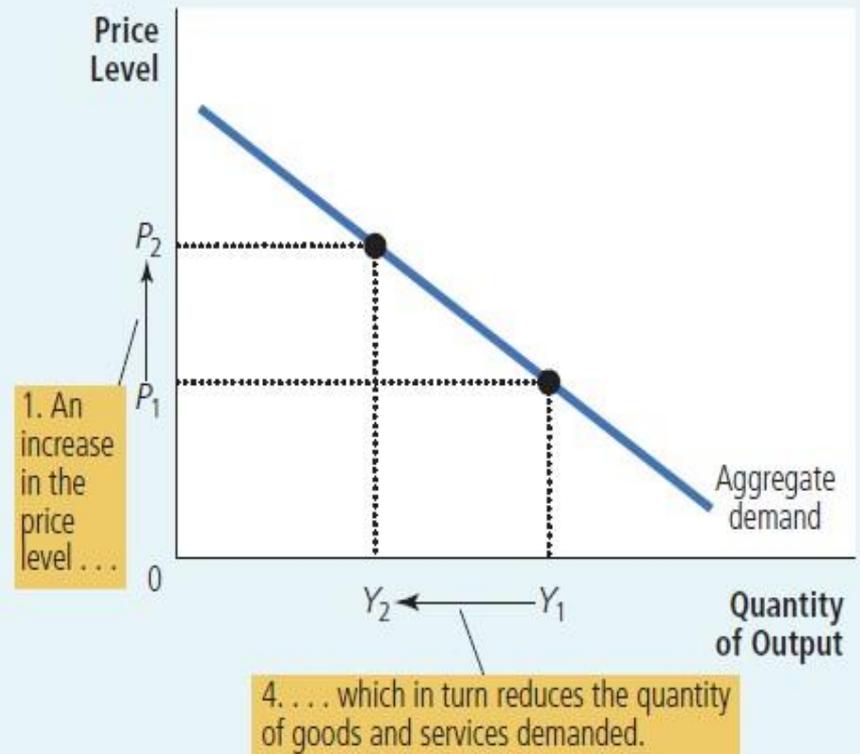
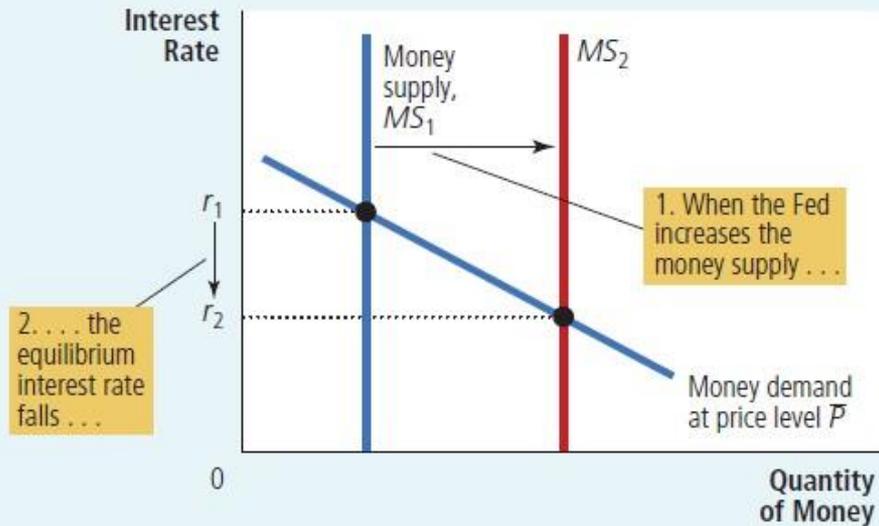


FIGURE 3

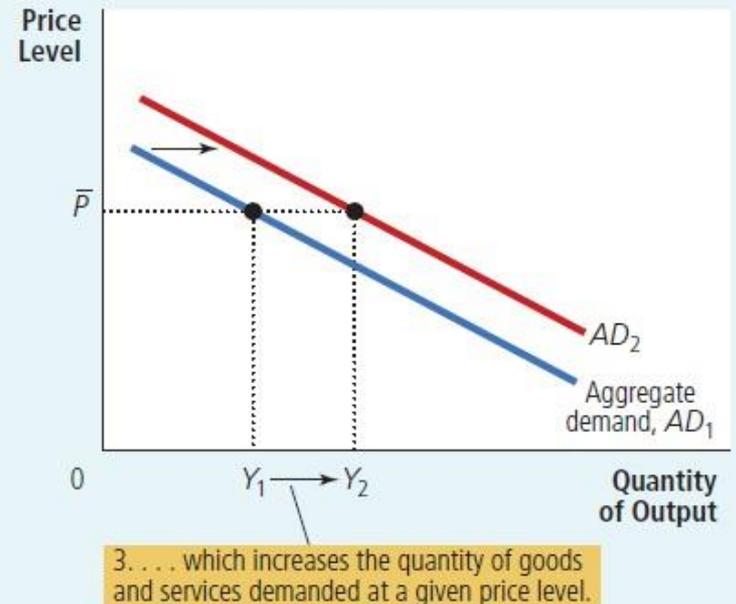
A Monetary Injection

In panel (a), an increase in the money supply from MS_1 to MS_2 reduces the equilibrium interest rate from r_1 to r_2 . Because the interest rate is the cost of borrowing, the fall in the interest rate raises the quantity of goods and services demanded at a given price level from Y_1 to Y_2 . Thus, in panel (b), the aggregate-demand curve shifts to the right from AD_1 to AD_2 .

(a) The Money Market



(b) The Aggregate-Demand Curve



The Global Financial Crisis

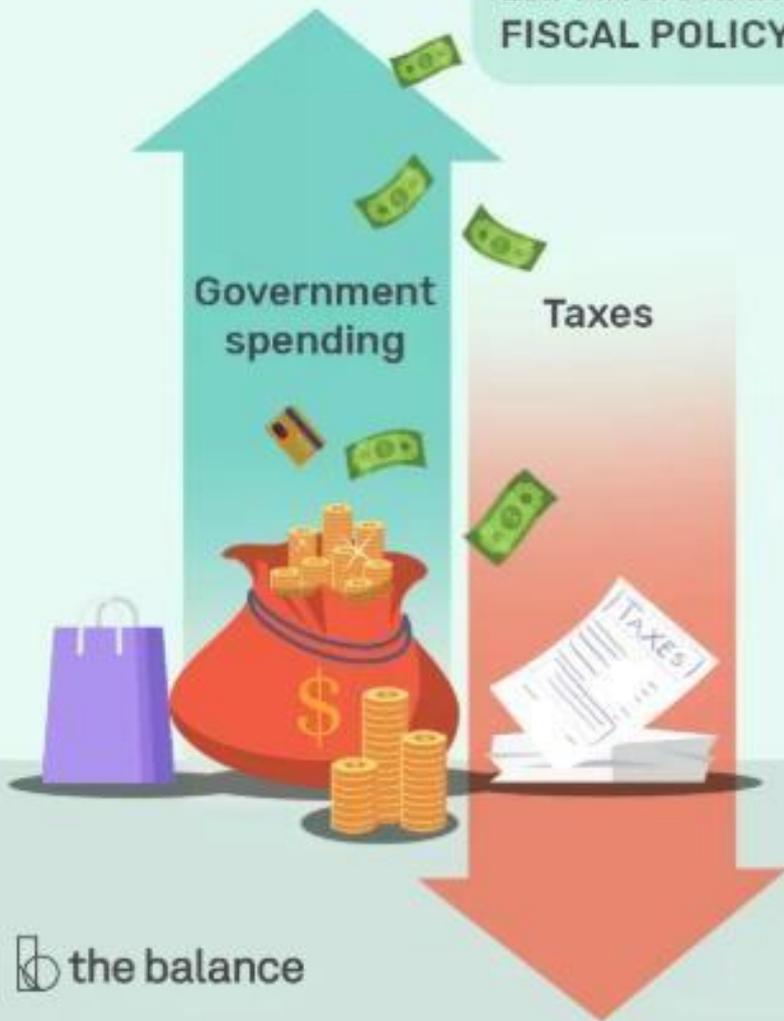
EXTRA SLIDES

Fiscal Policy Types, Objectives, and Tools

EXPANSIONARY
FISCAL POLICY

VS

CONTRACTIONARY
FISCAL POLICY



The Multiplier Effect

The Multiplier Effect At Work

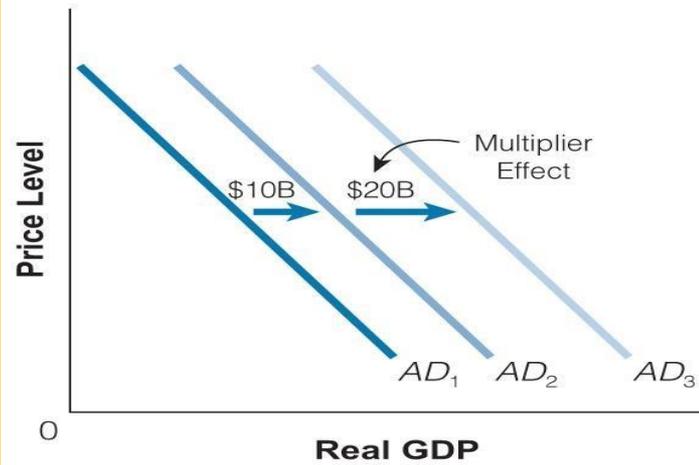
Change in government purchases	\$10.00 billion—direct effect on <i>AD</i>	} The sum of the indirect effect on <i>AD</i> , through induced additional consumption purchases, is equal to \$20 billion
First change in consumption purchases	6.67 billion (2/3 of 10)	
Second change in consumption purchases	4.44 billion (2/3 of 6.67)	
Third change in consumption purchases	2.96 billion (2/3 of 4.44)	
Fourth change in consumption purchases	1.98 billion (2/3 of 2.96)	
Fifth change in consumption purchases	1.32 billion (2/3 of 1.98)	
•	•	
•	•	
•	•	

\$30 billion = Total change in aggregate demand

The Multiplier Process

Where we see, government purchases increase *AD* by its **multiplier effect**.

\$10B investment = brings \$30B of *AD*.



Tax Cuts and the Multiplier

- increased government spending is only one alternative.
- The government can also stimulate business and consumer spending through **tax cuts**, depends on the marginal propensity to consume(MPC).
- The **tax multiplier is smaller than the government spending multiplier** because government spending has a **direct** impact on AD, while a tax cut has only an **indirect** impact on AD.
- **This is because consumers will save some of their income from the tax cut.**
- If tax cut is \$10 billion, the initial increase in consumption spending from the tax cut would be $2/3 * \$10 \text{ billion}$ (MPC*tax cut) = \$6.67 billion. Where;

$$\$6.67 \times 2/3 + \$4.44 \times 2/3 + \$2.96 \times 2/3 + \dots = \mathbf{\$20 \text{ billion} \dots}$$

But not, \$30 billion

Although, its less than the government purchase multiplier effect, but its easy to see why tax cut policy is attractive one.

The Phillips Curve

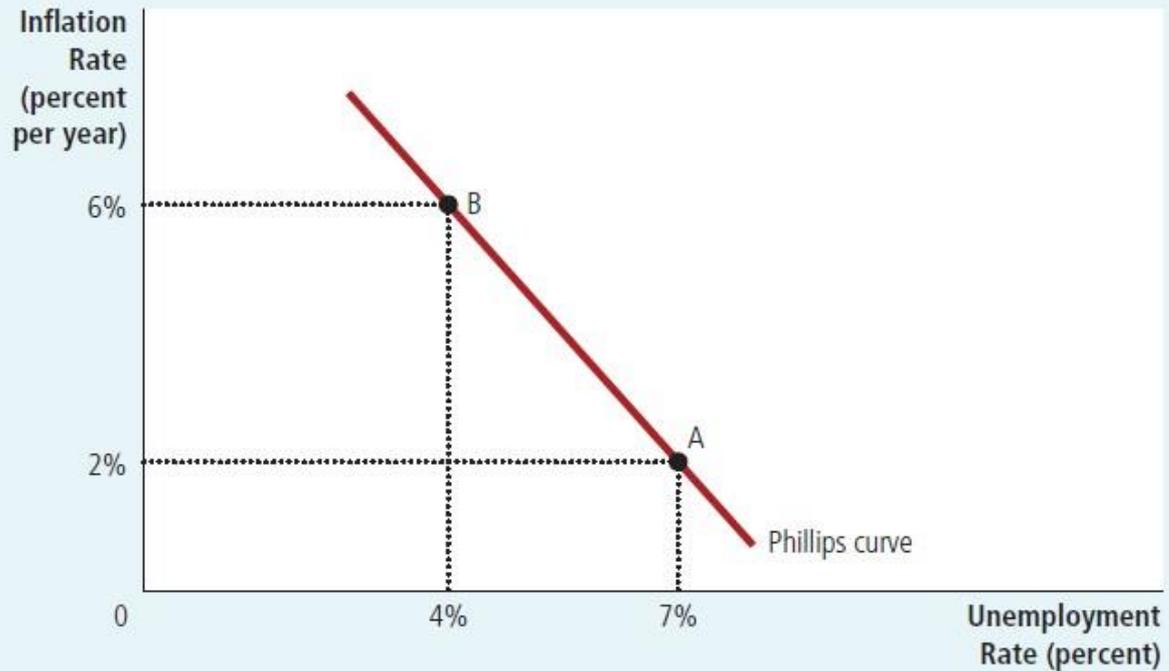


FIGURE 1

The Phillips Curve

The Phillips curve illustrates a negative association between the inflation rate and the unemployment rate. At point A, inflation is low and unemployment is high. At point B, inflation is high and unemployment is low.

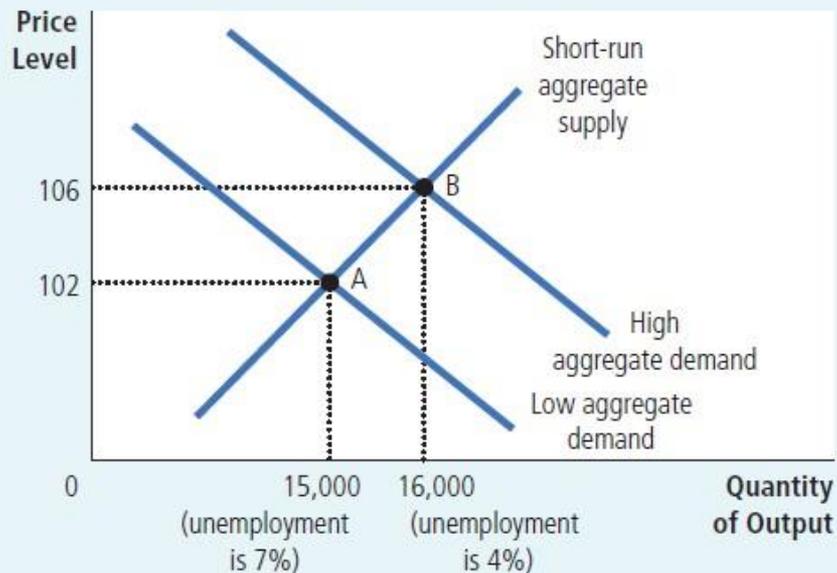
The Phillips Curve- in the short run

FIGURE 2

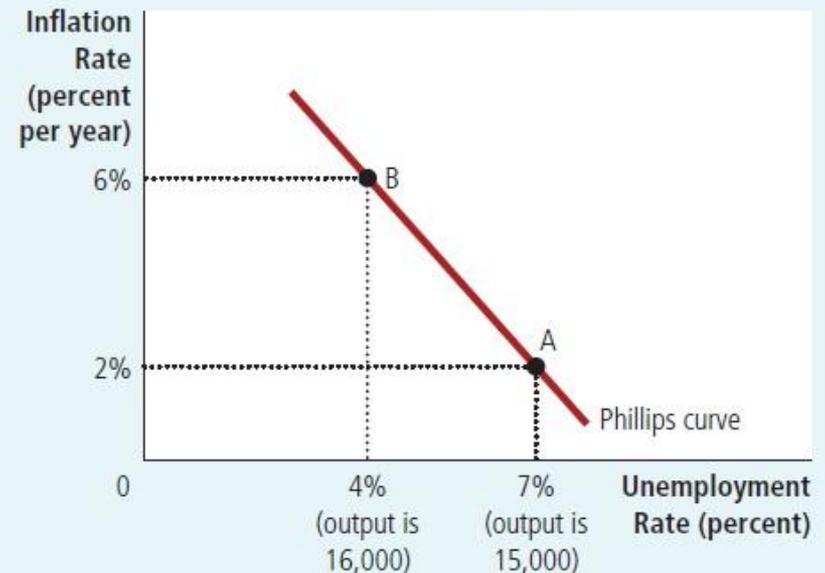
How the Phillips Curve Is Related to the Model of Aggregate Demand and Aggregate Supply

This figure assumes a price level of 100 for the year 2020 and charts possible outcomes for the year 2021. Panel (a) shows the model of aggregate demand and aggregate supply. If aggregate demand is low, the economy is at point A; output is low (15,000), and the price level is low (102). If aggregate demand is high, the economy is at point B; output is high (16,000), and the price level is high (106). Panel (b) shows the implications for the Phillips curve. Point A, which arises when aggregate demand is low, has high unemployment (7 percent) and low inflation (2 percent). Point B, which arises when aggregate demand is high, has low unemployment (4 percent) and high inflation (6 percent).

(a) The Model of Aggregate Demand and Aggregate Supply

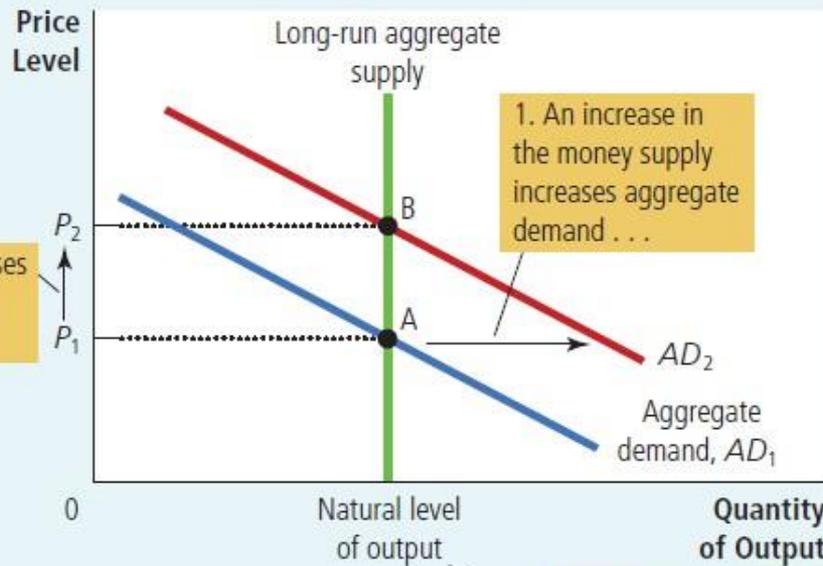


(b) The Phillips Curve

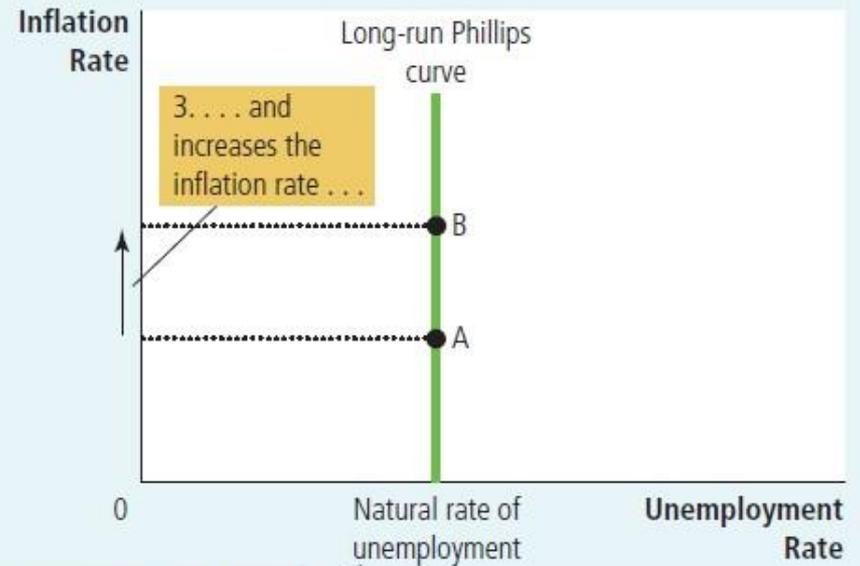


The Phillips Curve- in the long run

(a) The Model of Aggregate Demand and Aggregate Supply



(b) The Phillips Curve



4. . . . but leaves output at its natural level and unemployment at its natural rate.