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The Influence of Monetary and Fiscal Policy on Aggregate Demand

Aggregate Demand

- Many factors influence aggregate demand besides monetary and fiscal policy.
- In particular, desired spending by households and business firms determines the overall demand for goods and services.

Aggregate Demand

- When desired spending changes, aggregate demand shifts, causing short-run fluctuations in output and employment.
- Monetary and fiscal policy are sometimes used to offset those shifts and stabilize the economy.

HOW MONETARY POLICY INFLUENCES AGGREGATE DEMAND

- The aggregate demand curve slopes downward for three reasons:
  - The wealth effect
  - The interest-rate effect
  - The exchange-rate effect

HOW MONETARY POLICY INFLUENCES AGGREGATE DEMAND

- For the U.S. economy, the most important reason for the downward slope of the aggregate-demand curve is the interest-rate effect.

The Theory of Liquidity Preference

- Keynes developed the *theory of liquidity preference* in order to explain what factors determine the economy's interest rate.
- According to the theory, the interest rate adjusts to balance the supply and demand for money.

The Theory of Liquidity Preference

- Money Supply
  - The money supply is controlled by the Fed through:
    - Open-market operations
    - Changing the reserve requirements
    - Changing the discount rate
  - Because it is fixed by the Fed, the quantity of money supplied does not depend on the interest rate.
  - The fixed money supply is represented by a vertical supply curve.

The Theory of Liquidity Preference

- Money Demand
  - Money demand is determined by several factors.
    - According to the theory of liquidity preference, one of the most important factors is the interest rate.
    - People choose to hold money instead of other assets that offer higher rates of return because money can be used to buy goods and services.
    - The opportunity cost of holding money is the interest that could be earned on interest-earning assets.
    - An increase in the interest rate raises the opportunity cost of holding money.
    - As a result, the quantity of money demanded is reduced.

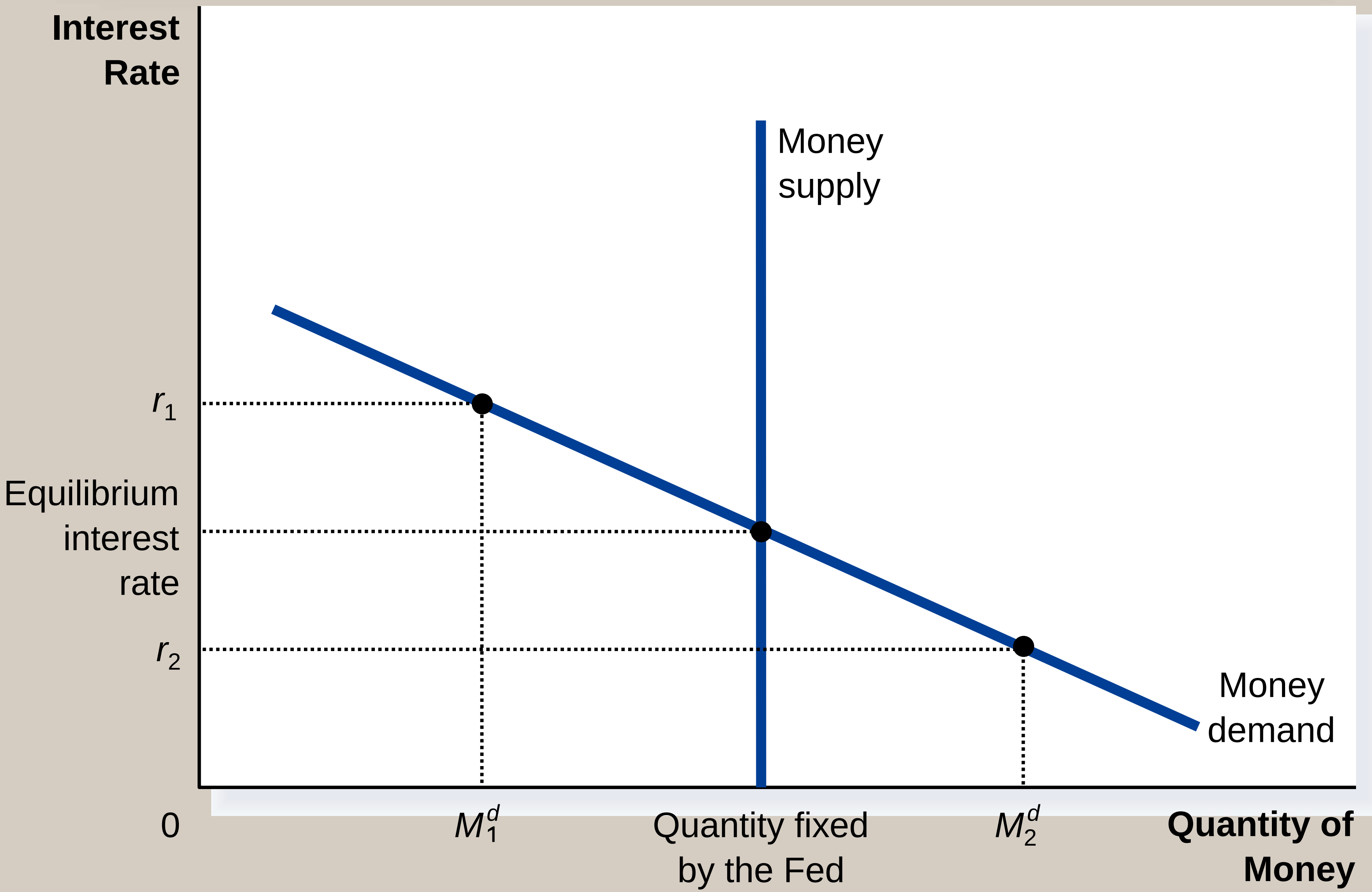
The Theory of Liquidity Preference

- Equilibrium in the Money Market
  - According to the theory of liquidity preference:
    - The interest rate adjusts to balance the supply and demand for money.
    - There is one interest rate, called the equilibrium interest rate, at which the quantity of money demanded equals the quantity of money supplied.

The Theory of Liquidity Preference

- Equilibrium in the Money Market
  - Assume the following about the economy:
    - The price level is stuck at some level.
    - For any given price level, the interest rate adjusts to balance the supply and demand for money.
    - The level of output responds to the aggregate demand for goods and services.

Figure 1 Equilibrium in the Money Market



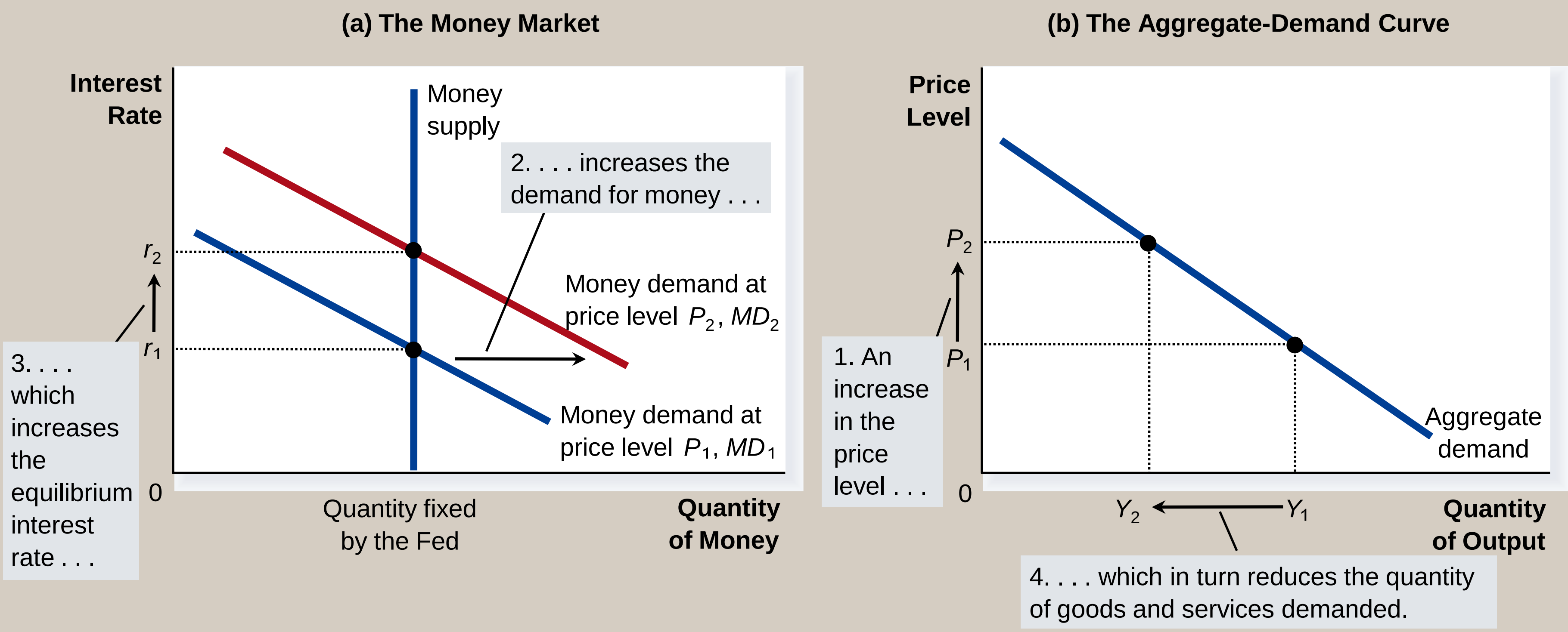
The Downward Slope of the Aggregate Demand Curve

- The price level is one determinant of the quantity of money demanded.
- A higher price level increases the quantity of money demanded for any given interest rate.
- Higher money demand leads to a higher interest rate.
- The quantity of goods and services demanded falls.

The Downward Slope of the Aggregate Demand Curve

- The end result of this analysis is a negative relationship between the price level and the quantity of goods and services demanded.

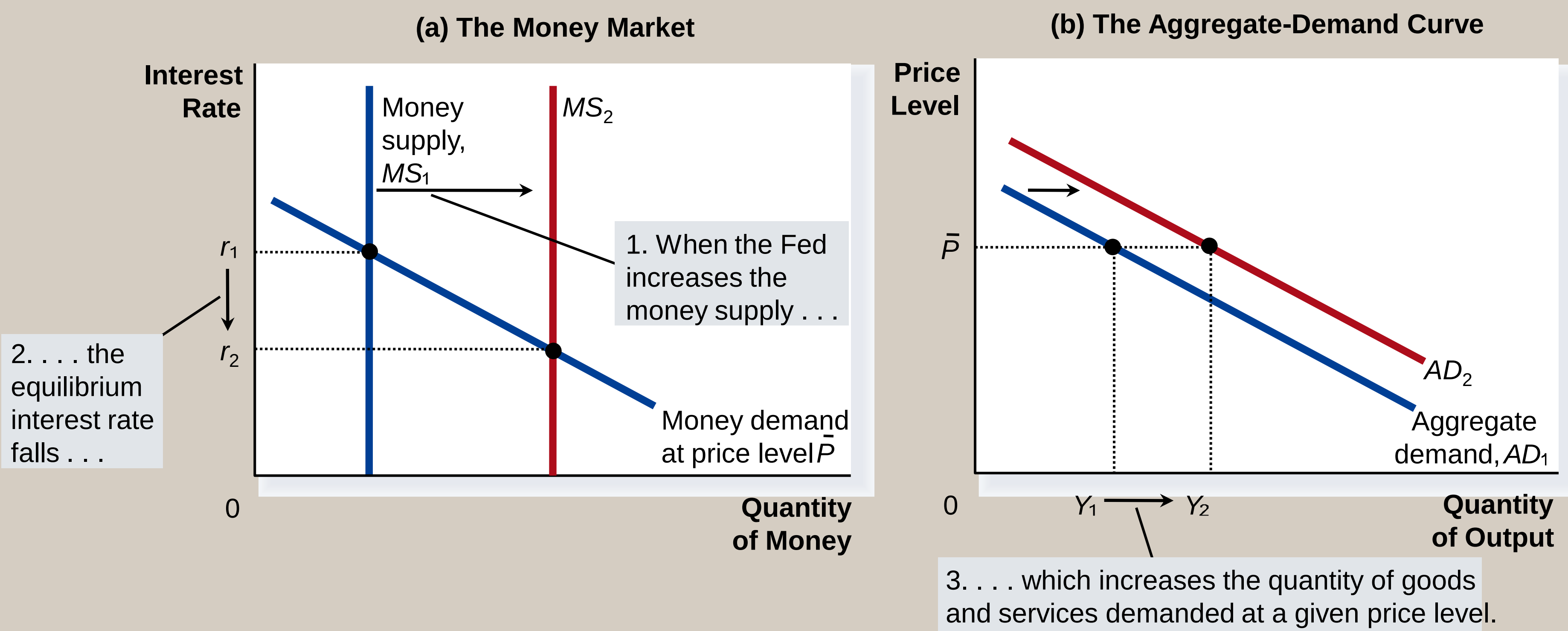
Figure 2 The Money Market and the Slope of the Aggregate-Demand Curve



Changes in the Money Supply

- The Fed can shift the aggregate demand curve when it changes monetary policy.
- An increase in the money supply shifts the money supply curve to the right.
- Without a change in the money demand curve, the interest rate falls.
- Falling interest rates increase the quantity of goods and services demanded.

Figure 3 A Monetary Injection



Changes in the Money Supply

- When the Fed increases the money supply, it lowers the interest rate and increases the quantity of goods and services demanded at any given price level, shifting aggregate-demand to the right.
- When the Fed contracts the money supply, it raises the interest rate and reduces the quantity of goods and services demanded at any given price level, shifting aggregate-demand to the left.

The Role of Interest-Rate Targets in Fed Policy

- Monetary policy can be described either in terms of the money supply or in terms of the interest rate.
- Changes in monetary policy can be viewed either in terms of a changing target for the interest rate or in terms of a change in the money supply.
- A target for the federal funds rate affects the money market equilibrium, which influences aggregate demand.

HOW FISCAL POLICY INFLUENCES AGGREGATE DEMAND

- Fiscal policy refers to the government's choices regarding the overall level of government purchases or taxes.
- Fiscal policy influences saving, investment, and growth in the long run.
- In the short run, fiscal policy primarily affects the aggregate demand.

Changes in Government Purchases

- When policymakers change the money supply or taxes, the effect on aggregate demand is indirect—through the spending decisions of firms or households.
- When the government alters its own purchases of goods or services, it shifts the aggregate-demand curve directly.

Changes in Government Purchases

- There are two macroeconomic effects from the change in government purchases:
  - The multiplier effect
  - The crowding-out effect

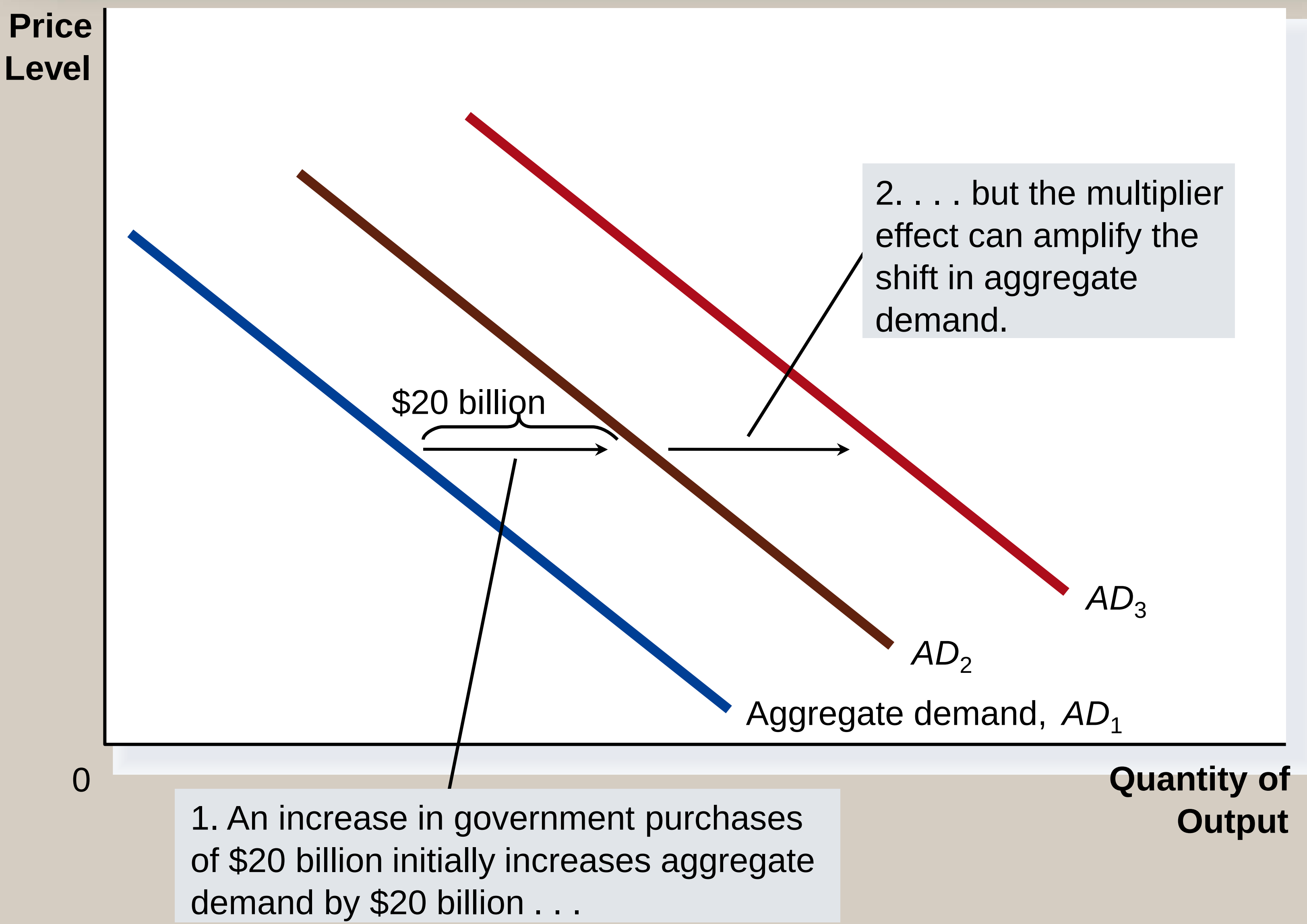
The Multiplier Effect

- Government purchases are said to have a *multiplier effect* on aggregate demand.
  - Each dollar spent by the government can raise the aggregate demand for goods and services by more than a dollar.

The Multiplier Effect

- The multiplier effect refers to the additional shifts in aggregate demand that result when expansionary fiscal policy increases income and thereby increases consumer spending.

Figure 4 The Multiplier Effect



A Formula for the Spending Multiplier

- The formula for the multiplier is:

$$\text{Multiplier} = 1/(1 - MPC)$$

- An important number in this formula is the marginal propensity to consume *(MPC)*.
  - It is the fraction of extra income that a household consumes rather than saves.

A Formula for the Spending Multiplier

- If the *MPC* is 3/4, then the multiplier will be:

$$\text{Multiplier} = 1/(1 - 3/4) = 4$$

- In this case, a $20 billion increase in government spending generates $80 billion of increased demand for goods and services.

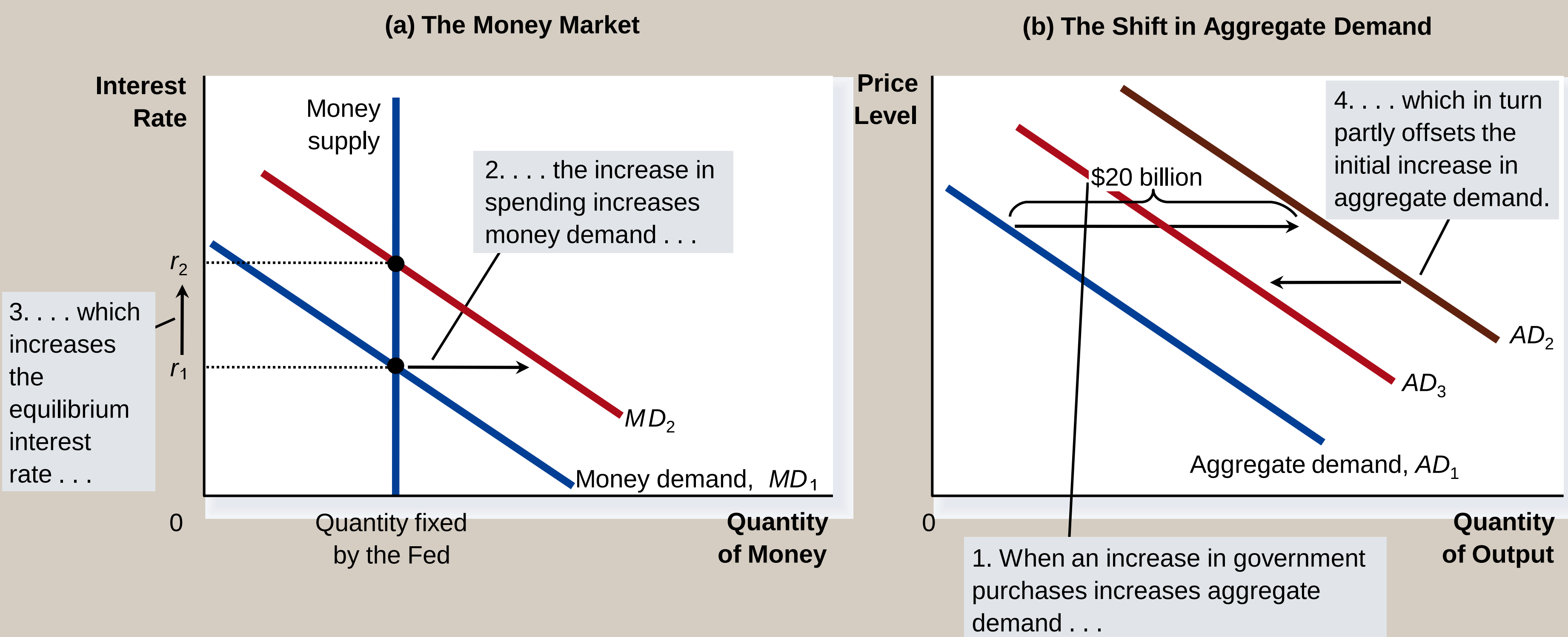
The Crowding-Out Effect

- Fiscal policy may not affect the economy as strongly as predicted by the multiplier.
- An increase in government purchases causes the interest rate to rise.
- A higher interest rate reduces investment spending.

The Crowding-Out Effect

- This reduction in demand that results when a fiscal expansion raises the interest rate is called the *crowding-out effect*.
- The crowding-out effect tends to dampen the effects of fiscal policy on aggregate demand.

Figure 5 The Crowding-Out Effect



The Crowding-Out Effect

- When the government increases its purchases by $20 billion, the aggregate demand for goods and services could rise by more or less than $20 billion, depending on whether the multiplier effect or the crowding-out effect is larger.

Changes in Taxes

- When the government cuts personal income taxes, it increases households' take-home pay.
  - Households save some of this additional income.
  - Households also spend some of it on consumer goods.
  - Increased household spending shifts the aggregate-demand curve to the right.

Changes in Taxes

- The size of the shift in aggregate demand resulting from a tax change is affected by the multiplier and crowding-out effects.
- It is also determined by the households' perceptions about the permanency of the tax change.

USING POLICY TO STABILIZE THE ECONOMY

- Economic stabilization has been an explicit goal of U.S. policy since the Employment Act of 1946.

The Case for Active Stabilization Policy

- The Employment Act has two implications:
  - The government should avoid being the cause of economic fluctuations.
  - The government should respond to changes in the private economy in order to stabilize aggregate demand.

The Case against Active Stabilization Policy

- Some economists argue that monetary and fiscal policy destabilizes the economy.
- Monetary and fiscal policy affect the economy with a substantial lag.
- They suggest the economy should be left to deal with the short-run fluctuations on its own.

Automatic Stabilizers

- *Automatic stabilizers* are changes in fiscal policy that stimulate aggregate demand when the economy goes into a recession without policymakers having to take any deliberate action.
- Automatic stabilizers include the tax system and some forms of government spending.

Summary

- Keynes proposed the theory of liquidity preference to explain determinants of the interest rate.
- According to this theory, the interest rate adjusts to balance the supply and demand for money.

Summary

- An increase in the price level raises money demand and increases the interest rate.
- A higher interest rate reduces investment and, thereby, the quantity of goods and services demanded.
- The downward-sloping aggregate-demand curve expresses this negative relationship between the price-level and the quantity demanded.

Summary

- Policymakers can influence aggregate demand with monetary policy.
- An increase in the money supply will ultimately lead to the aggregate-demand curve shifting to the right.
- A decrease in the money supply will ultimately lead to the aggregate-demand curve shifting to the left.

Summary

- Policymakers can influence aggregate demand with fiscal policy.
- An increase in government purchases or a cut in taxes shifts the aggregate-demand curve to the right.
- A decrease in government purchases or an increase in taxes shifts the aggregate-demand curve to the left.

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.

Summary

- Because monetary and fiscal policy can influence aggregate demand, the government sometimes uses these policy instruments in an attempt to stabilize the economy.
- Economists disagree about how active the government should be in this effort.
  - Advocates say that if the government does not respond the result will be undesirable fluctuations.
  - Critics argue that attempts at stabilization often turn out destabilizing.