Chapter 2

The Basics of Supply and Demand

Topics to Be Discussed

- Supply and Demand
- The Market Mechanism
- Changes in Market Equilibrium
- Elasticities of Supply and Demand
- Short-Run Versus Long-Run Elasticities

Topics to Be Discussed

- Understanding and Predicting the Effects of Changing Market Conditions

- Effects of Government Intervention--Price Controls

Introduction

- Applications of Supply and Demand Analysis
  - Understanding and predicting how world economic conditions affect market price and production
  - Analyzing the impact of government price controls, minimum wages, price supports, and production incentives

Introduction

- Applications of Supply and Demand Analysis
  - Analyzing how taxes, subsidies, and import restrictions affect consumers and producers

Supply and Demand

- The Supply Curve
  - The supply curve shows how much of a good producers are willing to sell at a given price, holding constant other factors that might affect quantity supplied

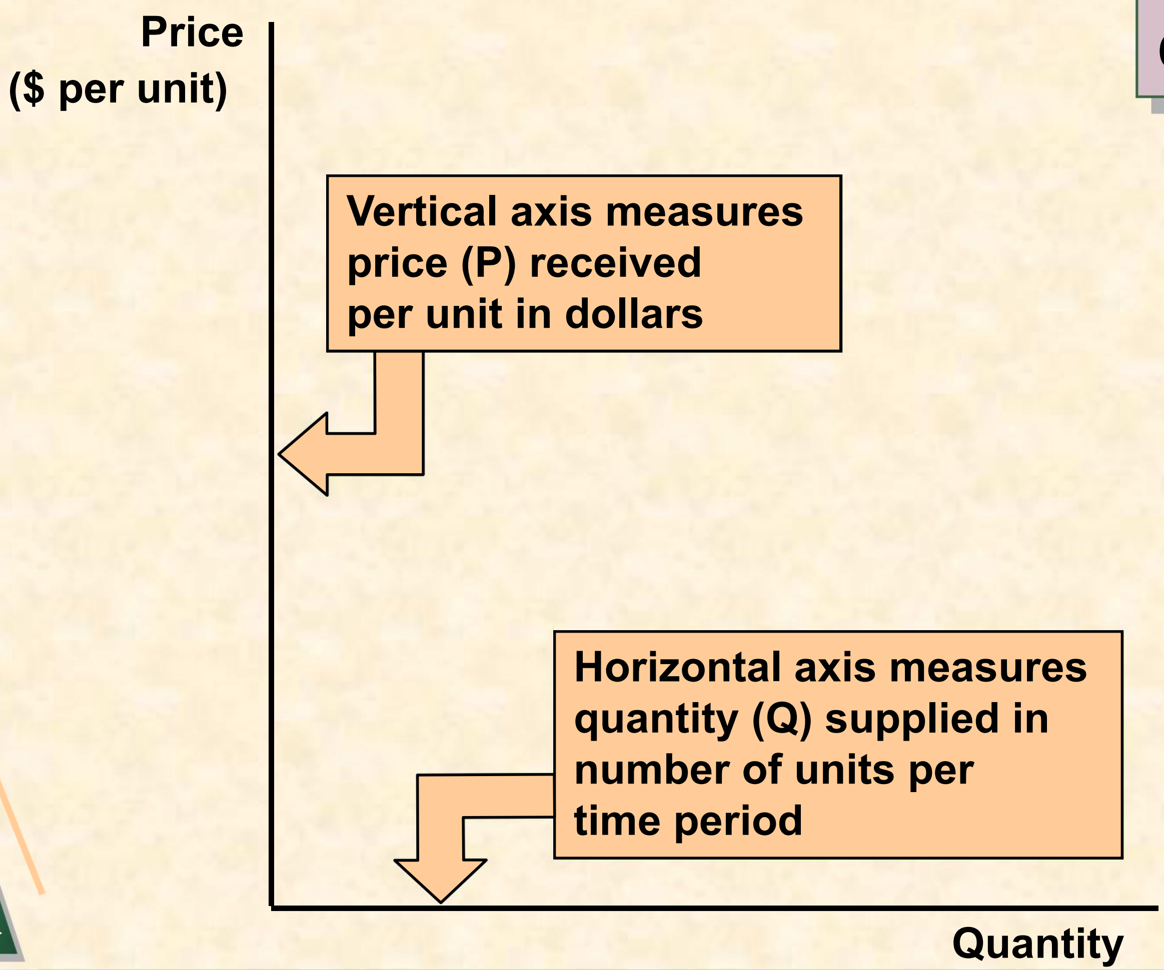
Supply and Demand

- The Supply Curve
  - This price-quantity relationship can be shown by the equation:

$$\boxed{Q_s = Q_S(P)}$$

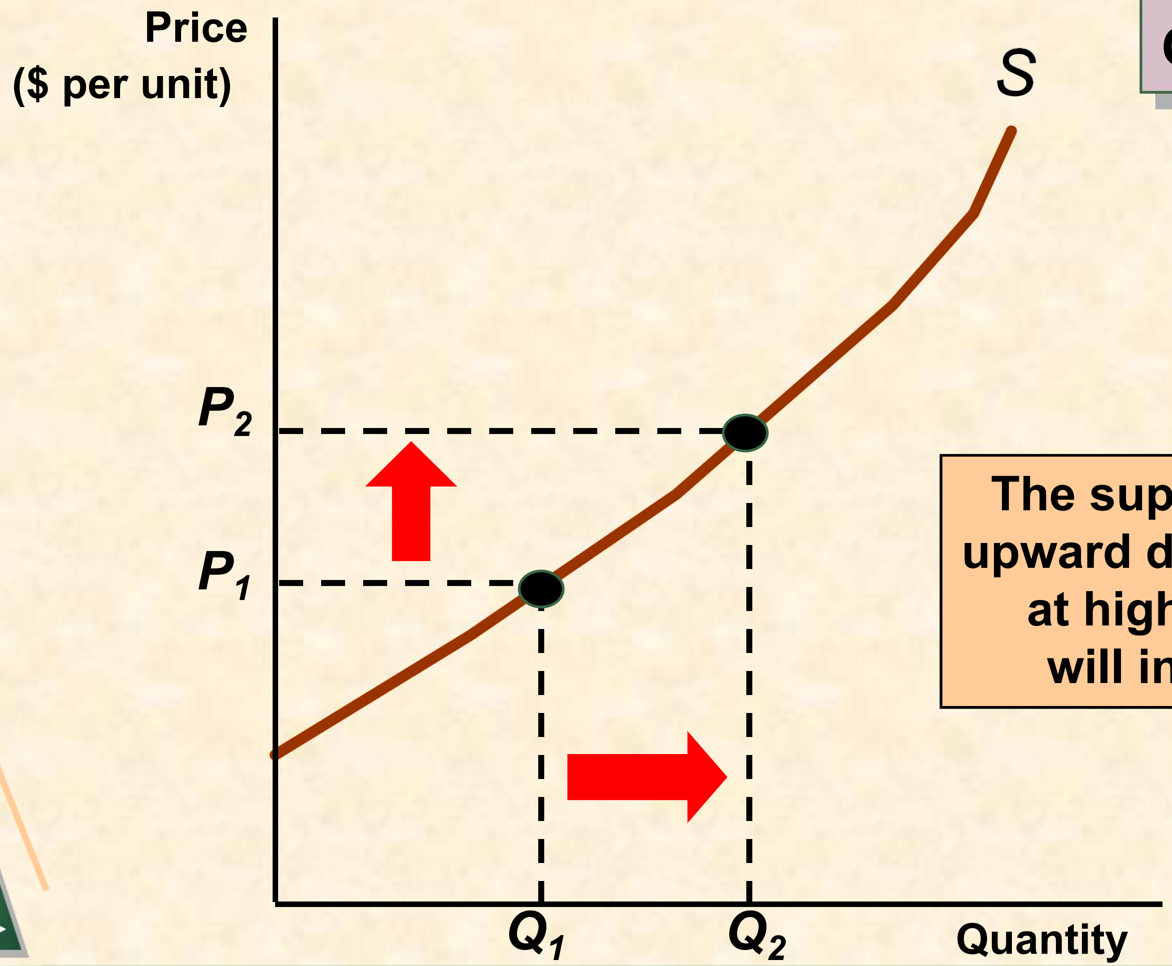
Supply and Demand

The Supply Curve Graphically



Supply and Demand

The Supply Curve Graphically



The supply curve slopes upward demonstrating that at higher prices firms will increase output

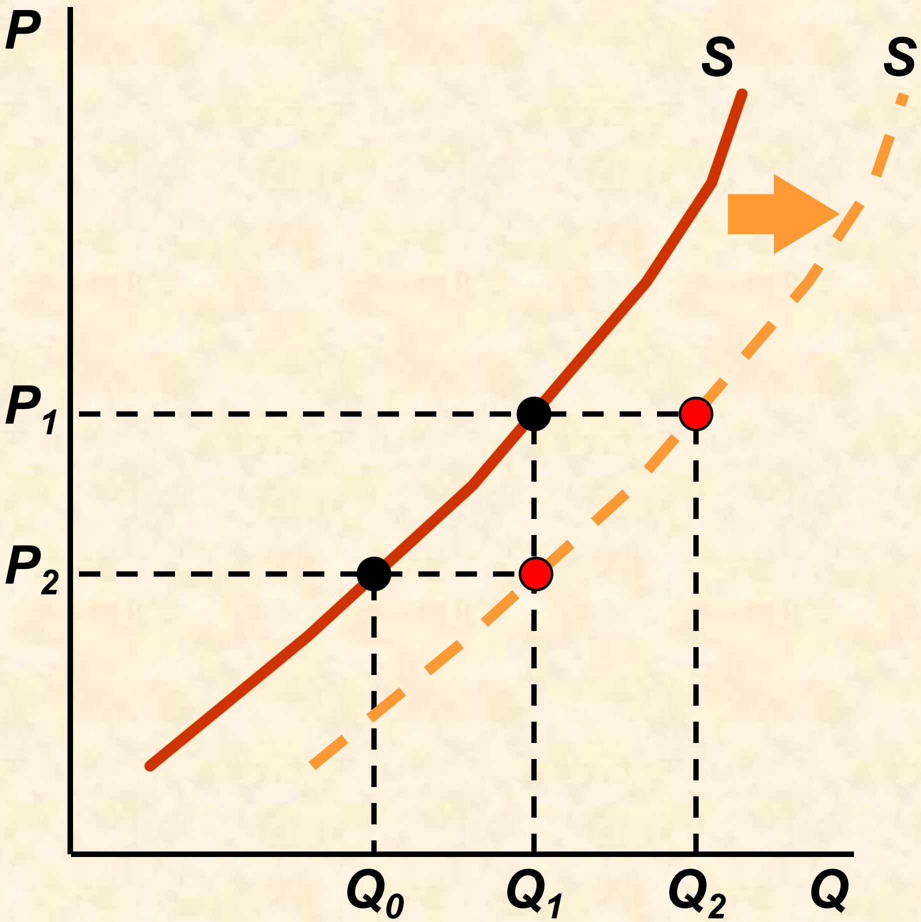
Supply and Demand

- Non-price Determining Variables of Supply
  - Costs of Production
    - Labor
    - Capital
    - Raw Materials

Supply and Demand

Change in Supply

- The cost of raw materials falls
  - At P_1, produce Q_2
  - At P_2, produce Q_1
  - Supply curve shifts right to *S'*
  - More produced at any price on *S'* than on *S*



Supply and Demand

- Supply - A Review
  - Supply is determined by non-price supply-determining variables as such as the cost of labor, capital, and raw materials.
  - Changes in supply are shown by shifting the entire supply curve.

Supply and Demand

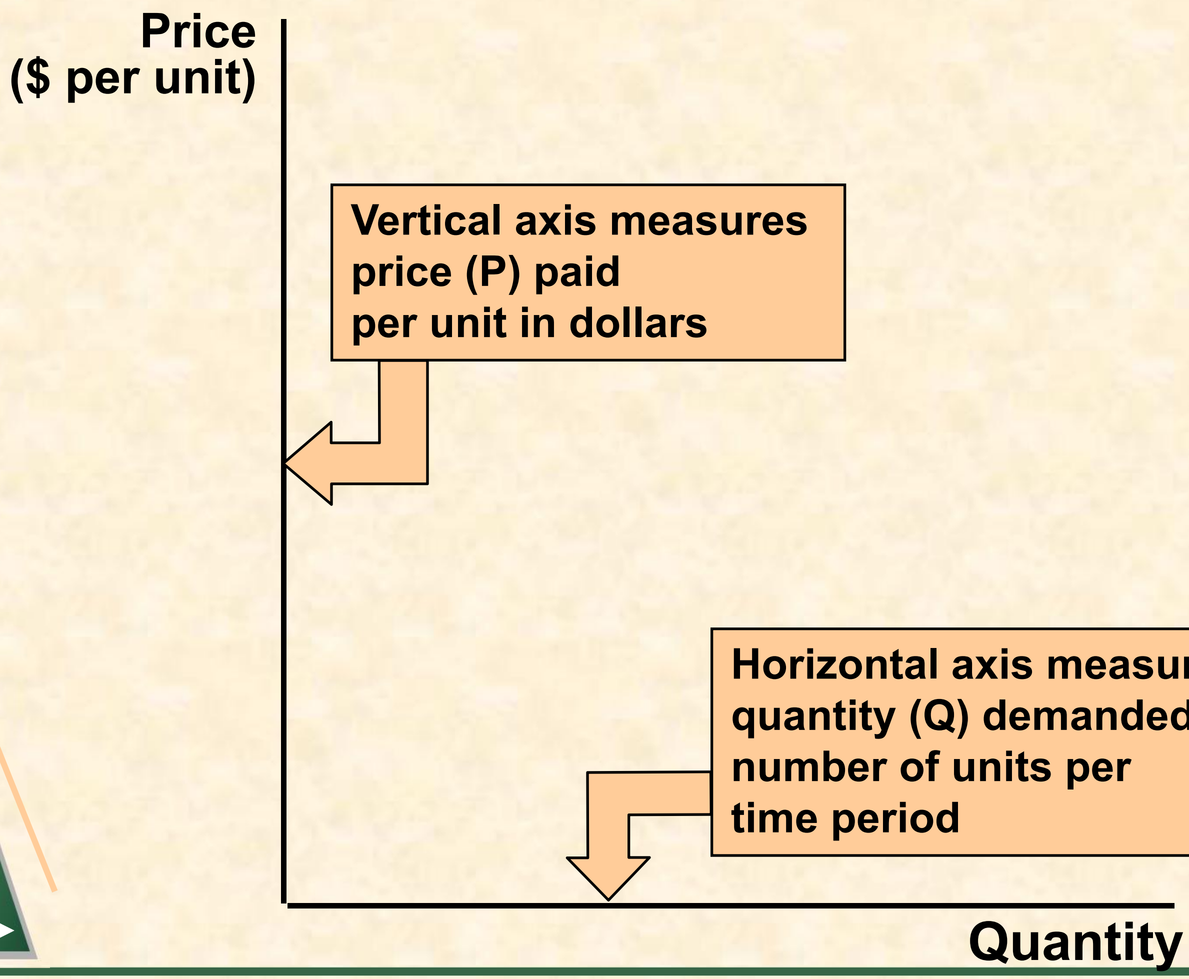
- Supply - A Review
  - *Changes in quantity supplied* are shown by movements along the supply curve and are caused by a change in the price of the product.

Supply and Demand

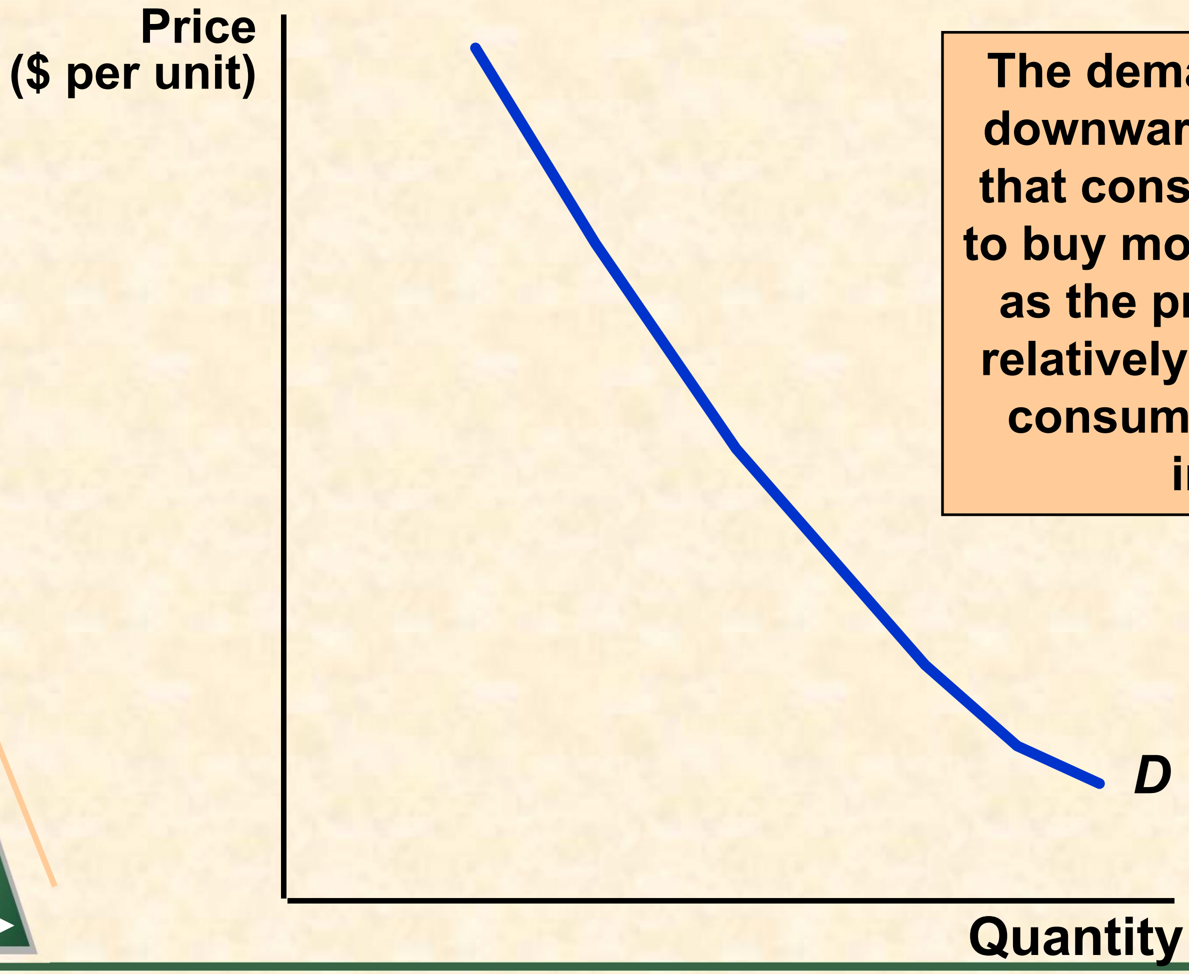
- The Demand Curve
  - The demand curve shows how much of a good consumers are willing to buy as the price per unit changes holding non-price factors constant.
  - This price-quantity relationship can be shown by the equation:

$$Q_D = Q_D(P)$$

Supply and Demand



Supply and Demand



The demand curve slopes downward demonstrating that consumers are willing to buy more at a lower price as the product becomes relatively cheaper and the consumer's real income increases.

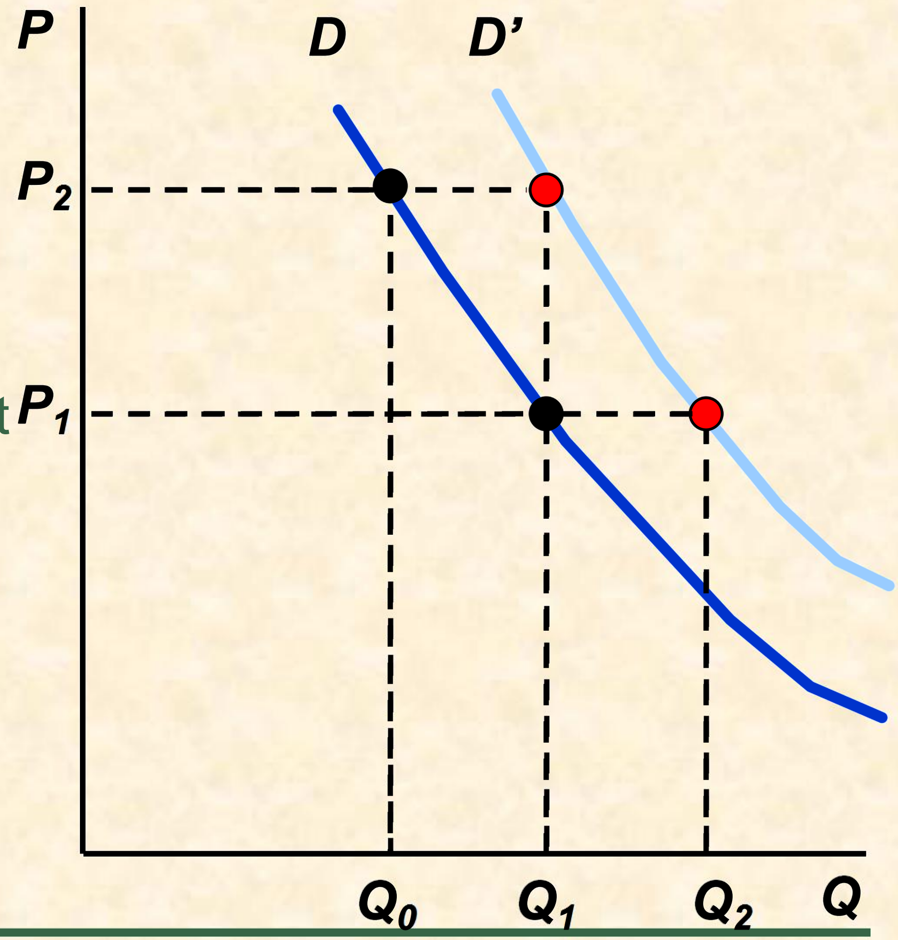
Supply and Demand

- Non-price Determining Variables of Demand
  - Income
  - Consumer Tastes
  - Price of Related Goods
    - Substitutes
    - Complements

Supply and Demand

Change in Demand

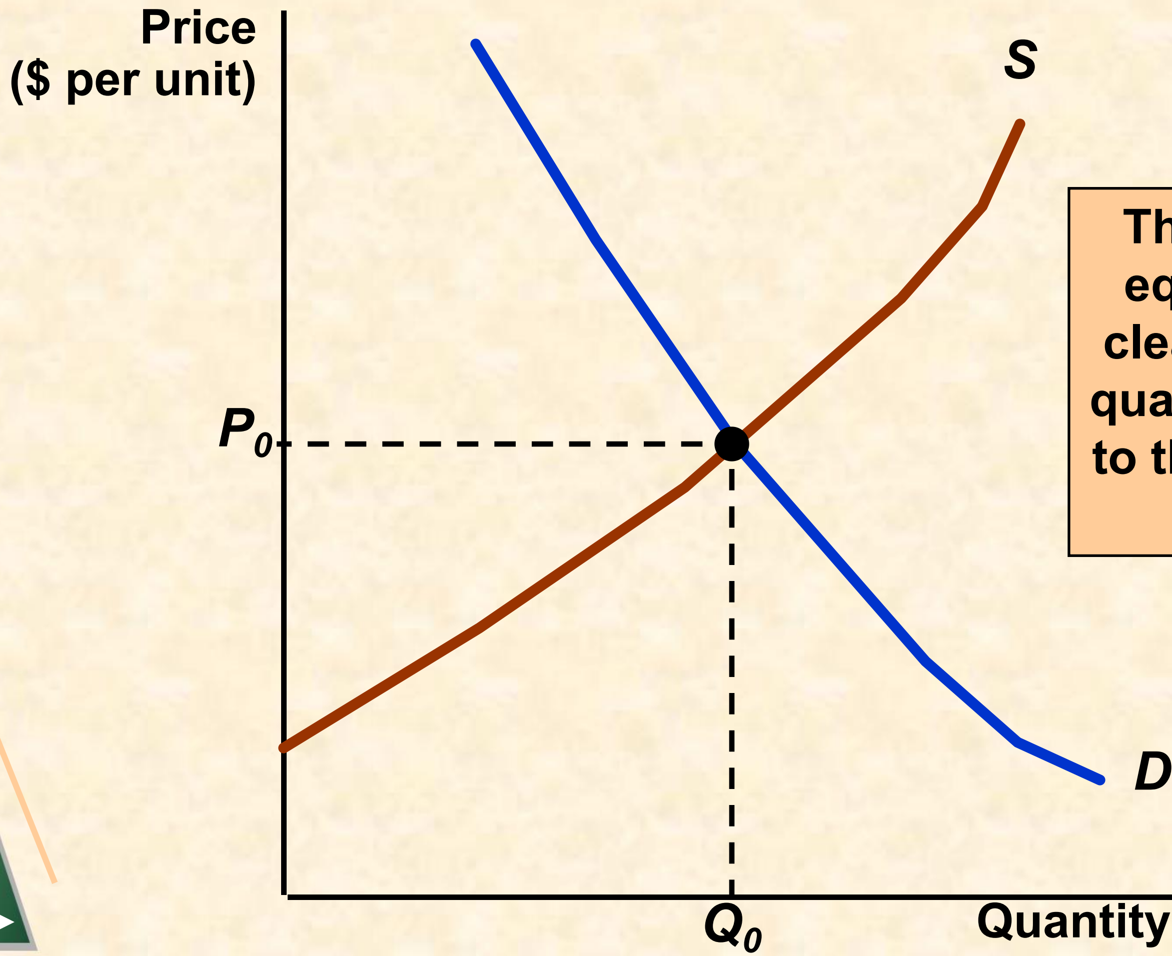
- Income Increases
  - At P_1, produce Q_2
  - At P_2, produce Q_1
  - Demand Curve shifts right
  - More purchased at any price on D' than on D



Shifts in Supply and Demand

- Demand - A Review
  - Demand is determined by non-price demand-determining variables, such as, income, price of related goods, and tastes.
  - Changes in demand are shown by shifting the entire demand curve.
  - *Changes in quantity demanded* are shown by movements along the demand curve.

The Market Mechanism

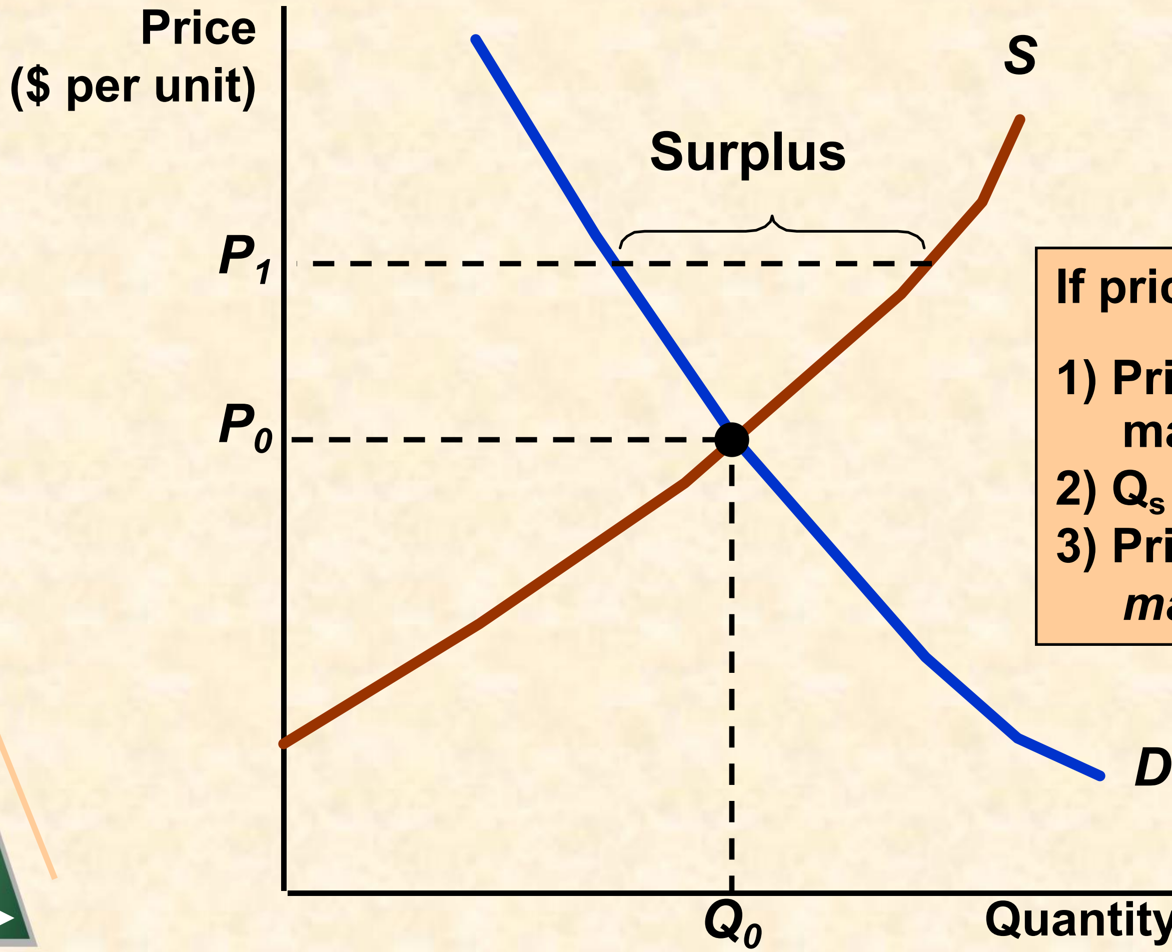


The curves intersect at equilibrium, or market-clearing, price. At P_0 the quantity supplied is equal to the quantity demanded at Q_0 .

The Market Mechanism

- Characteristics of the equilibrium or market clearing price:
  - $Q_D = Q_S$
  - No shortage
  - No excess supply
  - No pressure on the price to change

The Market Mechanism



If price is above equilibrium:

1) Price is above the market clearing price

2) $Q_s > Q_d$

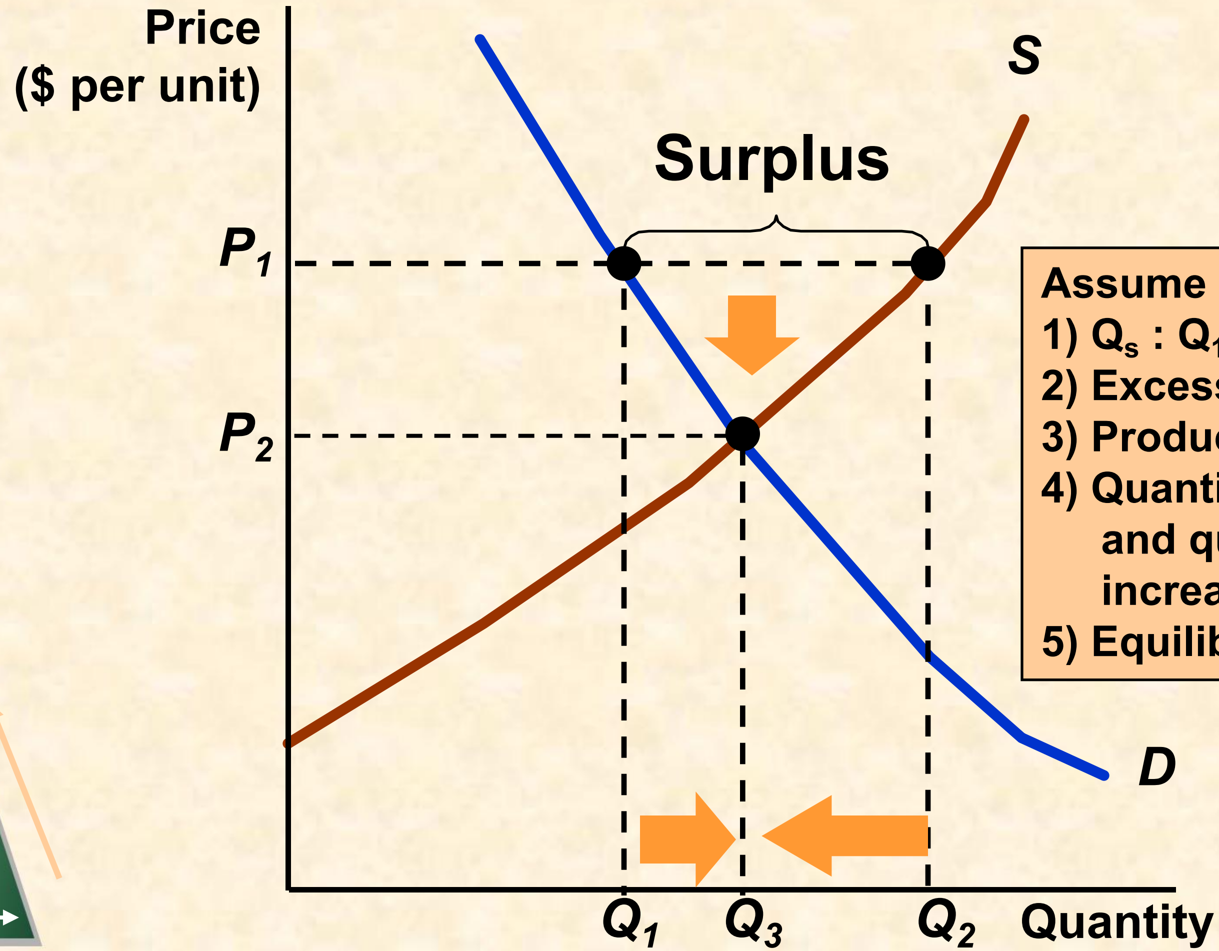
3) Price falls to the *market-clearing* price

The Market Mechanism

A Surplus

- The market price is above equilibrium
  - There is excess supply
  - Producers lower prices
  - Quantity demanded increases and quantity supplied decreases
  - The market continues to adjust until the equilibrium price is reached.

The Market Mechanism



Assume the price is P_1 , then:

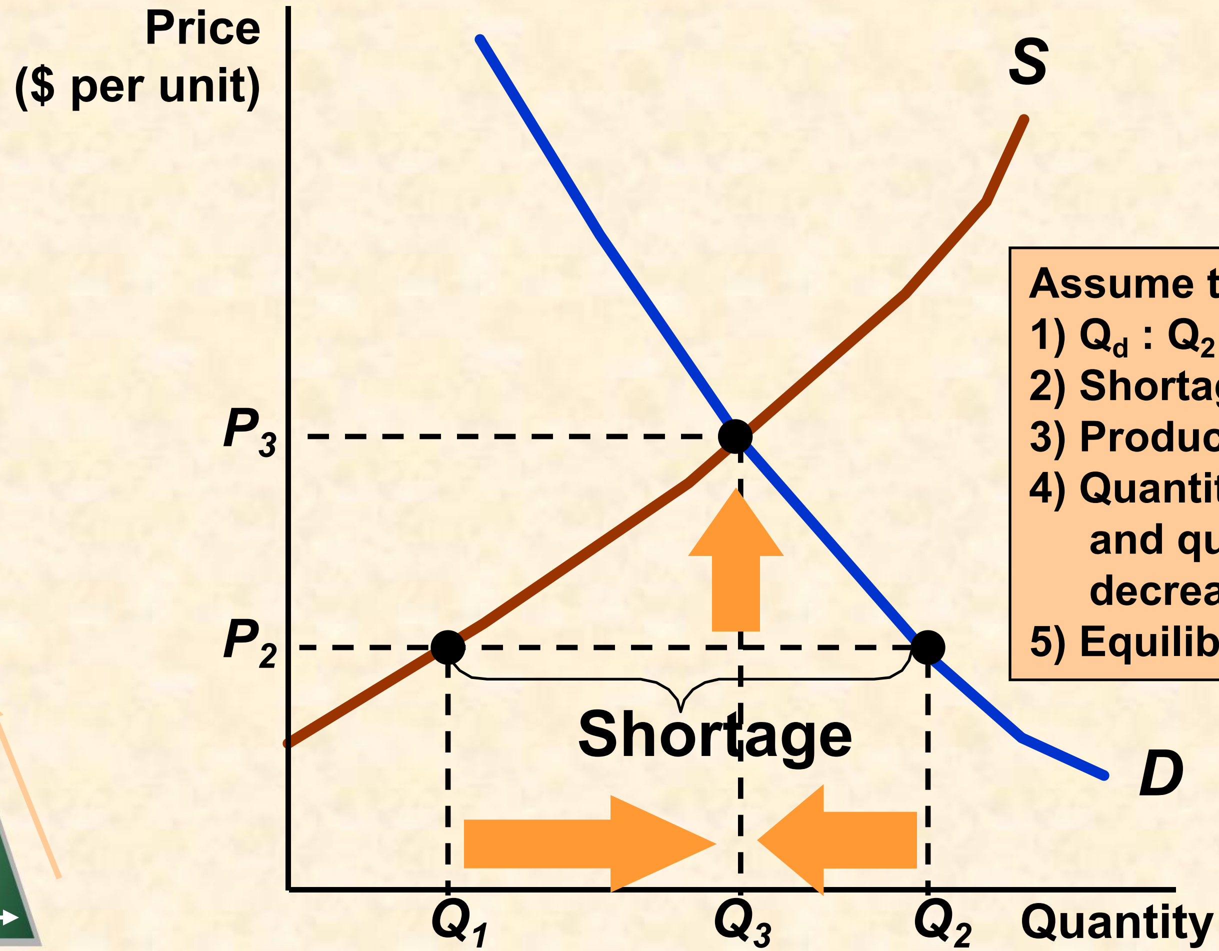
1) $Q_s : Q_1 > Q_d : Q_2$
2) Excess supply is Q_1:Q_2.
3) Producers lower price.
4) Quantity supplied decreases and quantity demanded increases.
5) Equilibrium at P_2Q_3

The Market Mechanism

Surplus - Review:

- The market price is above equilibrium:
  - There is excess supply
  - Producers lower prices
  - Quantity demanded increases and quantity supplied decreases
  - The market continues to adjust until the equilibrium price is reached

The Market Mechanism



Assume the price is P_2 , then:

1) Q_d : Q_2 > Q_s : Q_1
2) Shortage is Q_1:Q_2.
3) Producers raise price.
4) Quantity supplied increases and quantity demanded decreases.
5) Equilibrium at P_3, Q_3

The Market Mechanism

Shortage

- The market price is below equilibrium:
  - There is a shortage
  - Producers raise prices
  - Quantity demanded decreases and quantity supplied increases
  - The market continues to adjust until the new equilibrium price is reached.

The Market Mechanism

- Market Mechanism Summary

  1) Supply and demand interact to determine the market-clearing price.

  2) When not in equilibrium, the market will adjust to alleviate a shortage or surplus and return the market to equilibrium.

  3) Markets must be competitive for the mechanism to be efficient.

Changes In Market Equilibrium

- Equilibrium prices are determined by the relative level of supply and demand.
- Supply and demand are determined by particular values of supply and demand determining variables.
- Changes in any one or combination of these variables can cause a change in the equilibrium price and/or quantity.

Changes In Market Equilibrium

- Raw material prices fall
  - S shifts to S'
  - Surplus @ P_1 of Q_1, Q_2
  - Equilibrium @ P_3, Q_3