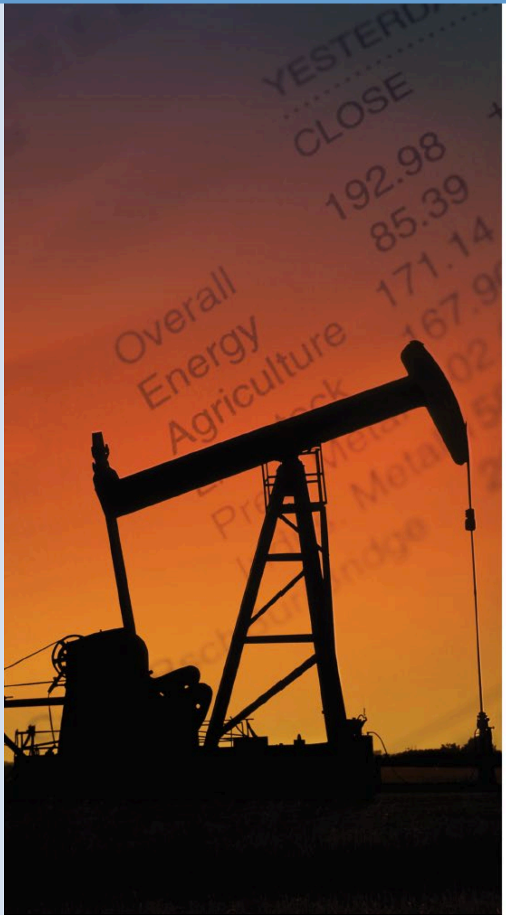
Chapter 2: Supply and Demand: The Basics



Introduction to Microeconomics, 6th Edition

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Learning Objectives

- How the price of a good or service affects the quantity demanded by buyers
- How other market conditions affect demand
- How the price of a good affects the quantity supplied by sellers
- How other market conditions affect supply
- How supply and demand interact to determine the market price of a good or service
- Why market prices and quantities change in response to changes in market conditions
- What the unintended consequences are of price floors and price ceilings

Chapter Outline (Slide 1 of 2)

- Demand
  - The Demand Curve
  - Shifts in the Demand Curve
    - Changes in the Price of Another Good
    - Changes in Consumer Incomes
    - Changes n Expectations
    - Changes in Tastes
- Supply
  - The Supply Curve
  - Shifts in the Supply Curve
    - Changes in Technology
    - Changes in Input Prices
    - Changes in the Prices of Other Goods
    - Changes in Expectations

Chapter Outline (Slide 2 of 2)

- Interaction of Supply and Demand
  - Market Equilibrium
  - Shortages
  - Surpluses
  - Changes in Market Conditions
    - Response to a Shift in Demand
    - Response to a Shift in Supply
    - A Shift in One Curve or Both?
- Price Floors and Ceilings
  - Price Supports: The Market for Milk
  - Price Ceilings: The Case of Rent Control
    - Intended Effects
    - Unintended Effects
  - Equilibrium as Spontaneous Order
- Some Closing Thoughts

Introduction

- **Demand:** the willingness and ability of buyers to purchase goods
- **Supply:** the willingness and ability of sellers to provide goods for sale in a market

Demand

- **Law of demand:** the principle that an inverse relationship exists between the price of a good and the quantity of that good that buyers demand, other things being equal
  - Quantity demanded tends to rise as prices fall, and vice versa—happens for two reasons:
    - If the price of one good falls while the prices of other goods stay the same, substitution of goods for a cheaper good is likely.
    - When the price of one good falls while incomes stay the same, people feel more wealthy and use their added buying power to purchase more.
- Demand combines the willingness and ability to buy.

The Demand Curve

- **Demand curve:** a graphical representation of the relationship between the price of a good and the quantity of that good that buyers demand
- **Change in quantity demanded:** a change in the quantity of a good that buyers are willing and able to purchase that is caused by a change in the price of a good, other things being equal; shown by a movement from one point to another along a demand curve

(a)

	Price of Chicken (dollars per pound)	Quantity of Chicken Demanded (billions of pounds per year)
	$3.50	0.5
	$3.00	1.0
	$2.50	1.5
A	$2.00	2.0
	$1.50	2.5
B	$1.00	3.0
	$0.50	3.5

(b)

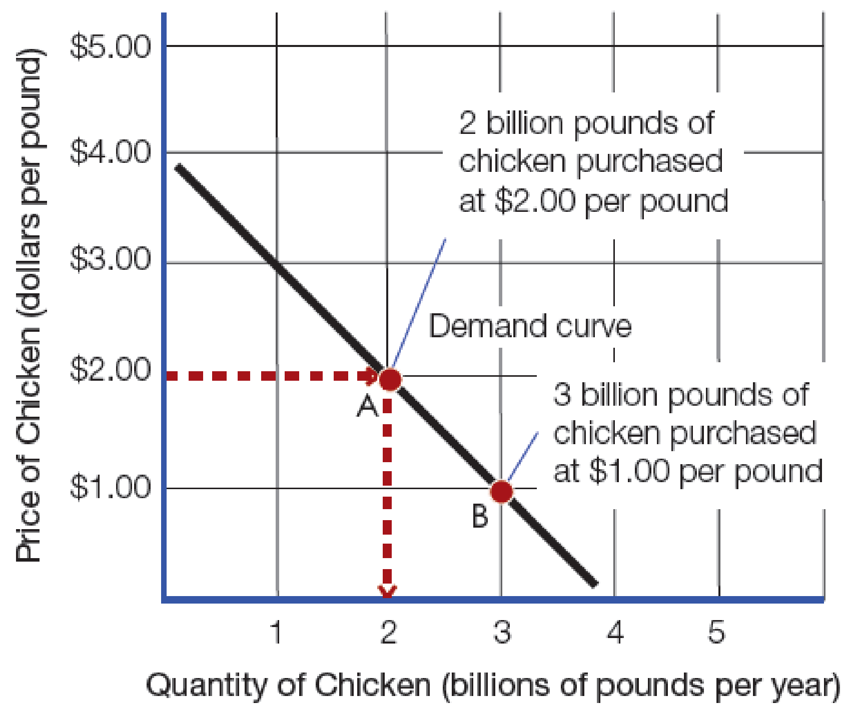


Figure 2-1: A Demand Curve for Chicken

Shifts in the Demand Curve (Slide 1 of 4)

- Changes in variables other than price can also affect people's buying decisions (i.e., the price of competing goods, changes in consumer's incomes)
  - Two rules apply to graphically represent this:
    - "Other things being equal" clause shows the effect of a change in price on quantity demanded in the form of a movement along the demand curve.
    - The effect of any other good or service creates a shift in the demand curve

Shifts in the Demand Curve (Slide 2 of 4)

- Changes in the Price of Another Good
  - Change in quantity demanded: shown as a movement along the demand curve
  - **Change in demand:** a change in the quantity of a good that the buyers are willing and able to purchase that is caused by a change in some condition other than the price of that good; shown as a shift in the demand curve
  - **Substitutes:** a pair of goods for which an increase in the price of one causes an increase in demand for the other
  - **Complementary goods:** a pair of goods for which an increase in the price of one causes a decrease in demand for the other

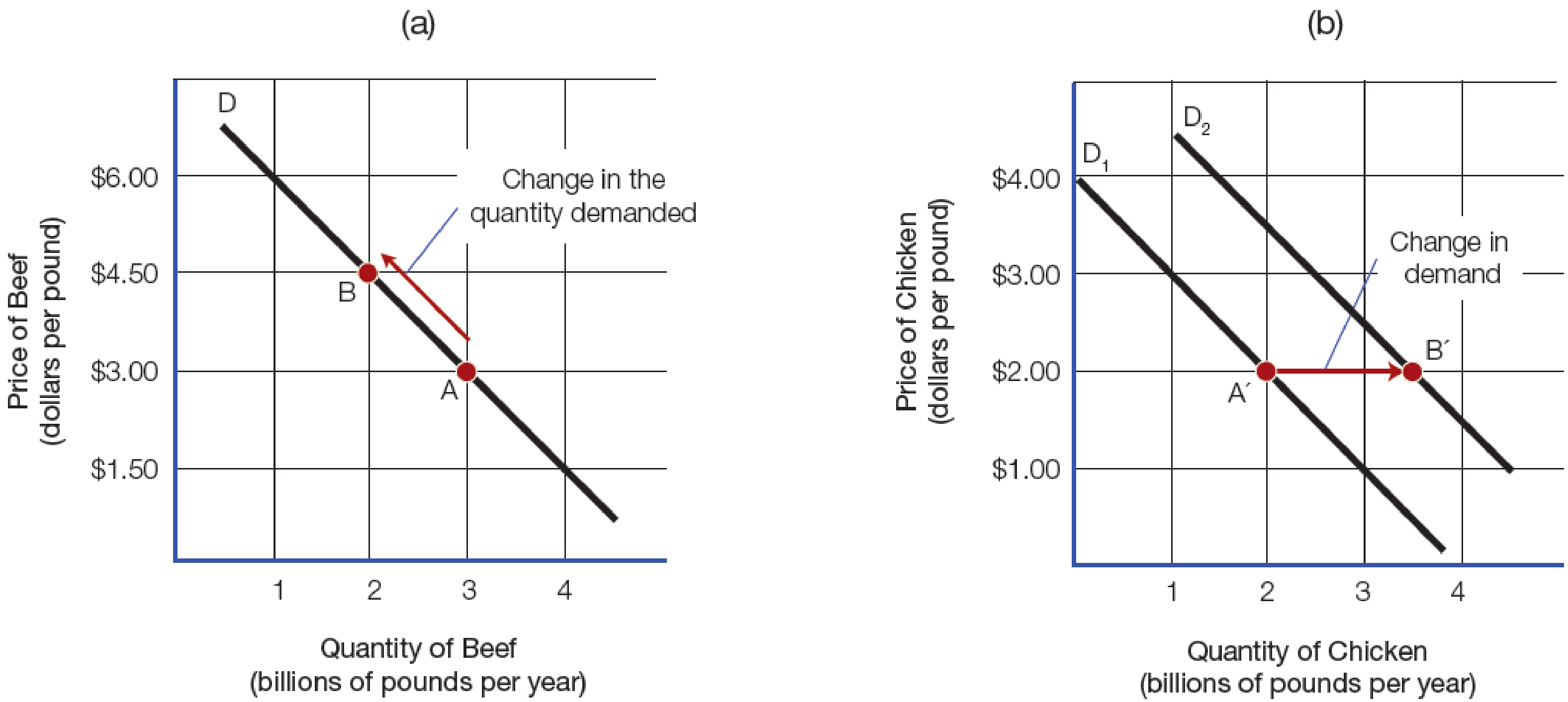


Figure 2-2: Effects of an Increase in the Price of Beef on the Demand for Chicken

Shifts in the Demand Curve (Slide 3 of 4)

- Changes in Consumer Incomes—people tend to buy larger quantities of many goods when their incomes rise, assuming that prices do not change.
- **Normal good:** a good for which an increase in consumer income results in the increase in demand
- **Inferior good:** a good for which an increase in consumer incomes results in a decrease in demand

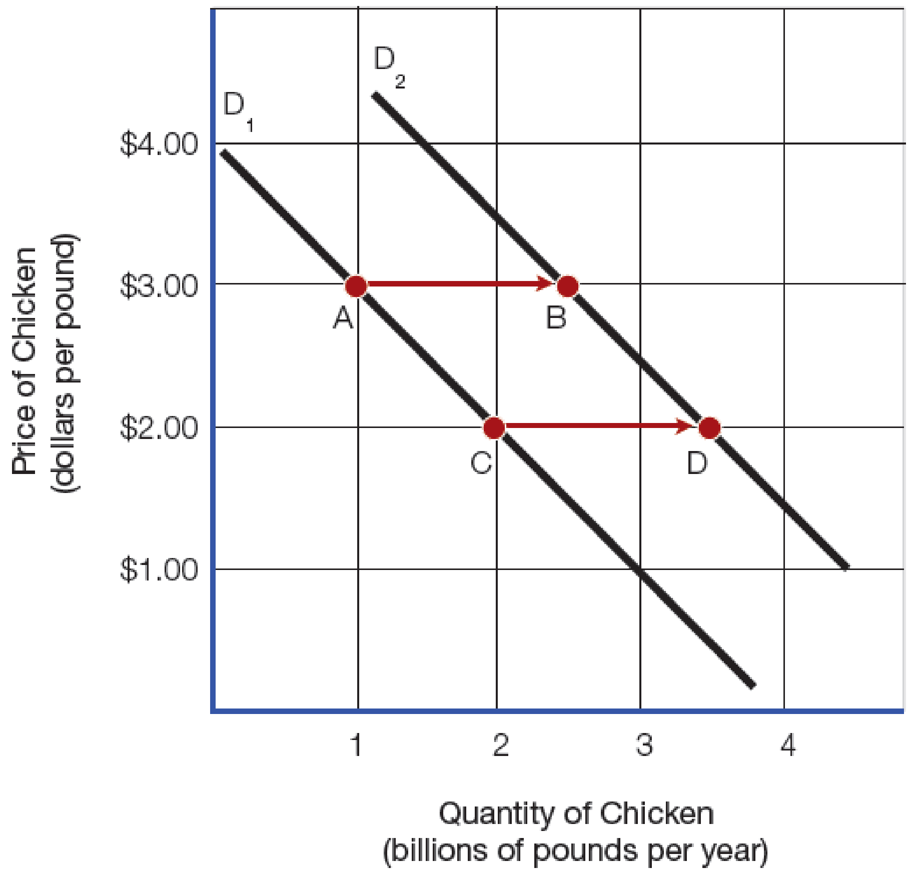


Figure 2-3: Effects of an Increase in Consumer Income on the Demand for Chicken

Shifts in the Demand Curve (Slide 4 of 4)

- Changes in buyer's expectations can also shift demand curves.
- Changes in tastes can also cause an increase or decrease in demand.
- Such changes can occur rapidly or gradually.

The Supply Curve

- **Supply curve:** a graphical representation of the relationship between the price of a good and the quantity of that good that sellers are willing to supply
  - Quantity supplied increases as demand goes up, and vice versa.
  - Positive supply curve slope can be explained by:
    - *Producers' responses to market incentives*
    - *Rising cost of producing additional output facilities of a fixed size*
    - *Comparative advantage and opportunity cost*

(a)

	Price of Chicken (dollars per pound)	Quantity of Chicken Supplied (billions of pounds per year)
	$4.00	4.0
	$3.50	3.5
A	$3.00	3.0
	$2.50	2.5
B	$2.00	2.0
	$1.50	1.5
	$1.00	1.0

(b)

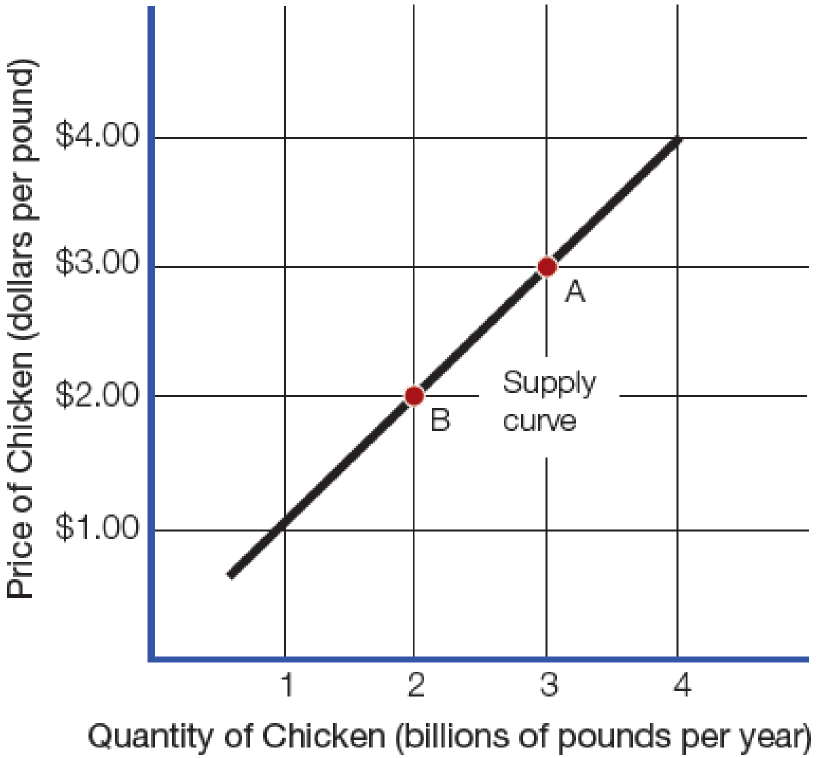


Figure 2-4: A Supply Curve for Chicken

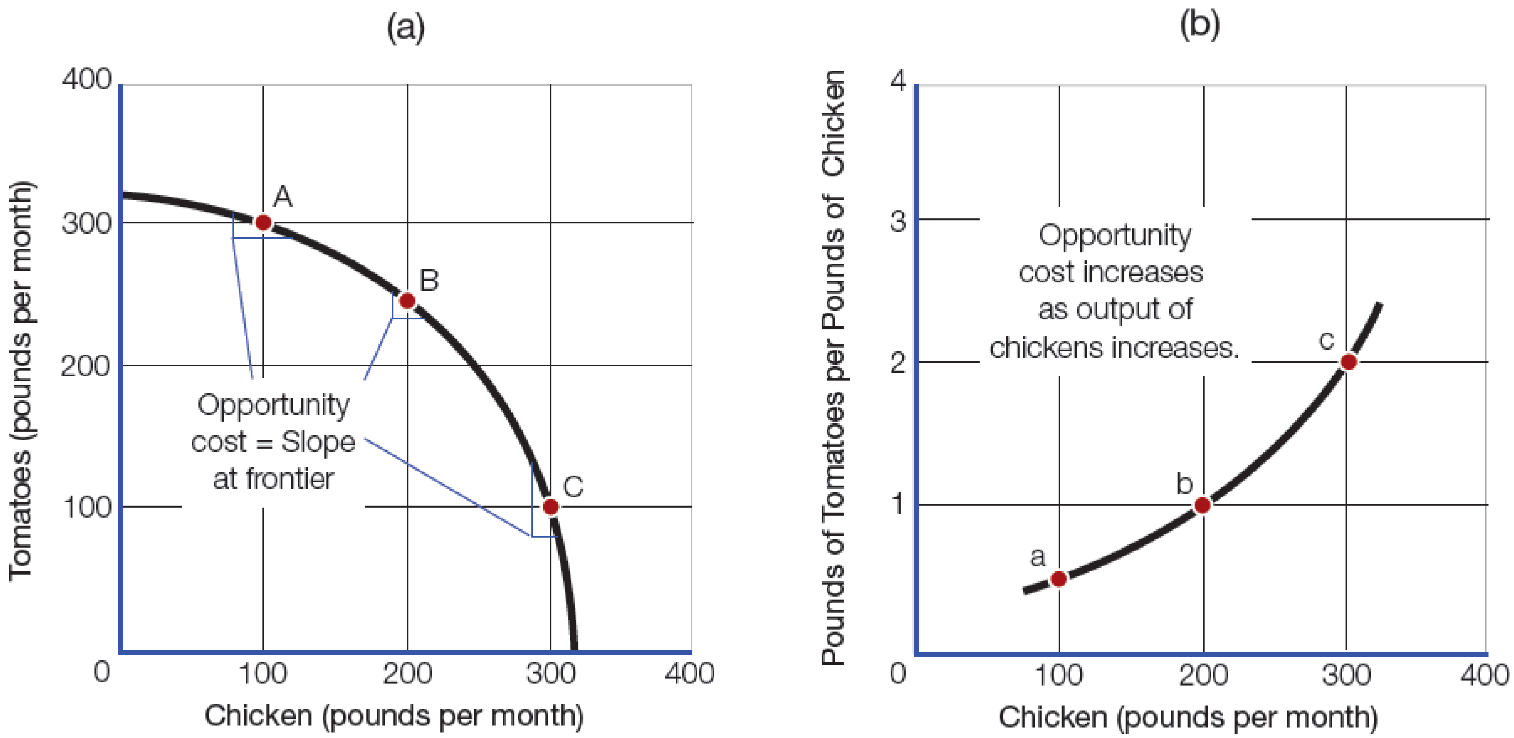


Figure 2-5: The Production Possibility Curve and the Supply Curve

Shifts in the Supply Curve (Slide 1 of 2)

- **Change in quantity supplied:** a change in the quantity of a good that suppliers are willing and able to sell that is caused by a change in the good's price, other things being equal; shown by a movement along a supply curve
- **Change in supply:** a change in the quantity of a good that suppliers are willing and able to sell that is caused by a change in some condition other than the good's price; shown by a shift in the supply curve

Shifts in the Supply Curve (Slide 2 of 2)

- Factors that can cause a shift in the supply curve:
  - Changes in Technology
  - Changes in Input Prices
  - Changes in the Prices of Other Goods
  - Changes in Expectations

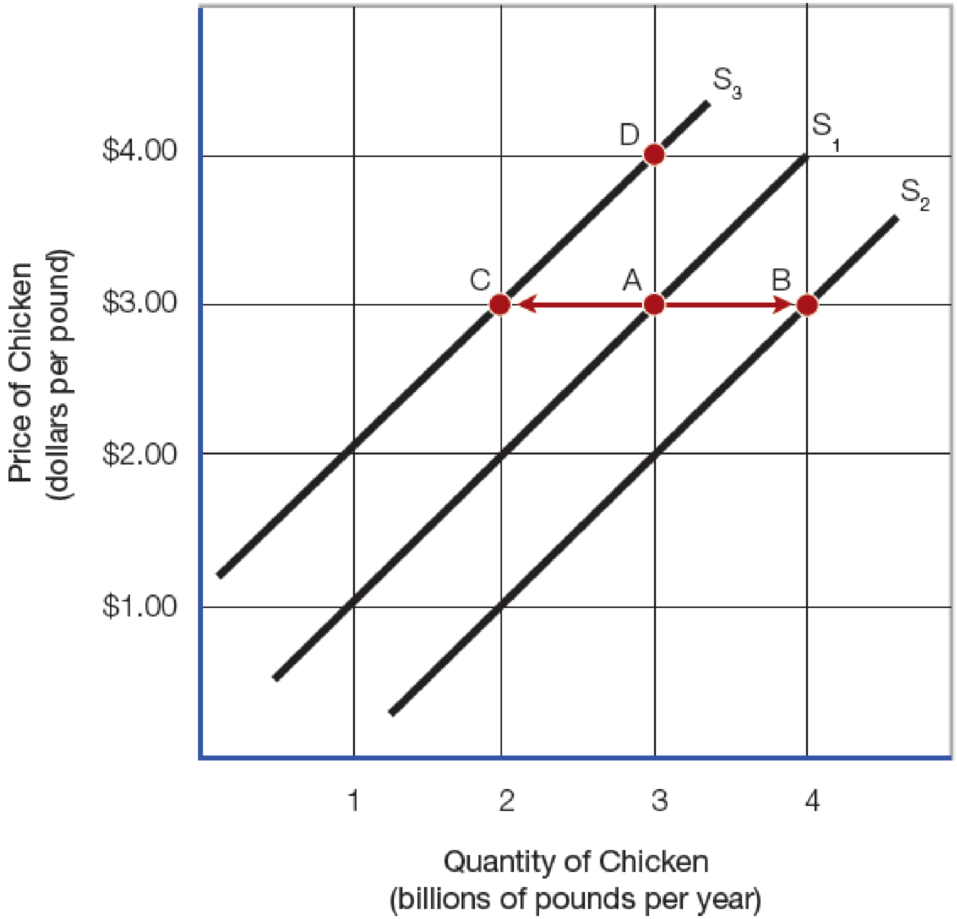
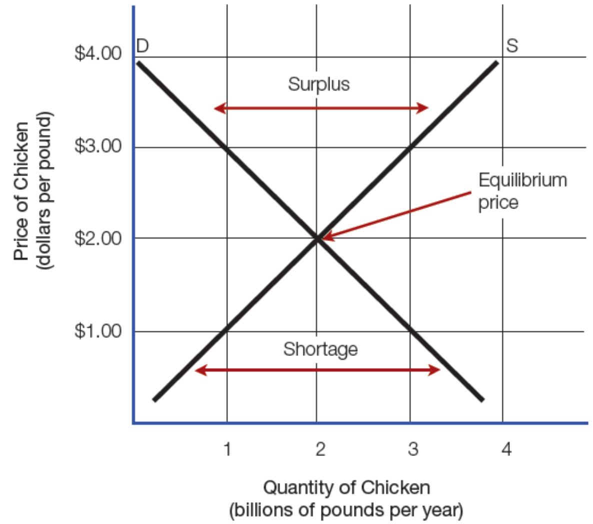


Figure 2-6: Shifts in the Supply Curve for Chicken

Market Equilibrium

- **Equilibrium:** a condition in which buyers' and sellers' plans exactly mesh in the marketplace, so that the quantity supplied exactly equal s the quantity demanded at a given price

(a)



(b)

Price (per pound)	Quantity Demanded (billions of pounds)	Quantity Supplied (billions of pounds)	Shortage (billions of pounds)	Surplus (billions of pounds)	Direction of Pressure on Rice
$3.50	0.5	3.5	—	3.0	Downward
$3.00	1.0	3.0	—	2.0	Downward
$2.50	1.5	2.5	—	1.0	Downward
$2.00	2.0	2.0	—	—	Equilibrium
$1.50	2.5	1.5	1.0	—	Upward
$1.00	3.0	1.0	2.0	—	Upward
$0.50	3.5	0.5	3.0	—	Upward

Figure 2-7: Equilibrium in the Chicken Market

Shortages

- **Excess quantity demanded (shortage):** a condition in which the quantity of a good demanded at a given price exceeds the quantity supplied
- First sign of a shortage is usually a decrease in **inventory**—a stock of a good awaiting sale or use.
  - To rebuild inventory: reduce output, increase price, or a combination of both
  - As price changes, buyers also adjust, reducing purchases.
- Different for markets for services—no inventory—formation of a queue

Surpluses

- **Excess quantity supplied (surplus):** a condition in which the quantity of a good supplied at a given price exceeds the quantity demanded
- Inventories will grow
  - Sellers will cut output, decrease prices, or a combination of both
  - Buyers will adjust by increasing purchases
- Markets with no inventory will react to surpluses by increasing the queue of sellers looking for customers.

Changes in Market Conditions

- Response to a Shift in Demand—movement along the supply curve, not a shift in the curve
- Response to a Shift in Supply—supply curve would shift and demand curve would remain the same
- A Shift in One Curve or Both?
  - Both curves do *not* always shift.

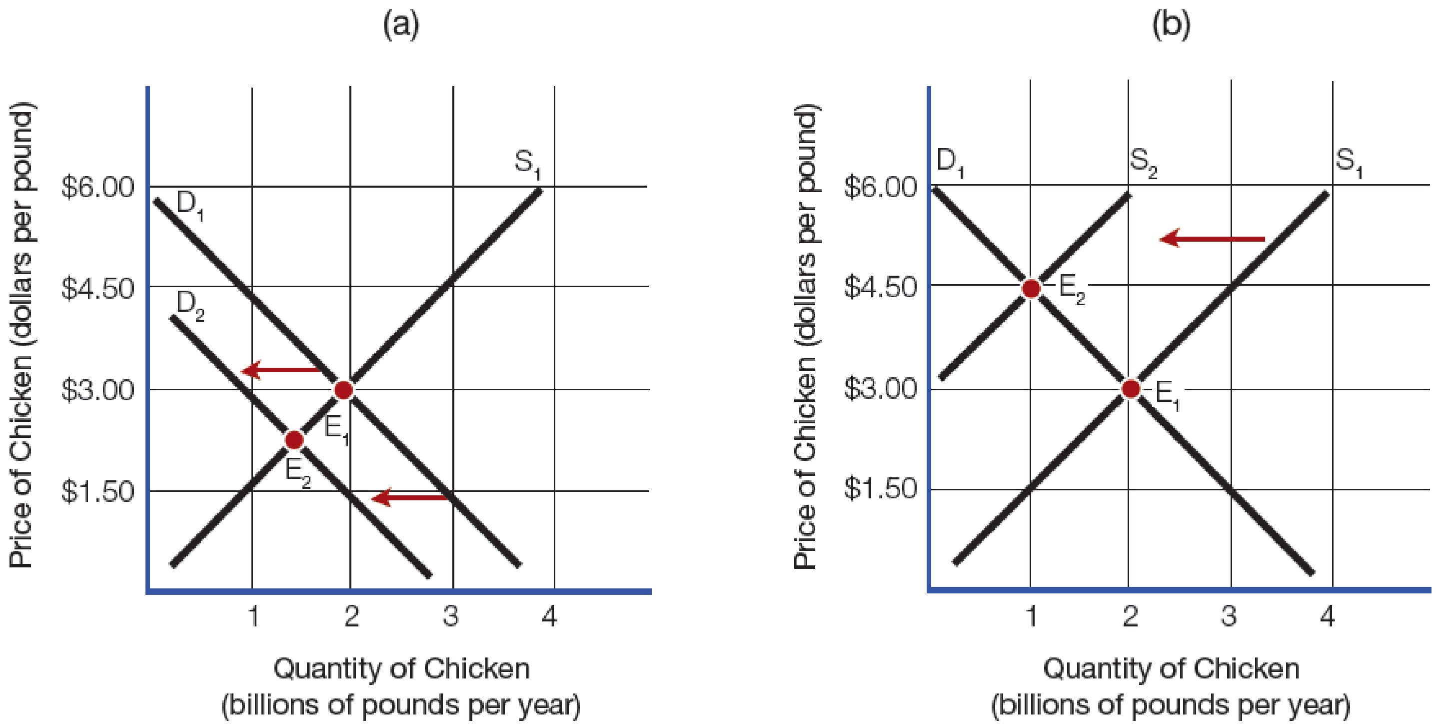


Figure 2-8: Effects of Changing Conditions in the Chicken Market

Price Supports: The Market for Milk

- Price floor: lowest price to be charged for a good or service
- Example used in the textbook is the milk price support program.
- Problems occur with price floors.
  - Floor can be consistently higher than the equilibrium price causing surplus.

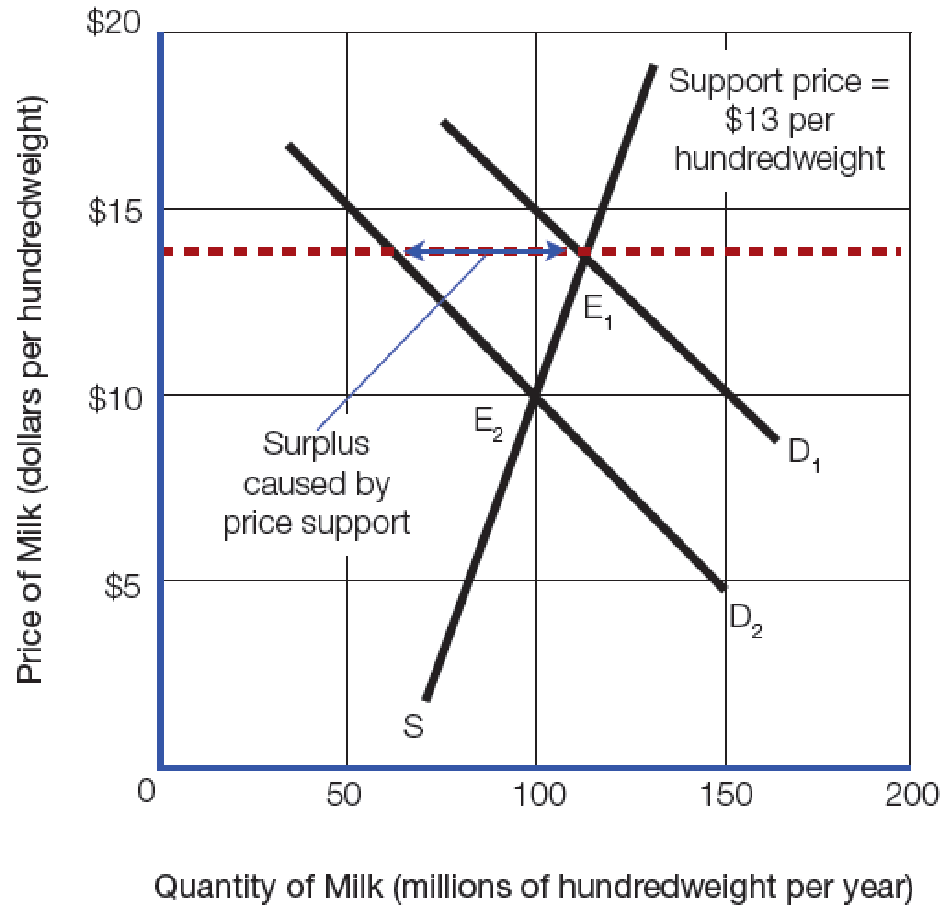


Figure 2-9: Price Supports for Milk

Price Ceilings: The Case of Rent Control

- Using price ceilings in the form of rent control to prevent landlords from charging "unreasonably high" rents
- Intended Effects
  - Lower rents
- Unintended Effects
  - Shortage of housing
  - More housing discrimination

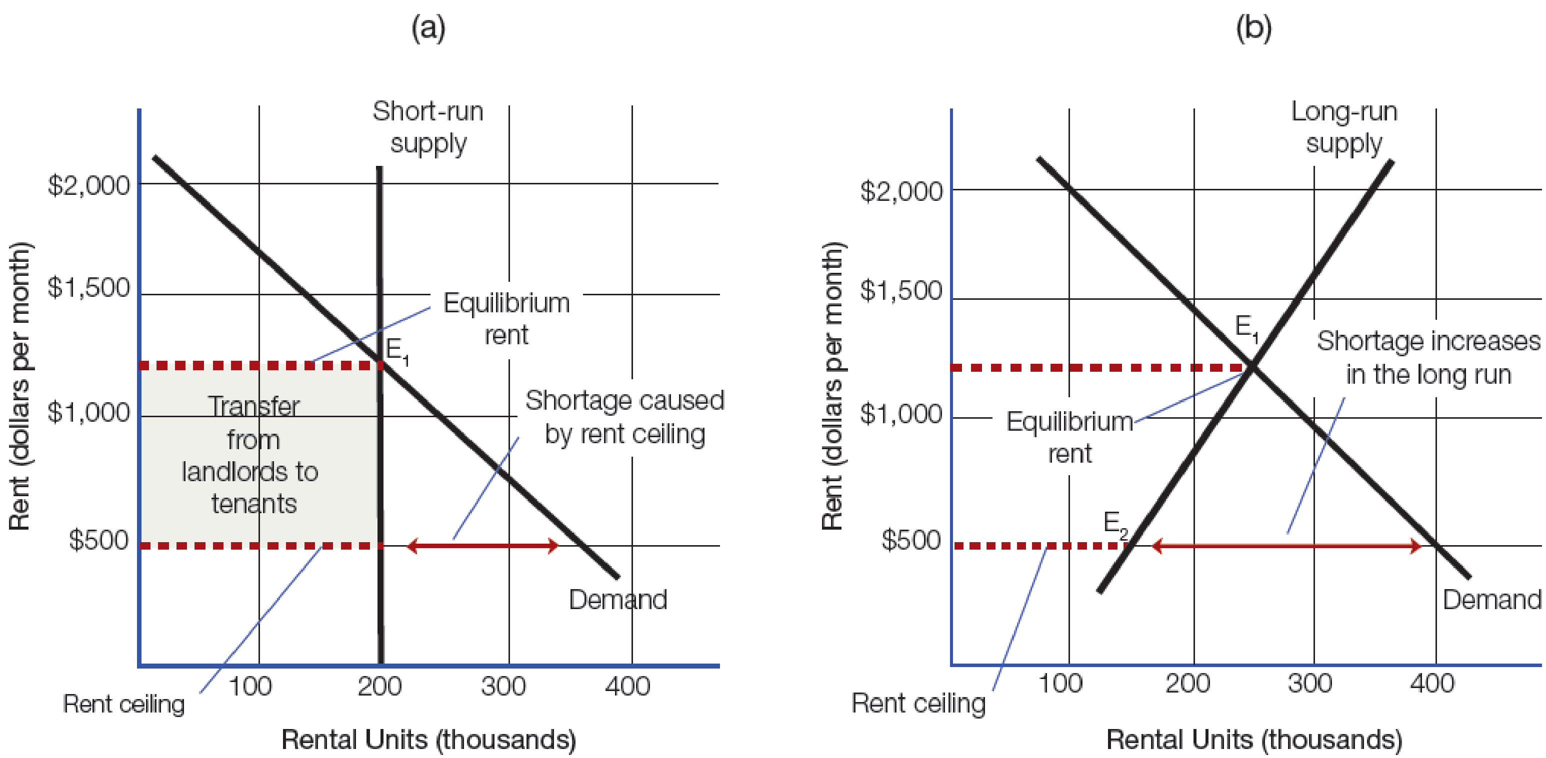


Figure 2-10: Effects of Rent Control

Chapter Summary (Slide 1 of 6)

F I N A L   T H O U G H T S

- How does the price of a good or service affect the quantity that buyers demand?
  - *Demand:* the willingness and ability of buyers to purchase goods and services
  - *Law of demand:* there is a universal relationship between the price of a good and the quantity demanded
    - *Quantity demanded:* amount buyers will purchase at a given price
    - Law of demand can be represented with a negatively sloped demand curve.
      - Movement upon the demand curve shows a change in quantity demanded

Chapter Summary (Slide 2 of 6)

F I N A L T H O U G H T S

- How do other market conditions affect demand?
  - *Change in demand:* a change in any of the variables covered by the "other things being equal" clause causes a shift in the demand curve
    - For example, changes in prices of goods that are *substitutes* or *compliments*, as well as changes in consumers' incomes

Chapter Summary (Slide 3 of 6)

F I N A L T H O U G H T S

- How does the price of a good affect the quantity supplied by sellers?
  - *Supply:* sellers' willingness and ability to offer products for sale in a market
    - Increase in the price of a good will increase the quantity of a good supplied, in most markets
  - Expressed on a positively sloped *supply curve*

Chapter Summary (Slide 4 of 6)

F I N A L   T H O U G H T S

- How do changes in other market conditions affect supply?
  - Change in any items covered by “other things being equal” clause will shift supply curve
- How do supply and demand interact to determine the market price of a good or service?
  - *Equilibrium price:* the price at which the quantity of a good that sellers plan to supply will exactly match the quantity that buyers plan to purchase

Chapter Summary (Slide 5 of 6)

F I N A L T H O U G H T S

- Why do market prices and quantities change in response to changes in market conditions?
  - Change in market condition, shifts the supply or demand curve, changes the equilibrium price and quantity
  - Demand curve shifts to the right for a normal good if consumer incomes increase.
    - Causes a shortage
  - Supply curve shifts to the right if there is a technological advancement, etc.
    - Causes a surplus

Chapter Summary (Slide 6 of 6)

F I N A L T H O U G H T S

- What are the unintended consequences of price floors and price ceilings?
  - Price floors lead to persistent surpluses.
  - Price ceilings lead to persistent shortages, which become more severe over time.