The Theory of Demand and Supply

Objectives

- The Concept of Market
- Definition of Demand
- Demand Schedule and Demand Curve
- Law of Demand
- Assumptions and limitations of the law
- Determinants of Demand
- Reasons for Downward Sloping of the Demand Curve
- Change in Quantity Demanded vs. Change in Demand/Movement Along the Demand Curve and Shifting of the Demand Curve
- Definition of Supply
- The Difference Between Supply and Stock
- Supply Schedule and Supply Curve
- Law of Supply
- Assumptions of the law
- Determinants of Supply
- Change in Quantity Supplied vs. Change in Supply/ Movement Along the Supply Curve and Shifting of Supply Curve
- Equilibrium
- Changes in the Equilibrium
- References

The Concept of Market

- Division of individual economic units → Buyers and Sellers
- Buyers → consumers, firms.
- Sellers → producers of goods and services
- Market → an institution/mechanism bringing that brings together buyers and sellers
- Not limited to geographical boundaries, exists in many forms
- Interaction of buyers and sellers → Market Price of a good or collection of goods

The Concept of Demand

Definition of Demand

- The power to purchase a good along with willingness to purchase it
- If a consumer holds one of them Demand does not exist
- The quantity of a good that potential purchasers would buy or attempt to buy, at a certain price

“Demand is the representation of the various amounts of a product that consumers are willing and able to purchase at each of a series of possible prices during a specific period of time”

Demand Schedule and Demand Curve

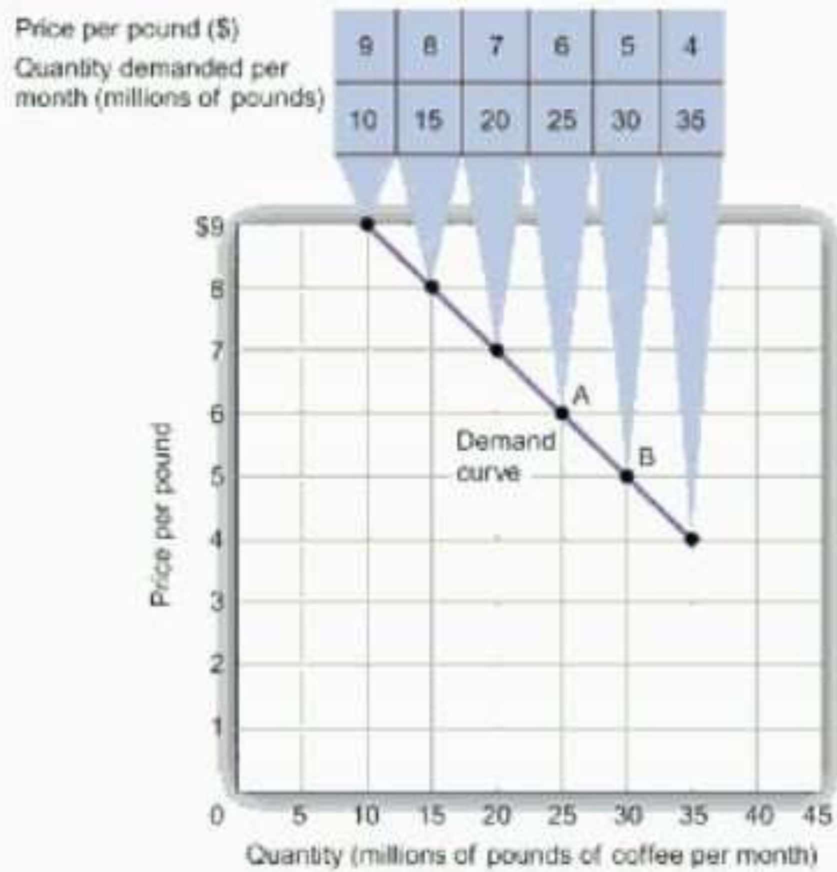
- Demand Schedule:

  -A list showing the quantity of a good that consumers would choose to purchase at different prices, with all other variables held constant

- Demand Curve:

  -graphically shows the relationship between the price of a good and the quantity demanded , holding constant all other variables that influence demand

The table is a demand schedule; it shows quantities of coffee demanded per month in the United States at particular prices, all other things unchanged. These data are then plotted on the demand curve. At point A on the curve, 25 million pounds of coffee per month are demanded at a price of $6 per pound. At point B, 30 million pounds of coffee per month are demanded at a price of $5 per pound.



Law of Demand

- Fundamental characteristic of demand:

"All else equal, as the price falls, the quantity demanded rises, and as price rises, the quantity demanded falls."

- Negative relationship between price and quantity demanded → Law of Demand

Assumptions and Limitations of the Law of Demand

- Assumptions

  →Income constant

  →no change in tastes, fashion and habits

  →price of related goods remains unchanged

  →no future expectations

  →no change in weather and population

- Limitations

  →Very high-priced goods

  →Very low-priced goods

  →Ignorance of the consumer

  →necessities

Determinants of Demand

- Price of the good
- Price of related goods [substitutes and complements]
- The size of household income
- Taste and fashion
- Expectation
- The distribution of income among households
- Number of Buyers

Reasons for Downward Sloping of the Demand Curve

- Customer effect
- Income effect
- Substitution effect

Change in Quantity Demanded vs. Change in Demand

- Change in Quantity Demanded

→ Occurs due to change in prices

→ Results in movement from one point to another on a fixed demand curve

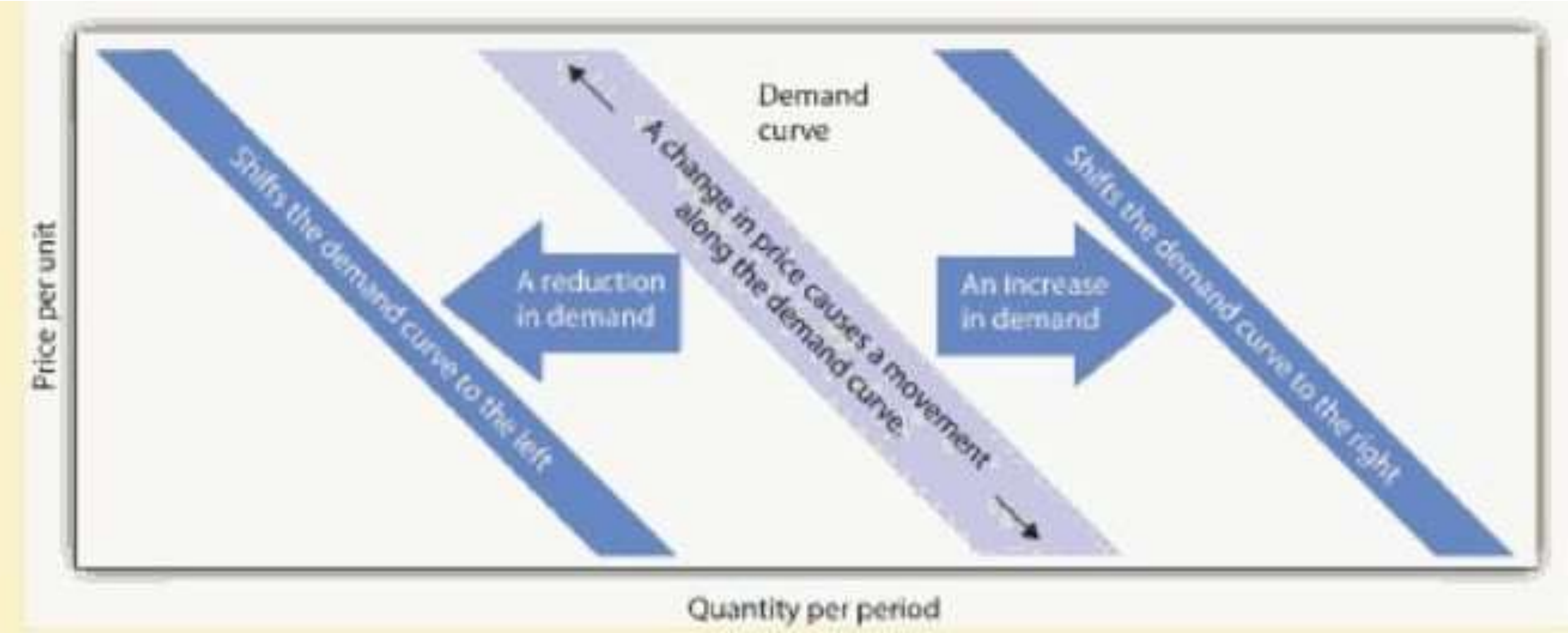
→ Also called extension and contraction of demand

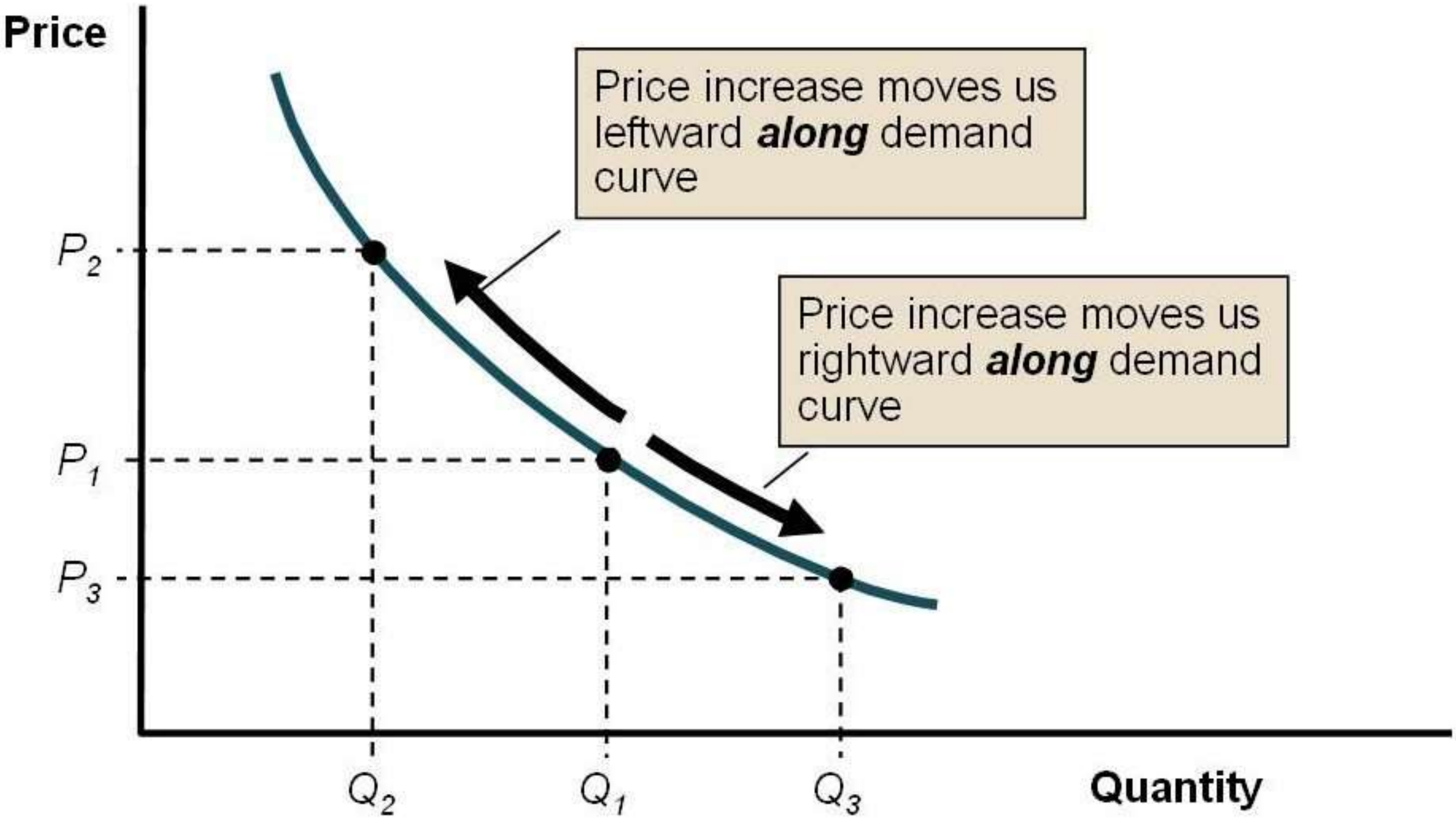
- Change in Demand

→ Occurs due to changes in determinants other than price

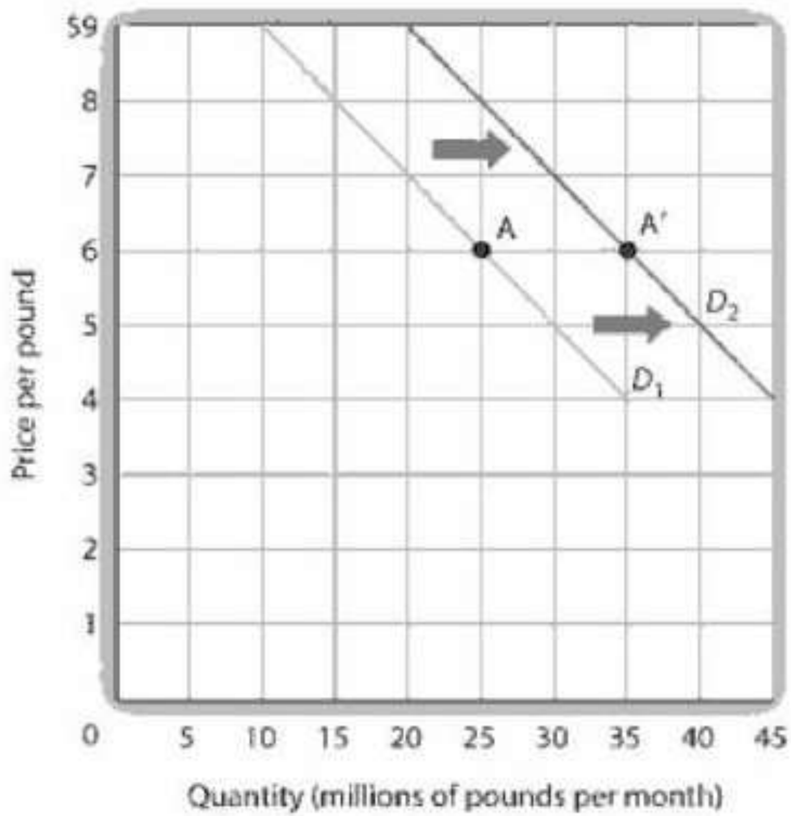
→ Results in shifting of the demand curve either to the right or to the left

→ Also called rise and fall of demand

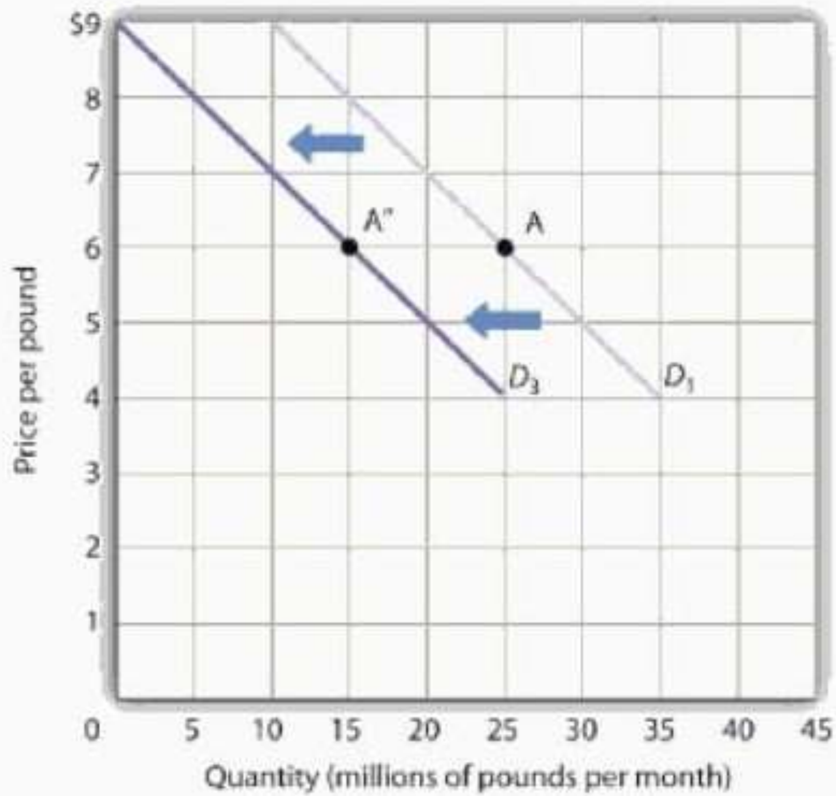

Demand
curve
Shifts the demand curve to the left
A change in price causes a movement along the demand curve
Shifts the demand curve to the right
A reduction in demand
An increase in demand
Price per unit
Quantity per period


Price
Price increase moves us leftward along demand curve
Price increase moves us rightward along demand curve
P2
P1
P3
Q2
Q1
Q3
Quantity

Price	Old quantity demanded	New quantity demanded
$9	10	20
8	15	25
7	20	30
6	25	35
5	30	40
4	35	45



Price	Old quantity demanded	New quantity demanded
$9	10	0
8	15	5
7	20	10
6	25	15
5	30	20
4	35	25



The Concept of Supply

Definition of Supply

- Quantity of output brought for sale in the market at a certain price
- The amount of a good producers would want to produce and sell at a specific price

“ The amounts of a product that producers are willing and able to make available for sale at each of a series of prices during a specific period”

The Difference Between Supply and Stock

Stock is the quantity of output which a seller has with him and has not yet brought for sale; whereas supply is the quantity of output brought from existing stock for sale at a certain price in the market

Supply Schedule and Supply Curve

- <u>Supply Schedule:</u>

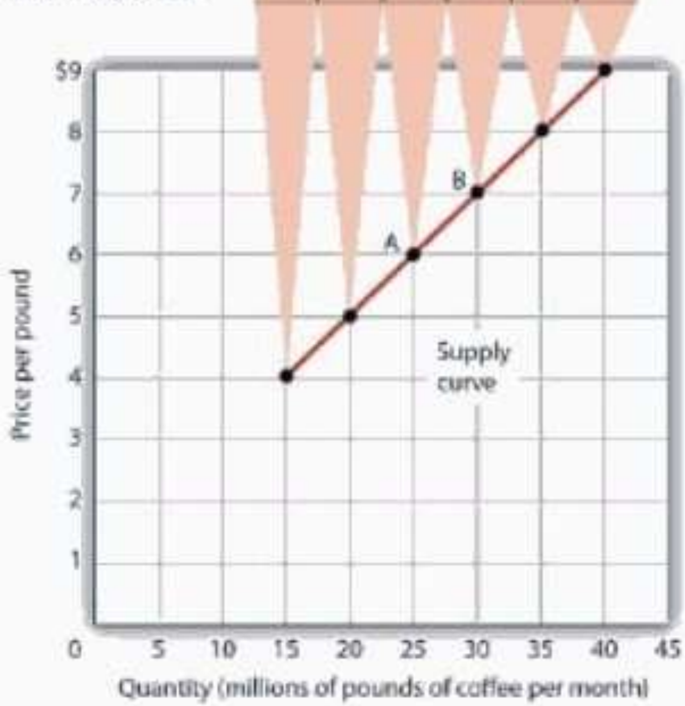
  - A list showing the amount of a product that producers would produce and sell at a series of varying prices, during a certain time, with all the other factors held constant

- <u>Supply Curve:</u>

  -The graphical representation of the relation between the quantity supplied of a good that producers are willing and able to sell and the price of the good

The supply schedule shows the quantity of coffee that will be supplied in the United States each month at particular prices, all other things unchanged. The same information is given graphically in the supply curve. The values given here suggest a positive relationship between price and quantity supplied.

Price per pound ($)	4	5	6	7	8	9
Quantity supplied per month (millions of pounds)	15	20	25	30	35	40



The Law of Supply

- Explains the fundamental characteristic of supply

"All else equal, as price rises, the quantity supplied rises, as price fall the quantity supplied falls"

- Positive or direct relationship between the quantity supplied and the price→ Law of Supply

Assumptions of the Law

- Constant cost of production
- Constant price of capital goods
- Constant technology

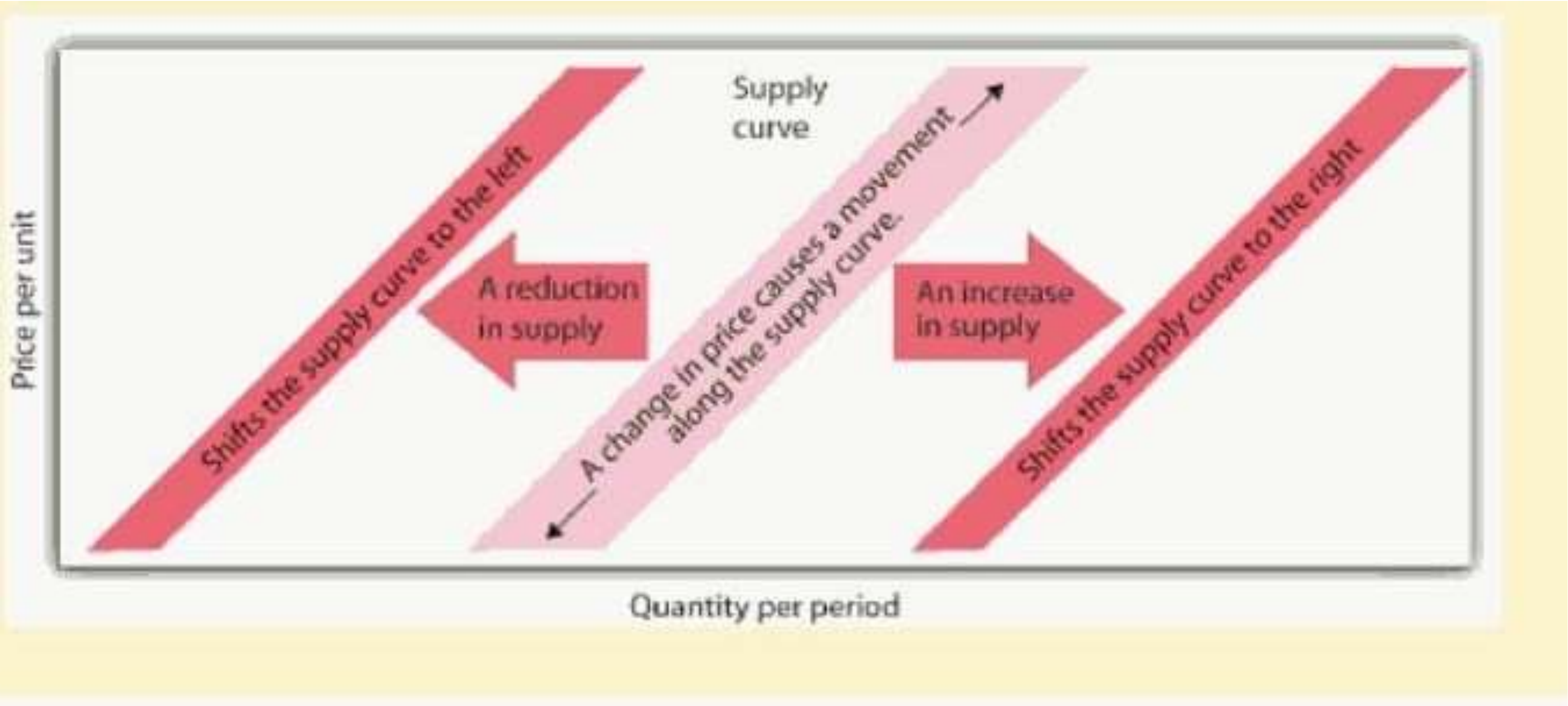
Determinants of Supply

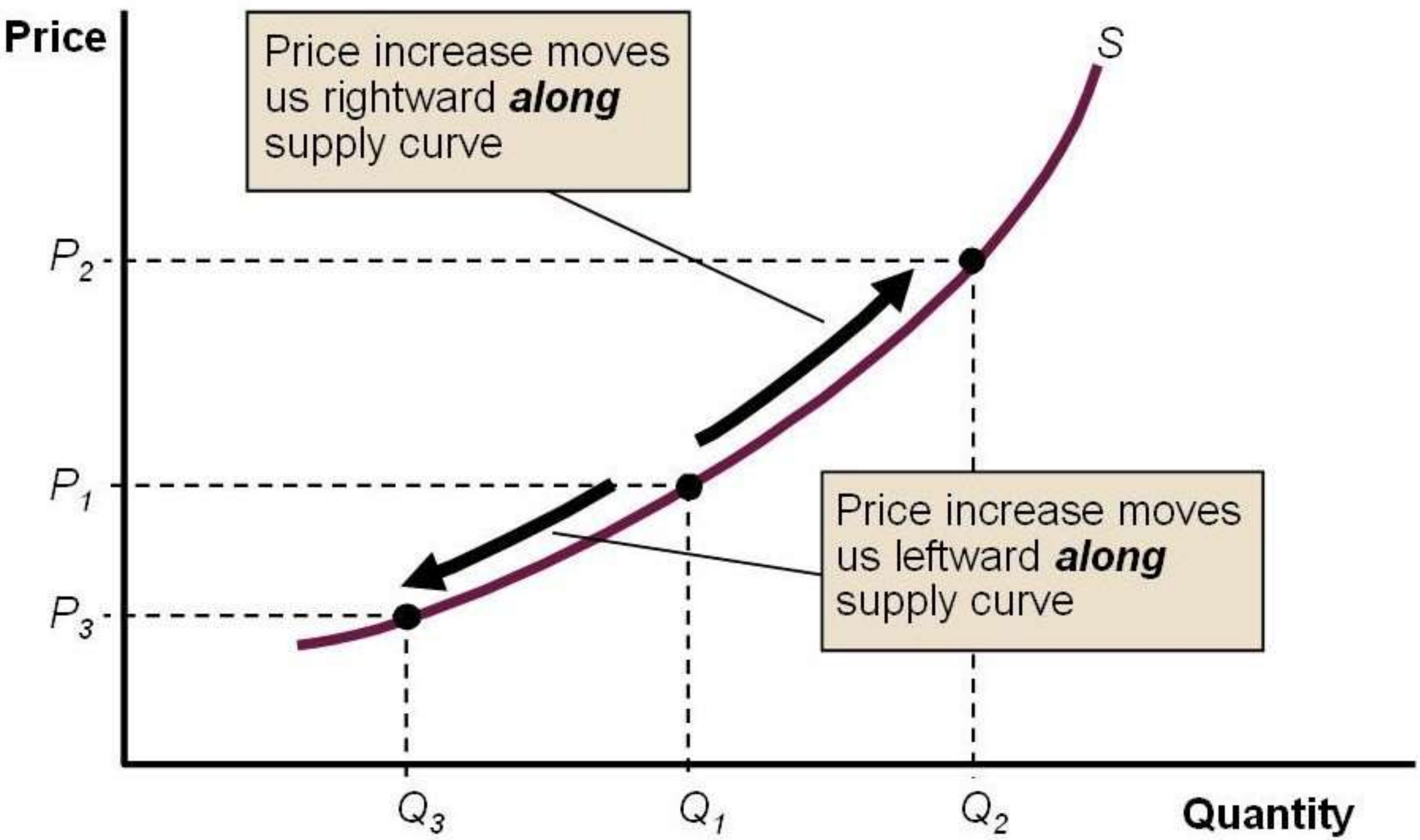
- Price of the good
- Resource Prices
- Technology
- Taxes and subsidies
- Price of Other Goods
- Expectations
- Number of Sellers

Change in Quantity Supplied vs. Change in Supply

- Change in Quantity Supplied
- → Occurs due to change in the market price
- → Is represented by movement from one point to another on the same supply curve
- → Also called extension and contraction of supply

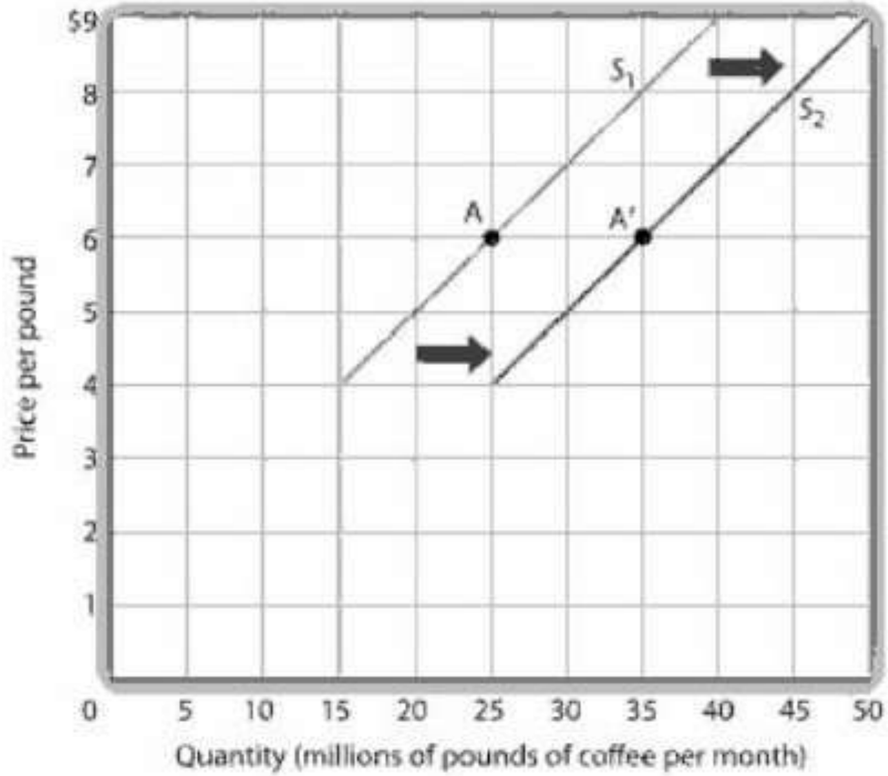
- Change in Supply
- → Occurs due to change in determinants of supply other than price
- → Is represented by a shift in the supply curve either to the right or to the left
- → Also called rise and fall in supply


Supply
curve
Shifts the supply curve to the left
A reduction
in supply
A change in price causes a movement
along the supply curve.
An increase
in supply
Shifts the supply curve to the right
Price per unit
Quantity per period

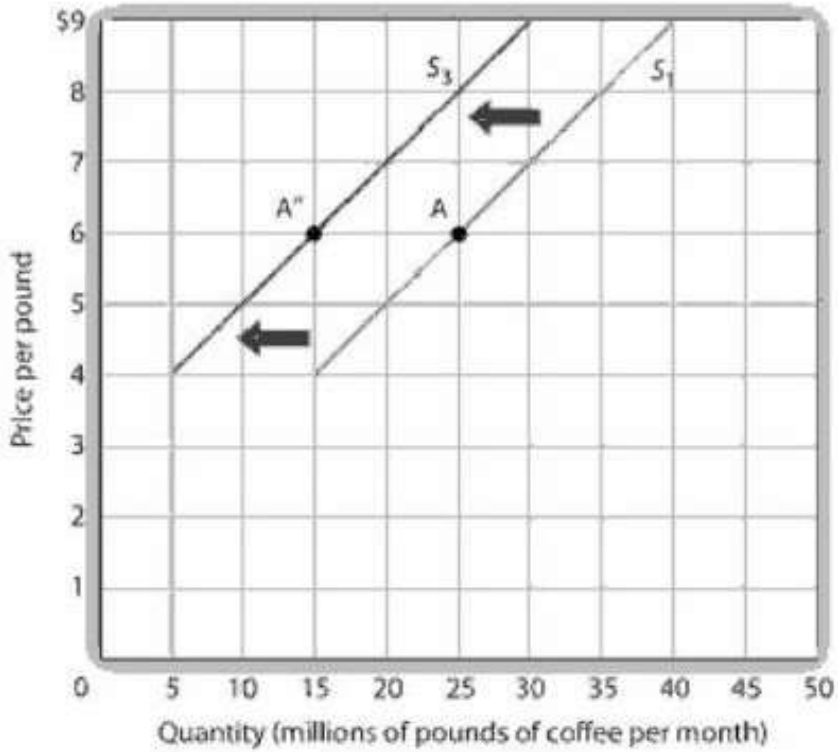


Price
Price increase moves us rightward **along** supply curve
S
P2
P1
P3
Price increase moves us leftward **along** supply curve
Q3
Q1
Q2
Quantity

Price	Old quantity supplied	New quantity supplied
$4	15	25
5	20	30
6	25	35
7	30	40
8	35	45
9	40	50



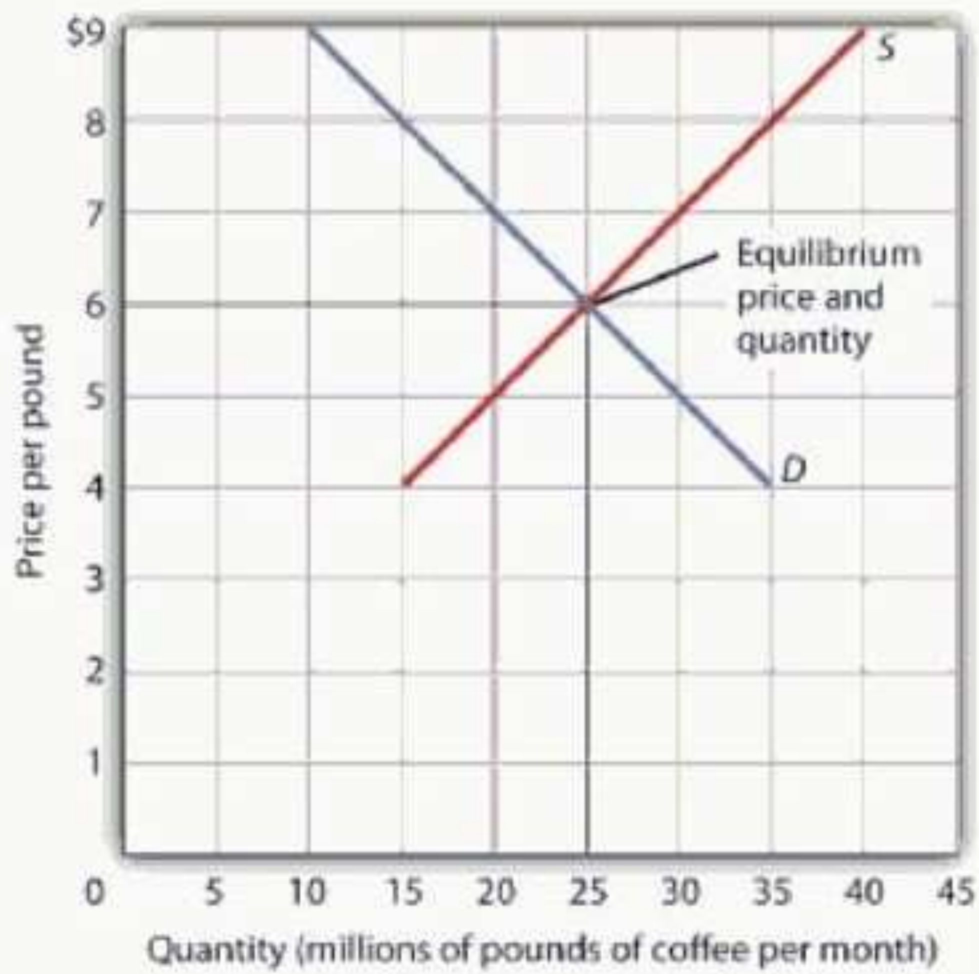
Price	Old quantity supplied	New quantity supplied
$4	15	5
5	20	10
6	25	15
7	30	20
8	35	25
9	40	30

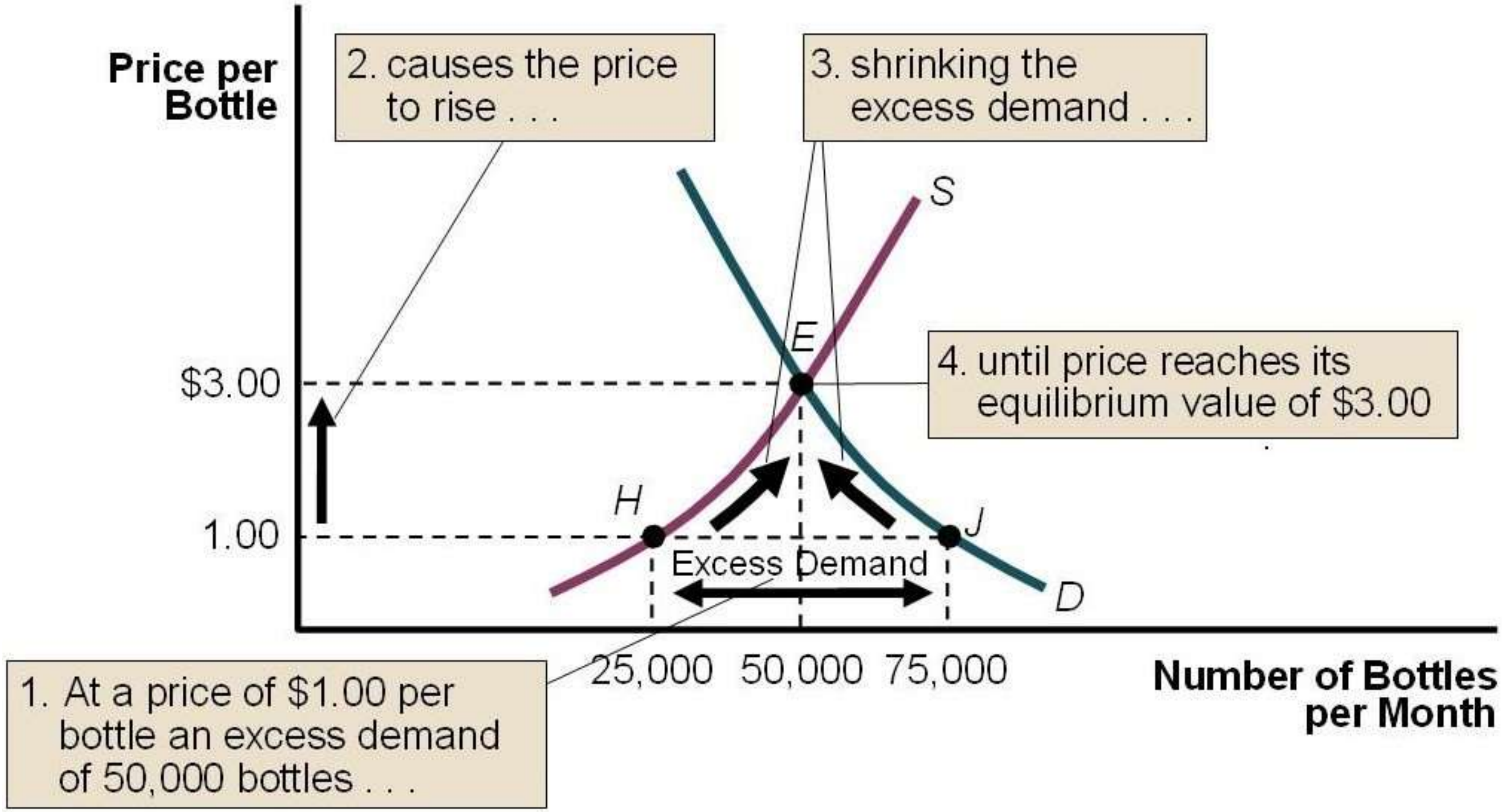


Equilibrium

Equilibrium – Putting Demand and Supply Together

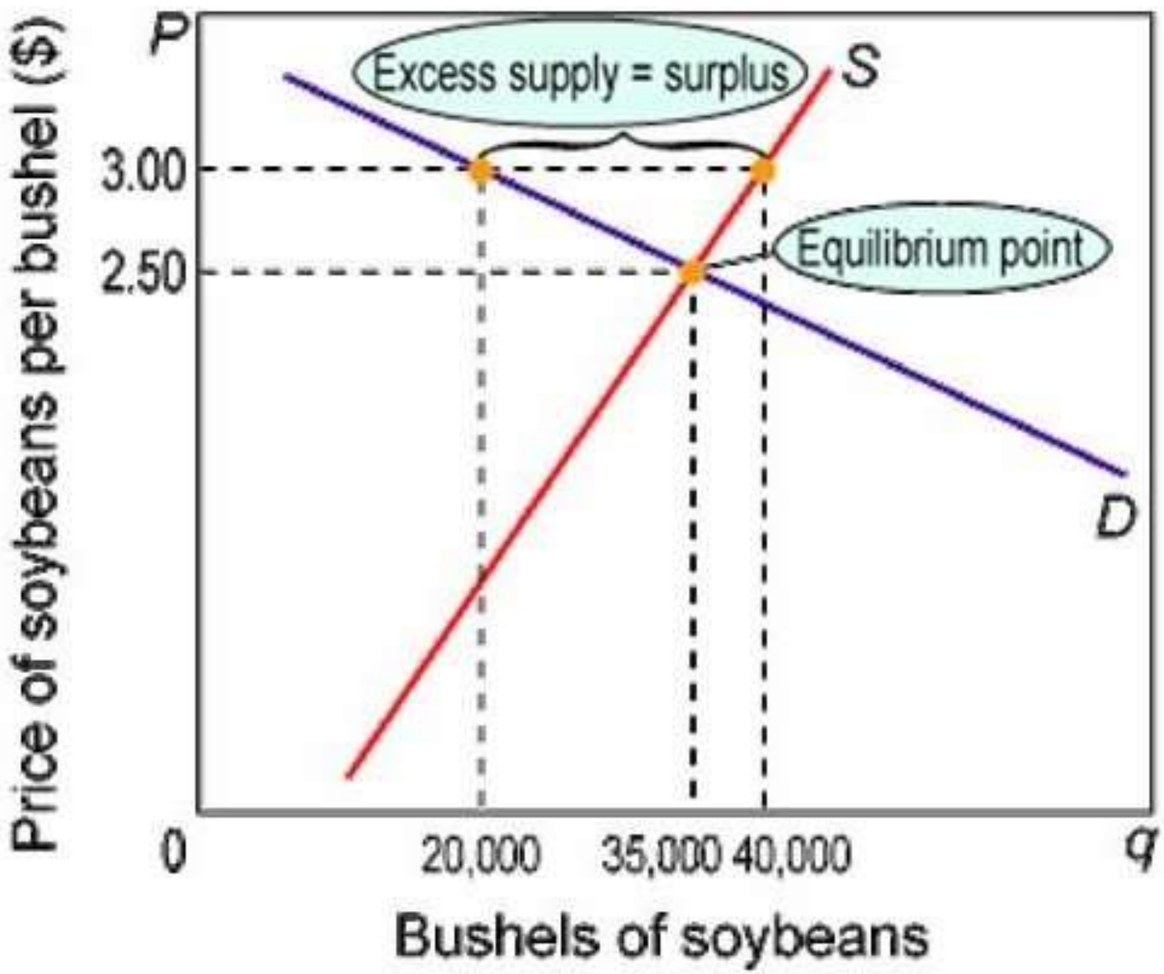
- When a market is in equilibrium
  - →Both price of good and quantity bought and sold have settled into *a state of rest*
  - →The equilibrium price and equilibrium quantity are values for price and quantity in the market but, once achieved, will remain constant
    - Unless and until supply curve or demand curve shifts
- The equilibrium price and equilibrium quantity can be found on the vertical and horizontal axes, respectively
  - →At point where supply and demand curves cross


$9
8
7
6
5
4
3
2
1
0
5
10
15
20
25
30
35
40
45
Price per pound
Quantity (millions of pounds of coffee per month)
S
D
Equilibrium price and quantity


Price per Bottle
2. causes the price to rise . . .
3. shrinking the excess demand . . .
S
E
$3.00
4. until price reaches its equilibrium value of $3.00
H
1.00
J
Excess Demand
D
25,000
50,000
75,000
Number of Bottles per Month
1. At a price of $1.00 per bottle an excess demand of 50,000 bottles . . .

Excess Supply or Surplus

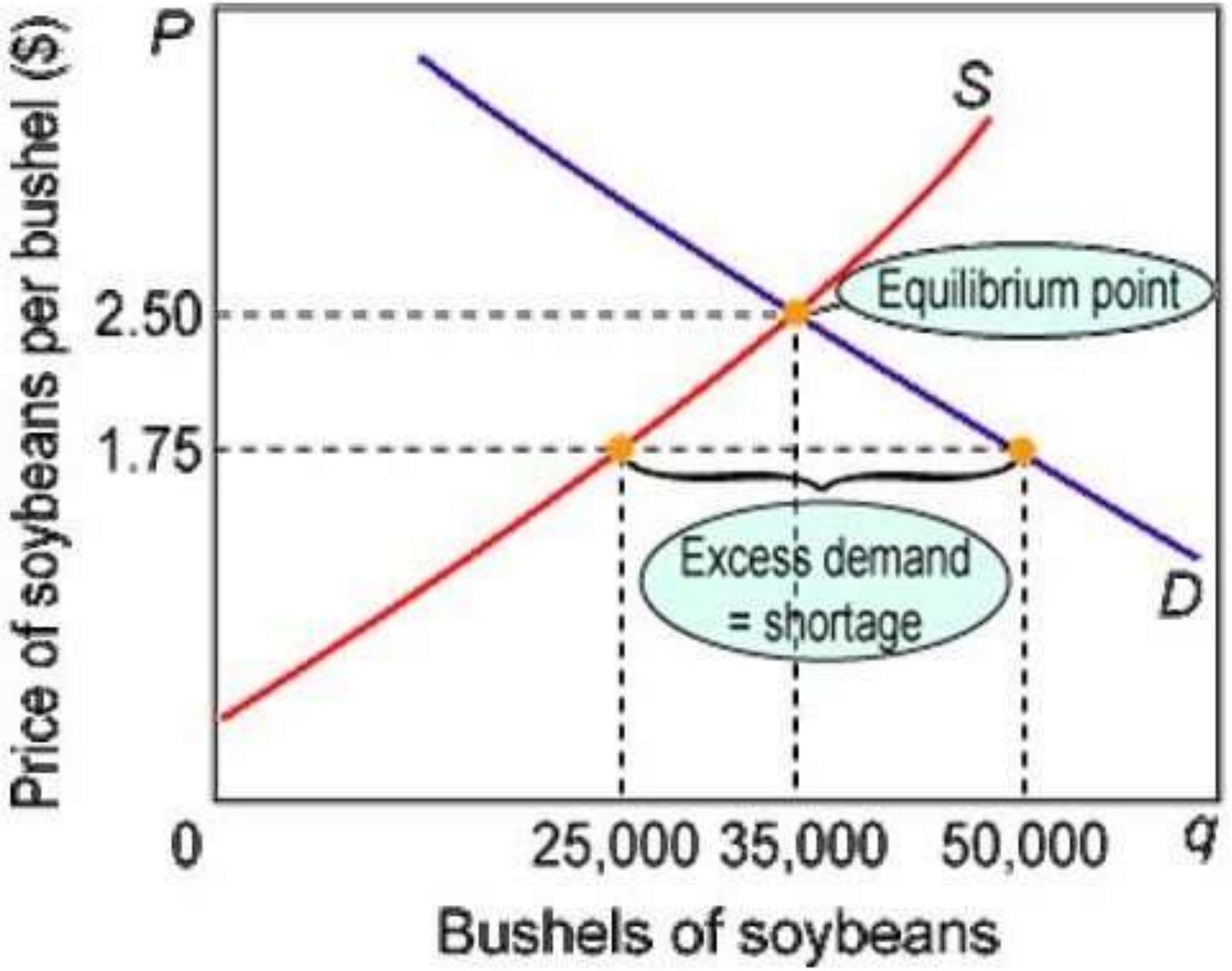
- Excess Supply
  - →At a given price, the excess of quantity supplied over quantity demanded
- Price of the good will fall as sellers compete with each other to sell more of the good than buyers want



Excess supply = surplus
Equilibrium point
P
3.00
2.50
0
20,000
35,000 40,000
q
S
D
Price of soybeans per bushel ($)
Bushels of soybeans

Excess Demand or Shortage

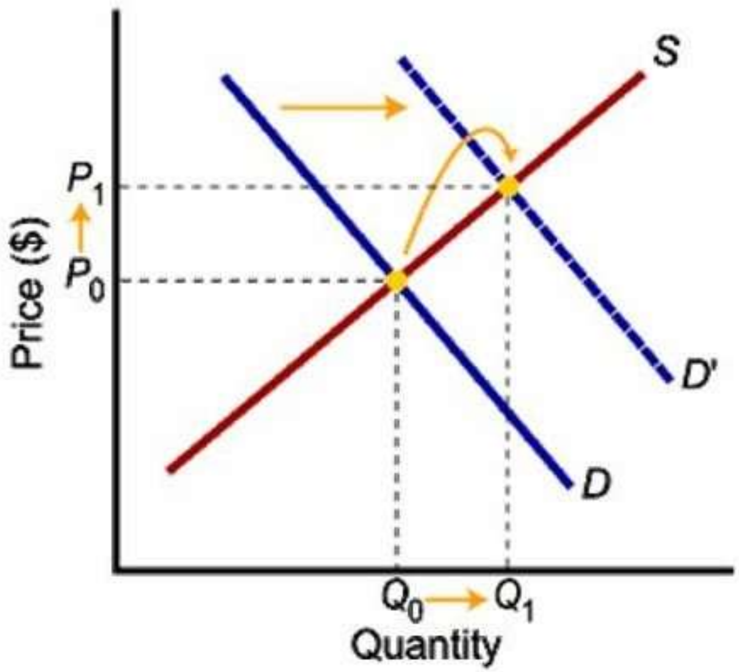
- Excess demand
  - →At a given price, the excess of quantity demanded over quantity supplied
- Price of the good will rise as buyers compete with each other to get more of the good than is available



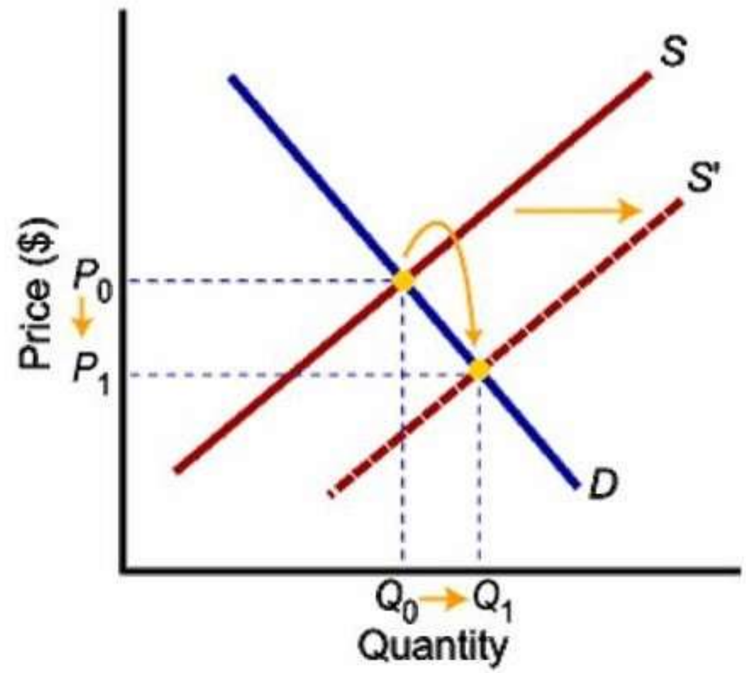
P
S
Equilibrium point
2.50
1.75
Excess demand = shortage
D
Price of soybeans per bushel ($)
0
25,000
35,000
50,000
q
Bushels of soybeans

Changes in Equilibrium

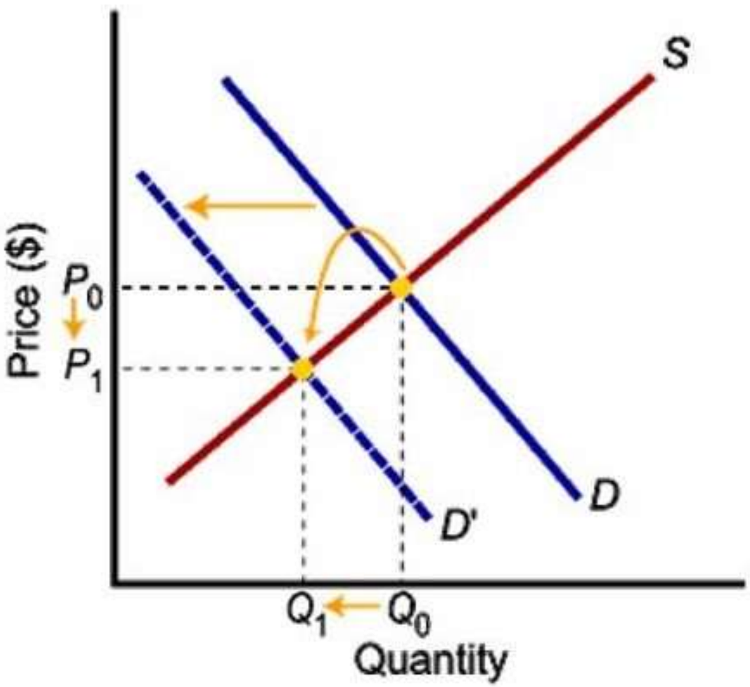
Situation	Increase in Demand	No Change in Demand	Decrease in Demand
Increase in Supply	Price → ? Quantity → Increase	Price →Decrease Quantity →Increase	Price → Decrease Quantity → ?
No change in Supply	Price → Increase Quantity → Increase	Price → No Change Quantity → No Change	Price → Decrease Quantity → Decrease
Decrease in Supply	Price → Increase Quantity → ?	Price →Increase Quantity →Decrease	Price →? Quantity → Decrease



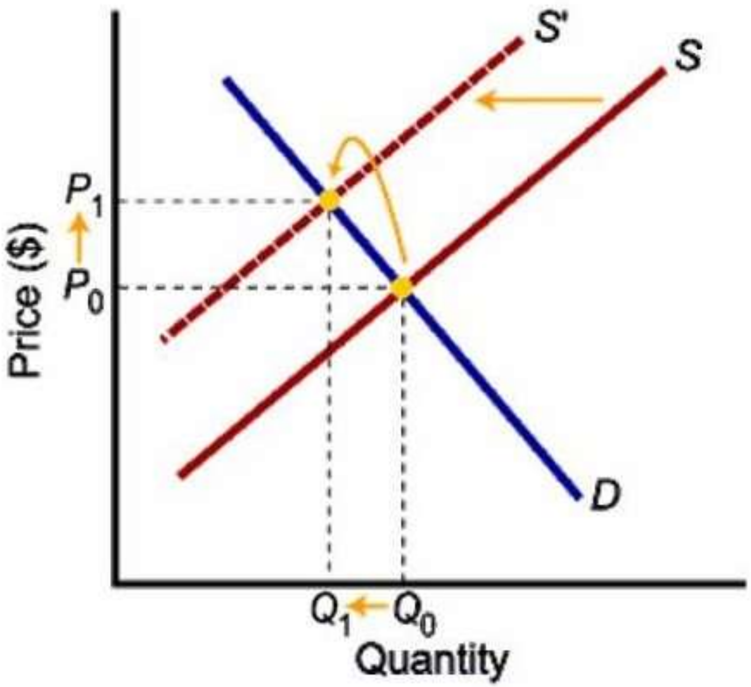
S
D'
D
P1
P0
Price ($)
Q0
Q1
Quantity



S
S'
D
P0
P1
Price ($)
Q0
Q1
Quantity



Price ($)
P_0
P_1
S
D
D'
Q_1
Q_0
Quantity



Price ($)
P_1
P_0
S'
S
D
Q_1
Q_0
Quantity

Conclusion

The importance of the concept of demand of supply is evident from the following quote:

“ Teach a parrot the terms “Demand and Supply” and you’ve got an Economist.”

-Thomas Carlyle

[Scottish Historian & Essayist of the Victorian Era]