Market Transactions: Basic Supply and Demand Analysis

1. *Markets: Purposes and Functions*
2. *The Law of Demand and the Market Demand Curve*
3. *The Law of Supply and the Market Supply Curve*
4. *Market Equilibrium*

A market is an arrangement through which buyers and sellers meet or communicate in order to trade goods or services.

A market's purpose is to provide information on the goods and services sellers want to sell and buyers want to buy.

Supply and demand analysis explains how prices are established in markets through competition among buyers and sellers, and how those prices affect quantities traded.

In **a *competitive* or *free*** market, many sellers compete for sales to many buyers who compete for available goods and services.

The quantity demanded of an item is the amount that buyers are willing and able to purchase over a period at a certain price, *given all other influences on their decision to buy.*

Demand is a relationship between the price of an item and the quantity demanded.

The law of demand states that, in general, other things being equal, there's a negative relationship between the price of a good and the willingness and ability of buyers to purchase it.

Box 1. A Demand Curve

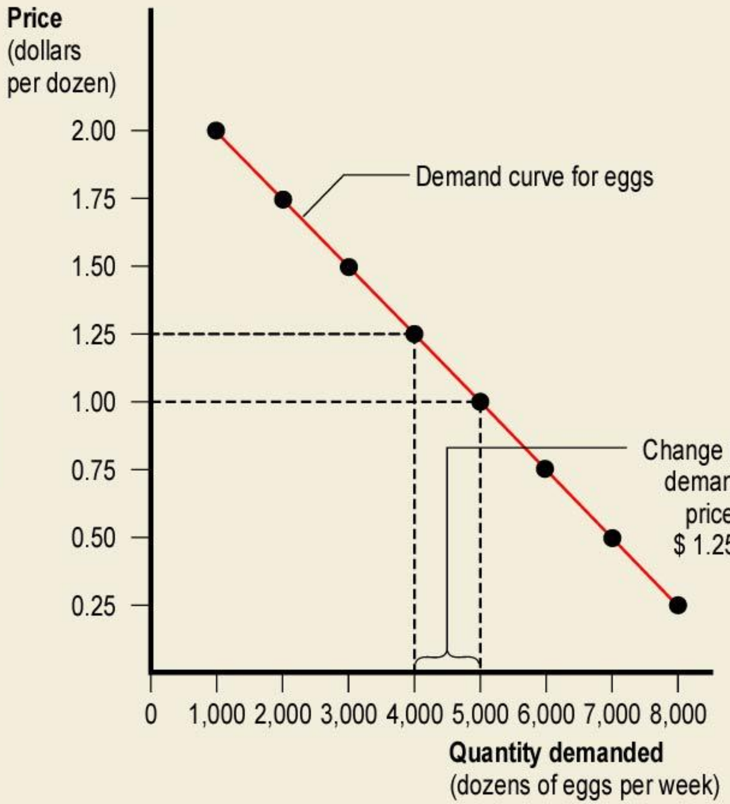
Box 1

A Demand Curve

The downward-sloping demand curve shows the quantity of eggs demanded per week at various prices, based on the demand schedule shown in the table below. A change in quantity demanded is a movement along a demand curve caused by a change in the price of the good. For example, a decrease in the price of eggs from $1.25 to $1 per dozen would increase quantity demanded from 4,000 to 5,000 dozen per week.

A Demand Schedule for Grade A Eggs

Price (dollars per dozen)	Quantity demanded (dozens per week)
2.00	1,000
1.75	2,000
1.50	3,000
1.25	4,000
1.00	5,000
0.75	6,000
0.50	7,000
0.25	8,000



A change in relative price of a good is an increase or decrease in the price of that good relative to the average change in the prices of all goods.

A change in quantity demanded is represented by a movement along a demand curve in response to a change in a good's price.

A change in demand is a response to a change in something other than price that shifts an entire demand curve.

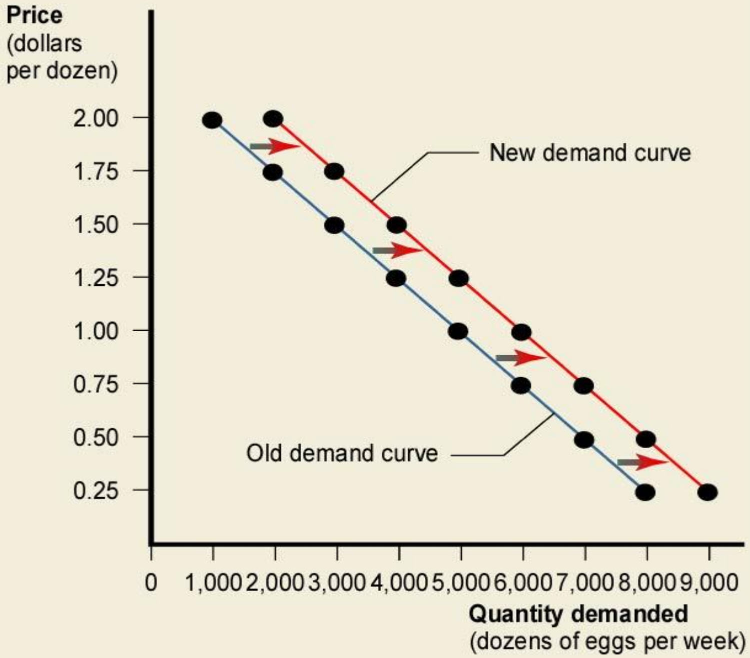
Box 2. An Increase in Demand

Box 2

An Increase in Demand

An increase in demand is represented by an outward shift of the entire demand curve. An increase in demand for an item can be caused by:

- An increase in income or in wealth if the item is a normal good (if it is an inferior good, an increase in income would decrease demand).
- An increase in the price of a substitute.
- A decrease in the price of a complement.
- Expectations of a future increase in the item's relative price.
- A change in tastes or fashion that makes the item more popular.
- An increase in the number of buyers served by the market.



A New Demand Schedule after an Increase in Demand

Price (dollars)	Quantity demanded of eggs (dozens per week): Old demand schedule	Quantity demanded of eggs (dozens per week): New demand schedule
2.00	1,000	2,000
1.75	2,000	3,000
1.50	3,000	4,000
1.25	4,000	5,000
1.00	5,000	6,000
0.75	6,000	7,000
0.50	7,000	8,000
0.25	8,000	9,000

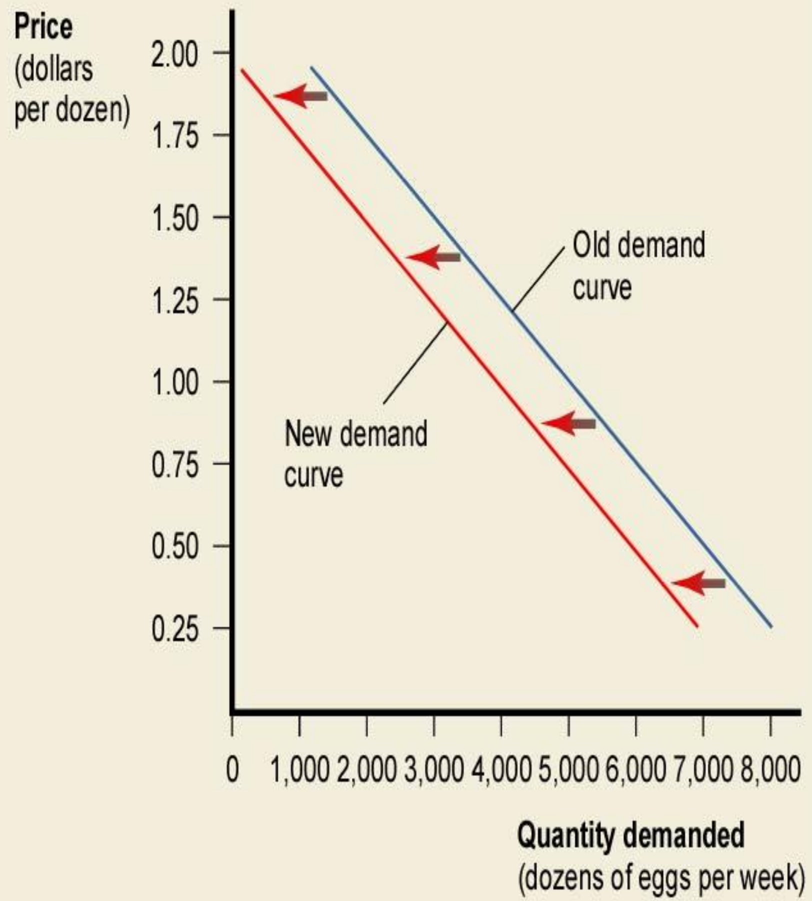
Box 3. A Decrease in Demand

Box 3

A Decrease in Demand

A decrease in demand is represented by an inward shift of a demand curve. After a decrease in demand, the quantities that consumers buy at each price will be smaller than before. A decrease in demand for an item can be caused by:

- A decrease in income or in wealth if the item is a normal good (if it is an inferior good, a decrease in income would increase demand).
- A decrease in the price of a substitute.
- An increase in the price of a complement.
- Expectations of a future decrease in the item's relative price.
- A change in tastes or fashion that makes the item less popular.
- A decrease in the number of buyers served by the market.



Goods whose demand declines as income increases are called ***inferior goods***.

Goods whose demand increases when income goes up are called ***normal goods***.

Alternatives, items that serve a purpose similar to that of a given item, are ***substitutes*** for that item.

Complements are goods whose use together enhances the satisfaction a consumer obtains from each of them.

The quantity supplied is the quantity of a good sellers are willing and able to make available in the market over a given period at a certain price, *other things being equal*.

Supply is a relationship between the price of an item and the quantity supplied.

The law of supply states that, in general, other things being equal, there's a positive relationship between price and the amount of a good sellers will make available.

Box 4. A Supply Curve

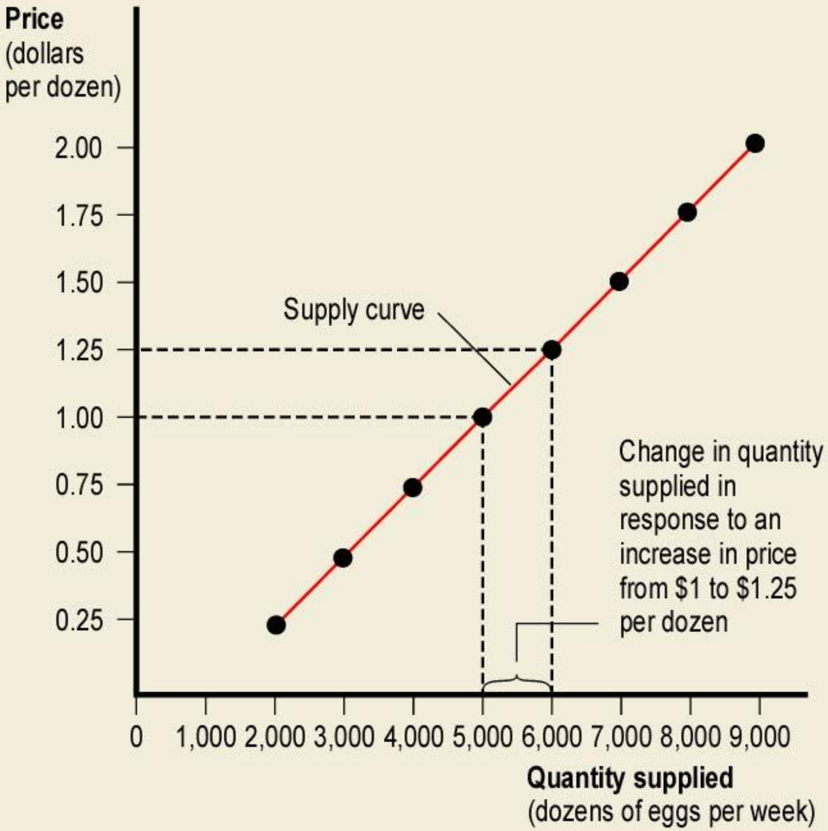
Box 4

A Supply Curve

A supply curve describes the relationship between price and quantity supplied. An upward-sloping supply curve reflects the law of supply. This supply curve is based on the supply schedule in the table below. A change in quantity supplied is a movement along the supply curve in response to a change in the price of the good.

A Supply Schedule for Eggs

Price (dollars per dozen)	Quantity supplied (dozens per week)
2.00	9,000
1.75	8,000
1.50	7,000
1.25	6,000
1.00	5,000
0.75	4,000
0.50	3,000
0.25	2,000



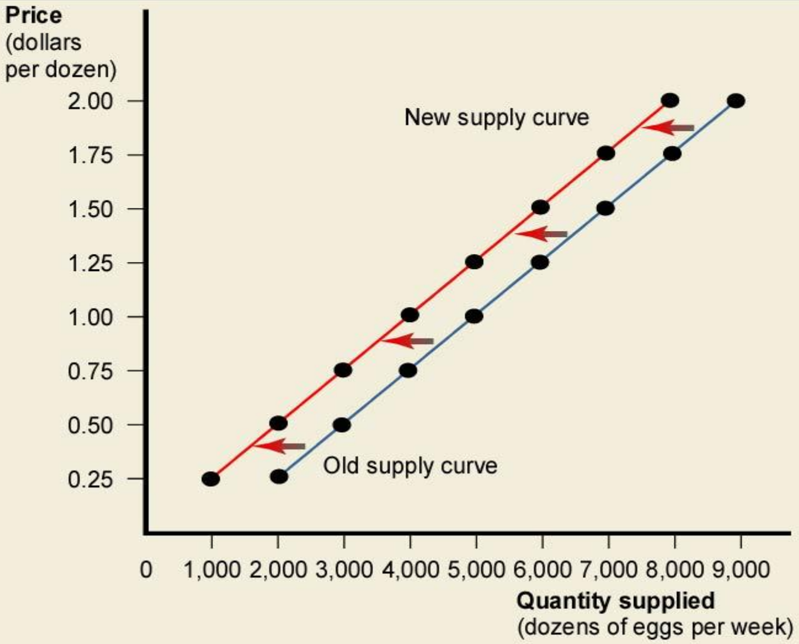
A change in quantity supplied is represented by a movement along a given supply curve caused by a change in a good's price. ***A change in supply*** implies a shift of an entire supply curve caused by a change in something other than the price of a good that affects the willingness and ability of sellers to make the good available.

Box 5. A Decrease in Supply

Box 5 **A Decrease in Supply**

A New Supply Schedule after a Decrease in Supply

Price (dollars per dozen)	Quantity of eggs supplied (dozens per week): Old supply schedule	Quantity of eggs supplied (dozens per week): New supply schedule
2.00	9,000	8,000
1.75	8,000	7,000
1.50	7,000	6,000
1.25	6,000	5,000
1.00	5,000	4,000
0.75	4,000	3,000
0.50	3,000	2,000
0.25	2,000	1,000



A decrease in supply is represented by an inward shift of the supply curve. A change in supply of an item can be caused by:

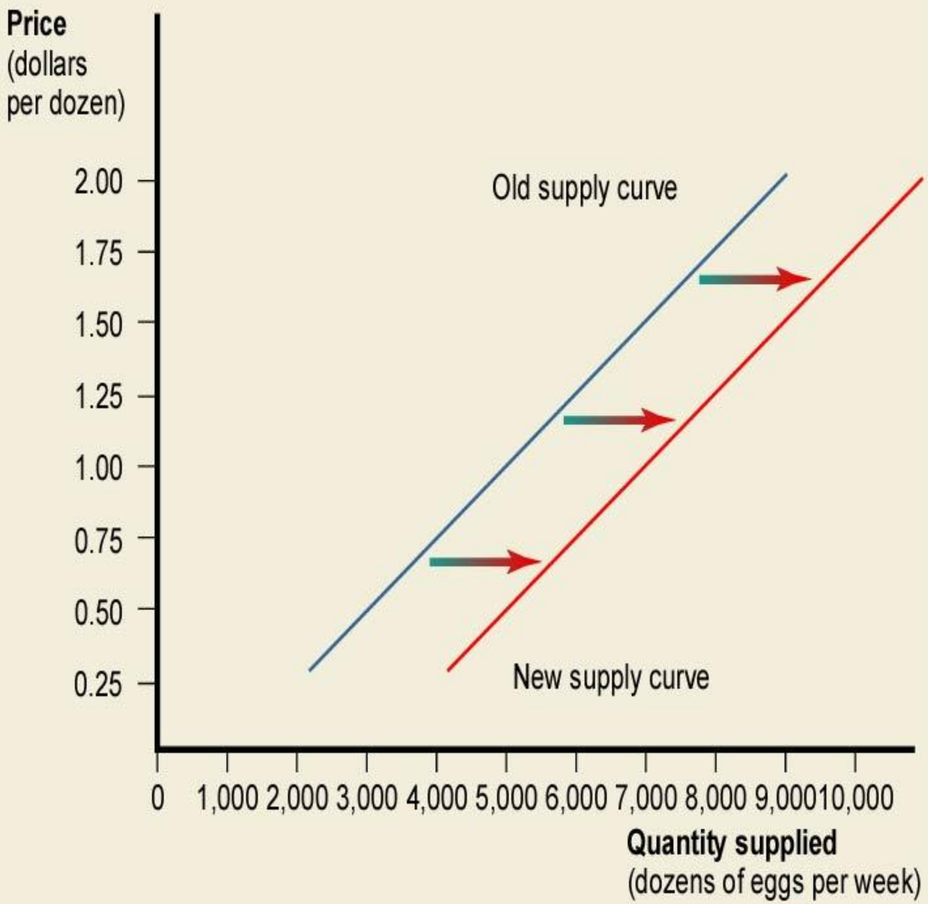
- A change in the prices of inputs used to produce it: an increase in input prices decreases supply, while a decrease in input prices increases supply.
- A change in technology: an improvement in technology increases supply, while the unlikely event of a deterioration in technology (caused by some catastrophe) would decrease supply.
- A change in the prices of other items: an increase in the relative price of an alternative item that can be produced with the same resources decreases supply of the first item, while a decrease in the relative price of the alternative item would increase supply of the first item.
- A change in the number of sellers serving the market: a decrease in the number of sellers decreases supply, while an increase in the number of sellers increases supply.

Box 6. An Increase in Supply

Box 6

An Increase in Supply

An increase in supply is represented by an outward shift of the supply curve caused by a change in a supply determinant such as input prices or technology.



An equilibrium prevails when economic forces balance so that economic variables neither increase nor decrease.

Market equilibrium is attained when the price of a good adjusts so that the quantity buyers will buy at that price is equal to the quantity sellers will sell.

A shortage exists in a market when the quantity demanded of a good exceeds the quantity supplied over a given period.

A surplus exists in a market when the quantity supplied of a good exceeds the quantity demanded over a given period.

Box 7. Market Equilibrium

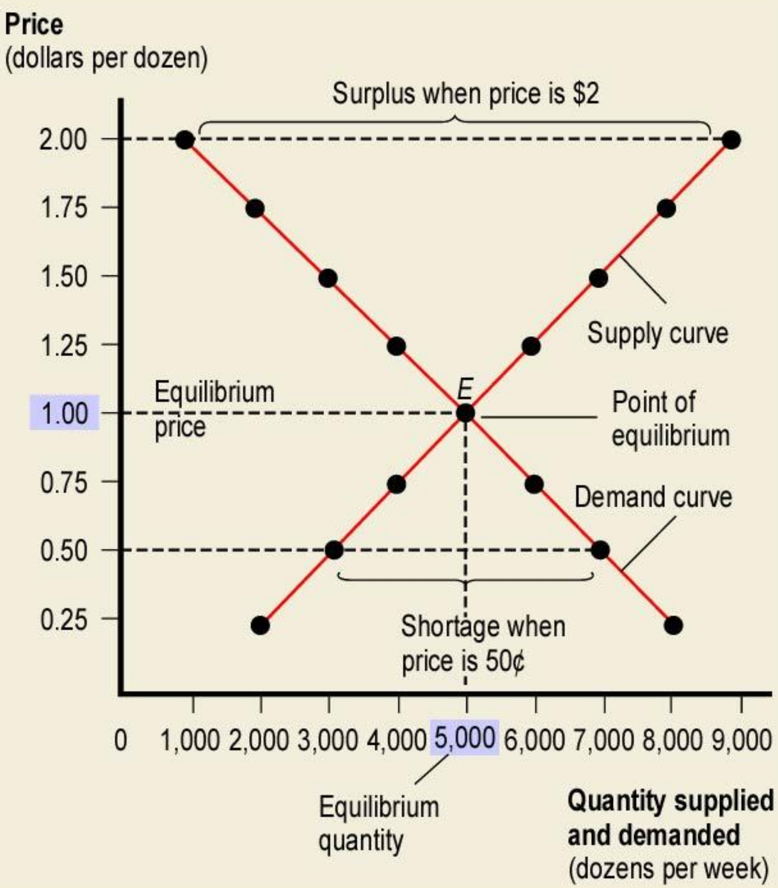
Box 7

Market Equilibrium

The market equilibrium price is $1 per dozen. The corresponding market equilibrium quantity is 5,000 dozen per week. Any price above $1 will result in a weekly surplus of eggs. Similarly, any price below $1 will result in a shortage.

Market Equilibrium

Price (dollars per dozen)	Dozens of eggs per week: Quantity demanded	Dozens of eggs per week: Quantity supplied	Shortage or surplus	Pressure on price
2.00	1,000	9,000	Surplus	Down
1.75	2,000	8,000	Surplus	Down
1.50	3,000	7,000	Surplus	Down
1.25	4,000	6,000	Surplus	Down
1.00	5,000	5,000	Equilibrium	None
0.75	6,000	4,000	Shortage	Up
0.50	7,000	3,000	Shortage	Up
0.25	8,000	2,000	shortage	Up



Box 8. Impact of a Decrease in Demand on Market Equilibrium

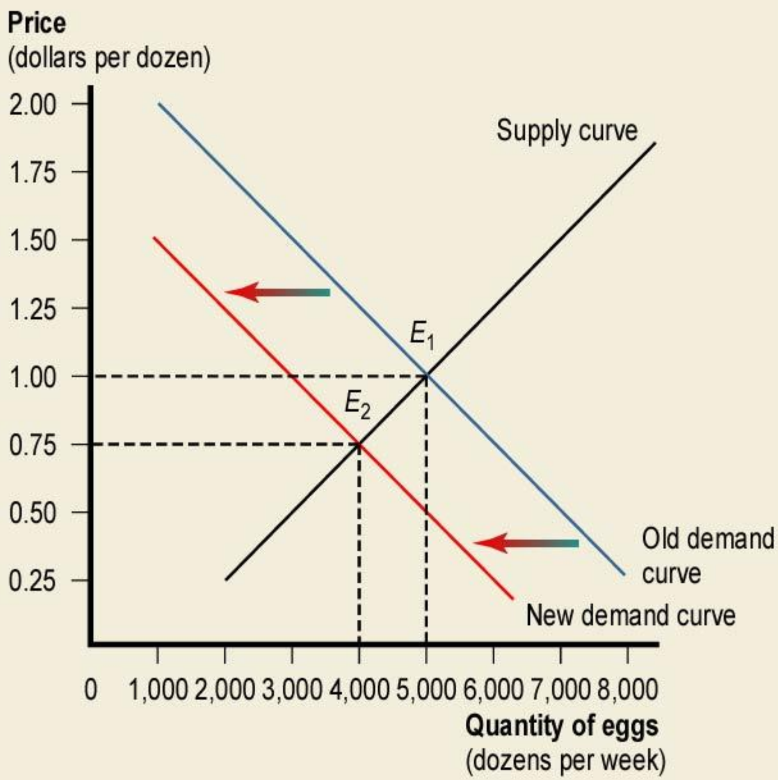
Box 8

Impact of a Decrease in Demand on Market Equilibrium

A decrease in demand causes a decrease in market equilibrium price. Sellers react to the decrease in price by decreasing quantity supplied until a new equilibrium is reached where quantity supplied equals quantity demanded at the new price along the new demand curve. The decrease in demand shifts market equilibrium from E_1 to E_2.

Chain of Causation

Decrease in demand → **Decrease in Price** → **Decrease in quantity supplied**

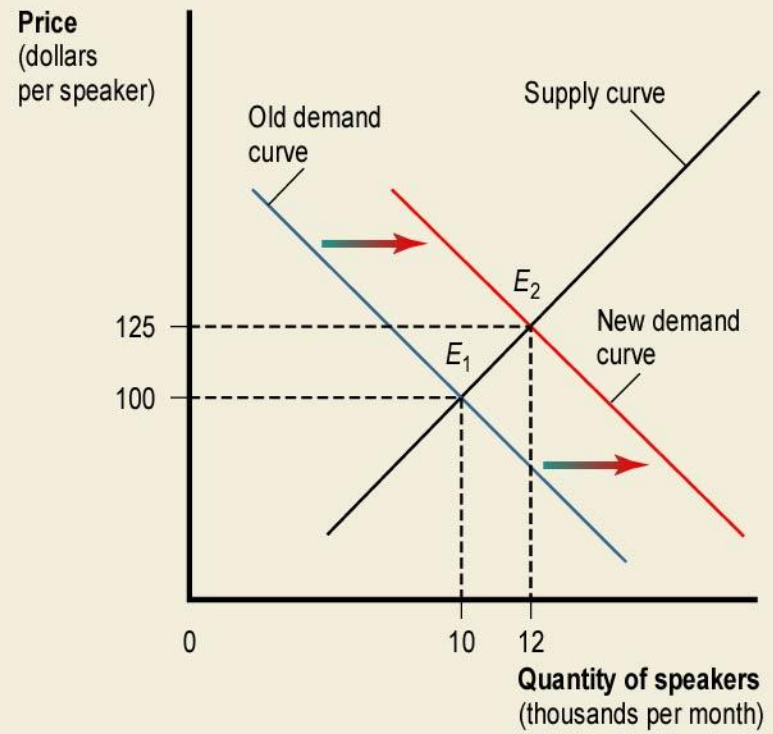


Box 9. Impact of an Increase in Demand on Market Equilibrium

Box 9

Impact of an Increase in Demand on Market Equilibrium

An increase in demand shifts market equilibrium from E_1 to E_2. The increase in demand raises price and induces an increase in quantity supplied as movement to the new equilibrium occurs.



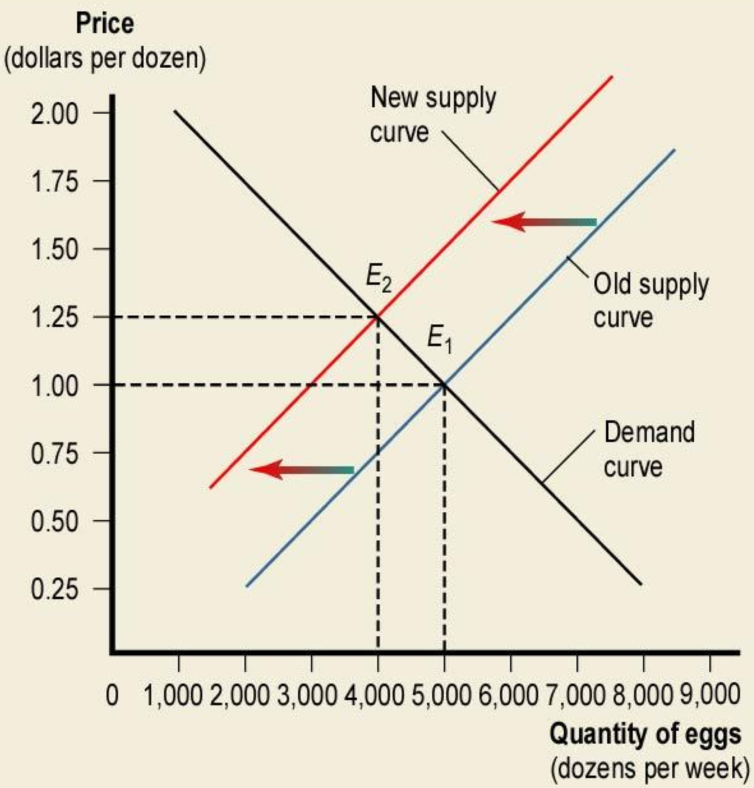
Chain of Causation

Increase in demand → **Increase in Price** → **Increase in quantity supplied**

Box 10. Impact of a Decrease in Supply on Market Equilibrium

Box 10 **Impact of a Decrease in Supply on Market Equilibrium**

A decrease in supply increases market equilibrium price and results in a decrease in quantity demanded.



Chain of Causation

Decrease in supply → **Increase in Price** → **Decrease in quantity demanded**

Box 11. Impact of an Increase in Supply on Market Equilibrium

Box 11

Impact of an Increase in Supply on Market Equilibrium

An increase in supply decreases the market equilibrium price. The quantity demanded increases as the new equilibrium is attained at point E_2.

Chain of Causation

Increase in supply → **Decrease in Price** → **Increase in quantity demanded**