Demand and Supply

Law of Demand

Supply and demand

Supply and demand are economic are the economic forces of the free market that control what suppliers are willing to produce and what consumers are willing and able to purchase.

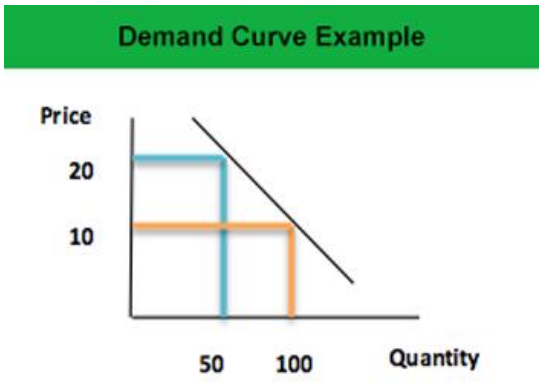
The term **supply** refers to how much of a certain product, item, commodity, or service suppliers are willing to make available at a particular price. **Demand** refers to how much of that product, item, commodity, or service consumers are willing and able to purchase at a particular price.

In other words, supply pertains to how much the producers of a product or service are willing to produce and can provide to the market with limited amount of resources available. Whereas, demand is how much of that product or service the buyers desire to have from the market.

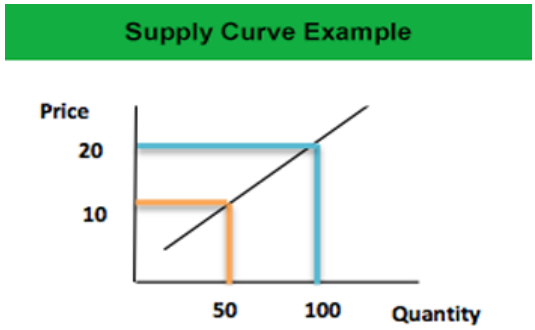
Law of Supply and Demand

Demand and **supply** play a key role in setting price of a particular product in the market economy. Since demands of buyers are endless, not all that is demanded can be supplied due to scarcity of resources. This is where the relationship of demand and supply plays a significant role, allowing efficient allocation of resources and determining a market price for the product or service, known as equilibrium price. This price reflects the price at which suppliers are willing to supply and the buyers are willing to buy from the market.
The mechanism of determining market price through demand and supply can be better understood by observing the market economic theories.
Supply and Demand Curve Example

- According to the law of demand, as the price of a product or service rises, the demand of buyers will decrease for it due to limited amount of cash they have to make purchases.



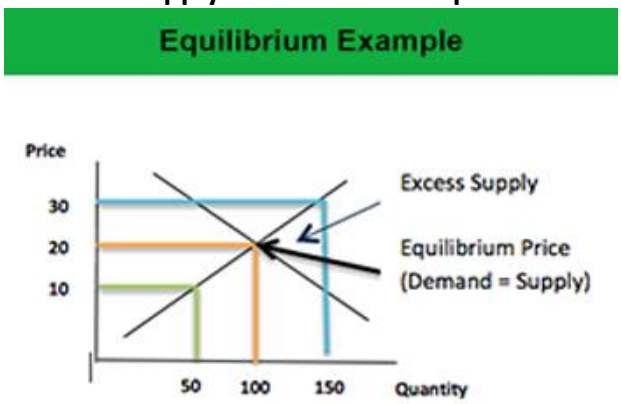
- According to the law of supply, as the price of a product increases, the suppliers will be more willing to supply that product as they can enjoy higher profits by selling that product or service.



From this we can conclude that demand has an inverse relationship with price; whereas, supply has a direct relationship with price.
Therefore, when both demand and supply are put together, we can determine the equilibrium price, which is the market price of a product or service.

This is the point at which the quantity supplied and quantity demanded is exactly equal and the resources are efficiently allocated.

Supply and Demand Graph



Supply & Demand means the amount of goods or services companies are willing to produce and the amount of goods or services that consumers are willing to purchase.

TERMS

- **Demand curve**

A graphic representation of the relationship between price and quantity demanded of a certain good or service, with quantity on the horizontal axis and the price on the vertical axis

- **Demand schedule**
  a table that shows a range of prices for a certain good or service and the quantity demanded at each price

- **Demand**
  the relationship between price and the quantity demanded of a certain good or service

- **Equilibrium price**
  the price where quantity demanded is equal to quantity supplied

- **Equilibrium quantity**
  the quantity at which quantity demanded and quantity supplied are equal for a certain price level

- **Equilibrium**
  the situation where quantity demanded is equal to the quantity supplied; the combination of price and quantity where there is no economic pressure from surpluses or shortages that would cause price or quantity to change

- **Excess demand**
  at the existing price, the quantity demanded exceeds the quantity supplied; also called a shortage

- **Excess supply**
  at the existing price, quantity supplied exceeds the quantity demanded; also called a surplus

- **Law of demand**
  the common relationship that a higher price leads to a lower quantity demanded of a certain good or service and a lower price leads to a higher quantity demanded, while all other variables are held constant

- **Law of supply**
  the common relationship that a higher price leads to a greater quantity supplied and a lower price leads to a lower quantity supplied, while all other variables are held constant

- **Price**
  what a buyer pays for a unit of the specific good or service

- **Quantity demanded**
  the total number of units of a good or service consumers are willing to purchase at a given price

- **Quantity supplied**
  the total number of units of a good or service producers are willing to sell at a given price

- **Shortage**
  at the existing price, the quantity demanded exceeds the quantity supplied; also called excess demand

- **Supply curve**
  a line that shows the relationship between price and quantity supplied on a graph, with quantity supplied on the horizontal axis and price on the vertical axis

- **Supply schedule**
  a table that shows a range of prices for a good or service and the quantity supplied at each price

- **Supply**
  the relationship between price and the quantity supplied of a certain good or service

- **Surplus**
  at the existing price, quantity supplied exceeds the quantity demanded; also called excess supply

7 Types of Economic Demand

1. Joint demand
Joint demand is the demand for complementary products and services. These can be products that are accessories for others or that people commonly purchase together. For example, cereal and milk or peanut butter and jelly. The two are linked but demand for one is not necessarily dependent on the demand for the other.

2. Composite demand
Composite demand happens when there are multiple uses for a single product. For example, corn can be used as animal feed, ethanol and food in its whole form. The rise in demand for any of these products leads to a shortage in supply for the others. This shortage can lead to a rise in price.

3. Short-run and long-run demand
Short-run demand refers to how people will immediately react to price changes while elements are fixed. For example, if the demand for a product drastically decreases and a manufacturer has high overhead costs, they have no choice but to absorb the profits lost. Over time, or in the long run, companies have a chance to adjust to the new situation by decreasing labor or increasing price and supplies.

4. Price demand
Price demand relates to the amount a consumer is willing to spend on a product at a given price. Businesses use this information to determine at what price point a new product should enter the market. Consumers will buy items based on their perception of that product's value. Price elasticity refers to how the demand will change with fluctuations in price.

5. Income demand
As consumers make more income, quantity demand increases. This means people will buy more overall when they earn more income. Tastes and expectations also change with an increase in income, reducing the size of one market and increasing the size of another. Consumers will often buy a product or service because it is what they can afford but may deem lower quality. The demand for those lower-quality products will decrease as income increases.

6. Competitive demand
Competitive demand occurs when there are alternative services or products a customer can choose from. From a business's perspective, they can use fluctuations in the price of their competitors to determine how their own will sell. An example of this is between name-brand and store-brand medicine. If a consumer prefers a name brand but it is out of stock or the price increases significantly, the store brand will see a rise in sales.

7. Direct and derived demand
Direct demand is the demand for a final good. Food, clothing and cell phones are an example of this. Also called autonomous demand, it's independent of the demand for other products. Derived demand is the demand for a product that comes from the usage of others. For example, the demand for pencils will result in the demand for wood, graphite, paint and eraser materials. In this example, the demand for wood is dependent on the demand for its uses.

Elasticity of Demand

Elasticity of demand is an important variation on the concept of demand. Demand can be classified as elastic, inelastic or unitary.

An **elastic** demand is one in which the change in quantity demanded due to a change in price is **large**. An inelastic demand is one in which the change in quantity demanded due to a change in price is **small**.

The formula used here for computing elasticity of demand is:

$$\frac{(Q1 - Q2) / (Q1 + Q2)}{(P1 - P2) / (P1 + P2)}$$

If the formula creates an absolute value greater than 1, the demand is elastic. In other words, quantity changes faster than price. If the value is less than 1, demand is inelastic. In other words, quantity changes slower than price. If the number is equal to 1, elasticity of demand is unitary. In other words, quantity changes at the same rate as price.

Types of Elasticity

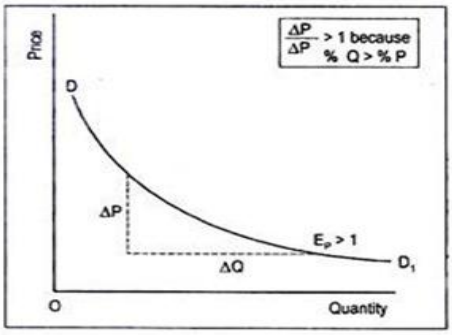
Types of Own (Price) Elasticity of Demand:

For all types of commodities, the rate of change of quantity demanded to a change in own price is not uniform. For some commodities, demand is said to be more responsive to price changes compared to other commodities. That is why there are various types of elasticities of demand.

They are of the following five types:

(1) Elastic Demand ($E_P > 1$):

Demand is said to be elastic if the change in price causes a more than proportionate change in quantity demanded. A 10 p.c. change in price causes quantity demanded to change by more than 10 p.c. In other words, if E is greater than one, demand is said to be elastic .

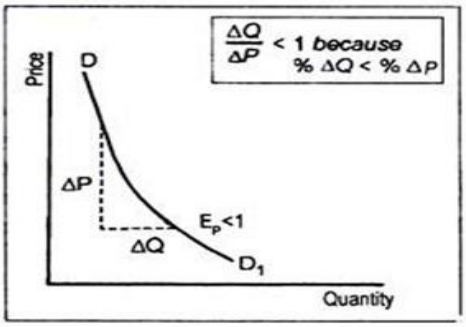


Normally, demand is elastic for luxury goods. Let the price of gold per gm decline from Rs. 160 to Rs. 140. As a result, demand for gold rises from 1,000 kilograms to 2,000 kilograms. Thus,

E_P = 1,000/1,000 ÷ 20/160 = 1,000/20 .160/1,000 = 8
Since elasticity of demand for gold is greater than one, gold is a luxury item.

(2) Inelastic Demand ($E_P < 1$):

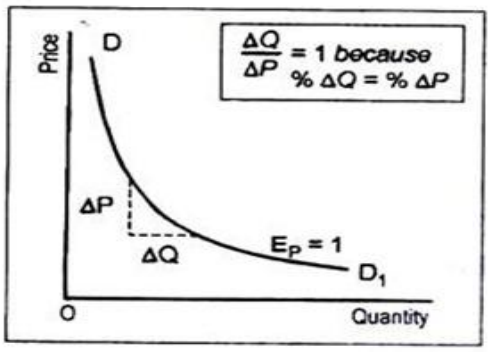
When the change in price causes a less than proportionate change in quantity demanded, demand is inelastic. A 10 p.c. cut in price may cause quantity demanded to fall by, say, 1 p.c. Thus, demand is said to be inelastic ($E_p < 1$), shown in. Usually, demand is inelastic for necessary goods.



Suppose that following a drop in the price of wheat from paisa 40 per kilogram to paisa 20 per kilogram, demand for wheat rises from 1,600 kilograms to 2,000 kilograms. This means

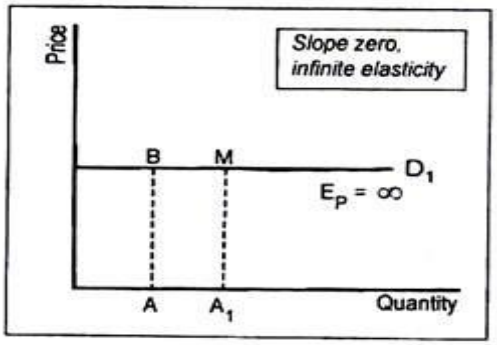
E_P = 400/160 ÷ 20/40 = 400/20. 40/1,600 = 0.5
Thus, wheat has an inelastic demand since E_P < 1 and wheat is a necessary article.

(3) Unit elasticity of Demand (E_P = 1):
When the change in price causes the same proportionate change in quantity demanded, demand has unit elasticity. A 10 p.c. decline in price will lead to an exactly 10 p.c. increase in quantity demanded. Then E_P = 1 .



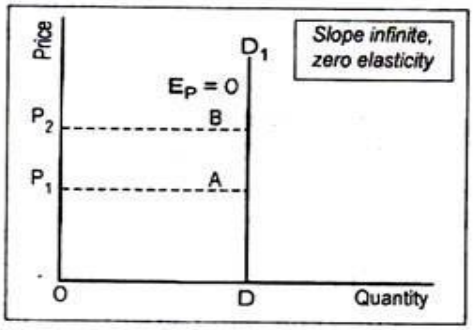
Suppose that the price of a commodity declines from Rs. 200 to Rs. 100 per kilogram. As a result, demand for that commodity rises from 400 kilograms to 800 kilograms.
Thus,
E_P = 400/400 ÷ 100/100 = 400/100. 100/400 = 1

(4) Perfectly Elastic Demand (EP = ∞)
When a slight change in price causes a great change in quantity demanded, the value of elasticity of demand tends to be infinity and demand is said to be infinite or perfectly elastic. In this case, the demand curve (DD,) becomes parallel to the horizontal axis . Under perfectly competitive market, the demand curve for a product of an individual firm becomes perfectly elastic.



(5) Perfectly Inelastic Demand ($E_P = 0$):

If quantity demanded becomes completely unresponsive to price changes, the coefficient tends to be zero. In this case, whatever the price, even if it is zero, quantity demanded will remain fixed at a particular level. The demand curve, thus, becomes parallel to the vertical axis and demand is said to be completely (perfectly) inelastic.



Thus, elasticity of demand varies from zero to infinity.

The relation between elasticity of demand and total outlay (P × Q = TR) may be presented here in a tabular form:

Change in price	E_p	Change in TR	Nature of the good
Increase	$E_p > 1$	Decrease	Luxury
Decrease	$E_p > 1$	Increase	
Increase	$E_p < 1$	Increase	Necessary
Decrease	$E_p < 1$	Decrease	
Increase	$E_p = 1$	No change	—
Decrease	$E_p = 1$	No change	