

DEMAND, SUPPLY AND ELASTICITY

2.1 THEORY OF DEMAND

At the end of this section, you will be able to:

- define concept of demand;
- examine the law of demand;
- construct and interpret the demand schedule, graph and function; and
- describe the basic determinants of demand.

Demand for a commodity is the amount of it that a consumer is willing to buy at various given prices and a given moment of time.

Note:

- ✓ A commodity refers to any good produced for sale in the market.
- ✓ Demand and quantity demanded are two different concepts. Whereas **demand** refers to the relationship between the price of a commodity and its quantity demanded, other things being same the **quantity demanded** refers to a specific quantity which a consumer is willing to buy at a specific price.

Demand Schedule

- ❖ A demand schedule is a tabular statement that states the different quantities of a commodity that would be demanded at different prices. Demand schedules are of two types:

i Individual demand schedule.

ii Market demand schedule.

i **Individual demand schedule** is a tabular statement which shows the quantity of a commodity demanded by an individual household at various alternate prices per time period.

Price (per kg)	Quantity demanded
10	4
15	3
22	1

ii **Market demand schedule** is a tabular statement which shows the different quantities of a commodity

demanded by different households or consumers in a market at various alternate prices per time period.

Price (per kg)	X's demand	Y's demand	Market demand(X + Y)
10	4	6	10
15	3	4	7
22	1	2	3

Demand Curve

- ❖ A demand curve conveys the same information as a demand schedule. But it shows the information graphically rather than in a tabular form. Demand curves also are of two types

i Individual demand curve

ii Market demand curve

i **Individual demand curve** refers to the curve which expresses graphically the relationship between different quantities of a commodity demanded by an individual at different prices per time period.

ii **Market demand curve** refers to the curve which express graphically the relationship between different quantities of a commodity demanded by different households or consumers at different prices per time period. It shows the demand of a whole market for a commodity.

Law of Demand

Statement of the Law:

- The law of demand states that, other things being equal, at a higher price consumers will purchase less of a commodity, and at a lower price, consumers will purchase more of it.

Or

- A rise in the price of goods leads to a fall in quantity demanded and vice versa, assuming all other determinants of demand are kept constant.

Assumptions of the Law of Demand

- ✓ There should be no change in prices of related goods,
- ✓ Tastes and preferences of the consumer should remain constant,
- ✓ There should be no change in the income of the consumers,
- ✓ The size of the population should remain constant,

- ✓ Distribution of income and wealth should be equal,
- ✓ There should be perfect competition in the market.

Exceptions to the Law of Demand

There are some situations when the law of demand does not operate. With an increase in price, more quantity of a commodity is purchased and vice-versa. In these situations demand curve is upward sloping.

- **Giffen Goods**: is a good for which an increase in the price raises the quantity demanded. Giffen goods are a special category of inferior goods.
- **Prestige Goods**: Some consumers measure the utility of a commodity entirely by its price. For example diamond is considered as a prestige good in the society, the higher the price of diamonds, the higher the prestige value of them.
- **Expectation of People about the Future**: This assumption relates to the changes in the expectations of the people regarding prices of the commodities in the future. For example, if rainfall in any year does not occur in adequate quantity and there is widespread drought, the expectations of the people will be that the prices would rise in the future. Therefore, even if the prices of food grains are higher at present, they would demand greater quantities since they will be expecting even higher prices in future.
- **Necessities**: There are some commodities which are necessities of life – for example, food grains, salt, medicines, etc.

Determinants of Demand

An individual's demand for a commodity is determined by a number of factors. Some of these important factors are as follows:

- ★ **Price of the Commodity**: The price of a commodity is the most important factor which affects the demand for a commodity. Other things remaining the same, if price increases, quantity demanded decreases, and if price decreases, quantity demanded increases.
- ★ **Income of the Consumer**: Income of the consumer is also an important factor affecting the demand for a commodity. Generally when income increases, demand also increases, and when income decreases, demand also decreases. This is true in the case of normal goods. However, in the case of inferior goods, with an increase in income their demand decreases and vice-versa.
- ★ **Prices of Related Goods**: Changes in the prices of related goods also affect the demand for a commodity. Related goods may be of two types: ' Substitute goods, and ' Complementary goods.

Substitute Goods: **Substitute goods** are those goods which can be used in place of each other to satisfy a given want. That is why they are also called competitive goods. Coffee and tea, pens and pencils, butter and oil, etc., are examples of substitute goods.

Complementary Goods: Complementary goods are those goods which are used together to satisfy

a given want. If two goods are complementary goods, a decline in the price of one would directly change the demand for other commodity and vice-versa. For example, cars and petrol are complements of each other. If the price of car increases, its demand will decrease and thus will lead to a decrease in the demand for petrol and vice-versa.

- ★ **Tastes and Preferences**: The amount demanded of a commodity also depends on consumer tastes and preferences. If a consumer is accustomed to certain commodities, he will demand that commodity and this leads to increase in the demand for that commodity.
- ★ **Future Expectation of Changes in the Price**: If there is an expectation of increase in the price of a commodity in the near future, consumers will start demanding more of it. Contrary to that, if the price of that commodity is likely to fall in near future, consumers will start demanding less of that commodity.
- ★ **Climate**: The demand for a commodity is also affected by climate. For example, demand for woolen clothes increases in cold seasons. On the other hand demand for coolers, cotton clothes etc., increases in hot seasons.
- ★ **Population and Number of Households**: Changes in population or number of households also affect the demand for goods. For example, with the increase in number of households the demand for consumer goods will also increase.
- ★ **Distribution of Income and Wealth**: If the distribution of income and wealth in a society is unequal, the demand for such commodities will be more which are generally demanded by the rich people. On the other hand, if there is equal distribution of income and wealth in the society, the demand for such commodity will be less which are specially used or demanded by the rich people.

‘ Normal Goods (Superior Goods),

‘ Inferior Goods.

A. **Normal goods** refer to those goods whose income effect is positive – i.e., all other factors remaining the same, as income increases, demand also increases and vice-versa. For example, cheese, butter, chocolates, biscuits, etc.

B. **Inferior goods** refer to those goods whose income effect is negative – i.e., all other factors remaining the same, as income increases, demand decreases and vice-versa. For example, some chinese shoes, coarse cloth, leftover food etc.

Difference between Movement along a Demand Curve (or change in quantity demanded) and Shift in the Demand Curve (or change in demand)

Movement along a demand curve or change in quantity demanded:

- ✓ Other things being equal, if the quantity demanded increases or decreases due to fall or rise in the price of a commodity alone, it is known as movement along a demand curve or change in quantity

demand.

Shift in the demand curve or change in demand:

- ✓ If more or less of a commodity is demanded, at the same price, due to change in factors other than the price of the commodity concerned (such as change in income, or taste or prices of other related goods, etc.), it is called shift in the demand curve or change in demand. In this situation, there is an either rightward shift or leftward shift in the demand curve itself. Here the rightward shift in the demand curve indicates increase in demand while the leftward shift indicates decrease in demand.

2.2 THEORY OF SUPPLY

At the end of this section, you will be able to:

- define concept of supply;
- examine the law of supply;
- describe the basic determinants of supply;
- construct and interpret the supply schedule graph and function; and
- identify the differences between individual and market supply.

Supply of a commodity refers to various quantities of it which producers are willing and able to offer for sale at a particular time at various corresponding prices.

Supply Schedule

- A supply schedule is a tabular statement that states the different quantities of a commodity offered for sale at different prices.

Supply schedules are of two types:

i Individual supply schedule.

ii Market supply schedule.

i Individual supply schedule is a tabular statement which shows the different quantities of a commodity offered for sale by an individual firm at different prices per time period.

Price (per kg)	Quantity supplied
5	15
8	20
12	28

ii **Market supply schedule** is a tabular statement which shows the sum of the quantities supplied by all the sellers.

Price (per kg)	X's supply	Y's supply	Market supply(X + Y)
5	15	12	27
8	20	18	38
12	28	25	53

Supply Curve

- ❖ A supply curve conveys the same information as a supply schedule. But it shows the information graphically rather than in a tabular form.

Supply curves also are of two types:

i Individual supply curve.

ii Market supply curve.

i **Individual supply curve** refers to the curve which expresses graphically the relationship between different quantities of a commodity supplied by an individual firm at different prices per time period.

ii **Market supply curve** is found by adding horizontally the individual supply curves.

Law of Supply

Statement of the Law

- The law of supply states that there is a direct relationship between the price of a commodity and its supply. Or
- Other things being equal, the supply of a commodity increases with an increase in its price and decreases with the fall in price.

Assumptions of the Law of Supply

- ✓ There should be no change in the prices of related goods,
- ✓ There should be no change in the prices of factors of production,
- ✓ There should be no change in the goals of the firm,
- ✓ There should be no change in the state of technology,

- ✓ The income of the buyers and sellers should remain constant.

Exceptions to the Law of Supply

There are some situations when the law of supply does not operate.

1. **Future Expectations About Change in Prices**: Law of supply will not apply if there is an expectation about change in prices of a commodity in the near future.
2. **Agricultural Products**: The law of supply does not apply in the case of agricultural products because their supply is governed by natural factors such as flood, drought, rainfall etc.
3. **Perishable Commodities**: The supply of perishable commodities like milk, fruits, vegetables etc. is not affected by their prices. Producers try to sell more perishable commodities even when their prices decline.
4. **Good of Auction**: Since supply of auction goods is limited, the law of supply does not operate in their case.
5. **Artistic Goods**: Law of supply does not apply in the case of artistic goods since the supply of these goods cannot be changed.

Determinants of Supply

Supply of a commodity is determined by a number of factors. Some of these important factors are as follows:

- I. **Price of the Commodity**: The price of a commodity is the most important factor affecting its supply. Generally, the relationship between price and quantity supplied is direct – i.e., supply is more when price is more and vice-versa.
- II. **Changes in Factor Prices**: Change in factor prices have a strong influence on the supply of a good in the market. An increase in the prices of factors of production leads to an increase in the cost of production. As a result the producers will not be able to sell the same amount at the prevailing market prices. Since their production cost has gone up, the only way the same amount can be offered is at a higher price.
- III. **Price of Related Goods**: An increase in the price of other, related goods induces the firms to produce more of those other goods, leading to a reduction in the supply of the goods whose price has remained unchanged.
- IV. **Objectives of the Firm**: Generally, the main objective of a firm is to maximise its profit. Profit is maximum when the difference between income and expenditure is maximum. However, besides this objective there are other objectives which a firm may pursue, such as objectives of maximum sales, maximum employment, more production, etc. In such a situation, if a firm aims at some other objective such as more employment besides the objective of maximum profit, then volume of output or supply will increase, even when profit declines.

- V. **State of Technology**: If there is change in the technique of production leading to fall in the cost of production, supply of a commodity will increase. On the other hand, supply of those commodities will be less whose production depends on old technology.
- VI. **Other Factors**: Beside the main factors discussed above, there are many other factors which affect the supply of a commodity such as fiscal policy of the government, the prices which are likely to prevail in the near future, etc.

Difference Between Movement along a Supply curve (or change in Quantity Supplied) and Shift in the Supply Curve (or change in Supply)

Movement along a supply curve (or change in quantity supplied):

- Other things being equal, if the quantity supplied increases or decreases due to rise or fall in the prices of the commodity alone, it is known as movement along a supply curve or change in quantity supplied. In this, we move along the same supply curve either upwards or downwards. Upward movement along the supply curve is extension of supply (that is, more quantity supplied at a higher prices) while the downward movement is contraction of supply (that is, less quantity supplied at a lower prices).

Shift in the supply curve (or change in supply):

- If more or less quantity of a commodity is supplied at every alternative price due to changes in factors other than the price of the commodity concerned, it is known as shift in the supply curve or change in supply. In this situation, supply curve itself shifts either to right or to the left. Rightward shift of supply curve indicates increase in supply, while leftward shift indicates decrease in supply.

2.3 MARKET EQUILIBRIUM

At the end of this section, you will be able to:

- ✓ define market equilibrium;
- ✓ compare and contrast mathematical equation and graphical representation of market equilibrium;
- ✓ show how the changes in demand and supply on equilibrium price and quantity; and
- ✓ identify the concepts of price ceiling and price floor.

Market Equilibrium

- In the context of price determination, equilibrium refers to a situation in which the quantity demanded of a commodity equals the quantity supplied of the commodity.
- It refers to the balance between opposite forces of demand and supply and is termed as market equilibrium.

Equilibrium Price

- The price at which the quantity demanded of a commodity equals quantity supplied is known as 'equilibrium price'. The price of commodity in a market is determined by its demand and supply. At equilibrium price, demand and supply are in equilibrium.

Equilibrium Quantity

- The equilibrium price is the price at which the consumers are willing to purchase the same quantity of a commodity which producers are willing to sell. The amount that is bought and sold at equilibrium price is called the 'equilibrium quantity'.

Market Equilibrium – An Illustration

Price (Birr per kg)	Demand (kg)	Supply (kg)	Trend
25	200	1000	Excess supply
20	400	800	Excess supply
15	600	600	Equilibrium
10	800	400	Excess demand
5	1000	200	Excess demand

In Case of Excess Demand

- ❖ Excess demand for a product means that the consumers want more than what the producers are willing to supply. If at a given price of a commodity, demand is in excess of supply, ***competition among buyers will push the price up*** to the point at which demand becomes equal to supply.

In Case of Excess Supply

- ❖ Excess supply of a product means that the consumers want less than what the producers are willing to supply. If at a given price, the quantity supplied of a commodity exceeds the quantity demanded, ***competition among sellers will push the price down*** to the point at which demand becomes equal to supply.

Mathematical Analysis of Market Equilibrium

Example 1: Let there be 5000 identical buyers of a commodity X in a market with an individual demand function of $DX = 8 - PX$, and 1000 identical sellers of commodity X with an individual supply function of $SX = 20 PX$, where DX is quantity demanded, SX is quantity supplied and PX is price of the commodity X. For calculating the equilibrium price and equilibrium quantity, we formulate the market demand and market supply functions for the commodity X.

Solution:

Market demand function = Number of buyers $\times$ Individual demand function

$$= 5,000 \times (8 - PX)$$

$$= 40,000 - 5,000 PX$$

Market supply function = Number of sellers $\times$ Individual supply function

$$= 1000 \times 20 PX$$

$$= 20,000 PX$$

On equating the two market functions, we get:

$$40,000 - 5,000 PX = 20,000 PX \text{ or } 25,000 PX = 40,000$$

$$\therefore PX = 40,000/25,000$$

$$= 1.6$$

Hence, equilibrium price of commodity X is Birr 1.6. On substituting the value of PX in either of the two functions, say market demand function,

we get: Equilibrium quantity = $40,000 - 5,000 PX$

$$= 40,000 - 5,000 \times 1.6$$

$$= 40,000 - 8,000$$

$$= 32,000 \text{ units}$$

Example 2: Assume in a market individual supply function of a commodity A is given by $SA = 2PA - 3$ and individual demand function is $DA = 12 - 4PA$. There are 200 suppliers of commodity A with identical supply function and there are 8,000 buyers of the commodity A with identical demand function.

Where; SA is quantity supplied, DA is quantity demanded and PA is price of commodity A. Find market equilibrium price and quantity demanded.

A non-viable industry is one whose demand and supply do not intersect each other at any positive quantity. It is an industry in which costs are too high for any positive output to be produced.

Effects of changes in Demand and Supply on Equilibrium Price and Equilibrium Quantity

Effects of Change in Demand (or Shifts in the Demand Curve) when Supply Remains Constant

There can be two situations of change in demand.

i Effect of Increase in Demand: Under the conditions of stable supply curve, if there is increase in demand (that is, a rightward shift of the demand curve), both equilibrium price and equilibrium quantity

increase.

ii Effect of Decrease in Demand: Under the conditions of stable supply curve, if there is decrease in demand (i.e., a leftward shift of the demand curve), both the equilibrium price and equilibrium quantity decreases.

In brief, with the same supply curve:

- the effect of increase in demand is higher equilibrium price and larger equilibrium quantity, and
- the effect of decrease in demand is lower equilibrium price and smaller equilibrium quantity.

Effects of Change in Supply (or Shifts in the Supply Curve) when Demand Remains Constant

i Effect of Increase in Supply: Under the conditions of stable demand curve, if there is increase in supply (that is, a rightward shift of the supply curve), equilibrium price decreases and equilibrium quantity increases.

ii Effect of Decrease in Supply:

Under the conditions of stable demand curve, if there is a decrease in supply (that is, a leftward shift to the supply curve), equilibrium price increases and equilibrium quantity decreases.

In brief, with the same demand curve:

- the effect of increase in supply is lower equilibrium price and larger equilibrium quantity, and
- the effect of decrease in supply is higher equilibrium price and smaller equilibrium quantity.

Effect of Simultaneous Change in Demand and Supply (Simultaneous Shifts in Demand and Supply Curves)

i When Both Demand and Supply Increase

- A. If the increase in demand is greater than the increase in supply, the equilibrium price rises.
- B. If the increase in demand is smaller than the increase in supply, the equilibrium price falls.
- C. If the increase in demand and increase in supply are equal, the equilibrium price remains unchanged.

ii When Both Demand and Supply Decrease

- A. If the decrease in demand is greater than the decrease in supply, the equilibrium price falls.
- B. If the decrease in demand is smaller than the decrease in supply, the equilibrium price rises.
- C. If the decrease in demand and decrease in supply are equal, the equilibrium price remains unchanged.

Changes in demand and supply	Effect on equilibrium price	Effect on equilibrium quantity
Increase in demand	price rises	
Decrease in demand		
Increase in supply		
Decrease in supply		
Increase in both (i.e., demand and supply)		
Decrease in both (i.e., demand and supply)		

Effects of Government Intervention on Market Equilibrium

Government may intervene in the market in many ways; one of the more prominent ways is of price control. In the interest of consumers and producers, the government executes the policy of price control by intervening in the market.

This policy of price-control may have two variants:

1. maximum price and
2. minimum price

Maximum Price Fixation (Price Ceiling)

- ❖ Sometimes the supply of a commodity is so short that it creates shortages in the market and common consumers are unable to get the commodity from the market. Competitive prices are so high that they become out of reach for common consumers, only the rich can purchase and consume the commodity. In such a situation government comes forward and fixes the maximum price for the commodity. This process is known as price ceiling.

Minimum Price Fixation (Price Floor)

- ❖ Whenever government feels that the competitive price determined by the forces of demand and supply in a free market is not fair from the producers' point of view, government announces a minimum price to protect the interests of the producers. This is also termed as support price or price floor.

2.4 ELASTICITY OF DEMAND AND SUPPLY

At the end of this section, you will be able to:

- ✓ define the concept of elasticity;

- ✓ identify and explain types of elasticity;
- ✓ calculate and derive the formula of price elasticity of demand;
- ✓ assess the determinant of price elasticity of demand;
- ✓ construct and compute the price elasticity of demand equation and graphical representation;
- ✓ analyze the relationship between price elasticity and total revenue;
- ✓ define the concept of income elasticity;
- ✓ calculate and drive the formula of income elasticity of demand;
- ✓ define the concept of cross-price elasticity demand; and
- ✓ calculate and drive the formula of cross-price elasticity of demand.

Elasticity of demand refers to the degree of responsiveness of quantity demanded of a good to a change in its price, or change in income, or change in prices of related goods.

Price Elasticity of Demand

- ❖ Price elasticity of demand means degree of responsiveness of demand to change in price. It indicates how consumers react to changes in price. The greater the reaction, the greater will be the elasticity, and the lesser the reaction, the smaller will be the elasticity.

Price elasticity of demand (ep) = % change in quantity demanded / % change in price

Determinants of Price Elasticity of Demand

1. **Availability of substitutes**: The most important determinants of the price elasticity of demand is the number and kind of substitutes available for a commodity. If a commodity has many close substitutes, its demand is likely to be elastic. Even a small fall in price will induce more people to buy this commodity rather than its substitutes.
2. **Nature of the commodity**: One of the important determinants of price elasticity of demand is nature of the commodity, that is, whether it is a 'necessary' or a 'luxury' or a commodity of 'comfort'. Generally the demand for necessities is inelastic and the demand for luxuries and comforts is elastic.
3. **Proportion of income spent**: The smaller the proportion of income spent on a commodity, the smaller will be the elasticity of demand and vice-versa. The demand for soap, salt, matches, etc., is highly inelastic since the consumer spends a very small proportion of his income on them. On the other hand, the demand for clothes, furniture, etc. is likely to be elastic since the consumer spends a large fraction of his income on these goods.
4. **The number of uses of a commodity**: Elasticity of demand depends also upon the number of

uses a commodity can be put to. The greater the number of uses to which a commodity can be put to, the greater will be its price elasticity of demand. Electricity,

5. **Time factor**: The elasticity of demand depends on the size of the time period – short period or long period. Price elasticity is generally low for short periods as compared to long periods. This is for two reasons.

Firstly, it takes time for consumers to adjust their tastes, preferences and habits. Secondary, new substitutes may be developed in the long run. Therefore, if the price of a commodity rises, the demand for it will be inelastic in the short-run as the substitutes may not be available. But in the long-run, demand will be elastic as the consumers may switch over to new substitute.

6. **Postponement of consumption**: Demand for a commodity is elastic if its consumption can be postponed.
7. **Price range**: the demand for the commodity is elastic within the moderate range of prices, as the commodity will be within the reach of a large number of consumers.
8. **Habits of the consumers**: Price elasticity of demand depends also upon whether or not the consumers are in the habit of using a commodity. If consumers are in the habit of consuming some commodities, they will continue to consume them even at higher prices.

Measurement of Price Elasticity of Demand

The measurement of elasticity of demand can be looked at from two view points:

i point elasticity and

ii arc elasticity

i Point Elasticity: When price elasticity of demand is measured at a point on a demand curve, it is called point elasticity.

ii Arc Elasticity: When elasticity of demand is measured over a finite range or 'arc' of a demand curve, it is called arc elasticity of demand.

Types of Elasticity of Demand

- I. **Perfectly inelastic demand ($|ep|=0$)**: When the demand of a commodity does not change at all, irrespective of any change in its price, it is said to be perfectly inelastic demand.
- II. **Less than unit elastic demand ($|ep|<1$)**: When percentage change in demand of a commodity is less than the percentage change in its price, it is said to be less elastic or less than unit elastic demand.

- III. **Unit elastic demand ($|ep| = 1$)**: When percentage change in the demand of a commodity and percentage change in price are equal, it is said to be unit elastic demand.
- IV. **More than unit elastic demand ($|ep| > 1$)**: When percentage change in demand of a commodity is more than the percentage change in its price, it is called more than unit elastic demand.
- V. **Perfectly elastic demand ($|ed| = \infty$)**: When demand of a commodity rises or falls to any extent without or with very little change in price, the demand for the commodity is said to be perfectly elastic or infinitely elastic demand.

Price Elasticity of Demand and Total Revenue

- **When Demand is Price-Inelastic ($|ep| < 1$)**: If the demand for a commodity is price-inelastic, the percentage decrease in quantity demanded is less than the percentage increase in price. This leads to an increase in total revenue due to increase in price. Similarly, a price decrease reduces the total revenue, in this case.
- **When Demand is Price-Elastic ($|ep| > 1$)**: If the demand for a commodity is price-elastic, the percentage decrease in quantity demanded is more than the percentage increase in price. This leads to a decrease in total revenue due to an increase in price. On the other hand, a price decrease increases the total revenue, in this case.
- **When Demand is Unit-Elastic ($|ep| = 1$)**: In this case, the percentage change in quantity demanded is equal to the percentage change in price. As a result, an increase or decrease in price leads to no change in the total revenue.

Income Elasticity of Demand

Income elasticity of demand is the ratio of proportionate change in demand to proportionate change in income.

Cross Elasticity of Demand

Responsiveness in the demand for a commodity to the changes in the prices of its related goods is called cross elasticity of demand

2.5 ELASTICITY OF SUPPLY

Price Elasticity of Supply

Price elasticity of supply to change in price, indicates how sellers react to change in price.

Determinants of Price Elasticity of Supply

1. **Behaviour of cost of production:** If an increase in output by the firms in an industry causes only a slight increase in their cost per unit or leads to a decrease in cost per unit, we would expect supply to be fairly elastic. If, on the other hand, an increase in supply leads to a large increase in cost of production, the supply would be relatively inelastic.
2. **Time element:** A price change due to change in demand for a commodity may have a small response in the quantity supplied in the short-run since the production capacity may be limited. Therefore, in the short run, supply tends to be relatively inelastic. However, in the long-run, new plants can be set up and production capacity can be expanded. Therefore, in the long-run supply tends to be elastic.
3. **Nature of the commodity:** Nature of the commodity is also an important determinant of the elasticity of supply.
4. **Availability of facilities for expanding output:** The response of producers to changes in price depends on the availability of production facilities.
5. **Nature of inputs:** If the production of a product requires inputs that are easily available, its supply would be more elastic. On the other hand, if it uses specialised inputs, its supply will be relatively inelastic.
6. **Risk-taking:** The elasticity of supply is determined by the willingness of the entrepreneurs to take risk. If entrepreneurs are willing to take risk, the supply will be more elastic. On the other hand, if entrepreneurs hesitate to take risks, the supply will be inelastic.
7. **Expectation of future prices:** If the producers expect a rise in the price of a commodity in future, producers will like to hoard the commodity to take advantage of rise in future price. The supply will, therefore, be less elastic. On the other hand, if they expect a fall in future price, they will release the goods from their stocks. The supply will be more elastic.

Types of Elasticity of Supply

- A. **Perfectly inelastic supply ($es = 0$):** When quantity supplied does not change at all irrespective of any change in price of the commodity, it is said to be perfectly inelastic supply.
- B. **Less than unit elastic supply ($es < 1$):** When percentage change in quantity supplied is less than the percentage change in price, it is said to be less than unit elastic supply.
- C. **Unit elastic supply ($es = 1$):** When percentage change in quantity supplied and percentage change in price are equal, it is said to be unit elastic supply.
- D. **More than unit elastic supply ($es > 1$):** When percentage change in quantity supplied is more than percentage change in price, it is said to be more than unit elastic supply.
- E. **Perfectly elastic supply ($es = \infty$):** When supply of a commodity rises or falls to any extent

without or with very little change in price, the supply of the commodity is said to be perfectly elastic or infinitely elastic supply.