Microeconomics

Microeconomics is the branch of economics that considers the behaviour of decision takers within the economy, such as individuals, households and firms.

The word ‘firm’ is used generically to refer to all types of business. Microeconomics contrasts with the study of macroeconomics, which considers the economy as a whole. To put it in other words, microeconomics refers to the social science that analyses the associations of human action, particularly about how those choices influence the consumption and allocation of scarce resources.

Much of the study of microeconomics is devoted to analysis of how prices are determined in markets. A market is any system through which producers and consumers come together

Consumer Behaviour

Consumer theory is the theory of the consumers’ Behaviour. It deals with how and why consumers make a decision or make choice regarding the consumption quantity of a particular good or set of goods, at a given price and other circumstances. This premise of the consumer theory is based on the idea and assumption that the consumers’ choices can be inferred and utility. It is also based on the idea that consumers always want to maximize their utility or satisfaction and whatever they like from their choice can also be inferred.

In consumer theory, we study the money spending decision of people on various goods based on their taste and preference and they are constrained by the given budget. Knowing the taste and preferences, money-spending decisions and income of the people is very important in shaping the economy.

To understand the consumer theory in a better way it is necessary to understand the basic assumptions about the consumers’ behaviour. Following are the three basic assumptions about consumer behaviour.

● **Utility Maximization:** The consumer theory assumes that a consumer always wants to maximize his or her utility as per taste and preferences and given budget. Here the term utility refers to the satisfaction gained from the consumption of the commodity. Although it can not be measured directly classical economists have considered money spent for goods as the indirect measure of utility.

● **Nonsatiation:** The assumption of nonsatiation in consumer theory means the consumers will always get additional benefit or marginal utility when they consume an additional unit of the good. In other words, the consumer will not stick with a fixed quantity of goods but will always want to consume more.

● **Decreasing marginal utility:** One of the important assumptions of consumer theory is that the utility or satisfaction is gained with every additional unit if consumption decreases. In other words, the utility of consumption of the 1st unit will be greater than the utility of consumption of the 2nd unit.

The marginal utility is the change in overall utility caused by the consumption of an additional unit of the commodity. To put it another way, it's the value gained from each additional unit

Law of Diminishing marginal Utility

According to the **Law of Diminishing Marginal Utility (DMU)**, with the consumption of more and more units of a commodity, the utility obtained from each successive unit decreases. Most consumers spread their income among different varieties of goods when making choices. This law explains a significant relationship between utility and the quantity of a commodity that is consumed. This can be better understood by using the example mentioned below.

Suppose your mother offers you a cup of tea after you just got home from work. The first cup of tea will provide you with great satisfaction. With the second cup of tea, you will feel less satisfied. As you consume more, you will reach a point where you will need another cup of tea where the marginal utility will be zero. After that, if you are forced to drink even one more cup

of tea, it will lead to disutility. The Law of Diminishing Marginal Utility causes such a decrease in satisfaction with successive unit consumption.

Assumptions of Diminishing Marginal Utility

The Law of Diminishing Marginal Utility functions under specific conditions. They are known by economists as “assumptions of law.” These are listed below:

**1. Cardinal Measurement of Utility:** It is assumed that utility can be measured and that a consumer can express his satisfaction using numbers, such as 1, 2, etc.

**2. Monetary Measurement of Utility:** The law of diminishing marginal utility assumes that utility can be measured in monetary terms.

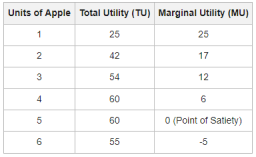
**3. Consumption of Reasonable Quantity:** It is assumed that the commodity is consumed in a reasonable quantity. **For instance,** rather than comparing the marginal utility of spoonfuls, one should compare the marginal utility of glasses of juice. If a thirsty person is given juice in a spoon, then each extra spoon will provide him with increased utility. Therefore, for the law to be true, proper quantity of the good is to be consumed.

**4. Continuous Consumption:** It is assumed that consumption is a continuous process. **For instance,** if you have one cup of milk in the morning and another in the evening, then the second cup of milk can provide equal or higher satisfaction when compared to the first one. **5. No change in Quality:** It is expected that the commodity consumed is of constant quality. If the first cup of milk has no added sugar and chocolate, the second cup of milk with added sugar and chocolate can satisfy you more than the first.

**6. Rational Consumer:** The rational consumer measures, compute, and evaluate the utility of various commodities to maximise overall satisfaction.

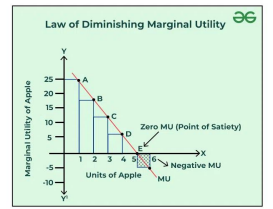
Example

The concept of diminishing marginal utility can be better understood with the help of the following schedule and diagram:



In the above diagram, the units of apples are displayed on the X-axis and the MU on the Y-axis. Points A, B, C, D, and E reflect the MU from each successive unit.

It can be observed as the consumption of apples rises, the rectangles (which represent each level of satisfaction) get smaller and smaller. When consumption is increased from first to second and then third, MU decreases from 25 to 17 and then to 12 utils. The fifth apple is the **Point of Satiety** and has no utility (MU= 0). When the sixth apple is consumed, MU turns negative. The downward-sloping MU curve indicates that the MU of successive units is decreasing.



DEMAND

The quantity that a consumer is able and willing to purchase at a specific price and within a specific time frame.

DEMAND FUNCTION:

The demand function represents the functional relationship taking place between a commodity's quantity demanded and its various determinants.

Demand of any goods or services depends on following factors;

1. **Own Price of the Good (Px):** This refers to the price of the product itself. When the price of a product increases, people tend to buy less of it because it becomes more expensive. Conversely, when the price decreases, people are more likely to buy more of it because it's more affordable.

2. **Income (Y):** This represents how much money people have to spend. When people have more money, they tend to buy more of most goods and services. If their income decreases, they are likely to buy less.

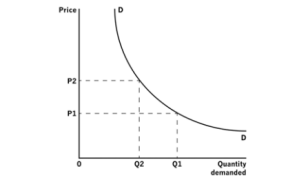
3. **Related Price of Goods (PR):** This factor relates to the prices of other goods that are similar or can be used as substitutes. For example, if the price of tea rises, people might start buying more coffee instead.

4. **Taste and Preferences (T):** This is about people's likes and dislikes. If something becomes trendy or popular, people might want to buy more of it. Conversely, if tastes change, demand for a particular product may decrease.

5. **Expectations (E):** This factor is about what people anticipate will happen in the future. For instance, if people expect the price of a product to go up in the near future, they might buy more of it now to save money.

The most common way of analysing demand is to consider the relationship between quantity demanded and price. Assuming that people behave rationally, and that other determinants of demand are constant, the quantity demanded has an inverse relationship with price. Therefore,

if price increases, the quantity demanded falls, and vice versa. Figure 1 portrays the conventional demand curve.

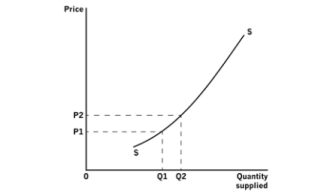


**Figure 1: Demand curve**

A change in price will cause a movement along the curve. When the price increases, the quantity demanded will reduce. This happens with most types of goods, with some bizarre exceptions. Demand for what are known as ‘Giffen goods’ actually rises with an increase in the price for such goods. For example, when the price of rice increases in some regions of China, more rice will be purchased, as there is not enough income left over to some consumers to purchase higher value food items.

Supply

Supply refers to the quantity of goods and services offered to the market by producers. Just as we can map the relationship between quantity demanded and price, we can also consider the relationship between quantity supplied and price. Generally, suppliers will be prepared to produce more goods and services the higher the price they can obtain. Therefore, the supply curve – when holding other influences constant – will slope upwards from left to right, as

illustrated in Figure 2. 

**Figure 2: Supply curve**

Supply of Goods depends on following factors;

1. **Price**: When the price of a product or service increases, producers are generally more willing to supply more of it because they can earn higher profits. Conversely, if the price decreases, they might be less inclined to supply as much.

2. **Prices of Other Goods and Services**: The supply of a particular good can also be influenced by the prices of related goods. For instance, if the price of a substitute (a similar product that can be used in place of the original) increases, producers may choose to supply more of the original good.

3. **Relative Revenues and Costs**: If producing a certain item becomes more profitable due to reduced costs or increased revenues, producers are likely to supply more of it. Conversely, if costs rise or the potential earnings decrease, supply may decrease.

4. **Objectives of Producers and Expectations**: The goals and expectations of producers play a significant role. If they foresee a high demand for their product in the future, they might increase supply. On the other hand, if they anticipate a decline in demand, they may reduce production.

5. **Technology**: Advances in technology can affect supply. When technology improves, it often makes production more efficient, reducing the cost of producing goods. This can lead to an increase in supply.

Elasticity of Demand and Supply

The concept of elasticity is concerned with the responsiveness of quantity demanded or quantity supplied to a change in price. If a small change in price brings about a massive change in quantity demanded, the price elasticity of demand is said to be highly elastic. Conversely, if a change in price has little or no effect on the quantity demanded, the demand is said to be highly inelastic. This concept is obviously very important to producers, who have to estimate the potential effects of their pricing strategies over time. It is also important to government finance departments, which have to model the implications of imposing sales taxes on goods and services in order to predict tax revenues.

Infinite or Perfect Elasticity of Demand:

Let as first take one extreme case of elasticity of demand, viz., when it is infinite or perfect. Elasticity of demand is infinity when even a negligible fall in the price of the commodity leads to an infinite extension in the demand for it. In Fig. 10.1 the horizontal straight line DD’ shows infinite elasticity of demand. Even when the price remains the same, the demand goes on changing.



Perfectly Inelastic Demand:

The other extreme limit is when demand is perfectly inelastic. It means that howsoever great the rise or fall in the price of the commodity in question, its demand remains absolutely unchanged. In Fig. 10.2, the vertical line DD’ shows a perfectly inelastic demand. In other words, in this case elasticity of demand is zero. No amount of change in price induces a change in demand.



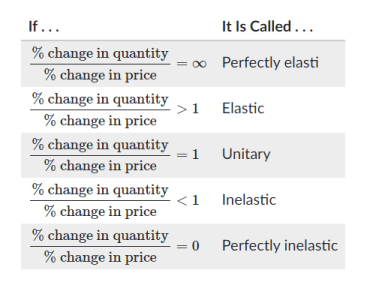
In the real world, there is no commodity the demand for which may be absolutely inelastic, i.e., changes in its price will fail to bring about any change at all in the demand for it. Some extension/contraction is bound to occur that is why economists say that elasticity of demand is a matter of degree only. In the same manner, there are few commodities in whose case the demand is perfectly elastic. Thus, in real life, the elasticity of demand of most goods and services lies between the two limits given above, viz., infinity and zero. Some have highly elastic demand while others have less elastic demand.

Price Elasticity :

The **price elasticity of demand** is the percentage change in the quantity demanded of a good or service divided by the percentage change in the price. The **price elasticity of supply** is the percentage change in quantity supplied divided by the percentage change in price.

Price elasticity of demand is measured by dividing the change in quantity demanded by the change in price and, conversely, price elasticity of supply is measured by dividing the change in quantity supplied by the change in price.

*Perfectly elastic* and *perfectly inelastic* refer to the two extremes of elasticity. Perfectly elastic means the response to price is complete and infinite: a change in price results in the quantity falling to zero. Perfectly inelastic means that there is no change in quantity at all when price changes.



Market Equilibrium

Market equilibrium refers to the stage where the quantity demanded for a product is equal to the quantity supplied for the product.

The price when the quantity demanded is equal to the quantity supplied for the product is known as equilibrium price.

Equilibrium price is also termed as market clearing price, which is referred to a price when there is neither an unsold stock nor an unsupplied demand.

The equilibrium price of a product is determined when the forces of demand and supply meet. For understanding the determination of market equilibrium price, let us take the example of talcum Powder shown in Table-10. In Table-10 we have taken the initial price of talcum powder as Rs. 100.

In this case, the quantity demanded is 80,000, while the supply is 10,000. This results in the shortage of 70,000 of talcum powder in the market. Due to this shortage, the sellers get a chance to earn more by increasing the price of the talcum powder and consumers are ready to purchase at the price quoted by sellers due to shortage of talcum powder.

This increase in profit results in increase in the production of a product to earn more profit, which, in turn, increases the supply of the product. The process of increase in prices goes on till the price of talcum powder reaches to Rs. 300. At this price, the demand and supply is equal to 40,000. Therefore, equilibrium is achieved and the equilibrium price is Rs. 300.

Similarly, if the supply of talcum powder increases beyond Rs. 300, then the sellers need to decrease their prices to sell their unsold stock. They would also stop production that results in the decrease in supply. In such a case, consumers would buy more due to reduction in price of talcum powder. This would continue till the stock would achieve equilibrium and the equilibrium price come out to be Rs. 300.

The graphical representation of equilibrium of demand and supply is shown in Figure 3

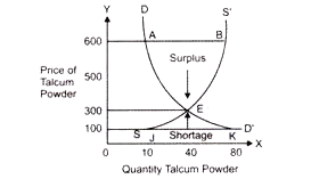


Figure 3 : Market Equilibrium

Shifts in Market Equilibrium:

If there is a shift in supply or demand curve, then the equilibrium point also gets shifted. The shift in demand curve and equilibrium is shown in Figure 4

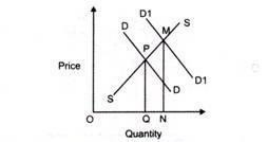


Figure 4 : Shift in demand curve

In Figure initially the equilibrium price is found at PQ and quantity at OQ. However, when there is rise in demand , the new demand quantity is M the demand curve shifted from DD to D1D1, then equilibrium also shifts from PQ to MN. Now, the equilibrium price is at MN and the quantity is at ON.

In this case, the supply does not show any changes. It can also be interpreted from Figure that the equilibrium price has increased with an increase in quantity when demand curve shifts or demand increases.

The shift in supply curve and equilibrium is shown in Figure 5

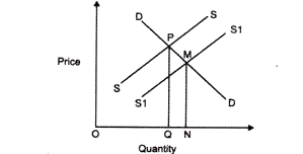


Figure 5 : Shift in supply curve

In Figure, initially the equilibrium price is found at PQ and quantity at OQ. However, when there is more supply in the market, the supply curve shifted from SS to S1S1, then equilibrium also shifts from PQ to MN. Now, the equilibrium price is at MN and the quantity is at ON. In this case, the demand does not show any changes i.e. the demand is constant. It can also be interpreted from Figure that the equilibrium price has decreased, and quantity has increased, when supply curve shifts.

Concept of Cost

Cost refers to the total expenditure made on inputs or resources that are used for the production of final goods or services. The resources used by a firm are limited in nature and thus require efficient allocation to maximise the firm’s profit. The cost or economic cost of a firm consists of all the expenses it faces, can manage, and are beyond its control. For example, cost of labor,

capital, and raw materials. Besides other resources, a firm may also use those resources whose expenses are not that clear but are still essential for the firm.

Fixed Cost:

The costs on which the output level does not have a direct impact are known as Fixed Costs. For example, salary of staff, rent on office premises, interest on loans.

Variable costs:

The costs on which the output level has a direct impact are known as Variable Costs. For example, fuel, power, payment for raw materials, etc.

Variable costs refer to those costs which vary directly with the level of output. If the same workforce produces more output, variable cost will decrease wherein fixed cost remains constant.

Total Cost

Summation of fixed cost and variable cost is called as total cost

TC = FC + VC

Average cost:

The per unit total cost of production is known as Average Total Cost or Average Cost. The formula for calculating Average Total Cost is:

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Marginal Cost

The additional cost incurred to the total cost when one more unit of output is produced is known as Marginal Cost. For example, if the total cost of producing 2 units is ₹400 and the total cost of producing 3 units is ₹600, then the marginal cost will be 600 – 400 = ₹200.

MCn = TCn – TCn-1

Where,

n = Number of units produced

MCn = Marginal cost of the nth unit

TCn = Total cost of n units

TCn-1 = Total cost of (n-1) units

Market Structure in Economics

Market structure refers to the organizational characteristics of a market. It describes how firms are organized and interact within a particular economic environment. There are different types of market structures, and each has its own unique features.

1.Perfect Competition:

In a perfect competition market, there are many small firms producing identical products. No single firm has control over the market price. Prices are determined by the forces of demand and supply. Entry and exit into the market are easy.

2. Monopoly:

A monopoly occurs when a single firm dominates the entire market and has no close substitutes for its product. Due to the absence of competition, the monopolist has significant control over pricing.

3. Monopolistic Competition:

This market structure features many firms producing similar but not identical products. Each firm has some degree of control over its pricing due to product differentiation. Entry and exit into the market are relatively easy.

4. Oligopoly:

In an oligopoly, a small number of large firms dominate the market. They produce either identical or differentiated products. The actions of one firm significantly affect the others, and there is interdependence among them.

Lest discuss in detail each in detail;

Perfect Competition

Perfect competition refers to a market situation in which there are large number of buyers and sellers of homogeneous products.

The price of the product is determined by industry with the forces of demand and supply. For instance, if you require pen, there should be several shops selling pens.

Under conditions of perfect competition, every seller should be selling the same quality of pens at the uniform prevailing price in the market. You may buy a pen from any shop at price Rs. 10. If another shopkeeper charges Rs. 12 for same quality of pen, nobody will buy from him. But if a shopkeeper charges Rs. 9 all will buy pens from that particular shop. But, both these situations are unrealistic.

There must be one price prevailing throughout the market. Thus, perfect competition in a market structure is characterized by the complete absence of rivalry among individual firms.

Assumptions:

A perfectly competitive market has following assumptions:

**1. Large Number of Buyers and Sellers:**

It means no single buyer or seller can affect the price. If a firm enters into the market or exit the market, there will be no effect on the supply. Similarly if a buyer enters into the market or exit from the market, demand will not be affected. Thus no individual buyer or seller can affect the price.

**2. Homogeneous Products:**

The second assumption of perfect competition is that all sellers sell homogeneous product. In such a situation, the buyers have no reason to prefer the product of one seller to another. This condition is present only when the commodity is a substance of definite chemical and physical composition i.e., salt, tin, specified grade of wheat etc.

**3. No Discrimination:**

Under perfectly competitive market, buyers and sellers must buy and sell freely among themselves. It implies that buyers and sellers must be willing to deal openly with one another to buy and sell at the market price. This may be true of one and all that may wish to do so without offering any special deals, discounts, or favours to selected individuals.

**4. Perfect Knowledge:**

A competitive market is (me in which the buyers and sellers are in close contact with each other. It means that, there is perfect knowledge of the market on the part of buyers and sellers. It implies that a large number of buyers and sellers in the market exactly know how much is the price of the commodity in different parts of the market.

In other words, there must be knowledge on the part of each buyer and seller of the prices at which transactions are being carried on, and of the prices at which other buyers and sellers are willing to buy or sell.

**5. Free Entry or Exit of Firms:**

In the long run, under perfect competition, firm can enter into or exit from the industry. There is no let or hindrance on firms as far as their entry into or exit from the market. In other words, there are no legal or social restrictions on the firm. Large number of sellers can be possible only if there is free entry of firms.

**6. Perfect Mobility:**

There must be perfect mobility of factors of production within the country which ensures uniform cost of production in the whole economy. It implies that different factors of production are free to seek employment in any industry that they may like.

**7. Profit Maximization:**

Under perfect competition, all firms have a common goal of profit maximization. Thus, there is absence of social welfare of the general masses.

Monopoly

monopoly refers to a market situation in which there is only one seller of a commodity. There are no close substitutes for the commodity it produces and there are barriers to entry. Monopolist has full control over the supply of commodity. Having control over the supply of the commodity he possesses the market power to set the price.

**We may state the features of monopoly as:**

**1. One Seller and Large Number of Buyers:**

The monopolist’s firm is the only firm; it is an industry. But the number of buyers is assumed to be large.

**2. No Close Substitutes:**

There shall not be any close substitutes for the product sold by the monopolist. The cross elasticity of demand between the product of the monopolist and others must be negligible or zero.

**3. Difficulty of Entry of New Firms:**

There are either natural or artificial restrictions on the entry of firms into the industry, even when the firm is making abnormal profits.

**4. Monopoly is also an Industry:**

Under monopoly there is only one firm which constitutes the industry. Difference between firm and industry comes to an end.

**5. Price Maker:**

Under monopoly, monopolist has full control over the supply of the commodity. But due to large number of buyers, demand of any one buyer constitutes an infinitely small part of the total demand. Therefore, buyers have to pay the price fixed by the monopolist.

Monopolistic Competition

Monopolistic Competition refers to competition among a large number of sellers producing close but not perfect substitutes for each other.

**Important characteristics of monopolistic competition are as follows:**

**1. Less Number of Buyers and Sellers:**

In this market neither buyers nor sellers are too many as under perfect competition nor there is only one seller as under monopoly. Mostly, it is a situation in between. Every producer for his produced commodity has some special buyers. Every consumer and seller can influence demand and supply in the market.

**2. Difference in the Quality and Shape of the Goods:**

Although the commodities produced by different producers can serve as perfect substitutes to those produced by others, yet they are different in colour, form, packing, design, name etc. So there is product differentiation in the market.

**3. Lack of Knowledge on the Part of Consumers:**

Neither consumers nor sellers have full knowledge of market conditions, so there is international difference in the price of goods from those of others.

Oligopoly

Oligopoly refers to a market situation or a type of market organisational in which a few firms control the supply of a commodity. The competing firms are few in number but each one is large enough so as to be able to control the total industry output and a moderate. However, increase of its output or sales will reduce the sales of rival firms by a noticeable amount.

**Characteristics of Oligopoly Market**

**1. Monopoly Power:**

There is a clement of monopoly power in oligopoly. Since there are only a few firms and each firm has a large share of the market. In its share of the market, it controls the price and output. Thus an oligopoly has some monopoly power.

**2. Interdependence of Firms:**

Under perfect competition there are so many small firms and no single firm is strong enough to influence price or output. So the firms do not care about the actions and reactions of other firms. Under monopoly, the question of interdependence of firms does not arise because there is one single firm in the market.

Under oligopoly, there are only a few firms, each producing a homogeneous or slightly differentiated product. Since the number of firms is small, each firm enjoys a large share of the market and has a significant influence on the price and output decisions. Thus, there is interdependence of firms. No firm can ignore the actions and reactions of rival firms under oligopoly.

**3. Conflicting Attitude of Firms:**

Under oligopoly, two types of conflicting attitudes are found in the firms. On the one hand, firms realize the disadvantages of mutual competition and desire to combine to maximize their joint profits. This tendency leads to the formation of collusion. On the other hand, the desire to maximize one’s individual profit may lead to conflict and antagonism, the firms come into clash with one another on the question of distribution of profits and allocation of markets. Thus, there is an existence of two opposing attitudes among the firms.

**4. Few firms. In this market, only few sellers are found:**

For example, the market for automobiles in India exhibits oligopolistic structure as there are only few producers of automobiles. If there are only two firms, it is called ‘duopoly’. **5. Nature of product:**

If the firms product homogeneous product, it becomes pure oligopoly. The firms with product differentiation constitute impure oligopoly.

**6. Interdependence among firms:**

In oligopoly market, each firm treats the other as its rival firm. It is for this reason that each firm while determining price of its product, takes into account the reaction of the other firms to its own action.

**7. Large number of consumers:**

In this market, there are large numbers of consumers to demand the product.

**8. Indeterminate demand:**

The demand curve under oligopoly is indeterminate because any step taken by his rivals may change the demand curve.