

Concepts and definitions

Meaning of Economics:

Economics can be called as social science dealing with economics problem and man's economic behavior. It deals with economic behavior of man in society in respect of consumption, production; distribution etc. economics can be called as an unending science.

Example:

For e.g. most of us want to lead an exciting life i.e. life full of excitements, adventures etc. but unluckily we do not always have the resources necessary to do everything we want to do. Therefore choices have to be made or in the words of economists "individuals have to decide-----"**how to allocate scarce resources in the most effective ways**".

Economics can be studied under two heads:

- 1) Micro Economics
- 2) Macro Economics

Micro Economics:

It has been defined as that branch where the unit of study is an individual, firm or household. It studies how individual make their choices about what to produce, how to produce, and for whom to produce, and what price to charge. It is also known as the price theory is the main source of concepts and analytical tools for managerial decision making.

Various micro-economic concepts such as demand, supply, elasticity of demand and supply, marginal cost, various market forms, etc. are of great significance to managerial economics.

Macro Economics:

It's not only individuals and firms who are faced with having to make choices. Governments face many such problems.

For e.g.

How much to spend on health

How much to spend on services

How much should go in to providing social security benefits.

Following are the various economic concepts which are useful for managers for decision making:

- Price elasticity of demand
- Income elasticity of demand
- Cost and output relationship
- Opportunity cost
- Multiplier
- Propensity to consume
- Marginal revenue product
- Production function
- Demand theory
- Theory of firm—price, output and investment decisions
- Money and banking
- Public finance and fiscal and monetary policy
- National income and • Theory of international trade

CONCEPT OF ECONOMICS IN DECISION MAKING

Meaning of decision making:

Decision making may be defined as the process of selecting the suitable action from among several alternative courses of action.

The problem of decision making arises whenever a number of alternatives are available. Such as:

What should be the price of the product?

What should be the size of the plant to be installed?

How many workers should be employed?

What kind of training should be imparted to them?

What is the optimal level of inventories of finished products, raw material, spare parts, etc.?

Therefore we can say that the problem of decision making arises due to the scarcity of resources. We have unlimited wants and the means to satisfy those wants are limited, with the satisfaction of one want, another arises, and here arises the problem of decision making.

The main reasons behind uncertainty and risks are uncertain behavior of the market forces which are as follows:

The demand and supply

Changing business environment

Government policies

External influence on the domestic market

Social and political changes

Economic problem

Meaning of Economic problem:

To know the meaning of the term economic problem we have to put together

the four characteristics i.e.

Human wants are unlimited.

Human wants vary in their intensity.

The means or resources are relatively limited.

There are alternative uses of the limited resources.

Therefore economic problem can be called as the problem related to the unlimited wants with limited resources. Problem arises due to this unlimited wants only. Resources used to satisfy one want cannot be used to satisfy the other want – it means that every man begins to face the problem of **economizing his means**.

The problem of economy is how to use the relatively limited resources with alternative uses in the face of unlimited wants.

NATURE AND SCOPE OF MANAGERIAL ECONOMICS

Scope of Managerial Economics

ME deals with Demand analysis, Forecasting, Production function, Cost analysis, Inventory Management, Advertising, Pricing System, Resource allocation etc.

Following aspects are to be taken into account while knowing the scope of ME:

1. Demand analysis and forecasting:

Unless and until knowing the demand for a product how can we think of producing that product. Therefore demand analysis is something which is necessary for the production function to happen. Demand analysis helps in analyzing the various types of demand which enables the manager to arrive at reasonable estimates of demand for product of his company. Managers not

only assess the current demand but he has to take into account the future demand also.

2. Production function:

Conversion of inputs into outputs is known as production function. With limited resources we have to make the alternative uses of this limited resource. Factor of production called as inputs is combined in a particular way to get the maximum output. When the price of input rises the firm is forced to work out a combination of inputs to ensure the least cost combination.

3. Cost analysis:

Cost analysis is helpful in understanding the cost of a particular product. It takes into account all the costs incurred while producing a particular product. Under cost analysis we will take into account determinants of costs, method of estimating costs, the relationship between cost and output, the forecast of the cost, profit, these terms are very vital to any firm or business.

4. Inventory Management:

What do you mean by the term inventory? Well the actual meaning of the term inventory is stock. It refers to stock of raw materials which a firm keeps. Now here the question arises how much of the inventory is ideal stock. Both the high inventory and low inventory is not good for the firm. Managerial economics will use such methods as ABC Analysis, simple simulation exercises, and some mathematical models, to minimize inventory cost. It also helps in inventory controlling.

5. Advertising:

Advertising is a promotional activity. In advertising while the copy, illustrations, etc., are the responsibility of those who get it ready for the press,

the problem of cost, the methods of determining the total advertisement costs and budget, the measuring of the economic effects of advertising ---- are the problems of the manager.

There's a vast difference between producing a product and marketing it.

It is through advertising only that the message about the product should reach the consumer before he thinks to buy it.

Advertising forms the integral part of decision making and forward planning.

6. Pricing system:

Here pricing refers to the pricing of a product. As you all know that pricing system as a concept was developed by economics and it is widely used in managerial economics. Pricing is also one of the central functions of an enterprise. While pricing commodity the cost of production has to be taken into account, but a complete knowledge of the price system is quite essential to determine the price. It is also important to understand how product has to be priced under different kinds of competition, for different markets.

Pricing = cost plus pricing and the policies of the enterprise

Now it is clear that the price system touches the several aspects of managerial economics and helps managers to take valid and profitable decisions.

7. Resource allocation:

Resources are allocated according to the needs only to achieve the level of optimization.

As we all know that we have scarce resources, and unlimited needs. We have to make the alternate use of the available resources. For the allocation of the resources various advanced tools such as linear programming are used to arrive at the best course of action.

NATURE OF MANAGERIAL ECONOMICS

- Managerial economics aims at providing help in decision making by firms. It is heavily dependent on microeconomic theory. The various concepts of micro economics used frequently in managerial economics

Elasticity of demand

Marginal cost

Marginal revenue

Market structures and their significance in pricing policies.

- Macro economy is used to identify the level of demand at some future point in time, based on the relationship between the level of national income and the demand for a particular product. It is the level of national income only that the level of various products depends.

In managerial economics macro economics indicates the relationship between (a) the magnitude of investment and the level of national income, (b) the level of national income and the level of employment, (c) the level of consumption and the level of national income.

- In managerial economics emphasis is laid on those propositions which are likely to be useful to management.

DEMAND ANALYSIS

“Demand for a product is the desire for that product backed by willingness as well as ability to pay for it. It is always defined with reference to a particular time, place, price and given values of other variables on which it depends.”

Demand for product implies:

- a) Desires to acquire it,
- b) Willingness to pay for it, and
- c) Ability to pay for it.

For example:

- A poor man's desires to stay in a five-star hotel room and his willingness to pay rent for that room is not 'demand', because he lacks the necessary purchasing power; so it is merely his wishful thinking.
- Similarly, a miser's desire for and his ability to pay for a car is not 'demand', because he does not have the necessary willingness to pay for a car.
- One may also come across a well-established person who possesses both the willingness and the ability to pay for higher education. But he has really no desire to have it, he pays the fees for a regular course, and eventually does not attend his classes. Thus, in an economics sense, he does not have a 'demand' for higher education degree/diploma.

TYPES OF DEMAND

Till now we have that may specify demand in the form of a function. Much of this specification and its form depend on the nature of demand itself – its type and determinants. From this standpoint, we can talk about a few other distinct concepts of demand:

i) Direct and Derived Demands

Direct demand refers to demand for goods meant for final consumption; it is the demand for consumers' goods like food items, readymade garments and

houses. By contrast, derived demand refers to demand for goods which are needed for further production; it is the demand for producers' goods like industrial raw materials, machine tools and equipments. Thus the demand for an input or what is called a factor of production is a derived demand; its demand depends on the demand for output where the input enters. In fact, the quantity of demand for the final output as well as the degree of substitutability/complementary between inputs would determine the derived demand for a given input.

For example, the demand for gas in a fertilizer plant depends on the amount of fertilizer to be produced and substitutability between gas and coal as the basis for fertilizer production. However, the direct demand for a product is not contingent upon the demand for other products.

ii) Domestic and Industrial Demands

The example of the refrigerator can be restated to distinguish between the demand for domestic consumption and the demand for industrial use. In case of certain industrial raw materials which are also used for domestic purpose, this distinction is very meaningful.

For example, coal has both domestic and industrial demand, and the distinction is important from the standpoint of pricing and distribution of coal.

iii) Autonomous and Induced Demand

When the demand for a product is tied to the purchase of some parent product, its demand is called induced or derived.

For example, the demand for cement is induced by (derived from) the demand for housing. As stated above, the demand for all producers' goods is derived or induced. In addition, even in the realm of consumers' goods, we may think of

induced demand. Consider the complementary items like tea and sugar, bread and butter etc. The demand for butter (sugar) may be induced by the purchase of bread (tea). Autonomous demand, on the other hand, is not derived or induced. Unless a product is totally independent of the use of other products, it is difficult to talk about autonomous demand. In the present world of dependence, there is hardly any autonomous demand. Nobody today consumes just a single commodity; everybody consumes a bundle of commodities. Even then, all direct demand may be loosely called autonomous.

iv) Perishable and Durable Goods' Demands

Both consumers' goods and producers' goods are further classified into perishable/non-durable/single-use goods and durable/non-perishable/repeated-use goods. The former refers to final output like bread or raw material like cement which can be used only once. The latter refers to items like shirt, car or a machine which can be used repeatedly. In other words, we can classify goods into several categories: single-use consumer goods, single-use producer goods, durable-use consumer goods and durable-use producer's goods.

This distinction is useful because durable products present more complicated problems of demand analysis than perishable products. Non-durable items are meant for meeting immediate (current) demand, but durable items are designed to meet current as well as future demand as they are used over a period of time. So, when durable items are purchased, they are considered to be an addition to stock of assets or wealth. Because of continuous use, such assets like furniture or washing machine, suffer depreciation and thus call for replacement. Thus durable goods demand has two varieties – replacement of

old products and expansion of total stock. Such demands fluctuate with business conditions, speculation and price expectations. Real wealth effect influences demand for consumer durables.

v) New and Replacement Demands

This distinction follows readily from the previous one. If the purchase or acquisition of an item is meant as an addition to stock, it is a new demand. If the purchase of an item is meant for maintaining the old stock of capital/asset, it is replacement demand. Such replacement expenditure is to overcome depreciation in the existing stock.

Producers' goods like machines. The demand for spare parts of a machine is replacement demand, but the demand for the latest model of a particular machine (say, the latest generation computer) is a new demand. In course of preventive maintenance and breakdown maintenance, the engineer and his crew often express their replacement demand, but when a new process or a new technique or a new product is to be introduced, there is always a new demand.

You may now argue that replacement demand is induced by the quantity and quality of the existing stock, whereas the new demand is of an autonomous type. However, such a distinction is more of degree than of kind. For example, when demonstration effect operates, a new demand may also be an induced demand. You may buy a new **VCR**, because your neighbor has recently bought one. Yours is a new purchase, yet it is induced by your neighbor's demonstration.

vi) Final and Intermediate Demands

This distinction is again based on the type of goods- final or intermediate. The demand for semi-finished products, industrial raw materials and similar intermediate goods are all derived demands, i.e., induced by the demand for final goods. In the context of input-output models, such distinction is often employed.

vii) Individual and Market Demands

This distinction is often employed by the economist to study the size of the buyers' demand, individual as well as collective. A market is visited by different consumers, consumer differences depending on factors like income, age, sex etc. They all react differently to the prevailing market price of a commodity. For example, when the price is very high, a low-income buyer may not buy anything, though a high income buyer may buy something. In such a case, we may distinguish between the demand of an individual buyer and that of the market which is the market which is the aggregate of individuals.

You may note that both individual and market demand schedules (and hence curves, when plotted) obey the law of demand. But the purchasing capacity varies between individuals. For example, A is a high income consumer, B is a middle-income consumer and C is in the low-income group. This information is useful for personalized service or target-group-planning as a part of sales strategy formulation.

viii) Total Market and Segmented Market Demands

This distinction is made mostly on the same lines as above. Different individual buyers together may represent a given market segment; and several market segments together may represent the total market.

x) Company and Industry Demands

An industry is the aggregate of firms (companies). Thus the Company's demand is similar to an individual demand, whereas the industry's demand is similar to aggregated total demand. You may examine this distinction from the standpoint of both output and input.

For example, you may think of the demand for cement produced by the Cement Corporation of India (i.e., a company's demand), or the demand for cement produced by all cement manufacturing units including the CCI (i.e., an industry's demand). Similarly, there may be demand for engineers by a single firm or demand for engineers by the industry as a whole, which is an example of demand for an input. You can appreciate that the determinants of a company's demand may not always be the same as those of an industry's. The inter-firm differences with regard to technology, product quality, financial position, market (demand) share, market leadership and competitiveness---- all these are possible explanatory factors. In fact, a clear understanding of the relation between company and industry demands necessitates an understanding of different market structures.

What determines demand?

- There are a number of factors which influence housework demand for a commodity.

- (I) Price of the commodity,
- (ii) Prices of other related commodities,
- (iii) Level of income of the household,
- (iv) Tastes and preferences of consumers,
- (v) Size and composition of population,
- (vi) Distribution of income,

Demand and supply analysis

Economics may appear to be the study of complicated tables and charts, statistics and numbers, but, more specifically, it is the study of what constitutes rational human behavior in the endeavor to fulfill needs and wants.

As an individual, for example, you face the problem of having only limited resources with which to fulfill your wants and needs, as a result, you must make certain choices with your money. You'll probably spend part of your money on rent, electricity and food. Then you might use the rest to go to the movies and/or buy a new pair of jeans. Economists are interested in the choices you make, and inquire into why, for instance, you might choose to spend your money on a new DVD player instead of replacing your old TV. They would want to know whether you would still buy a carton of cigarettes if prices increased by \$2 per pack. The underlying essence of economics is trying to understand how both individuals and nations behave in response to certain material constraints.

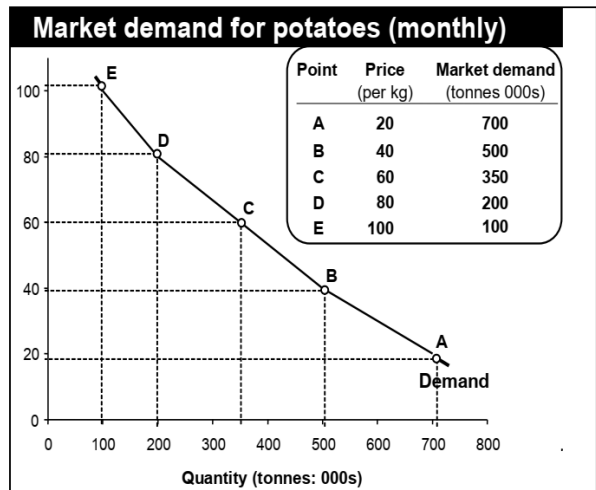
We can say, therefore, that economics, often referred to as the "dismal science", is a study of certain aspects of society. Adam Smith (1723 - 1790), the "father of modern economics" and author of the famous book "An Inquiry into the Nature and Causes of the Wealth of Nations", spawned the discipline of economics by trying to understand why some nations prospered while others lagged behind in poverty. Others after him also explored how a nation's allocation of resources affects its wealth.

To study these things, economics makes the assumption that human beings will aim to fulfill their self-interests. It also assumes that individuals are rational in their efforts to fulfill their unlimited wants and needs. Economics, therefore, is a social science, which examines people behaving according to their self-interests.

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Market demand for potatoes (monthly)

	Price (per kg)	Babu's demand (kg)	Latha's demand (kg)	Total market demand (tonnes: 000s)
A	20	28	16	700
B	40	15	11	500
C	60	5	9	350
D	80	1	7	200
E	100	0	6	100



The definition set out at the turn of the twentieth century by Alfred Marshall, author of "The Principles Of Economics" (1890), reflects the complexity underlying economics: "Thus it is on one side the study of wealth; and on the other, and more important side, a part of the study of man."

Supply and demand

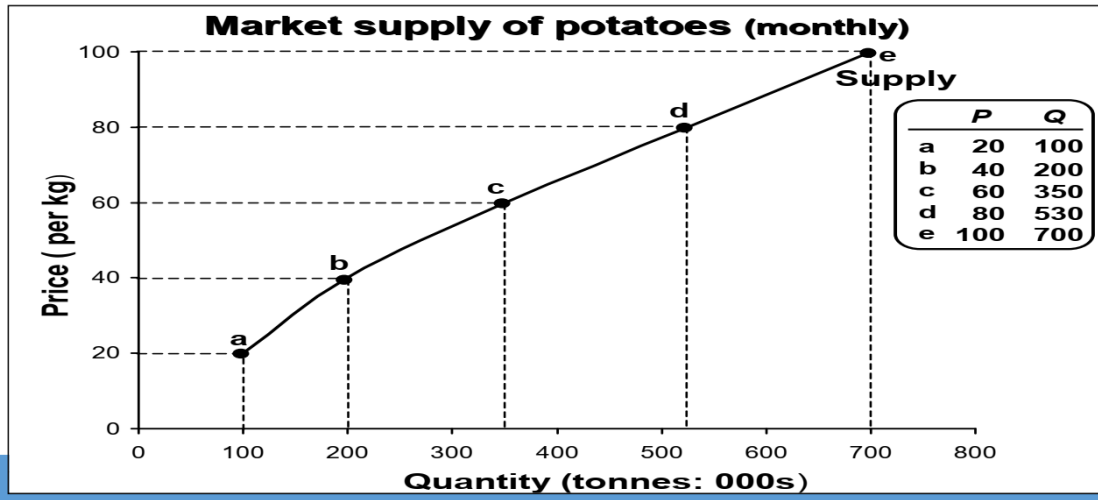
Supply and demand is perhaps one of the most fundamental concepts of economics and it is the backbone of a market economy. Demand refers to how much (quantity) of a product or service is desired by buyers. The quantity demanded is the amount of a product people are willing to buy at a certain price; the relationship between price and quantity demanded is known as the demand relationship. Supply represents how much the market can offer. The quantity supplied refers to the amount of a certain good producers are willing to supply when receiving a certain price. The correlation between price and

**The supply curve:
The supply of potatoes (monthly)**

	Price of potatoes (per kg)	Farmer X's supply (tonnes)	Total Market supply (tonnes: 000s)
a	20	50	100
b	40	70	200
c	60	100	350
d	80	120	530
e	100	130	700

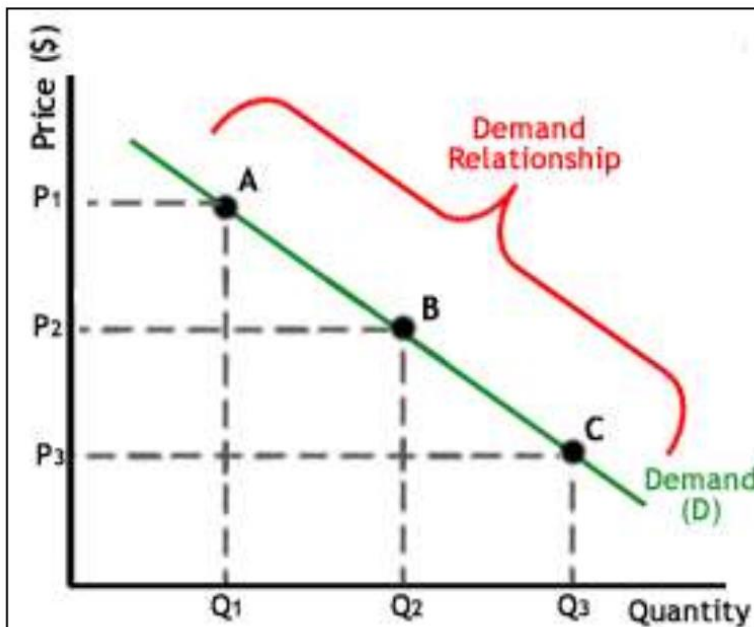
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how much of a good or service is supplied to the market is known as the supply relationship. Price, therefore, is a reflection of supply and demand.



Law of Demand

A microeconomic law that states that, all other factors being equal, as the price of a good or service increases, consumer demand for the good or service will decrease and vice versa.

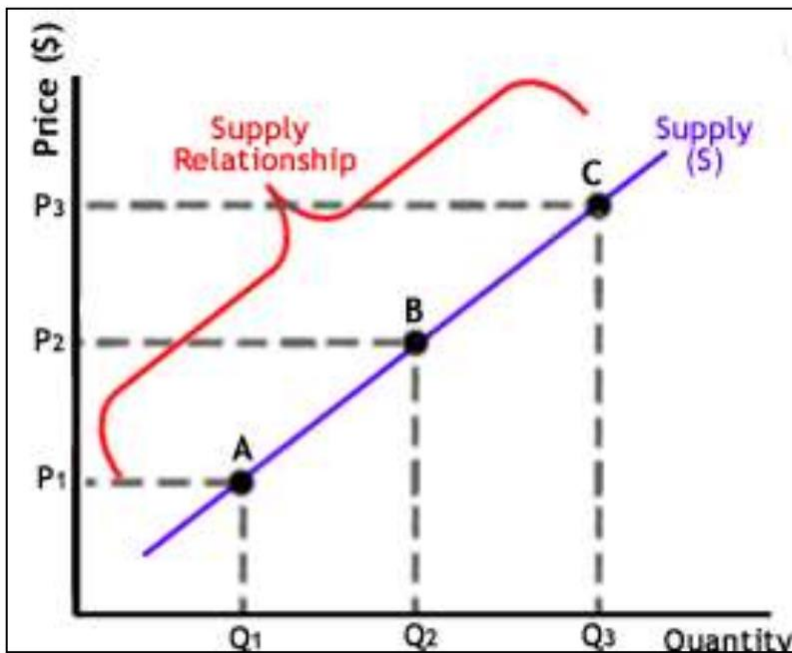


This law summarizes the effect price changes have on consumer behavior. For example, a consumer will purchase more pizzas if the price of pizza falls. The opposite is true if the price of pizza increases.

A, B and C are points on the demand curve. Each point on the curve reflects a direct correlation between quantities demanded (Q) and price (P). So, at point

A, the quantity demanded will be Q_1 and the price will be P_1 , and so on. The demand relationship curve illustrates the negative relationship between price and quantity demanded. The higher the price of a good the lower the quantity demanded (A), and the lower the price, the more the good will be in demand (C).

B. The Law of Supply



Like the law of demand, the law of supply demonstrates the quantities that will be sold at a certain price. But unlike the law of demand, the supply relationship shows an upward slope. This means that the higher the

price, the higher the quantity supplied. Producers supply more at a higher price because selling a higher quantity at higher price increases revenue

A, B and C are points on the supply curve. Each point on the curve reflects a direct correlation between quantity supplied (Q) and price (P). At point B, the quantity supplied will be Q_2 and the price will be P_2 , and so on.

Time and Supply

Unlike the demand relationship, however, the supply relationship is a factor of time. Time is important to supply because suppliers must, but cannot always,

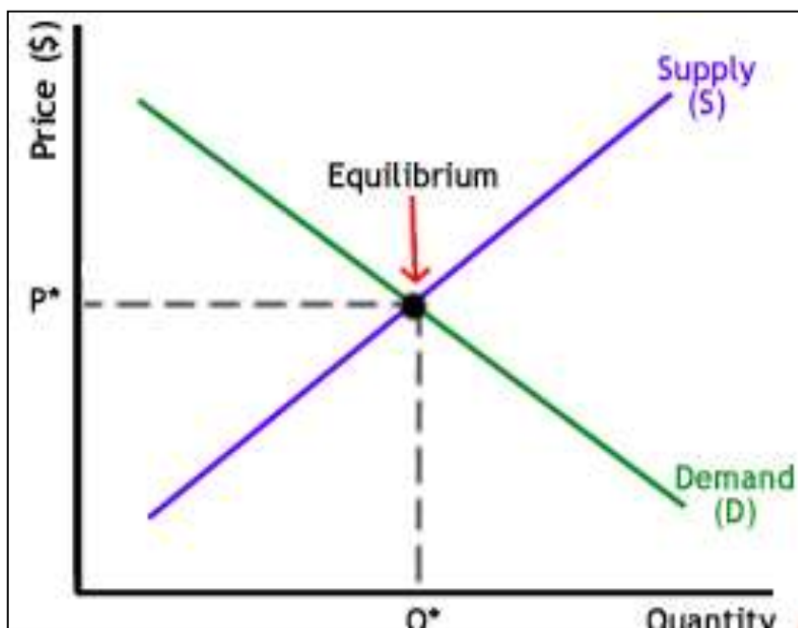
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react quickly to a change in demand or price. So it is important to try and determine whether a price change that is caused by demand will be temporary or permanent.

Let's say there's a sudden increase in the demand and price for umbrellas in an unexpected rainy season; suppliers may simply accommodate demand by using their production equipment more intensively. If, however, there is a climate change, and the population will need umbrellas year-round, the change in demand and price will be expected to be long term; suppliers will have to change their equipment and production facilities in order to meet the long-term levels of demand.

C. Supply and Demand Relationship

Now that we know the laws of supply and demand, let's turn to an example to show how supply and demand affect price.



Imagine that a special edition CD of your favorite band is released for \$20. Because the record company's previous analysis showed that consumers will not demand CDs at a price higher than \$20, only ten CDs were released because the opportunity cost is too high for suppliers to produce more. If, however, the ten CDs are demanded by 20 people, the price will subsequently

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rise because, according to the demand relationship, as demand increases, so does the price. Consequently, the rise in price should prompt more CDs to be supplied as the supply relationship shows that the higher the price, the higher the quantity supplied.

If, however, there are 30 CDs produced and demand is still at 20, the price will not be pushed up because the supply more than accommodates demand. In fact after the 20 consumers have been satisfied with their CD purchases, the price of the leftover CDs may drop as CD producers attempt to sell the remaining ten CDs. The lower price will then make the CD more available to people who had previously decided that the opportunity cost of buying the CD at \$20 was too high.

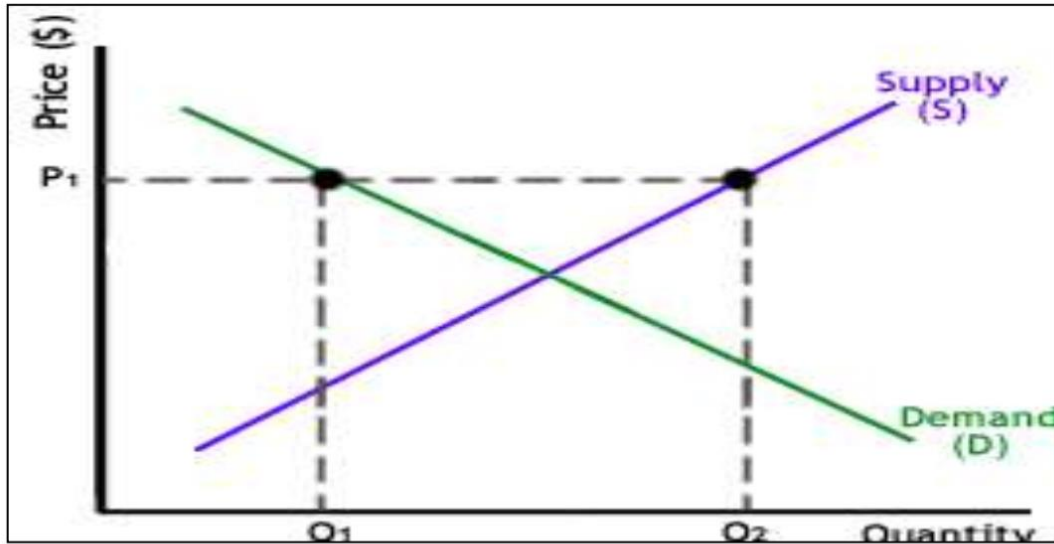
D. Equilibrium

When supply and demand are equal (i.e. when the supply function and demand function intersect) the economy is said to be at equilibrium. At this point, the allocation of goods is at its most efficient because the amount of goods being supplied is exactly the same as the amount of goods being demanded. Thus, everyone (individuals, firms, or countries) is satisfied with the current economic condition. At the given price, suppliers are selling all the goods that they have produced and consumers are getting all the goods that they are demanding.

As you can see on the chart, equilibrium occurs at the intersection of the demand and supply curve, which indicates no allocative inefficiency. At this point, the price of the goods will be P^* and the quantity will be Q^* . These figures are referred to as equilibrium price and quantity. In the real market place equilibrium can only ever be reached in theory, so the prices of goods and services are constantly changing in relation to fluctuations in demand and supply.

E. Disequilibrium

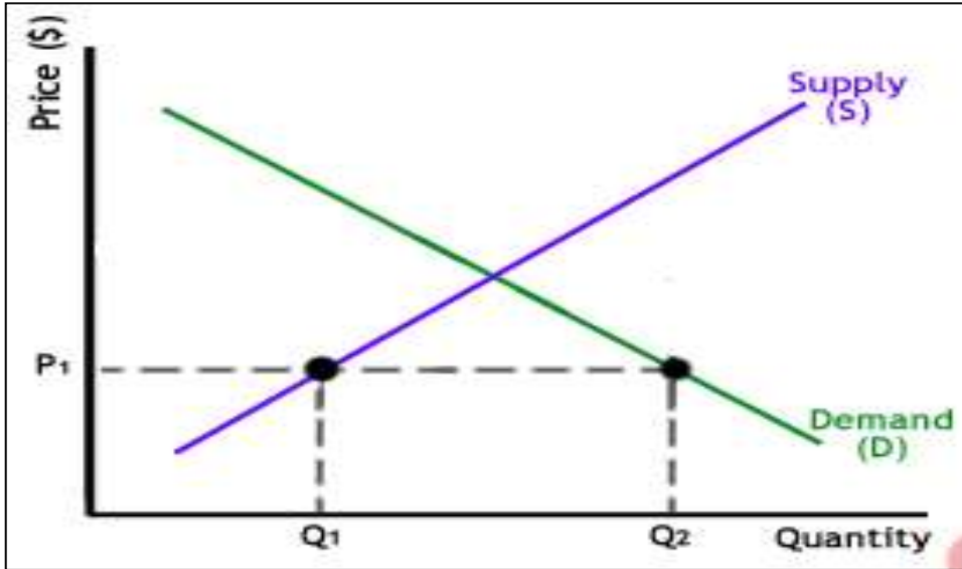
Disequilibrium occurs whenever the price or quantity is not equal to P^* or Q^* .

1. Excess Supply

If the price is set too high, excess supply will be created within the economy and there will be allocative inefficiency. At price P_1 the quantity of goods that the producers wish to supply is indicated by Q_2 . At P_1 , however, the quantity that the consumers want to consume is at Q_1 , a quantity much less than Q_2 . Because Q_2 is greater than Q_1 , too much is being produced and too little is being consumed. The suppliers are trying to produce more goods, which they hope to sell to increase profits, but those consuming the goods will find the product less attractive and purchase less because the price is too high.

2. Excess Demand

Excess demand is created when price is set below the equilibrium price. Because the price is so low, too many consumers want the good while producers are not making enough of it.

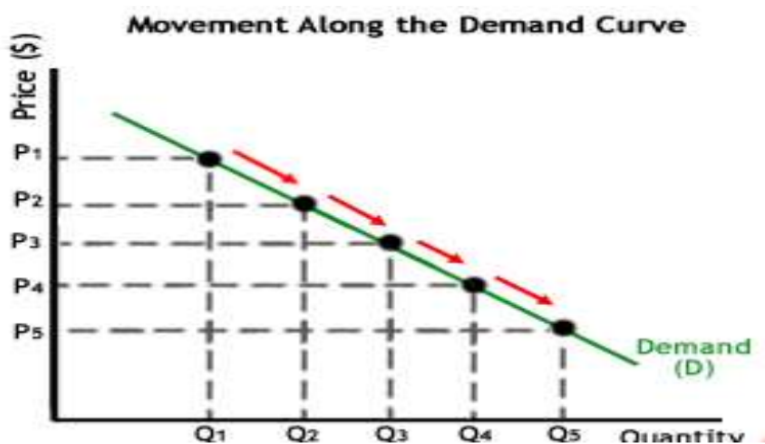


In this situation, at price P_1 , the quantity of goods demanded by consumers at this price is Q_2 . Conversely, the quantity of goods that producers are willing to produce at this price is Q_1 . Thus, there are too few goods being produced to satisfy the wants (demand) of the consumers. However, as consumers have to compete with one other to buy the good at this price, the demand will push the price up, making suppliers want to supply more and bringing the price closer to its equilibrium.

F. Shifts vs. Movement

For economics, the “movements” and “shifts” in relation to the supply and demand curves represent very different market phenomena:

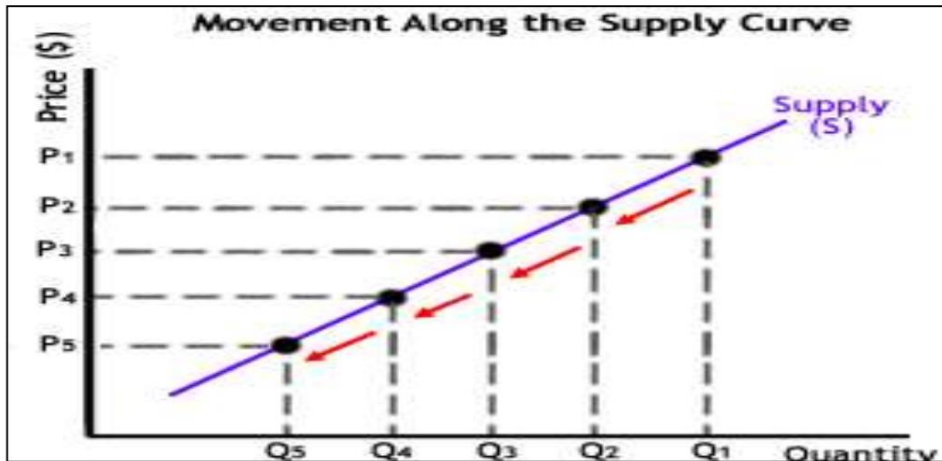
1. Movements



A movement refers to a change along a curve. On the demand curve, a movement denotes a change in both price and quantity demanded from one point to another on

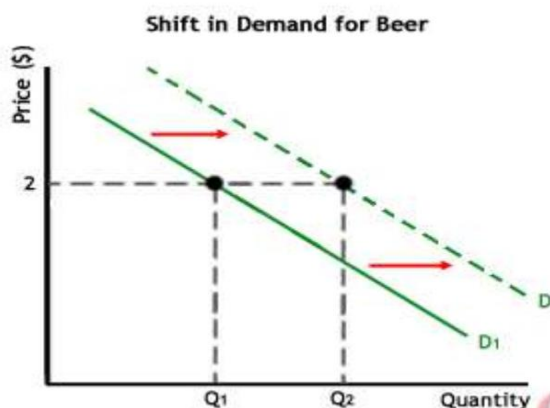
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the curve. The movement implies that the demand relationship remains consistent. Therefore, a movement along the demand curve will occur when the price of the good changes and the quantity demanded changes in accordance to the original demand relationship. In other words, a movement occurs when a change in the quantity demanded is caused



Only by a change in price, and vice versa. Like a movement along the demand curve, a movement along the supply curve means that the supply relationship remains consistent. Therefore, a movement along the supply curve will occur when the price of the good changes and the quantity supplied changes in accordance to the original supply relationship. In other words, a movement occurs when a change in quantity supplied is caused only by a change in price, and vice versa.

2. Shifts

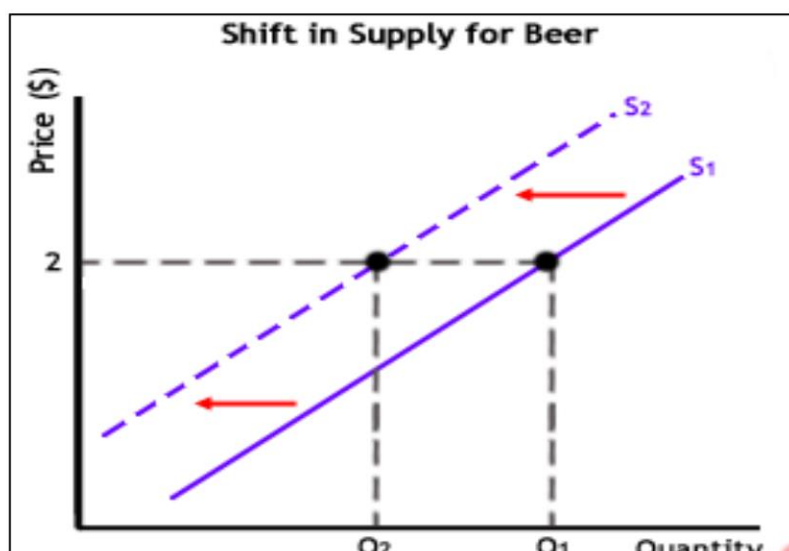


A shift in a demand or supply curve occurs when a good's quantity demanded or supplied changes even though price remains the same. For instance, if the price for a bottle of beer was \$2 and the quantity of beer demanded increased from Q₁ to Q₂,

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then there would be a shift in the demand for beer. Shifts in the demand curve imply that the original demand relationship has changed, meaning that quantity demanded is affected by a factor other than price. A shift in the demand relationship would occur if, for instance, beer suddenly became the only type of alcohol available for consumption.

Conversely, if the price for a bottle of beer was \$2 and the quantity supplied decreased from Q_1 to Q_2 , then there would be a shift in the supply of beer.



Like a shift in the demand curve, a shift in the supply curve implies that the original supply curve has changed, meaning that the quantity supplied is effected by a factor other than price.

A shift in the supply curve would occur if, for instance, a natural disaster caused a mass shortage of hops; beer manufacturers would be forced to supply less beer for the same price.

The degree to which a demand or supply curve reacts to a change in price is the curve's elasticity. Elasticity varies among products because some products may be more essential to the consumer. Products that are necessities are more insensitive to price changes because consumers would continue buying these products despite price increases. Conversely, a price increase of a good or service that is considered less of a necessity will deter more consumers

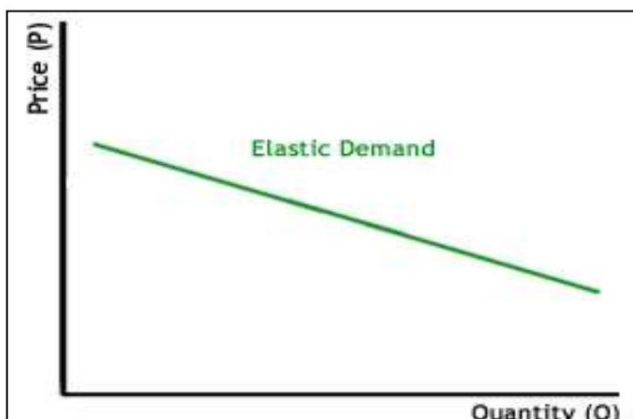
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because the opportunity cost of buying the product will become too high.

A good or service is considered to be highly elastic if a slight change in price leads to a sharp change in the quantity demanded or supplied. Usually these kinds of products are readily available in the market and a person may not necessarily need them in his or her daily life. On the other hand, an inelastic good or service is one in which changes in price witness only modest changes in the quantity demanded or supplied, if any at all. These goods tend to be things that are more of a necessity to the consumer in his or her daily life.

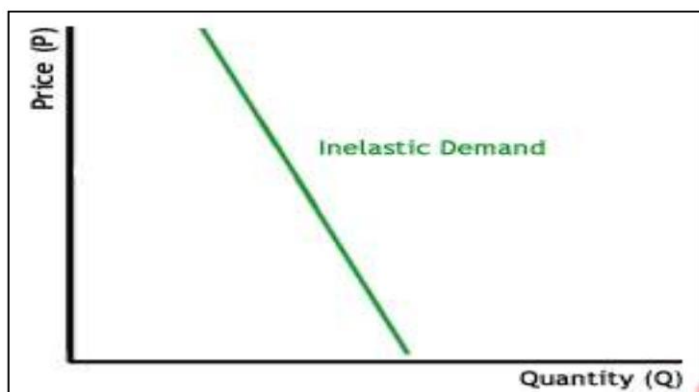
To determine the elasticity of the supply or demand curves, we can use this simple equation:

$$\text{Elasticity} = (\% \text{ change in quantity} / \% \text{ change in price})$$



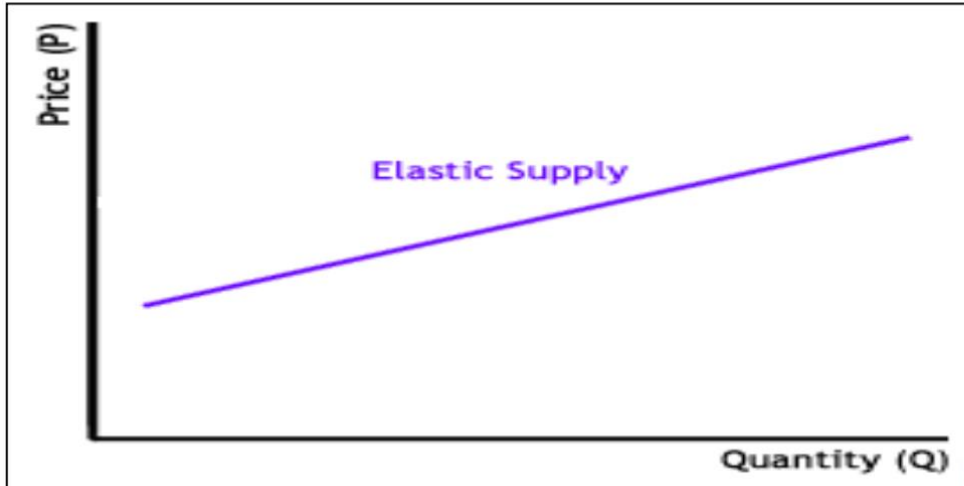
If elasticity is greater than or equal to one, the curve is considered to be elastic. If it is less than one, the curve is said to be inelastic.

As we mentioned previously, the demand curve is a negative slope, and if there is a large decrease in the quantity demanded with a small increase in price, the demand curve looks flatter, or more horizontal. This flatter curve means that the good or service in question is elastic.



Meanwhile, inelastic demand is represented with a much more upright curve as quantity changes little with a large movement in price.

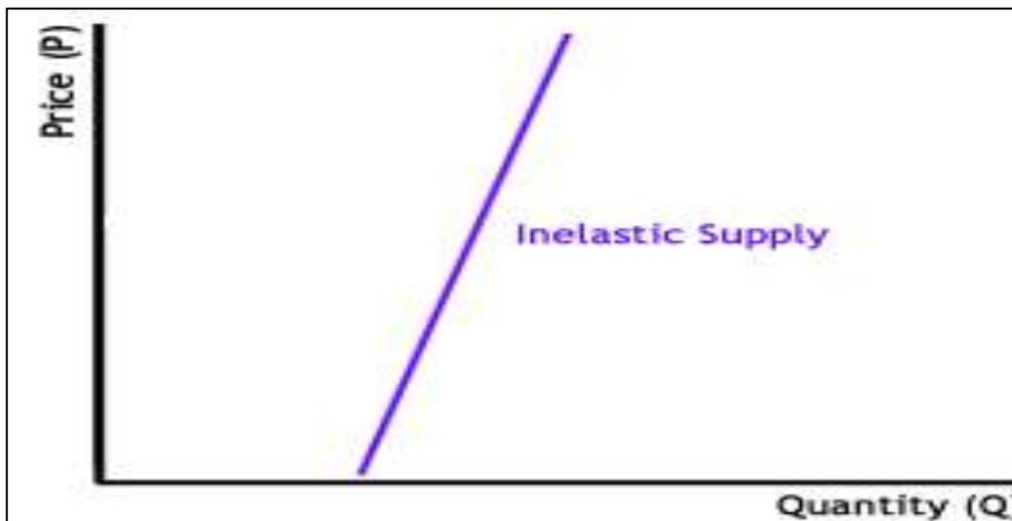
Elasticity of supply works similarly. If a change in price results in a big change in the amount supplied, the supply curve appears flatter and is considered elastic. Elasticity in this case would be greater than or equal to one.



On the other hand, if a big change in price only results in a minor change in the quantity supplied, the supply curve is steeper and its elasticity would be less than one.

A. Factors Affecting Demand Elasticity

There are three main factors that influence a demand's price elasticity:



1. The

availability of substitutes –

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This is probably the most important factor influencing the elasticity of a good or service. In general, the more substitutes, the more elastic the demand will be. For example, if the price of a cup of coffee went up by \$0.25, consumers could replace their morning caffeine with a cup of tea. This means that coffee is an elastic good because a raise in price will cause a large decrease in demand as consumers start buying more tea instead of coffee.

However, if the price of caffeine were to go up as a whole, we would probably see little change in the consumption of coffee or tea because there are few substitutes for caffeine. Most people are not willing to give up their morning cup of caffeine no matter what the price. We would say, therefore, that caffeine is an inelastic product because of its lack of substitutes. Thus, while a product within an industry is elastic due to the availability of substitutes, the industry itself tends to be inelastic. Usually, unique goods such as diamonds are inelastic because they have few if any substitutes.

2. Amount of income available to spend on the good –

This factor affecting demand elasticity refers to the total a person can spend on a particular good or service. Thus, if the price of a can of Coke goes up from \$0.50 to \$1 and income stays the same, the income that is available to spend on coke, which is \$2, is now enough for only two rather than four cans of Coke. In other words, the consumer is forced to reduce his or her demand of Coke. Thus if there is an increase in price and no change in the amount of income available to spend on the good, there will be an elastic reaction in demand; demand will be sensitive to a change in price if there is no change in income.

3. Time - The third influential factor is time. If the price of cigarettes goes up \$2 per pack, a smoker with very few available substitutes will most likely continue buying his or her daily cigarettes. This means that tobacco is inelastic

because the change in price will not have a significant influence on the quantity demanded. However, if that smoker finds that he or she cannot afford to spend the extra \$2 per day and begins to kick the habit over a period of time, the price elasticity of cigarettes for that consumer becomes elastic in the long run.

B. Income Elasticity of Demand

In the second factor outlined above, we saw that if price increases while income stays the same, demand will decrease. It follows, then, that if there is an increase in income, demand tends to increase as well. The degree to which an increase in income will cause an increase in demand is called income elasticity of demand, which can be expressed in the following equation:

$$ED_y = \frac{((Q_{\text{current}} - Q_{\text{previous}}) / (Q_{\text{previous}}))}{((Y_{\text{current}} - Y_{\text{previous}}) / Y_{\text{previous}})}$$

ED = Elasticity of Demand

Q = Quantity

Y = Income

ED_y = Income Elasticity of Demand

If ED_y is greater than one, demand for the item is considered to have high income elasticity. If however ED_y is less than one, demand is considered to be income inelastic. Luxury items usually have higher income elasticity because when people have a higher income, they don't have to forfeit as much to buy these luxury items.

UTILITY

We have already seen that the focus of economics is to understand the problem of scarcity: the problem of fulfilling the unlimited wants of humankind with limited and/or scarce resources. Because of scarcity, economies need to allocate their resources efficiently. Underlying the laws of demand and supply is the concept of utility, which represents the advantage or fulfillment a person receives from consuming a good or service. Utility, then, explains how individuals and economies aim to gain optimal satisfaction in dealing with scarcity.

Utility is an abstract concept rather than a concrete, observable quantity. The units to which we assign an "amount" of utility, therefore, are arbitrary, representing a relative value. Total utility is the aggregate sum of satisfaction or benefit that an individual gains from consuming a given amount of goods or services in an economy. The amount of a person's total utility corresponds to the person's level of consumption. Usually, the more the person consumes, the larger his or her total utility will be. Marginal utility is the additional satisfaction, or amount of utility, gained from each extra unit of consumption.

Although total utility usually increases as more of a good is consumed, marginal utility usually decreases with each additional increase in the Consumption of a good.

This decrease demonstrates the law of diminishing marginal utility. Because there is a certain threshold of satisfaction, the consumer will no longer receive the same pleasure from consumption once that threshold is crossed. In other

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words, total utility will increase at a slower pace as an individual increases the quantity consumed.

Take, for example, a chocolate bar. Let's say that after eating one Chocolate bar your sweet tooth has been satisfied. Your marginal utility (and total utility) after eating one chocolate bar will be quite high. But if you eat more chocolate bars, the pleasure of each additional chocolate bar will be less than the pleasure you received from eating the one before - probably because you are starting to feel full or you have had too many sweets for one day.

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