



## SYLLABUS

**Class: - B.com ( Hons) I Year**

**Subject: - Managerial Economics**

<b>UNIT I</b>	Concepts and Techniques- Nature and Scope of Managerial Economies, Application of Economics in Managerial Decision Making Marginal Analysis: Meaning and definition of demand Functions of demand, Types of demand, Demand Forecasting.
	Production function: type and return to scale
	Market Structure: Perfect Competition, Monopoly, Oligopoly, Monopolistic Competition and Discriminatory Pricing
	Factor Pricing: Rent, Wages, interest
	Industrial Organization: Privatization, Nationalization, etc.



## **UNIT -I** **MANAGERIAL ECONOMICS**

### **Introduction to Economics**

-The standard definition for economics is the study of the production, distribution, and consumption of goods and services floating in the economy. This definition indicates that economics includes any business, nonprofit organization, or administrative unit. This subject presents economic concepts and principles from the perspective of "managerial economics," which is a subfield of economics. To the great dismay of economists - is merely a branch of psychology. It deals with individual behaviour and with mass behaviour. Many of its practitioners sought to disguise its nature as a social science by applying complex mathematics where common sense and direct experimentation would have yielded far better results.

This is not a realistic model - merely a useful approximation. According to this latter day - rational - version of the dismal science, people refrain from repeating their mistakes systematically. They seek to optimize their preferences. Altruism can be such a preference, as well. Still, many people are non-rational or only nearly rational in certain situations. And the definition of "self-interest" as the pursuit of the fulfillment of preferences is a tautology

In simple words, Economics means utilization of optimum resources. The word Economics derived from the Greek words "OIKOU" & "NOMUS", which means Rules or Law of the household. Economics is the Social Science that studies the Production, distribution & consumption of goods & services.

Basically, Economics deals with proper utilization of available scarce resources like manpower, money, raw materials & other resources which satisfy the wants of Social Animals.

### **Nature of Economics**

- ❖ Is Economics a science or an art?
- ❖ Is Economics a positive or normative science?
- ❖ Is Economics a macro or micro Economics?

### **Economics as a science:-**

For this first know what is science, "Science is a systematic & comprehensive study of knowledge which explains in cause & effective relation." is Economics is a science. For this two basic features are-

1. Argument in favour of Economics as a science.

**Arguments in favour of Economics as a science:** - Robbins considered Economics as a science.

The following arguments are given in favour of Economics as a science.

- 1) **Systematic study-** Collection, classification, & analysis of Economics facts are systematized in Economics. The subject matter of Economics is systematically divided into consumption, production, exchange, distribution, & public finance.
- 2) **Scientific Law-** Law of Economics is similar to the Law of other sciences. In Laws we establish cause & effective relationship of Economic activities. For E.g. the Law of demand shows the relationship between a change in demand & change in price.
- 3) **Experiments-** Economics carries several experiments with the laws of Economics. Different Economic laws have been experimented & tried to get out of Economics evils. For e.g. the devaluation of Indian rupee in 1955-66 was an economic experiment.



- 4) **Measuring rod of money-** Economists possess the measuring rod of money to measure the economic facts. Marshall said that the measuring rod of money has made Economics a more certain science than offer social sciences. Money is good measuring rod to measure individual as well as commercial motives.
- 5) **Universal-** Much of the Economic laws is universally true. They are applicable to all types of Economics. Whether it is a capitalist, socialist, or mixed Economy, the law of Economy is equally applicable.
- 6) On the basis of arguments given above, we can say that Economics is a science. It explores the facts, analysis them & classifies them.

### **Economics as an art:-**

For this first know about what is art, Art is the practical application of knowledge of achieving definite ends.

According to "Lord J.N. Keynes"

"An art is a system of rules for the attainment of a given end." "A science teaches us to know, an art teaches us to do."

Economics as an art due to following reasons:-

1. **Solution of problems-** it can be helpful to human beings only, if it is able to solve their problems. Economics helps to utilize the scarce resources in the best possible ways. Prof. Pigou remarked in this context, "Economics is not only light-giving but also fruit-bearing."
2. **Modern trends-** Modern Economists are much concerned with solving the Economic problems. Prof. Stiglar said, "At least 90% of modern Economists spend over half of their time on applied or empirical subject." for this we can regard Economics as an art.
3. **Verification of Economics law-** Verification of Economics laws is possible only if Economics is an art because art is the practical application of knowledge. When we actually apply the Economics laws, only then we come to know that whether their results are true or false. From the arguments given below, we say that Economics is an art. Now days, Economic problem has become very popular & to formulate Economic plans is an art. Therefore we can conclude that Economics is a science as well as art.

**Science & Art both are complementary to each other.**

### **Macro-Economic Conditions & Micro-Economic analysis**

1. **Macro-Economic Condition-** The decision of the firm are made almost always within the broad framework of environment within which the firm operates, known as macro-economic conditions. with regard these conditions, we may stress three points:
  - a. The Economy in which the business is predominantly, a free enterprise economy using prices & market.
  - b. The present day economy is the one undergoing rapid technological & economic changes.
  - c. The intervention of government in economic affairs has increased in resent times & there is no likelihood that this intervention will stop in future. It can ignore neither the working of the market nor the place of economic change, nor the activities of government in the economic sphere. The management which keeps itself well & continuously informed of changes in the economic system is called progressive management.
2. **Micro-Economic Analysis-** The Micro-Economic analysis deals with the problem of an individual firm, industry, consumer, etc. in the case of Managerial Economics Micro-Economics helps in studying what is going on with in the firm, how best to use the available resources between various activities of the firm. It is also known as price theory.

The concept of Micro-Economics are the elasticity of demand, marginal costs, the long-run economics, & diseconomies of scale, opportunity costs, present value, & market structures.



Micro environment	Macro environment
1. Micro Environment or Internal Environment refers to the forces operating in the market that are close or within the enterprise or firm and affect its ability to serve its customers directly.	1. Macro environment refers to all forces that are part of the larger society and are the "uncontrollable" to which companies mould itself through setting the "controllable" factors.
2. It comprises of producer/seller customer, competitors, suppliers marketing intermediaries.	2. Macro environment comprises demographic forces, economic forces, technological forces, political forces, natural forces, cultural forces.
3. These are uncontrollable for a firm.	3. These are controllable for a firm.
4. It includes concepts such as demography, economy, natural forces, technology, politics, and culture.	4. This includes all departments, such as management, finance, research and development, purchasing, operations and accounting.

### Positive V/s Normative approach

Positive approach concern with **WHAT IS, WAS OR WILL BE**, while Normative approach concern with **WHAT OUGHT TO BE**.

The statement 'a government deficit will reduce unemployment & cause an increase in prices' is hypothesis in positive economics, while the statement 'in setting policy, unemployment ought to matter more than inflation' is a normative hypothesis.

Positive Economics is of two types:

- Description.
- Theory.

The Positive Economics theory, on the other hand attempt to developed hypothesis which explain why it happened.

The Normative Micro-Economics, one is concerned with problems like what the objectives & policies of business ought to be & how to go about them. Managerial Economics is concern with analysis which is prescriptive or normative in nature.

Positive and Normative Statements

In this brief note we introduce you to the idea of positive and normative statements and the idea of value judgments contained in statements and articles.

### **Detecting Bias in Arguments**

Whenever you are reading articles on current affairs it is important to be able to distinguish where possible between objective and subjective statements. Very often the person writing an article has a particular argument to make and will include in their piece subjective statements about what ought to be or what should be happening. Their articles are said to carry value judgments, they are trying to persuade you of the particular merits or demerits of a particular policy decision or issues. These articles may be lacking in objectivity.

### **Positive Statements**



Positive statements are objective statements that can be tested or rejected by referring to the available evidence. Positive economics deals with objective explanation and the testing and rejection of theories. For example:

1. A rise in consumer incomes will lead to a rise in the demand for new cars.
2. A fall in the exchange rate will lead to an increase in exports overseas.
3. More competition in markets can lead to lower prices for consumers.
4. If the government raises the tax on beer, this will lead to a fall in profits of the brewers.
5. A reduction in income tax will improve the incentives of the unemployed to search for work.
6. A rise in average temperatures will increase the demand for chicken.
7. Poverty in the UK has increased because of the fast growth of executive pay.

### Normative Statements

Normative statements express an opinion about what ought to be. They are subjective statements rather than objective statements – i.e. they carry value judgments. For example:

1. The level of duty on petrol is too unfair and unfairly penalizes motorists.
2. The London congestion charge for drivers of petrol-guzzling cars should increase to £25 - three times the current charge.
3. The government should increase the national minimum wage to £6 per hour in order to reduce relative poverty.
4. The government is right to introduce a ban on smoking in public places.
5. The retirement age should be raised to 75 to combat the effects of our ageing population.
6. The government ought to provide financial subsidies to companies manufacturing and developing wind farm technology.

### Managerial economics

Sometimes referred to as business economics, is a branch of economics that applies microeconomic analysis to decision methods of businesses or other management units. The purpose of managerial economics is to provide economic terminology and reasoning for the improvement of managerial decisions. Most of us are familiar with two different conceptual approaches to the study of economics: microeconomics and macroeconomics. Microeconomics studies phenomena related to goods and services from the perspective of individual decision-making entities—that is, households and businesses. Macroeconomics approaches the same phenomena at an aggregate level, for example, the total consumption and production of a region. Microeconomics and macroeconomics each have their merits. The microeconomic approach is essential for understanding the behavior of atomic entities in an economy. However, understanding the systematic interaction of the many households and businesses would be too complex to derive from descriptions of the individual units. The macroeconomic approach provides measures and theories to understand the overall systematic behavior of an economy. Since the purpose of managerial economics is to apply economics for the improvement of managerial decisions in an organization, most of the subject material in managerial economics has a microeconomic focus. However, since managers must consider the state of their environment in making decisions and the environment includes the overall economy, an understanding of how to interpret and forecast macroeconomic measures is useful in making managerial decisions.

Economics is the combination of three different activities:-

1. **MONEY;**
2. **WEALTH (ASSETS);**



### 3. GOODWILL;

“Economics is an enquiry into nature & cause of wealth in nation.”

**“Adam Smith”**

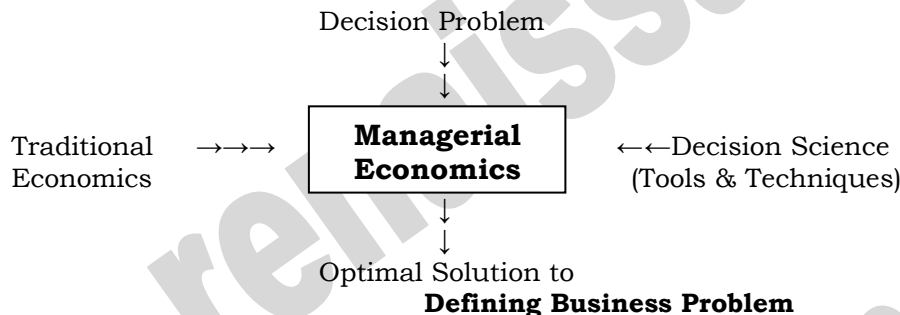
“Economics is the study of mankind in the ordinary business of life. It examines that part of individual or social action which is closely connected with the attainment & use of material requisite of well being.”

**“Marshall”**

#### **Managerial Economics = Management + Economics**

Management deals with principles which helps in decision making under uncertainty and improves effectiveness of the organization. On the other hand economics provide a set of preposition for optimum allocation of scarce resources to achieve a desired result. Managerial Economics deals with the integration of economic theory with business practices for the purpose of facilitating decision making and forward planning by management. Almost any business decision can be analyzed with managerial economics techniques, but it is most commonly applied to:

- **Risk analysis** - various models are used to quantify risk and asymmetric information and to employ them in decision rules to manage risk.
- **Production analysis** - microeconomic techniques are used to analyze production efficiency, optimum factor allocation, costs, economies of scale and to estimate the firm's cost function.
- **Pricing analysis** - microeconomic techniques are used to analyze various pricing decisions including transfer pricing, joint product pricing, price discrimination, price elasticity estimations, and choosing the optimum pricing method.
- **Capital budgeting** - Investment theory is used to examine a firm's capital purchasing decisions.



At universities, the subject is taught primarily to advanced undergrads. It is approached as an integration subject. That is, it integrates many concepts from a wide variety of prerequisite courses. In many countries it is possible to read for a degree in Business Economics which often covers managerial economics, financial economics, game theory, business forecasting and industrial economics.

Managerial Economics is a tool which is help to solve the Business problems. It is totally practical approach over pure Economics.

Managerial Economics is an Economic applied to problems of choice of alternatives of Economic nature & allocation of scarce resources by the firm. In other words, Managerial Economics involves analysis of allocation of the resources available to a firm.

Managerial Economics is the Economics applied in the decision making. It is that branch of Economics which serves as a link between abstract theory & managerial practice.

1. “Managerial Economics is the use of Economic modes of thoughts to analyze business problem.”



2. “Managerial Economics as, “price theory in the service of business executives.”  
“McNair & Meriam”
3. “The application of Economic theory & methodology to business practice.”  
“Watson”  
“Brigham & Pappas”
4. “Managerial Economics as, “a fundamental academic subject which seek to understand & to analyze problem of business decision making”.  
“Hague”

### Scope of Managerial Economics

Managerial Economics has a closed connection with economic theory, operation research, statistics, mathematics, & the theory of decision-making. Managerial Economics also draws together & relates ideas from various functional areas of management like production, marketing, finance & accounting, project management etc.

In so far as Managerial Economics is concern, the following aspects constitutes its subject matter

1. Objective of a Business firm
2. Demand analysis & demand forecasting
3. Production & cost
4. Competition
5. Pricing & output
6. Profit
7. Investment & capital budgeting cost
8. Product policy, sales promotion & market strategy

Well scope is something which tells us how far a particular subject will go. As far as Managerial Economic is concerned it is very wide in scope. It takes into account almost all the problems and areas of manager and the firm.

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. **Objective of the Business Firm:** As we know that Economics is playing very essential role for the business. It is first used for the Setting up of the objectives of a organization or business. The objective may be Business Expansion, Increase Sales, New technology adoption etc. or some time as per the change in government policy it help us to set the business objective as per the availability of the resources.
2. **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.
3. **Production and Cost 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. 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. **Competition:** As per the Market situation a business has to face many tough competition from the market in terms of Perfect Competition, Monopolistic Competition, Duopoly or Oligopoly etc. as a Businessman you must know what kind of competition you are facing with the world and what are the different solution for the same. Because this is the world of competition and it has to be faced with all the possible options.
5. **Pricing and Output:** After knowing the competition, and type of it, it is must to set the price of the products or services which has to be offered in the market. It is very necessary to set a price of the commodity and its output, where the cost will be minimum and sufficient output at a required profit margin can be achieved. Economics help to decide the Pricing and output for the organization. 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.
6. **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. **Profit:** Every organization is working for Profit. To decide the profit margin and the net amount of profit economics helps better. At last every one as a firm need to earn profit but profit is depends on the Competition and pricing of the firm. Economics also helps in this to determine the profit level.
8. **Investment decision and capital budgeting:** Some time firm to invest again for the business expansion and diversification. To take the decision whether to invest or not, Economics help to decision maker to take decision. Capital Budgeting is a technique to determine whether to invest or not.
9. **Product policy, sales promotion & market strategy:** As per the Situation firm take decision regarding Product mix, sales promotion in the market and the best possible market strategy. Again to decide all of these, economics will help to firm to take decision.
10. **After 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.
11. **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.
  - a. There's a vast difference between producing a product and marketing it.
  - b. It is through advertising only that the message about the product should reach the consumer before he thinks to buy it.
  - c. Advertising forms the integral part of decision making and forward planning.
12. **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.



## Managerial Economics



### **Role of Managerial Economist**

A managerial economist helps the management by using his analytical skills and highly developed techniques in solving complex issues of successful decision-making and future advanced planning.

The role of managerial economist can be summarized as follows:

1. He studies the economic patterns at macro-level and analysis it's significance to the specific firm he is working in.
2. He has to consistently examine the probabilities of transforming an ever-changing economic environment into profitable business avenues.
3. He assists the business planning process of a firm.
4. He also carries cost-benefit analysis.
5. He assists the management in the decisions pertaining to internal functioning of a firm such as changes in price, investment plans, type of goods /services to be produced, inputs to be used, techniques of production to be employed, expansion/ contraction of firm, allocation of capital, location of new plants, quantity of output to be produced, replacement of plant equipment, sales forecasting, inventory forecasting, etc.
6. In addition, a managerial economist has to analyze changes in macro- economic indicators such as national income, population, business cycles, and their possible effect on the firm's functioning.
7. He is also involved in advising the management on public relations, foreign exchange, and trade. He guides the firm on the likely impact of changes in monetary and fiscal policy on the firm's functioning.
8. He also makes an economic analysis of the firms in competition. He has to collect economic data and examine all crucial information about the environment in which the firm operates.
9. The most significant function of a managerial economist is to conduct a detailed research on industrial market.
10. In order to perform all these roles, a managerial economist has to conduct an elaborate statistical analysis.
11. He must be vigilant and must have ability to cope up with the pressures.
12. He also provides management with economic information such as tax rates, competitor's price and product, etc. They give their valuable advice to government authorities as well.

### **Relationships between Managerial Economics & Other Subjects**



1. Managerial Economics & Traditional Economics- The relationships between M.E. & T.E. starts with the basic concepts that both of them are related or concern with solving the problem of allocation of limited resources between competing ends. the two main contributions to M.E. are:
  - a. To help in understanding the market conditions & the general economic environment within which the firm operates.
  - b. To provide a philosophy for understanding & analyzing resources- allocation problems. Managerial Economics takes help of Economics analysis for achieving both T.E. & M.E. efficiency in the business operations. The firm maximizes its goal by producing maximum output at minimum cost is Managerial Economics efficiency. The production is carried out to the best of technological specification is Traditional Economics efficiency.
2. Managerial Economics & Operation Research- Both M.E. & O.R. are concern with taking effective decisions. M.E. & O.R. are both concerned with model-building. Models are generalized & scientifically analyzed relationship between various factors relevant in a specified kind of situations. Economic models are more general & confined to broad economic decision-making. whereas O.R. models on the other hand, draw from various disciplines & are more job-oriented, through situational O.R. is both expensive as well as a very slow process compare to M.E. the significant relationship between M.E. & O.R. can be highlighted with reference to certain important problems of M.E. which are solved with the help of O.R. techniques. The problems are equal allocation problems, waiting-line problems & inventory problems.
3. M.E. & Mathematics- Mathematics & M.E. are very closely related to each other. This is because M.E. is both conceptual as well as metrical. It drives its metrical property from the fact that an important function M.E. is to estimate & predict the relevant economic factors for decision-making & forward planning.
4. M.E. & Statistics- Statistics is widely used by Managerial Economists. M.E. aims at quantifying the past economic activity as well as to predict its future course. This is the way where Statistics is used in M.E. Managerial Economics heavily depending upon the theory of probability to take care of various problems in decision-making.
5. M.E. & the Theory of Decision-Making- M.E. is based on the assumption of a single goal of profit maximization & on the assumption of certainty, i.e., perfect knowledge. The theory of decision-making recognizes the multiplicity of goals & the pervasiveness of uncertainty in the business. In complex problem with multiple goals & high degree of uncertainty & where decisions are to be taken quickly, the theory of decision-making guides M.E.

### **Features of Managerial Economics**

- ✚ Managerial Economics concern with decision making of Economic nature. It deals with identification of Economic choices & allocation of scarce resources.
- ✚ It is goal oriented & prescriptive. It deals with how decisions should be made by managers to achieve the organizational goals.
- ✚ It is pragmatic. It is concern with those analytical tools which are useful in improving decision making.
- ✚ It is both conceptual & metrical.
- ✚ Managerial Economics provide a link between Traditional Economics & the Decision Science, for Managerial decision making, as shown in figure:-



### **Characteristics of ME**

- ✦ Managerial Economics is micro-economic in character as it concentrates only on the study of firm & not on the working of economy.
- ✦ Managerial Economics takes the help of macro-economics to understand & adjust to the environment in which the firm operates.
- ✦ Managerial Economics is Normative rather than Positive character.
- ✦ It is only for the analysis of profits that help is taken of the theory of distribution.

### **Significance of Managerial Economics**

1. In order to enable the manager to become a more competent model builder, Managerial Economics provides the no. of tools & techniques.
2. Managerial Economics provides most of the concepts that are needed for the analysis of business problems, concept of elasticity of demand, fixed & variable costs, short & long-run costs, opportunity costs, net present value, etc. all helps in understanding & solving decision problems.
3. It helps in making decision such as- what is the production technique & the input-mix that is least costly? How to take investment decision? & so on...



## DEMAND ANALYSIS

### **Meaning and Definition of Demand: -**

The demand may arise from an individual, a household as well as a market.

As we have indicated earlier, 'demand' is a technical concept from Economics. Demand for product implies:

- Desires to acquire it,
- Willingness to pay for it, and
- Ability to pay for it.

All three must be checked to identify and establish demand. **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 processes 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. It should also be noted that the demand for a product—a commodity or a service—has no meaning unless it is stated with **specific reference to the time, its price, price of related goods, consumers' income and tastes etc.**

### **Difference between NEED, WANT and DEMAND**

<b>Need</b>	Basic necessity Feel deprived if this is absent	Food
<b>Want</b>	Given choices, this is what you prefer	Chicken, Burger, Steak dinner
<b>Demand</b>	A want that is supported by a decision and capacity to buy	Only burger is within my budget!

**Need:** Human needs are the basic requirements and include food, clothing and shelter. Without these humans cannot survive. An extended part of needs today has become education and healthcare. Generally, the products which fall under the needs category of products do not require a push. Instead the customer buys it themselves. But in today's tough and competitive world, so many brands have come up with the same offering satisfying the needs of the customer that even the "needs category product" has to be pushed in the customer's mind. For Example: Agriculture sector, FMCG, Real Estate etc.

**Wants:** Wants are a step ahead of needs and are largely dependent on the needs of humans themselves. For example, you need to take a bath. But I'm sure you take baths with the best soaps. Thus Wants are not mandatory part of life. You DONT need a good smelling soap. But you will definitely use it because it is your want. For example: Hospitality, Consumer Durables, and Electronics etc.



**Demand:** You might want a BMW or a Mercedes for a car. You might want to go for a cruise. But can you actually buy a BMW or go on a cruise? It is not necessary that you have the *ability* to buy a BMW or go on a cruise but you may want that in future. Thus a step ahead of wants is demand.

When an individual wants something which is premium, but he also has the ability to buy it, then these wants are converted to demands. The basic difference between wants and demands is desire. A customer may desire something but he may not be able to fulfill his desire.

Example of demands – Cruises, BMW's, 5 star hotels etc.

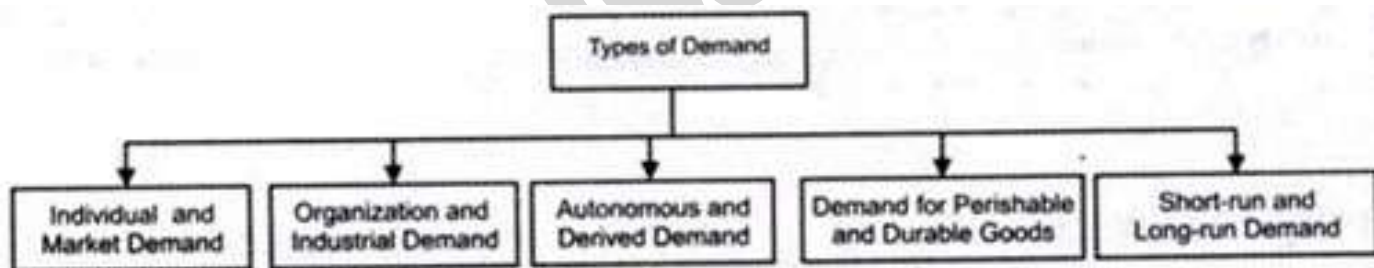
The needs wants and demands are a very important component of marketing because they help the marketer decide the products which he needs to offer in the market. Thus the flow is like this.

To say that demand for an Atlas cycle in India is 60,000 is not meaningful unless it is stated in terms of the year, say 1983 when an Atlas cycle's price was around Rs. 800, competing cycle's prices were around the same, a scooter's prices was around Rs. 5,000. In 1984, the demand for an Atlas cycle could be different if any of the above factors happened to be different. For example, instead of domestic (Indian), market, one may be interested in foreign (abroad) market as well. Naturally the demand estimate will be different. Furthermore, it should be noted that a commodity is defined with reference to its particular quality/brand; if its quality/brand changes, it can be deemed as another commodity.

To sum up, we can say that the **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, and price and given values of other variables on which it depends.**

Demand for a commodity refers to the quantity of the commodity, which an individual household is willing to purchase per unit of time at a particular price.

1. **Individual Demand** :- It is demand by one or more Individual e.g. Cigarettes, Footwear etc.
2. **House Holds (H.H.)** :- Demand by H.H. e.g.: Refrigerator.
3. **Market Demand** :- When we consider the demand for a commodity by all the Individuals/Households in the market at a price, we call it Market Demand.



**Figure-1: Types of Demand**

### **Demand and Quantity Demanded**

Demand refers to different possible quantities of a commodity that the consumer is ready to buy at different possible price of that commodity prevailing in the market at a given point of time.

Quantity demanded refers to a specific quantity to be purchased against a specific price of the commodity.

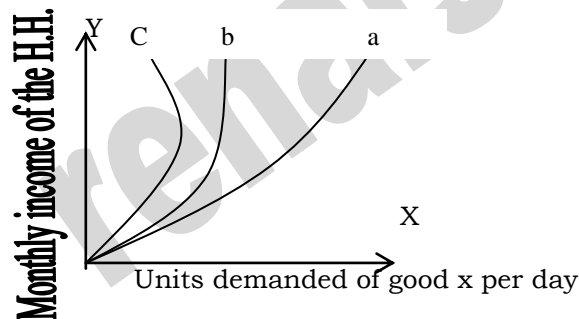
For Example: Demand of commodity X refers to 10 units of X if  $P_x$  is Rs 5/- per unit, 8 units of X if  $P_x$  is Rs 6 per unit of X if  $P_x$  is Rs 7/- per unit. Quantity demanded of commodity X refers to Rs 8/- per unit if  $P_x$  happens to be Rs 6 per unit.



### Factors Affecting Demand or Determinants of Demand

The desire to purchase is revealed by taste and preference of the individuals/households. The capability to purchase depends upon his purchasing power, which in turn depends upon his income and price of the commodity.

- a) **Price of the Commodity:** - Effect of price on commodity even that the other determinants of demand is constant. There are two effects:
1. The substitutes effect
  2. The Income effect
- I) **The Substitutes Effects:** - Substitutes effect the decrease in the price of commodity x, leaves the consumer with additional income which he can use in buying more amount of x, rather than its substitute y. This increasing the demand of commodity x. For e.g.: x=tea and y=coffee. If increasing in the price of the commodity x or tea, then the substitute y or coffee demand is increasing and vice-verse.
- II) **Income Effect:** - It is the increase in the real income or the purchasing power of a consumer due to the decrease in the price of commodity x.
- b) **Income of Individual or Consumer and Household:** - The amount demanded of a commodity also depends upon the income of a household/individual. Income of individual or consumer can have three effects:
- An increase in the income usually increases the amount of consumption of regular goods and other factors remaining constant. Generally **Luxury Goods** are the Goods which have the same nature. As Income of the consumer increase then they purchase luxury goods more and more.
  - Increase in income may need to increase in the consumption and thus the demand of certain commodity remains unchanged. In these category goods like **FMCG and Necessity goods** take place. According to this concept demand increase up to a certain limit then become constant.
  - An increase in the income after a point may decrease the consumption and thus the demand of a commodity decrease, such a commodity is known as **Inferior Goods**. Normally it always happens that as income increase demand of some product becomes negative.



Engel was the first person to study the relationship between income and quantity demanded for the normal and inferior goods.

C] **Price of related goods:** - There are two types of relation between goods.

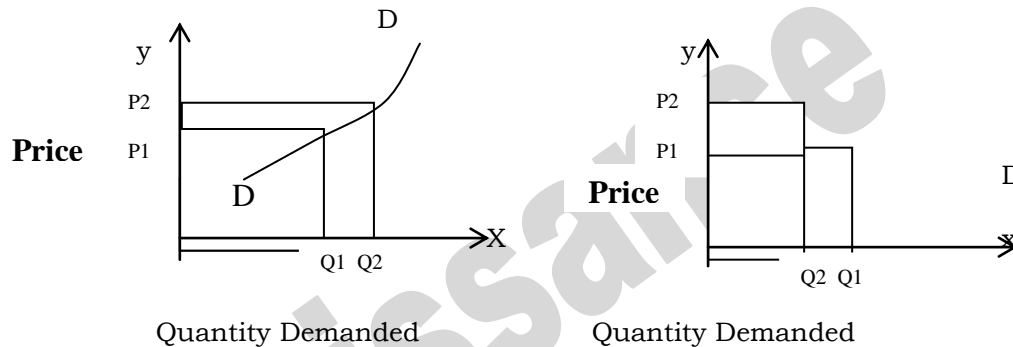
1<sup>st</sup> Substitute and 2<sup>nd</sup> Complimentary.

- i. **Substitute:** - These are the goods which have same effect – as price increase of the first commodity; it results in increase in demand of other commodity. **For ex:** Apple and Pears, Tea and Coffee. Price of Tea increases and demand of Coffee also increase.
- ii. **Complementary:** - These are those goods which have adverse effect on the demand of the commodity. The increases in the price of the first commodity decrease the demand of the other quantity or commodity. **For exp:** - Bread and Butter, Pen and Ink, Tea and Sugar.

(I)

(II)

D



- I. Amount demanded of coffee per week [I Substitute goods case]  
II. Amount demanded of butter per day [II Complementary goods case]

D] **Taste and Preference:** - Taste and Preference, if changes in the consumer favors, the demand of commodity increase and vice versa. For e.g.: Jeans will have greater demand now, because of the preference of the consumer. Taste also play important role to change in the demand of the commodity because of the new choice of the consumer. No. of examples are considered for the taste and preference of the consumer like Food articles, dressing sense, luxury products etc.

E] **Advertisement:** - More advertisement creates favorable taste and preference for the demand of a commodity. In present scenario higher the advertising, higher the demand for the product. Every company has to use this concept or philosophies. In present Insurance and banking firm also has great advertising so they can capture more market shares.

F] **Expectations:** - The consumer makes two kinds of expectation:

- Related to their future income.
- Related to future price of the good and its related goods.

- Related to their future income:** - If the consumer feels that his future income will be more, he will spent more today. Whereas if he feels that his income will be less in the future, he would spend less today and so the demand will decrease. Income of the consumer  $\times$  demand today in future. Recently in all over the world recession becomes big problem, in this situation, persons who find that their income will cut down, they stop consuming luxury goods. In recent survey, higher society persons sell their luxury hotels or Ship to survive.
- Related to future price of the goods and its related goods:** - If the consumer feels that the price of goods is going to increase in the future, they will buy more of it today, thus increasing the demand of the commodity. And if they feel that price will decrease tomorrow, then they postponed their demand right now.

**G] Population:**

**H] Government Policy:**

**I] Others**

### Demand Schedule

Demand schedule is a table showing relation between different quantities of a commodity to be purchased at different prices of that commodity. **SAMUELSON** state this as "The table relating to price and quantity demanded is called the demand schedule."

This could be of two major types – Individual Demand Schedule and Market Demand Schedule \



### Individual Demand Schedule

Px ( Price of Goods )	Qx ( Quantity of Goods Demanded )
1	4
2	3
3	2
4	1

It refers to the demand schedule of an individual buyer for a commodity at different possible prices at a given point of time. This table reflects the inverse relationship between price of the commodity and the quantity demanded for the same at a given point of time.

### Market Demand Schedule

Px ( Price of Good X )	Qx ( Consumer A )	Qx ( Consumer B )	Qx ( Consumer A+ B )
1	4	5	4+5=9
2	3	4	3+4=7
3	2	3	2+3=5
4	1	2	1+2=3

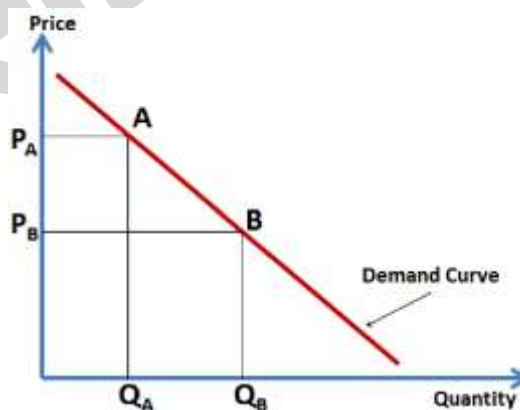
Every market has several consumers of a commodity at a given point of time. This table shows the quantity demanded for Goods X by consumer A and B at different price levels.

### THE LAW OF DEMAND

The law of demand states that other things being constant, there is an inverse relationship between quantities demanded and own price of the commodity.

### Explanation

Px ( Rs )	Qx ( Units )
10	100
9	150
8	200





## Nature of Demand

1. Derived demand & autonomous demand.
  2. Demand for producer's goods and consumer goods.
  3. Demand for durable goods and non durable goods.
  4. Industry demand and firm demand.
  5. Total demand and market segment demand.
  6. Short run and long run demand.
1. Derived demand & autonomous demand: - derived demand means a demand which is created because to produce other commodities or the commodities which are helpful to produce other products. For ex. Machinery, labour, raw material etc. are the example which is demanded as per requirement.  
*Autonomous* demand is just reverse of derived demand where demand is already exist due to its direct consumption. For ex. Demand for food is direct demand or autonomous demand because it can consume directly by a person or a group of persons.  
*In practical* there is no distinction between derived and autonomous demand because for same product may be derived demand but the same product can be autonomous demand for other. The autonomous demand is more elastic in nature then the derived demand. It is because derived demand not influences the price effect on others.
  2. Demand for producer goods & consumer goods: - producer goods are those goods which are used by a producer for further production e.g. raw material, machinery, semi finished goods and other material.  
In general sense consumer goods demand is more elastic in nature as compare to the producer goods.  
Consumer goods are those goods which are directly consumed by the consumers. E.g. milk, bread and any other product which directly satisfy the needs of consumers.
  3. Demand for durable goods and non durable goods :-As we know that durable goods are those goods which can be store for a long time as well as the demand can be postponed, if it is not required immediately or urgently e.g. machinery, household appliances, books etc are the durable goods.  
The non-durable goods are those which have short life. It is also divided into two parts perishable and non-perishable.  
Demand of durable goods is more elastic in nature then the non durable goods because slight change in price will directly affect the overall demand of the product.
  4. Industry demand and firm demand: - firm demand denotes the demand for the products of a particular firm for ex. Demand for steel produced by "TISCO" is a firm demand.  
In contrast to these if all the companies create demand of a particular product that produce similar product is called industry demand. For ex. Demand of steel by all the companies represent s demand of steel industry.  
The firm demand is more elastic in nature as compare to Industry demand. It is because every firm faces the competition with their competitors in the industry.
  5. Total demand and market segment demand: - as the name suggests market segment demand is demand of a particular market where as total demand represents demand of whole market.  
For ex. A company has a product which is sold in whole India and the demand of that product is called total demand, but if the same product has different demand in different –different segment then this is called as market segment demand.  
Market segment demand is always more elastic then the total demand.



6. Short run & long run demand: - short run demand refers to demand with its immediate to price changes & income fluctuations where as long run demand is that which will ultimately exist as a result of the changes in pricing, promotion or a product improvement other enough time is allowed to let the market adjust itself to the new situations.

Long run demand is more elastic than the short run demand.

**ELASTICITY OF DEMAND**

Elasticity of demand is defined as measurement of percentage changed in quantity demanded in response to a given percentage change in own price of the commodity.

E =  $\frac{\% \text{age change in quantity demanded of good x}}{\% \text{age change in determinant of demand z}}$

E =  $\frac{\Delta Q}{\Delta Z} \times \frac{Q1}{Z1}$

- E = Elasticity of demand
- Δ = To change
- Q = to quantity demanded
- Z = to a demand determinant
- Δ Q = Q2 - Q1
- Δ Z = Z2 - Z1

E =  $\frac{Q2-Q1/Q1}{Z2-Z1/Z1}$

**Price Elasticity of Demand**

The more the value of the E.O.D. the more responsive is the quantity demanded to changes in the determinant under consideration. Price E.O.D. is the determinant of relative responsiveness of quantity demanded to price of the commodity.

E =  $\frac{\% \text{age change in quantity demanded of good x}}{\% \text{age change in price of commodity x}}$

E =  $\frac{Q2-Q1/Q1}{P2-P1/P1}$

E =  $\frac{\Delta Q}{\Delta P} \times \frac{Q}{P}$   
 $\frac{\Delta Q}{\Delta P} = \frac{Q2 - Q1}{P2 - P1}$

Q1 and P1 are original quantity and price respectively  
Q2 and P2 are the new quantity and price respectively.

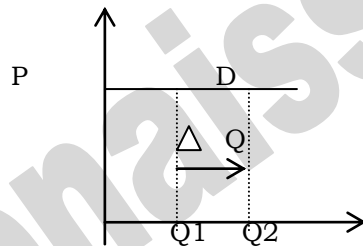
Higher the elasticity of demand, greater will be the %age change in Quantity demanded for every %age change in price.

Since the elasticity of demand is linked to the law of demand, the coefficient of price elasticity of demand E, will always have a negatively sloping demand curve, in order to avoid confusion in interpretation only the absolute value of E is taken i.e. the sign is ignored



### Type of price elasticity

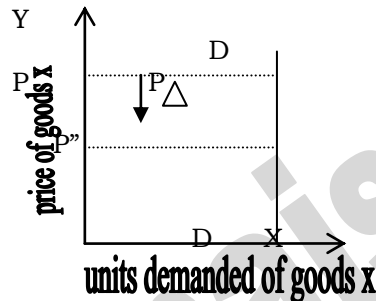
1. Perfectly elastic demand: - where no reduction in price is needed to cause an increase in quantity demand



Example: -

1. Petrol
2. Ice cream
3. Cloths

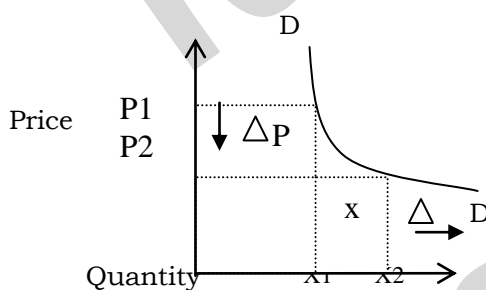
2. Absolutely (Perfectly) inelastic demand: - where a change in price, however large, causes no change in quantity demanded. ( $E=0$ )



Example: -

1. Salt
2. Match box
3. Ink

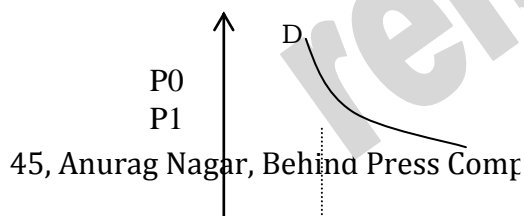
3. Unit Elasticity of demand: - Where a given proportionate change in price causes an equally proportionate change in quantity demanded. ( $E=1$ )



Example:-

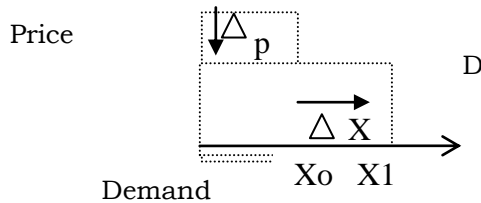
1. Soap
2. Detergent
3. Tea
4. Milk
5. Sugar
6. Cold Drink

4. Relatively elastic demand quantity: - Where a change in price causes more than proportionate change in quantity demanded. ( $E>1$ )

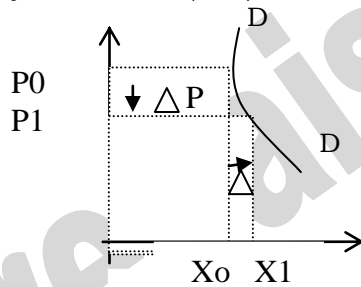


Example: -

1. Dry Fruits
2. Bear
3. Whiskey
4. Durable item



5. Relatively inelasticity demand: - where a change in price causes a less than proportionate change in quantity demanded. ( $E < 1$ )



Example:-

1. Cigarettes
2. Mobile
3. Vegetables

### **Factors affecting Price elasticity of demand**

1. The Number and Closeness of the Substitutes: - The availabilities of close substitutes of the commodity are the most important determinant of the degree of price elasticity. In case the product has large no. of close substitutes in price range demand for the product is bound to be highly elastic.  
**For e.g.:** Demand for cigarettes will be inelastic because there are no close substitutes.
2. The share of commodity in buyer's budget: - if the proportion of consumer income, which is spent on the commodity, is very small, demand will tend to be in elastic. The commodities in the category are salt, match- boxes, ink etc.
3. The nature of the commodity: - the demand of necessities is inelastic, while these of luxuries are elastic.
4. Number of uses a commodity can be put to: - larger the number of user of a commodity, greater will be the elasticity of that commodity. The various uses of the commodity are put in the order of their importance.
5. Habit-forming characteristics: - there are some goods which are habit-forming like the use of tobacco and alcohol. Since the consumer forms a habit with their use the demand for such goods will tend to be inelastic.
6. Time - Period: - Time is very important in price elasticity of demand. Demand is more elastic in the long run than in the short run.

### **INCOME ELASTICITY OF DEMAND**



### Factors Affecting Price Elasticity Of Demand

- Nature of the Commodity
- Availability of Substitutes
- Variety of uses of commodity
- Postponement
- Influence of habits
- Proportion of Income spent on a commodity
- Range of prices

It is for a commodity shows the extent to which a consumers demand for the commodity changes as a result of the change in his/her income.

Income elasticity of demand may be defined as a ratio of percentage change in the quality demanded of a good. Say x to the %age change in income of the consumer.

$$E_y = \frac{\% \text{age change in quantity demanded of good x}}{\% \text{age change in Income of Consumer}}$$

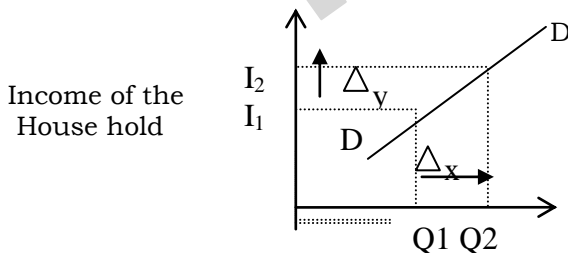
$$E \frac{\Delta Q}{\Delta Z} \times \frac{Z_1}{Q_1}$$

$$\frac{\Delta Q}{\Delta Z} = \frac{Q_2 - Q_1}{Z_2 - Z_1}$$

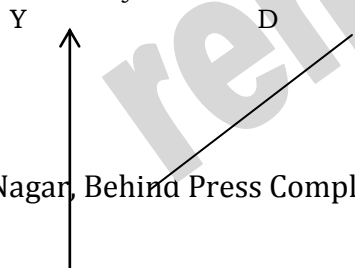
The income elasticity of demand is positive for all normal goods because the consumers demand for a good change in the direction of the change in his income. In the case of an inferior goods the demand for the good varies inversely with income. Therefore the income elasticity of demand is negative.

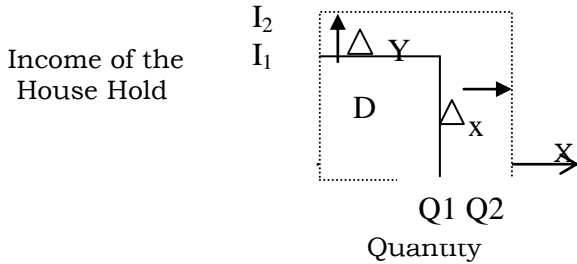
#### Types of Income Elasticity

1. High Income elasticity: - when the quantity demanded of good x increases by a larger % age change than the income of the consumer.  $E_y > 1$

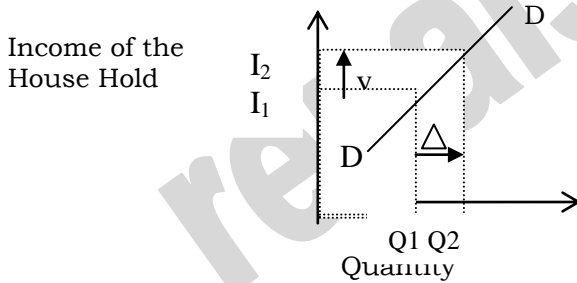


2. Unitary income elasticity: - the %age change in the quality demanded is equal to the %age change in money income.  $E_y = 1$

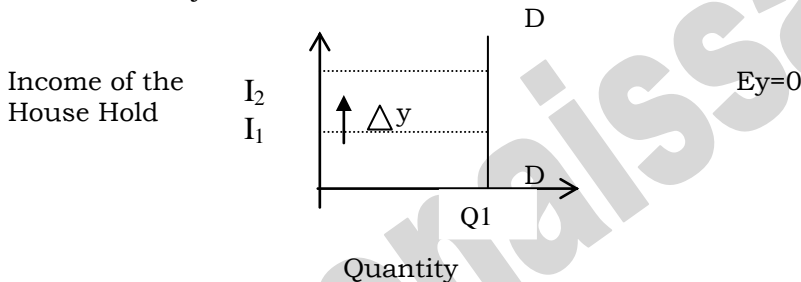




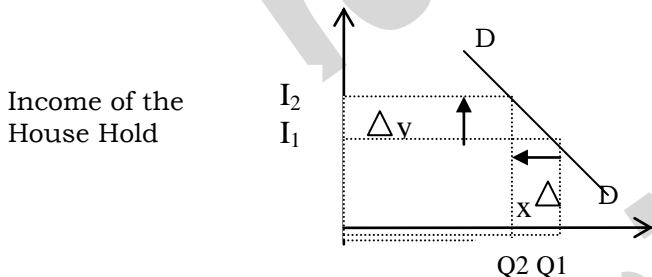
3. Low income elasticity: - income elasticity is low if the relative change in quantity demanded is less than the relative change in money.  $E_y < 1$



4. Zero income elasticity: -A change in the income will have effect on the quantity demanded for ex. Salt.  $E_y = 0$



5. Negative income elasticity: - as the income increases, the demand decrease because less is bought at higher income and more is bought at lower income.  $E_y < 0$



We have high-income elasticity in case of luxury goods and low-income elasticity in case of necessity of goods.

### Cross elasticity of demand

It is defined as the ratio of percentage change in demand for one goods due to a change in the price of some other related goods. The concept of cross elasticity is useful in inter commodity demand relation. This



change in the demand for one good due to a change in the price of some other goods comes about because often fact that the two goods may be either substitutes or complementary to each other.

$$E = \frac{\text{\%age change in demand of commodity x}}{\text{\%age change in price of commodity y}}$$

$$E = \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x}$$

1. If the two goods are **substitutes**, the value of cross-elasticity will be positive.
2. In the case of **complementary** goods the value of cross elasticity of demand will be negative, because the change in the price of one good cause opposite change in the quality demanded of the other goods.