UNIT-I

INTRODUCTION TO MANAGERIAL ECONOMICS

ECONOMICS:

Economics is a study of human activity both at individual and national level. The economists of early age treated economics merely the science of wealth. Every one of us are involved in efforts aimed at earning money and spending this money to satisfy our wants such as food, clothing, shelter and others. Such activities of earning and spending money are called Economic activities.

DEFINITIONS OF ECONOMICS:

- Adam Smith, the father of economics, defined economics as "the study of nature and uses of national wealth."[Wealth Definition]
- Professor Lionel Robbins defined Economics as "the science which studies human behavior as a relationship between ends and scarce means which have alternative uses."[Scarcity Definition]
- Alfred Marshall writes,"Economics is a study of man's actions in the ordinary business of life; it enquires how he gets his income and how he uses it."

MANAGERIAL ECONOMICS

The managerial economics is concerned with those aspects of economics and its tools of analysis which are used in the process of decision making of business enterprises.

DEFINITIONS OF MANAGERIAL ECONOMICS:

- **Spencer and Siegelman** define "Managerial economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management".
- **Brigham and Pappas** believe that managerial economics is "the application of economic theory and methodology to business administration practice."

ANOTHER NAMES OF MANAGERIAL ECONOMICS

- Business economics
- Micro economics
- Economics of enterprises
- Applied economics
- Managerial economics

Managerial economics lies on the border line between economics and business management and services as a bridge between the two disciplines.

NATURE OF MANAGERIAL ECONOMICS

- **Close to Micro economics:** Managerial economics is concerned with finding the solutions for different managerial problems of a particular firm. Thus it is close to micro economics.
- **Operates against backdrop of macro economics:** The macroeconomic conditions of the economy are also seen as limiting factors for the firm to operate. Managerial economics has to be aware of the limits set by the macro economic conditions such as government industrial policy, inflation and so on.
- **Normative statements:** A Normative statement usually includes the words 'ought' or 'should'. They reflect the people's moral attitudes and are expressions of what a team of people ought to do. Example: Government of India should open up the economy. Hence Managerial economics belongs to normative economics; as it is concerned with what management should do under particular circumstances.
- **Prescriptive actions:** Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from available alternatives for optimal solutions. Example: Variable costs and marginal costs can be used to judge the feasibility of an export order.
- **Applied in nature:** 'Models' are built to reflect real life business situations which help in decision making. They are used in inventory control, optimization, project management etc.
- **Offers scope to evaluate each alternative:** Managerial economics provides an opportunity to evaluate each alternative in terms of its costs and revenues. It can decide which alternative is better to maximize the profits of the firm.
- **Interdisciplinary:** The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology etc.
- **Assumptions and Limitations:** Every concept and theory of managerial economics is based on certain assumptions, so their validity is not universal.

MAIN AREAS OF MANAGERIAL ECONOMICS

The main areas of applications of managerial economics are discussed below:

1. **Demand Decision:** It includes analysis and forecasting of demand for a given product and service. Demand forecasting is an important part of managerial decision making because an estimate of future sales is essential before preparing production

schedule and employing productive resources. Demand analysis helps the management in indentifying factors that influence the demand for the products of a firm. Thus demand analysis and fore casting is essential for business planning.

2. **Input-Output Decision:** Here, the cost of inputs in relation to output is studied to optimize the profits. The main focus of this decision is to optimize (maximize) the output and minimize cost (input).
3. **Price-Output Decision:** Here, the task is to determine price for the product in different market situations such as perfect market and imperfect markets ranging from monopoly, monopolistic competition, duopoly and oligopoly. The features of these markets and how price is determined in each of these competitive situations is studied. It includes pricing policies, theories and strategies.
4. **Profit-related Decisions:** Here, we employ the techniques such as break even analysis, cost reduction, cost control and ratio analysis to ascertain the level of profits.
5. **Investment Decisions:** Investment decisions are also called capital budgeting decisions. It includes:
    - Selection of the most suitable investment project.
    - Maximize return on capital invested.
    - Study of cost of capital and capital structure.
    - Minimize the cost of capital.
6. **Economic forecasting and forward planning:** It is necessary to forecast the trends in the economy to plan for the future in terms of investments, profits, products and market. Government policies, competition, social & political factors, employment, income levels etc influence economy of the country. Hence we need to forecast the economy and plan future to minimize risk and uncertainty.

DEMAND ANALYSIS

DEMAND:-

The willingness of buyer to pay money for some quantity of a particular good or service is known as demand.

Ex: - I want a car and I cannot pay for it there is no demand for it from my side.

FEATURES OF DEMAND

- Desire on the part of the buyer to buy
- Willingness to pay for it.
- Ability to pay the specified price for it.

NATURE AND TYPES OF DEMAND

A product with more number of uses is naturally more in demand than one with a single use.

- Consumer goods Vs producer goods
- Autonomous demand Vs derived demand
- Durable Vs perishable goods
- Firm demand Vs industry goods
- Short run demand Vs long run demand
- New demand Vs replacement demand
- Total market Vs segment market demand

i. Individual and Market Demand:

It refers to the classification of demand of a product based on the number of consumers in the market. Individual demand can be defined as a quantity demanded by an individual for a product at a particular price and within the specific period of time. For example, Mr. X demands 200 units of a product at Rs. 50 per unit in a week.

In simple terms, market demand is the aggregate of individual demands of all the consumers of a product over a period of time at a specific price, while other factors are constant. For example, there are four consumers of oil. These four consumers consume 30 litres, 40 litres, 50 litres, and 60 litres of oil respectively in a month. Thus, the market demand for oil is 180 litres in a month.

ii. Organization and Industry Demand:

It refers to the classification of demand on the basis of market. The demand for a product of an organization at given price over a point of time is known as organization demand. For example, the demand for Toyota cars is organization demand. The sum total of demand for products of all organizations in a particular industry is known as industry demand. For example: the demand for cars of various brands, such as Toyota, Maruti Suzuki, Tata, and Hyundai, in India constitutes the industry' demand. The distinction between organization demand and industry demand is not so useful in a highly competitive market.

iii. Autonomous and Derived Demand:

It refers to the classification of demand on the basis of dependency on other products. The demand for a product that is not associated with the demand of other products is known as

autonomous or direct demand. On the other hand, derived demand refers to the demand for a product that arises due to the demand for other products.

For example, the demand for petrol, diesel, and other lubricants depends on the demand of vehicles. Apart from this, the demand for raw materials is also derived demand as it is dependent on the production of other products. Moreover, the demand for substitutes and complementary goods is also derived demand.

iv. Demand for Perishable and Durable Goods:

It refers to the classification of demand on the basis of usage of goods. The goods are divided into two categories, perishable goods and durable goods. Perishable or non-durable goods refer to the goods that have a single use. For example: cement, coal, fuel, and eatables. On the other hand, durable goods refer to goods that can be used repeatedly.

For example, clothes, shoes, machines, and buildings. Perishable goods satisfy the present demand of individuals. However, durable goods satisfy both present as well as future demand of individuals. Therefore, consumers purchase durable items by considering its durability.

v. Short-term and Long-term Demand:

It refers to the classification of demand on the basis of time period. Short-term demand refers to the demand for products that are used for a shorter duration of time or for current period. This demand depends on the current tastes and preferences of consumers.

For example, demand for umbrellas, raincoats, sweaters, long boots is short term and seasonal in nature. On the other hand, long-term demand refers to the demand for products over a longer period of time.

FACTOR DETERMINING THE DEMAND

1. **Price of the commodities or products**: There is an inverse relationship between price and demand of a commodity if the price increases demand will decrease and vice versa . According to the law of demand “A fall in the price of a commodity causes the house hold to buy more of that commodity and less of the other commodity which compete with it, while a rise in price causes the household to buy less of this commodity and more of competing commodities”.

2. **Nature of commodity:-**

   - ✓ Necessities
   - ✓ comforts
   - ✓ luxuries

3. **Price of related goods:-**
   A. Substitute goods: - These are the goods that can be used as substitute in the place of other goods with equal satisfaction.
      EX:- coffee (or) tea.
   B. Complementary goods:- these are the goods that are demanded only when their related goods are available.
      Ex:-ink is complimentary to the pen
4. **Income of the consumers**: - If the income of the consumers increase the demand of commodity will increase the demand of the commodity will also increase because with the increase in income he can also spend more amounts on the purchase of commodity.
5. **Taste and preferences of the consumers**:- Tastes and preferences along with fashion habit and customs of consumers affect the demand for example the demand of goods of fashion goes on increasing at the same price or even if the prices of these goods increase if a consumer is habitual of consuming he will purchase it on all the price levels.
6. **Size of the population**: - The demand of almost all the commodities increases on an increase in the population and it decreases on a decrease in population.
7. **Government policy**:- Government policy affects the demand of the commodity for example if heavy taxes are imposed on the commodity the demand of such commodity will decrease substantially conversely if the government announces the tax concession for certain commodity their demand will increase.
8. **Expectations regarding future prices:** - Expectations of consumers regarding future prices of a commodity affects its demand for example if there is a hope of raise in price of a commodity in future, its demand will increase even at high price because the consumer would like to store such commodity conversely if there is hope of fall in the prices of a commodity in future, the demand of such commodity will decrease.
9. **Quality of the product:** - Demand of the goods of better quality is more than of cheaper quality.
10. **Advertisement:**-Advertisement creates increase and maintains demand of goods advertisement helps in increasing the demand.

DEMAND SCHEDULE

A demand schedule can be constructed to any commodity when the list of price and the quantities purchased at those prices are known. Demand schedule can be divided into two categories. They are:

- **A.** Individual demand schedule
- **B.** Market demand schedule

A. **Individual demand schedule**: - An individual demand schedule is a list of the various quantities of a commodity which an individual consumer purchases at various levels of price in the market.

EX:-

PRICE OF THE MANGOES(RS)	QUANTITY DEMANDED
9	1
8	2
7	3
6	4
5	5
4	6
3	7
2	8

B. **MARKET DEMAND SCHEDULE:-**

A Market demand schedule shows the total demand for a good at a particular time at different prices in the market.

Market demand schedule can be obtained by adding up all the individual demand schedule of all consumers in the market.

Price of Apples	Quantity Demanded			Market demand
	A	B	C	
10	6	6	10	22
9	8	10	15	33
8	10	14	20	44
7	12	18	25	55
6	14	22	30	66
5	16	26	35	77

It is clear from the above figure that adding up the individual curves A, B, C; we can arrive at the market demand curve.

TYPES OF DEMAND

1. Price demand
2. Income demand
3. Cross demand

1. **PRICE DEMAND**: Price demand refers to the quantity of a product or service demanded at a given price.
2. **INCOME DEMAND**: Income demand refers to the quantity of a particular product or service demanded at a given level of income of the consumer or the households.
3. **CROSS DEMAND**: Cross demand refers to the quantity demanded of a particular product or service for a given price of the related goods. The related goods may be complementary or substitute goods.

LAW OF DEMAND

The law of demand tells us about the relation between the price of a commodity and its quantity demand in the market. Lower the price, greater is the quantity demanded. The law of demand shows the inverse relationship between the price and quantity demanded.

The law of demand states **"Other things remaining the same, the amount of quantity demanded rises with every fall in the price and vice versa."**

Assumptions

1. Consumer is a rational man which means he always tries to get maximum satisfaction.

2. Units of the commodity are similar in quality, size, taste, and color etc

3. The tastes and preferences of the consumer remain constant

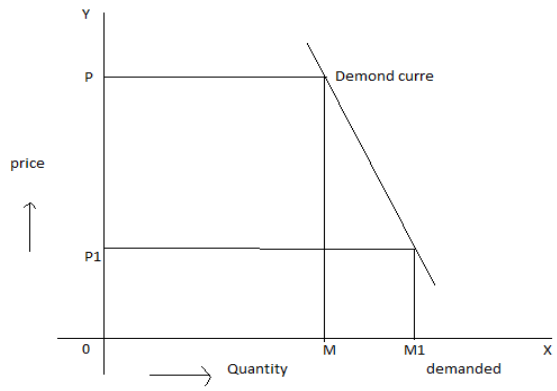
3. There should be continuity in the consumption of the commodity.

4. Units of the commodity are not rare collections like stamps, coins, paintings etc.

5. Units of the commodity should be of suitable size that is neither too big nor too small.

OPERATIONS OF THE LAW OF DEMAND

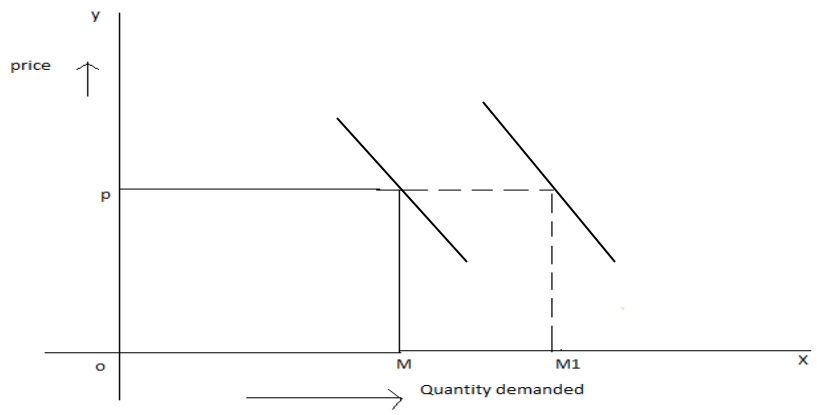
The law of demand explains that with every fall in the price of a particular product, its demand goes on increasing and vice versa.



CHANGES IN DEMAND:-

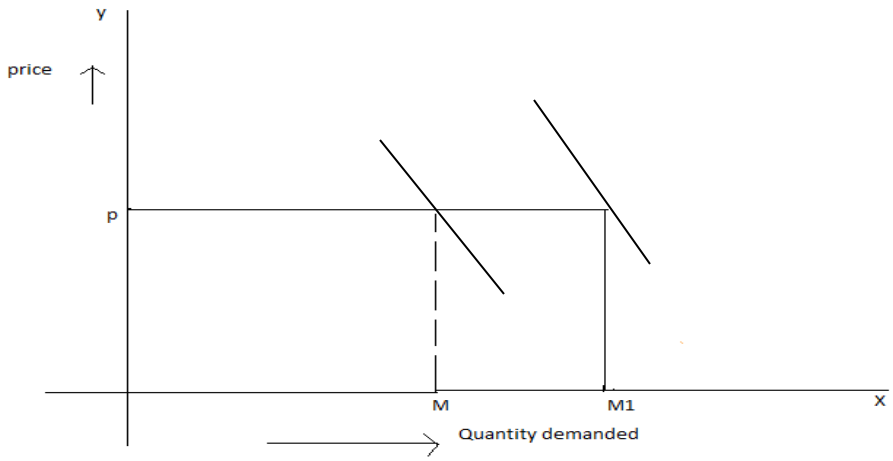
1. Increase in demand
2. Decrease in demand
3. Extension and contraction in demand

1. **Increase in Demand:-**
   If the consumer is willing and able to buy more of the product or services at the same price, the result will be an increase in demand then the demand curve will shift to the right.



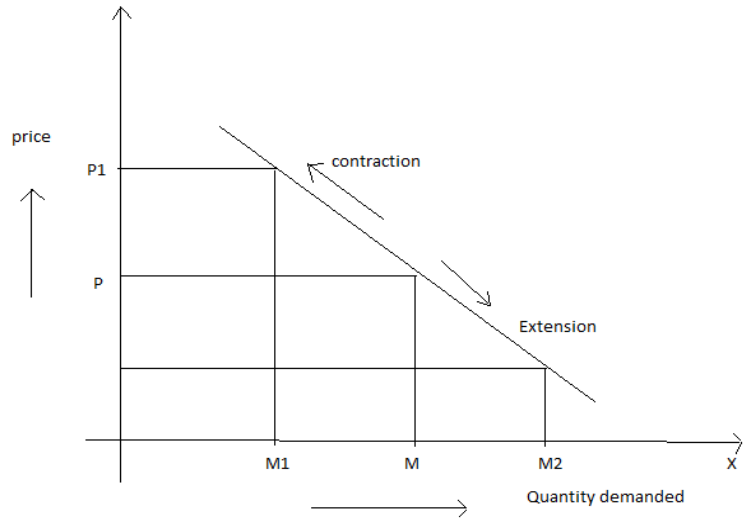
2. Decrease in Demand:-

A decrease in demand occurs when buyers are ready to buy less of a product at the same price because of facts like fall income, rise in price of complimentary goods and so on. Movement along a demand curve indicates that a higher quantity is demand for a given fall in the price of the goods.



3. Extension and contraction in demand:-

A contraction is the upward movement along a demand curve which indicates that a lower quantity is demanded for a given increase in the price of the goods.



In the above figure we can see that at OP price, the quantity demanded is OM. When the price decreases from OP to OP2, the quantity demanded extends from OM to OM2, this is called extension in demand.

Contraction refers to the movement upwards along the same demand curve when the price increases from OP to OP1, the demand contrast from OM to OM2 along the same demand curve, this is called contraction in demand

EXCEPTIONS TO THE LAW OF DEMAND

Law of Demand is a general statement but there are few exceptions to this general statement. They are:

1. **GIFFEN'S PARADOX:-**
   According to the law of demand, when the price of a commodity increases its demand must decrease but in some rare occasions, people may buy more when the prices are high. This type of situation was first discovered by the British Economist Sir ROBERT GIFFEN. Goods of this type are called as Giffen's goods. People whose incomes are low purchase more of a commodity such as broken rice, bread etc (which is their staple food) when its price rises. Conversely when its price falls, instead of buying more, they buy less of this commodity and use the savings for the purchase of better goods such as meat. This phenomenon is called Giffen's paradox.

2. **PRESTIGIOUS GOODS:-**

Veblen is an American sociologist and economist. He is famous for his book "The Theory of the Leisure Class"1899.

A commodity is sometimes bought not because it has any intrinsic worth but because it possession confer a social status for example diamonds precious stones gold etc. Hence the demand for such goods increases with increase in price and vice versa. Such goods are exception to law of demand and are known as Veblen goods.

3. **SPECULATION:-**
   Sometimes the customers demand more commodity of product when its price increases as they expect further increase in the price of the product. Such expectation about further increase in price of a product is called speculation. This is an exception to Law of Demand.

ELASTICITY OF DEMAND

- Definition
- Types of elasticity of demand
- Measurement of elasticity of demand
- Signification of elasticity of demand
- Demand forecasting
- Factors governing the demand forecasting
- Methods of demand forecasting

INTRODUCTION

The law of demand does not tell us by how much or to what extent the quantity demanded of a good will change in response to a change in its price. It will be explained by the concept of "ELASTICITY OF DEMAND".

Definition of Elasticity of Demand

The elasticity of demand is defined as the rate of responsiveness in the demand of a commodity for a given change in price or any other determinants of demand.

In other words, elasticity of demand refers to the degree of sensitiveness or responsiveness in the demand due to change in price.

TYPES OF ELASTICITY OF DEMAND

1. Price elasticity of demand
2. Income elasticity of demand

3. Cross elasticity of demand
4. Advertising elasticity of demand

1. Price elasticity of demand:-

It refers to the quantity demanded of a commodity in response to a given change in price. Price elasticity is always negative which indicates that the customer tends to buy more with every fall in the price. There exists inverse relationship between the price and the quantity demanded.

Price elasticity of demand = Proportional change in the quantity demanded / Proportional change in the price

2. Income elasticity of demanded:-

Income elasticity of demand refers to the quantity demanded of a commodity in response to a given change in income of consumer

Income elasticity is normally positive which indicates that the consumer tends to by more and more with every increase in income

Income elasticity of demand = Proportional change in the quantity demanded / Proportional change in the Income

3. Cross elasticity of demand:-

Cross elasticity of demand refers to the quantity demanded of a commodity in response to a change in the price of a related good which maybe substitute or complement.

Cross elasticity of demand= Proportional change in the qty demanded of product X / Proportional change in the price of Product Y

Product Y here refers to related good. Complementary goods will have negative cross elasticity of demand where as substitutes will have positive cross elasticity of demand.

4. Advertising elasticity of demand:-

It refers to increase in the sales revenue because of change in the advertising expenditure. There is a direct relationship between the amount of money spent on advertising and its impact on sales. Advertising elasticity is always positive.

Advertising elasticity of demand= Proportional change in the quantity demanded / Proportional change in the advertisement expenditure

TYPES OF PRICE ELASTICITY OF DEMAND

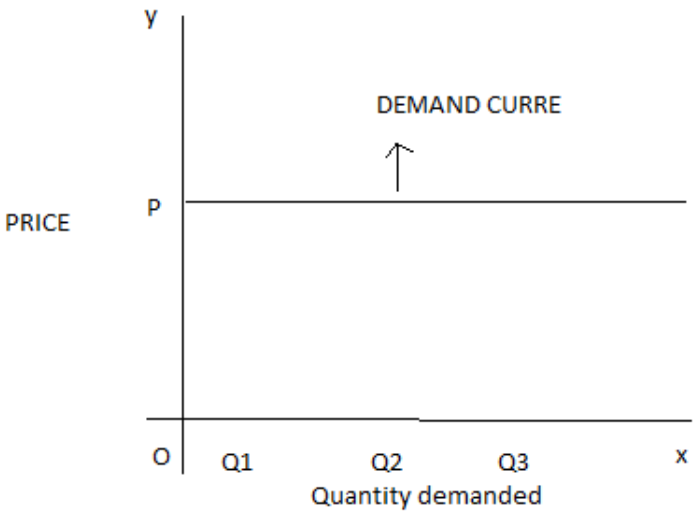
1. Perfectly elastic demand
2. Perfectly inelastic demand
3. Relatively elastic demand

4. Relatively inelastic demand
5. Unity elasticity of demand

1. **Perfectly elastic demand**: It is a situation where the smallest or no change in price causes the greatest change in the demand. This type of situation we rarely come across in real life.

   A slight fall in price leads to infinitive increase in demand.

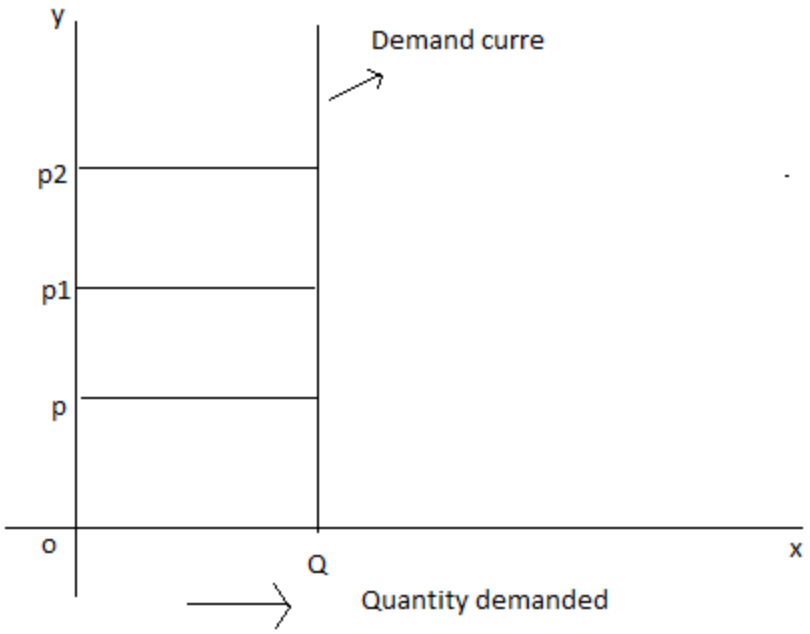
   In real life, we will not come across any such commodity which has perfectly elastic demand implying that it remains as an imaginary concept. In this case, The elasticity is ∞



2. **Perfectly inelastic demand:-**

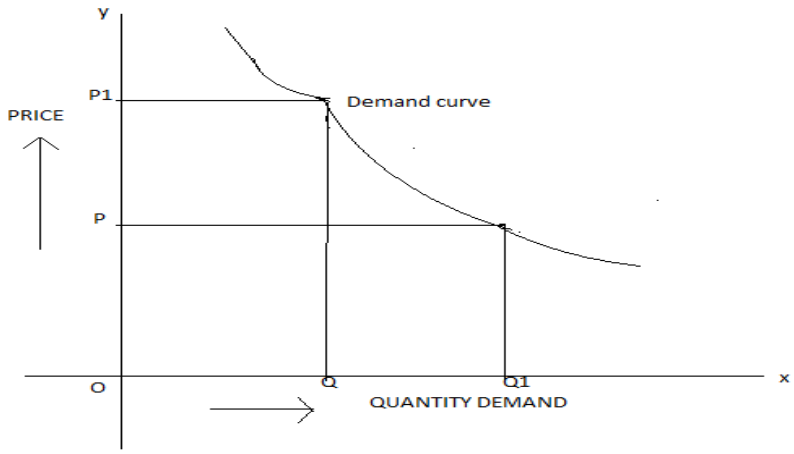
   When a significant degree of change in price leads to little or no change in the quantity demanded, then the elasticity is said to be perfectly inelastic.

   In other words, the demand is said to be perfectly inelastic when there is no change in the quantity demanded even though there is a big change in price. Here, the elasticity value is 0 (zero)



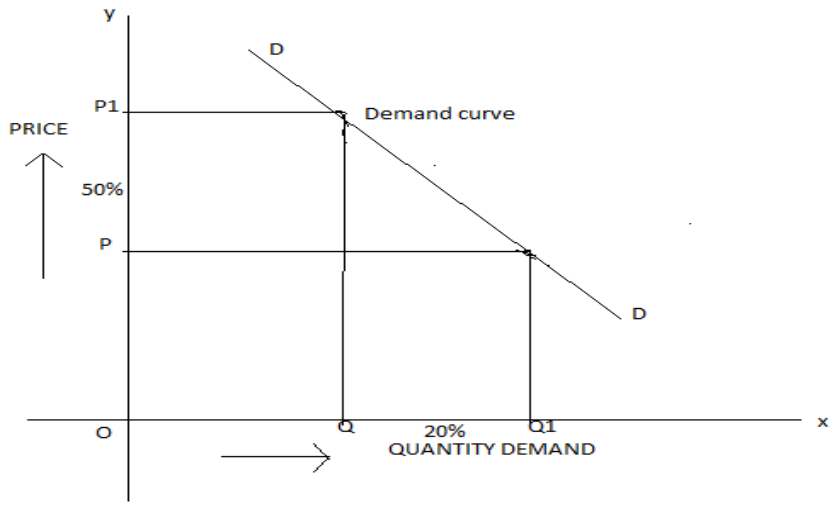
3. **Relative elastic demand:-**

   It is a situation when the proportionate change in quantity demanded is greater than the proportionate change in the price of a product. Here the elasticity value is greater than one (>1).



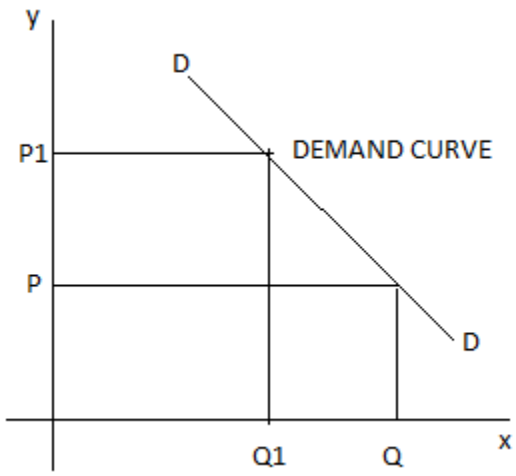
4. **Relative inelastic demand:-**

   The demand is said to be relative inelastic when the change in demand is less than the change in the price. Here the elasticity value is less than one (<1).



5. **Unity elasticity of demand:-**

   The elasticity in demand is said to be unity when the change in demand is equal to the change in price, it is a situation where the proportionate in quantity demand is equally proportionate to change in the price of the goods. Elasticity of demand here is said to be equal to unity or1.



MEASUREMENT OF ELASTICITY OF DEMAND

Different methods have been devised by the economist to measure the degree of elasticity they are

1. Total outlay method
2. The point method
3. The arc method

1. **The Total out lay/Revenue method**

   Under this method, we compare the total outlay of the buyer or total revenue of the seller before and after the change in price. we can calculate total out lay as follows:

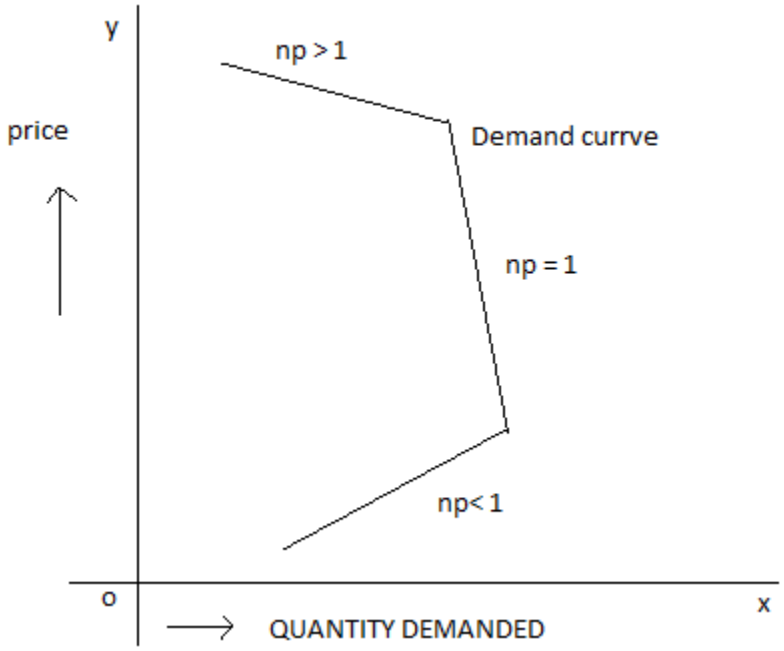
   P*q = price*quantity

   P*q = total outlay=total revenue

   According to this method, price elasticity of demand is expressed in three forms, they are:

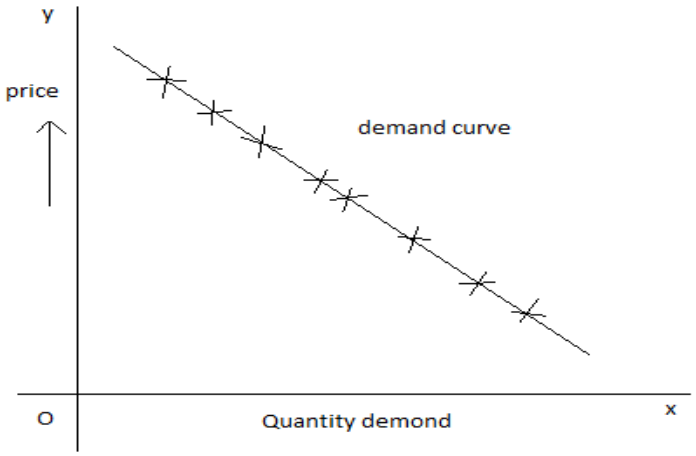
   - Elastic demand
   - Unity elasticity
   - Inelastic demand

Price of product (p)	Q.D	Total outlay (P x Q)	Elasticity
9	40	360	elasticity demand Ep>1
8	50	400	
7	60	420	elasticity demand Ep=1
6	70	420	
5	80	400	elasticity demand Ep<1
4	90	360	



2. **Point method:-**

   This method helps us to measure the elasticity of demand at any point on the demand curve this method is also given by Alfred Marshall and is known as “Geo-metrical method”. According to this method, elasticity at any point is the ratio to the lower position of the demand curve to the upper position.

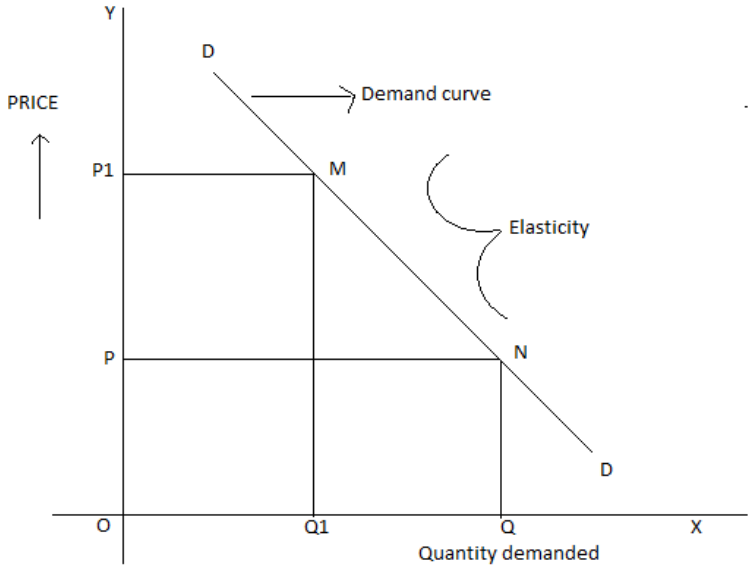


3. **Arc method:-**The main drawback to the point method is that it can be used only when we have complete data on the changes in the price of the good and quantity demand but in real life, it is not easy to get and quantity this means that there will be gaps in the demand schedules in such cases, it is not possible to apply the point method to get the desired results.

   In the arc method, the mid-points b/w the old and new data in the case of price and quantity are used.

   This method studies a portion or segment (Arc) of the demand curve between the two points

$$Ep = \frac{\text{Change in the quantity demanded/ original quantity + new quantity}}{\text{Change in the price/Old price + new price.}}$$



FACTORS GOVERNING THE ELASTICITY OF DEMAND

Elasticity is governed by number of factors. Change in any one of these factors is likely to affect the elasticity of demand these factors are:

1. **Nature of the product**: Based on the nature, the products and services are classified into necessities, comforts and luxuries. Necessaries imply the absolute or basic necessities such a food, clothing housing, comforts refer to T.V, refrigerator and so on. By luxuries, we mean sofa, marble flooring in the house and such others. The meaning and definition of these necessaries luxuries and comforts change from person to person time to time and place

   EX: A scooter may be a comfort or luxury for a student but when he does a part-time job, it may be a necessity for him.
2. **Time factor**: In general the demand is inelastic in the short period and more elastic in the long period, because there will be sufficient time for consumers to know the change in price.
3. **Degree of postponement:** Where the product consumption can be postponed, the product is said to have elastic demand and where it cannot be postponed, it is said to have inelastic demand. The consumption of necessaries cannot be postponed and hence they have in elastic demand.
4. **Number of alternative uses:** If the number of alternative uses is more, the demand is said to be highly inelastic, and vice versa. In the case of electricity or power. It is used for a number of alternative uses.

5. **Tastes and preference of the consumer:** where the customer in particular about his taste and preference, the product is said to be inelastic for the customer who are particular to certain brands such as Colgate, Tata tea and so on price increases do not matter. They tend to by that brand in spite of the price changes.
6. **Availability of close substitutes:** where there are a good number of close substitutes, the demand is said to be elastic and vice versa. If coffee and tea core equally good for me, if there is an increase in price of coffee, I may tend to switch over to tea.
7. **In case of complementary of joint goods:** In case of complementary goods or goods having joint demand, the elasticity is comparatively low.
8. **Level of prices:** If the product is very expensive such as diamonds or very cheap such as salt, then the product is likely to have an inelastic demand.
9. **Expectation of the prices:** When people expect a fall in the price, the demand for the product is likely to be inelastic.
10. **Durability of the product:** Where the product is durable in case of consumer durable such as T.V .The demand is elastic. In the case of perishable goods such as milk, the demand is inelastic.

SIGNIFICANCE OF ELASTICITY OF DEMAND

1. **Price determination**:- The individual producer consider the elasticity of demand of his commodity before fixing the price when the commodity has inelastic demand he will fix a lower price to maximum his profit vice versa.
2. **Joint products**: In case of joint products, separate costs are not ascertainable. In such cases the product will be guided mostly by elasticity of demand. So a lower price is fixed in the case of goods having elastic demand and a higher price of inelastic demand.
3. **To government**:- The concept of elasticity of demand also enables the government to decide as what particular industries should be declared as “Public utilities” to be taken over and operated by the state.
4. **International trade:** It is possible to calculate the terms of trade between two countries only by taking into account the natural elasticity of demand for each other products.
5. **To the finance minister:** The finance minister also takes in to the account elasticity of demand for goods when selecting the goods for taxation. When the government is in need of more revenue it chooses those goods which have inelastic demand.

DEMAND FORECASTING

“Forecasting helps to assess the likely demand for product and services and to plan production accordingly. Demand forecasting is helpful not only at the firm level but also at the national level.”

"Demand forecasting is an estimation of demand during as specified future period based on a proposed marketing plan and particular uncontrollable and competitive forces."

ADVANTAGES OF FORECASTING

- Production scheduling
- Reducing cost of manufacturing
- Inventory control
- Determination of price policy
- Setting sales targets
- For suitable advertising
- Make a long term investment decision
- Manpower planning

FACTORS GOVERNINIG THE DEMAND FORECASTING

1. **Functional Nature of Demand:** Demand is a function of various factors like Price, Purchasing power of customers, advertisements, etc.
2. **Types of Forecast:** Demand forecasting may be short-term or long-term. A short-term demand may cover a period of three months, six months or one year but not exceeding one year and long forecasting covers a period exceeding 5 years. A business should forecast short term as well as long term sales/demand for its products to have a clear view of business activities.
3. **Forecasting Level:**

    - **Marco level:** It is concerned with business conditions over the whole economy measured by an approximate index of industrial production, national income or expenditure.

    - **Industry level:** This includes the preparations of sales forecasting by different trade associations.
    - **Firm level:** It is an important matter from the managerial view point. Individual firms forecast their sales.
4. **Degree of Orientation:** Forecast can be general or specific. Forecasts in terms of total sales can be viewed as general forecast whereas product wise/ service wise or region or customer segment-wise forecast is referred to as specific forecast.
5. **Established or New Product:** As far as the new products are concerned, methods and problems for forecasting are quite different from products already established in the

market as sales trends are known better and the competitive nature is well known. Thus, the methods and problems should be studied accordingly.

6. **Nature of Goods:** Products are to be classified under capital goods and consumer durable or non-durable goods and services. There are distinct patterns of demand for different category of these products.
7. **Degree of Competition:** In every forecast, every product has special factors of its own. If there is competition in the market, situation is complicated up to what extent with uncertainty or unmeasurable risk, error or inaccuracy in the forecast requires consideration
8. **Other Factors:** Other factors include Credit conditions, Demographic, Socio-economic condition of the country, technological, political, cultural environment etc

METHODS OF DEMAND FORECASTING

Forecasting demand is not any easy exercise it may be easy only in the case of a very few products or services.

Where the demand for the products does not change from time to time or competition is not significant. It may be relating easy to forecast demand for a particular product or services

There are many methods of forecasting demand some of them is

1. Survey methods.
2. Statistical methods.
3. Other methods.

1. SURVEY METHODS:

A. Survey of buyer intention: To anticipate what buyer are likely to do under a given set of circumstances. Most useful sources of information would be the buyers themselves. It is better to draw a list of all potential buyers approach each buyers to ask how much does he plans to buy of the given product of a given point of time under particular conditions.

B. Sales force opinion method: The sales people are those who are in constant touch with the main large buyers of a particular market and hence they constitute another valid source of information about the likely sales of a product.

2. STATISTICAL METHODS:-

For forecasting the demand for goods and services in the long run, statistical and mathematical methods are used condition ring the past data.

A. Trend projection methods:- These are generally based on analysis of past sales patterns. These methods dispense with the need for costly market research because the necessary information is often already available in company files in terms of different time periods, that is a time series data.

B. Barometric Techniques: Under the barometric technique, one set of data is used to predict another set In other words, to forecast demand for a particular product or service, use some other relevant indicator which is known as barometer of future demand.

C. simultaneously equation method: In this method, all variables are simultaneously considered, with the conviction that every variable influences the other variables in an environment. Hence the set of equations equal the number of dependent variable which is also called endogenous variables.

D. Correlation and regression methods:-

Correlation and regression methods are statistical techniques. Correlation describes the degree of association between tow variables such as sales and advertisement experiment. When the two variables tend to change together then they are correlated is measure by correlation co-efficient of these two variables one is a dependent variables and the other is an independent. If the high value of one variable is associated with the high value of another, they are said to be positively correlation.

3. OTHER METHODS:-

A. **Expert opinion method:** well informed person are called expert. Experts constitute yet another source an expert is good at forecasting and analyzing the future trend in a given product or services at a given level of technology.

B. **Test marketing:** It is likely that opinions given by buyers, sales man or other experts may be, at times, misleading. This is the reason why most of the manufacturers prefer to test their products or services in a limited market as test- run before they launch their products nationwide.

Based on the result of test marketing valuable lessons can be learnt on how consumer reacts to the given product and necessary changes can be introduced to gain wider acceptability.

To forecast the sales of a new product or the likely sales of an established product in a new channel of distribution or territory, it is customary to find test marketing in practice.

C. **Controlled experiment:** In this method the product is introduced with different package, different prices in different markets or same markets to asses which combination appeals to the customer most.

   This method cannot provide better result, unless these markets are homogeneous in terms of, tastes and preference of the customers their income so on.

D. **Judgmental approach:** when none of the above the methods are directly related to the given product or services, the management has no alternative other than using its own judgment.