#### MEFA- Unit-1

## **Economics**

**Economics**:-Economics is a social science. This studies day to day economic activities of human life. Economics are two types' 1.Micro economics and 2.Macro economics.

**Micro economics:** This studies the behavior of individual unit of an economy. Example individual income, individual product, individual demand.

**Macro economics:** this studies the behavior of aggregates of the economy as a whole. Example national income, total product and total demand.

## **Introduction to managerial economics**

Managerial economics is a part of economics and it is concerned with decision – Making.

Those economic principles, concepts, methods, tools and techniques that can be applied practically to solve the problems of business management is known as managerial economics.

# 1) Nature (features) of Managerial Economics:- CSMAEIA

- **1. Close to Micro Economics:** Managerial economics is can concerned with finding the solution for different managerial problems to a particular firm thus it is more close to micro economics
- **2. Study of Macro Economics:** Business firms also operate under macroeconomic. The macroeconomic environment relating to national income, business cycles economic policies of the government in relation to business are important to managers. The firm has to create by environmental factors business firm operate a basic of economic forecasts of national income price level inflation rates etc.
- **3. Managerial economics is science as well art**: A business firm employs scientific methods of observation reasoning and verification in analyzing business problems demand forecasting in a scientific analysis and as such it is called science managerial economics may also be called an art because it help management in the efficient utilization of scarce resources it considers production costs, demand, price, profit, alternative course action.
- **4. Applied in nature:** Models are built to reflect the life complex business situations and these model are help to managers for decision making the different areas where models are extensively used include inventory control, optimization, project management etc. in managerial economics, we also employ case study method to conceptualize the problem identify the alternatives and determine the best course of action.
- **5. Evaluate each alternative:** Managerial economics provides an opportunity to evaluate each alternative in terms of its cost and revenues. The managerial to maximize the profits for the firm
- **6. Interdisciplinary:** The contents, tools and techniques of managerial economics are drawn from different subject such as economics, management, mathematics, statistics, accountancy psychology, sociology ect.
- **7. Assumptions and limitations:** Every concept and theory of managerial economics is based on certain assumptions and as such their validity is not universal, where there is change in assumption the theory may not hold good at all.

### 2) Scope (areas) of Managerial Economics:- DIPPIE

- **1. Demand decisions**: the analysis and forecasting of demand for give product and service is the first such as the needs of the customer's responses to given change in the price are supply are analyzed in scientific manner. The impact of changes in prices income levels and prices alternative products services are assessed and accordingly the decisions are taken to maximize the profits demand at different price level at different price level at different points of time is forecast to plan it necessary to enlarge the customer base and gain more profits. Determination of elasticity of demand and demand forecasting constitute the strategies issues that the managerial economist handles in a scientific way.
- **2. Input- output decisions:** Here, the costs of inputs in relation to output are studied to optimize the profits. Production function and cost functions are estimated given certain parameters. The behavior of costs of different levels of production is assessed here. Some costs are fixed, some are semi-variable and other is perfectly variable. The quantity of production increases remains constant or decreases with additional increases in the inputs. This decision deals with changes in the production following changes in inputs which could be substitute or complementary. The entire focus of the decision is to optimize (maximize) the output at minimum cost. It is necessary for the manager to know the relationship between the cost and output both in the short-run and long-run to position his products amidst the competitive environment.
- **3. Price out put decisions:** Here, the production is ready and the task is to determine price these in different market situations such as such as perfect market and imperfect market ranging from monopoly, monopolistic competition, duopoly and oligopoly.

The features of the markets and how price is determined in each of this competitive situation is studied here. The pricing policies, methods, strategies and practices constitute crucial part of the study of managerial economics.

- **4. Profit –related decisions:** Here, we employ the techniques such as break even analysis, cost reduction and cost control and ratio analysis to ascertain the level of profits in break-even analysis. We are concerned with profit planning and control. We determine break-even point beyond which the firm starts getting profits in other words. If the firm produces less than break-even point, it losses. We can also plan the production needed to attain a given level of profits in the strategies to reduce the wastage and thereby reduce the costs. These indirectly enhance the level of profits. Ratio profitability of the activities of the firm. There are certain ratios used to analysis and interpret the profitability of the firm given a set of accounting data
- **5. Investment -decisions:** Investment decision is also called capital budgeting decisions. These involve commitment of large funds. Which determine the fate of the firm? These decisions are irreversible. Hence the manager needs to be more alternative while committing his scare funds. Which have alternative uses? The allocation and utilization of the investments is it permanent importance. Capital has a cost it is expensive. Hence, it is to capital invested. It is necessary to study the cost of capital, choice of capital structure and investment projects before the funds are committed.
- **6. Economic forecasting and forward planning:** Economic forecasting leads to forward planning. The firm operates in an environment which is dominated by the external and internal factors. The external factors include major forces such as government policy, competition, employment, labour, and price and income levels and so on. These influence its decisions relating

to production, human resources, finance and market and products. It is necessary to forecasting the trends in the economy to plan for the future in terms of investments, profits and markets. This will minimize the risk and uncertainty about the future.

#### <u>Importance (significance) of Managerial Economics</u>

- **1. Business Planning and Forecasting:** Managerial economics plays an efficient role in formulating business policies by forecasting future demands and uncertainties. It assists in the effective decision making of an organization by supplying all information using economic tools and techniques.
- **2. Analyze Cost and Production level:** Managerial economics focuses on minimizing the cost of business. It determines the cost associated with different business processes and finds out the cost-minimizing level of output. Managerial economics enables business managers in ensuring that there is no resource wastage which reduces the overall cost.
- **3. Production Scheduling:** Managerial economics manages and prepare schedules for all production activities of business. It estimates all future demands using various quantitative tools which helps in making production plans.
- **4. Price Determination**: Setting the right price is one of the key decisions to be taken by every business organization. Managerial economics supplies all relevant data to managers for deciding the right prices for products.
- **5. Profit Planning and Control**: Managerial economics enables in planning and managing the profit of the business. It makes an accurate estimate of all cost and revenue which helps in earning the desired profit.
- **6. Inventory Management**: Proper management of inventory is a must for ensuring the continuity of business activities. It helps in analyzing the demand and accordingly, production activities are performed. Managers can arrange and ensure that the proper quantity of inventory is always available within the business organization.
- **7. Investment Analysis:** Managerial economics ensures that all business funds are allocated to profitable means. It properly analyzes the profitability of all investment avenues before investing any amount into it.

# 3) Relationship between managerial Economics and other Subjects (interdisciplines):-

- **1. Economics and managerial economics:** Economics is concerned with theoretical concepts, methods, principles and managerial application both economics and managerial economics are concerned with problems a scarcity and resource allocation.
- **2. Statistics and managerial economics:** Statistics are techniques used for analyzing cause and effect relationship managerial economics aims at quantifying the past economic activity to predict its future. Averages, correlation, regression, time- series interpolate are popularly used statistical techniques.
- **3. Mathematics and managerial economics:** Estimation and modeling are the integral part of managerial economics for decision making and forward planning mathematics provides a set of tools which includes algebra, calculus, exponentials, vectors, these tools are used for managerial economics analysis.

- **4. Accounting& managerial economics:** Managerial economics is closely linked to accounting. Which is concerned with financial operations of a business firm accounting information is one of the principle sources of data used by managerial economics for his decision purpose.
- **5. Operation research and managerial economics:** operation research is am activity carried out by functional specialist within the firm to help the manager to do his job of solving decision making problems, while managerial economics is purely an academic subject which seeks to understand and analyze decision making problems of business. both managerial economics and operation research are concerned with taking effective decisions and build economics models the operation research model like transportation linear programming, assignment etc are useful in business
- **6. Psychology and managerial economics:** consumer psychology is the basis on which managerial economist acts upon. How the customer reacts to a given change in price or supply and its consequential effect in demand /profits is the main focus of study in managerial economics. we assume that the behavior of the consumer is always rational , Which in reality is not so psychology, contributes towards understanding the behavioral implications, aptitude and motivations of each of the microeconomic variables such as consumer, supplier/ seller , investor, worker or an employee
- **7. Computer science and Managerial economics:** computers have changes the way of the world functions and business activity. Computers are used in data and accounts maintenance inventory and stock controls and supply and demand predictions. What used to take days and months is done in a few minutes or hours by the computers. In most countries a basic knowledge of computer science is a compulsory programme for managerial trainees.

#### **Demand analysis**

**4. <u>Demand</u>:-**demand is any goods or commodity purchase quantity it is called as demand.

# Factors influencing the demand for a product

# (or) determinants of demand: PITRCPCA

- **1.Price of the product:** The most important factor affecting amount demanded is the price of the product the amount of product demanded at particular price is called as price demand normally a large quantity is demanded at a lower price but also expected change in price will effect demand.
- **2. Income of the consumer:** When consumers income increase the demand will increase significantly on the other hand it the income decreases the demand will decrease.
- **3. Tastes, habits and preference of the consumers:** Demand for many goods depends upon the tastes habits and preferences of the consumer
  - Eg: demanded for several good like ice cream, chocolates, beverages depends the taste of the individuals
- **4. Relative price of substitute goods and complement goods:** The demands for a product are also affected by the change in price of the related by the changes in prices related goods. Related goods can be of two types.

- 1. Substitutes which can replace each other in use. Eg: tea, coffee, and bourn vita are substitutes.
- 2. Complementary goods are those which are jointly demanded. Eg: tea, sugar, and milk, are complementary goods.
- **5. Consumer expectation:** A consumer expectation about the future changes in the prices of given product may also affect in demand. When the consumer expects the prices to fall in the future he tends to buy less and vice versa
- **6. Population:** Increase in population increase in demand for necessaries life, decrease in population will also affect the demand for different products.
- **7. Climate and weather:** The climate of an area and the weather prevailing there will also effect on consumer demand.

Eg: in gold areas woolen cloths are demanded on a rainy day, ice cream is not much demand.

1. **Advertisement effect:** In modern times the consumer preferences can be changed by advertisement and sales propaganda. Demand for many products like toothpaste, soaps, washing powder ect. Is partially caused by the advertisement affect.

## **Demand Function**

Demand function is a mathematical function showing relationship between the quantity demanded of a commodity and the factors influencing demand.

Dx = f(Px, Py, T, Y, A, Pp, Ep, U)

In the above equation,

Dx = Quantity demanded of a commodity

Px = Price of the commodity

Py = Price of related goods

T = Tastes and preferences of consumer

Y = Income level

A = Advertising and promotional activities

Pp = Population (Size of the market)

Ep = Consumer's expectations about future prices

U = Specific factors affecting demand for a commodity such as seasonal changes, taxation policy, availability of credit facilities, etc.

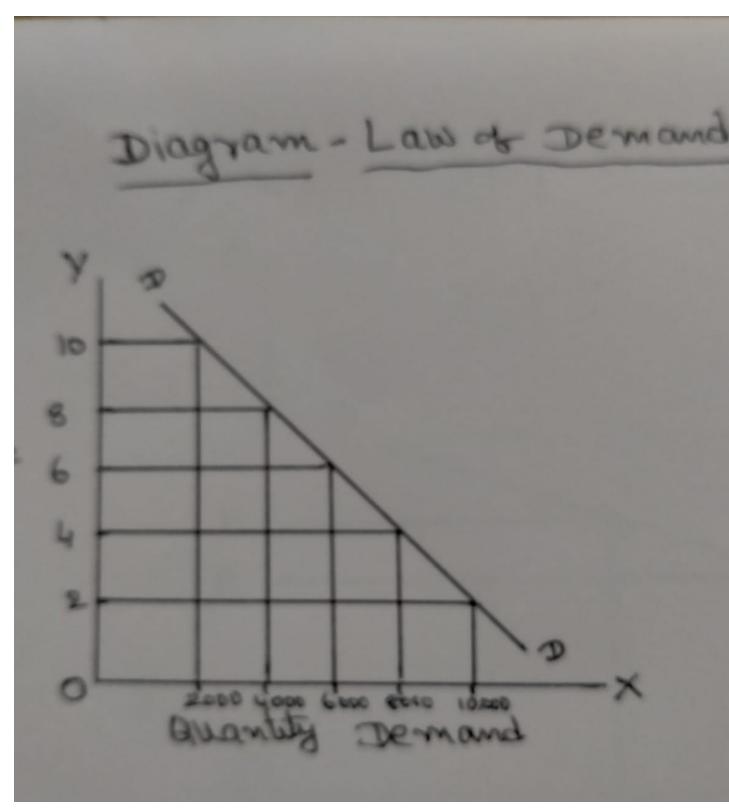
## 5. Law of demand

<u>Law of demand</u>: the Law of demand was introduced by prof.Alfred Marshall in his book principles of economics. This was published in 1890. The law of demand explains the functional relationship between price and quantity demand. The law may be stated as follows when the price is decrease demand is increase. Price rises demand is decrease. Other things, remaining are constant.

# **Law of Demand-table**

Price in Rs.	Quantity (demand)
10	1000
8	2000
6	3000
4	4000
2	5000

Diagram - law of demand.



# **Assumptions law of demand:**

**1. No change in consumer income:** If the income of the consumer increases in spite of increase in the price of the goods the demand will increase. Similarly if the income decreases,

in spite of decrease in the price the demand will decrease.

- **2. No change in consumer's preference:** If the consumer has specific preferences of the product or he likes the product very much he purchases the product if it is costlier also.
- **3. No change in consumer tastes and fashion:** If fashion of the product is outdated, the demand will decrease even if it is offered at a lower price.
- **4. No change in the price of related product:** If the price of the related product is decreases, demand tends to decrease for the other similar products also.
- **5. No change in the population:** If the population goes on the increasing the demand will increase even though the price increases on the other hand if the population decreases tends to decline even though the price is low.
- **6. No change in govt. policy:** No change in govt. policies and political situations will influence the demand for the product.
- **7. No change in weather condition:** In summer season the demand for fans, air coolers, air condition is increasing considerably irrespective of change in the price.

# Exceptions or limitations the law of demand:- IPEPNSU

- **1. Inferior goods (or) Giffen goods:** Robert Giffen British economist observed that when the price of the product is decreasing the demand for the product is decreasing. These products are called as inferior goods or Giffen goods.
- **2. Prestige goods (or) Veblen goods:** American economist Veblen explained that, there are certain goods which are purchases by the consumer not because they really need those goods but they purchase goods because of status symbol i.e to maintain status in the society. Prestige goods are those which consumers will purchases even though they are costlier .when the price of the product is increasing the demand also increasing.
- **3. Consumer expectation:** Whenever the consumer experts a further fall in price in future he will not purchase the product or goods immediately. When price decrease demand tends to be decline. Similarly when the consumer experts a further increase in the price for the future he will buy the product immediately.
- **4. Consumer psychological bias:** The consumer may have a feeling that if a product is costlier the quality will be better i.e. it is a superior product. Similarly if the product is cheaper its quality will be low.
- **5. Necessaries:** The demand almost remains constant irrespective of the price changes concerned to these goods as people tend to adjust their consumption on other goods as they fee; these are most necessary products.
- **6. Sale during off season:** We find reduction offers on certain production like refrigerators during off seasons yet demand is low.
- **7. Uncertain future:** When the availability of the product is uncertain in future, people may buy more of it even in the face of rising prices.

### 5) Elasticity of demand

**Elasticity of demand:**-elasticity of demand is the measure of change in the demand of the commodity in response to a given change in price of the commodity (goods) or price of some related goods or changes in consumer's income.

# Types of demand elasticity:-

**1. Price elasticity of demand:** It refers to the quantity demanded of a commodity in response to a given change in the price of the commodity. It can be computed with formula

#### EP=Proportionate change in quantity demand

## Proportionate change in price

**2. Income elasticity of demand:** Income elasticity refers to the quantity demanded to the commodity in response to a given change in income of the consumer. It can be computed from the following formula.

## EI=proportionate change in quantity demand

#### Proportionate change in income

**3. Cross elasticity of demand:** It refers to the quantity demanded for a commodity in response to a change in the price of a related good. This may be substitute goods or complement goods. Cross elasticity is always positive for substitute and negative for complements. it can be computed from the following formula.

#### EC=Proportionate change in quantity demand product A

#### Proportionate change in price of product B

**4. Advertising elasticity of demand:** It refers to the measurement of proportionate change in demand in response to the proportionate change in promotional efforts. Advertising elasticity is always positive it can be computed from the following formula.

#### EA = Proportionate change in quantity demand

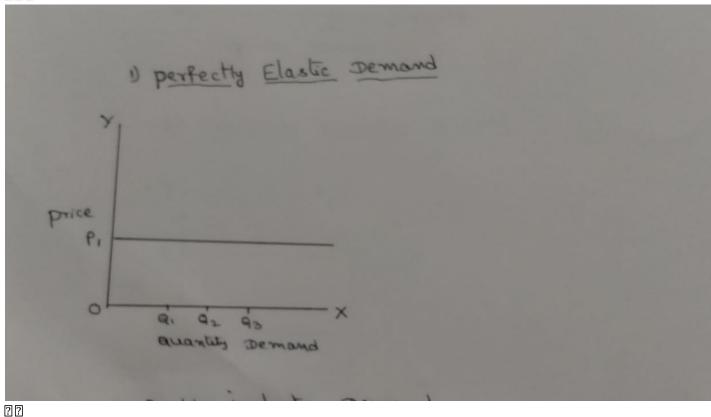
#### Proportionate change in advertisement cost

Advertising elasticity of demand is high, when even a small percentage change in advertising expenditure results in a large percentage of change in the level of quality demanded.

# Measurements or types of price elasticity demand:-

**1. Perfectly elastic demand:** When any quantity can be sold at a given price and when there is no need to reduce price, the demand is said to be perfect elastic in such cases even a smell increase in price will lead to complete fall in demand.

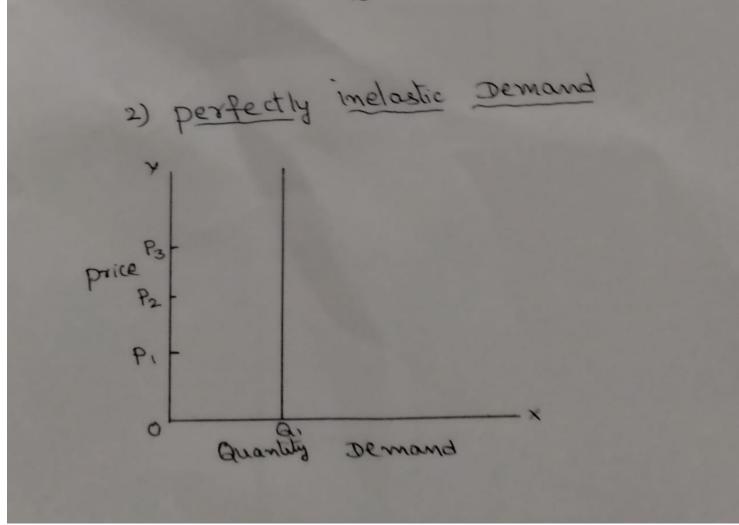
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That Figure show that the quantity demand increases from OQ1 to OQ 2, from OQ2 to OQ3 even though there is no change in price is fixed at OP1.

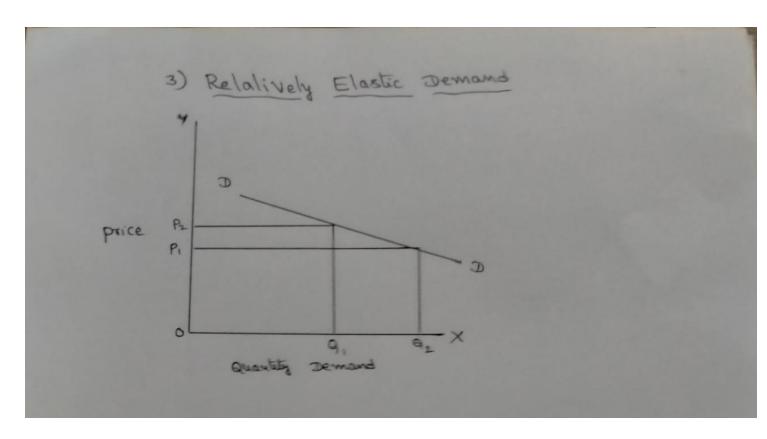
**2. Perfectly inelastic demand:** When a significant degree of change in price leads to little or no change in the quantity demanded then the elasticity is said to be perfectly inelastic in other words the demand is said to be perfectly inelastic when there is no change in the quantity

demanded even though there is a big change (increases or decrease) in price.

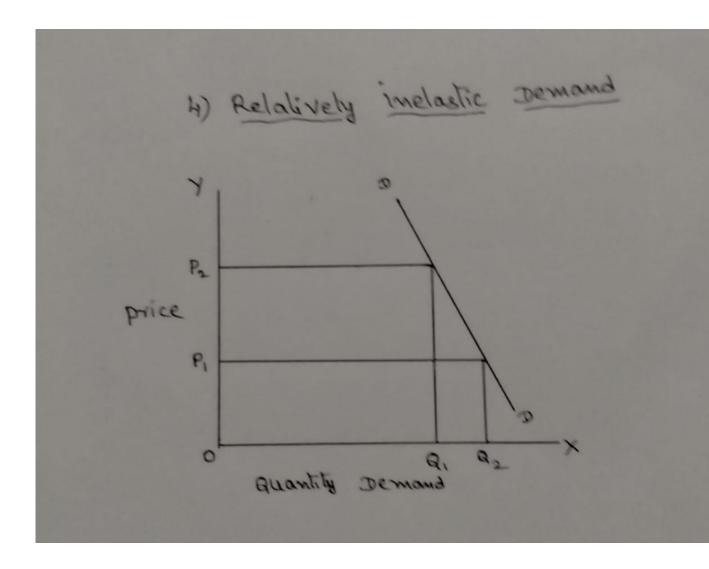


That Figure show that is no change in the quantity demanded though there is change in price .say increase or decrease in other words despite the increase in price from OP1 to OP3,the quantity demanded has not fallen down similarly ,though there is a fall in the price from OP3 to OP2 the quantity demanded remains unchanged.

**3. Relatively elastic demand:** The demand is said to be relatively elastic when the change in demand is more than the change in the price.



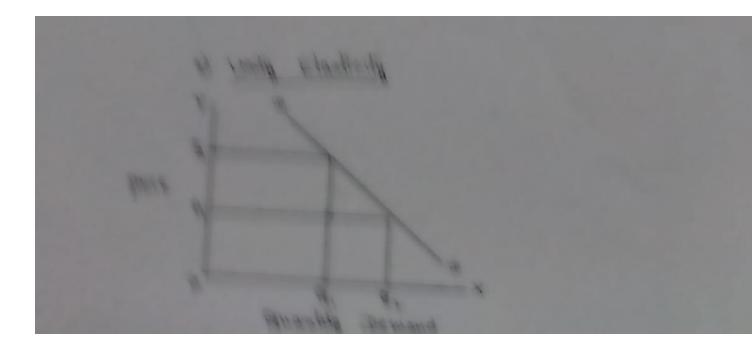
That Figure show that the quantity demanded increase from OQ1 TO O1Q2 because of a decrease in price from OP2 to OP1.the extent of increase in the quantity demanded is greater than extent of fall in the price.



**4. Relatively inelastic demand:** The demand is said to be relatively inelastic. When the change in demand is less than the change in the price.

That Figure show that the quantity demanded decreases from  $0Q2\ T0\ 0Q1$  because of a increase in price from 0P1 to 0P2.the extent of decrease in the quantity demanded is less than extent of increase in the price.

**5. Unity elastic demand:** The elasticity in demand is said to be unity when the change in demand is equal to the change in price.



That Figure show that the quantity demanded increases from OQ1 to OQ2. because of a decrease in price from OP2 to OP1 the extent of increase in the quantity demanded is equal to the extent of fall in the price.

## Significance of elasticity demand:-

- **1.Useful to businessmen:** A business man gets the help of elasticity of demand in fixing the price for his goods .he is able to know how much amount demanded for his commodity shall go up or down with the change in prices. He is able to decide the most profitable amount of output for himself.
- **2.Useful to the government and finance minister:** the finance minister can know the effect of taxes on the amount demanded for different commodities. If increasing the rate of taxation of a goods reduces its sales to a large extent, it is not preferable to tax that goods only those goods will be taxed which have relatively inelastic demand
- **3. Useful to international trade:** The concept of elasticity of demand is also helpful in formulating export and import policies of a country. It is also helpful in fixing the foreign exchange rate
- **4.Useful for planning:** It has an utmost importance in the field of planning for individual commodities and industries, in such it are necessary to know whether a change in the price of the commodity will have the desired effect on the demand for commodity.
- **5. Useful to consumer:** A consumer also benefits firm this law. He is advised to spend his income over the purchase of number of commodities rather than on one commodity in this way he can get maximum utility out of his expenditure.
- **6. Useful to trade unions:** If the demand for the labour is relatively inelastic then the trade unions can bargain for more wages.

## **Demand fore casting:-**

**<u>Demand fore casting:</u>**-demand fore casting means expectation about the future course of the market demand for a product.

# **Types of demand forecasting:**

- **1. Active and passive forecasting:** Active forecasting is a method of forecasting the demand on the consideration that a firm is likely to initiate some action like change in product quality, size, price etc. passive for casting is based on the assumption that the same product is being offered without any change.
- **2. Short run and long-run forecasting:** Short-run forecasting normally extends up to one year. These forecasts are useful for product scheduling, inventory planning, and mobilization of working capital etc. long-run forecasts extend beyond one year. They are helpful in capital budgeting, product diversification, personnel recruitment etc.
- **3. Company forecasting and industry forecasting:** the demand for the products of a particular firm is company forecasting. These are firm specific and designed to service the individual firm in planning their policies. Industry fore casting forecasts the demand for the products of the industry as a whole. The association of manufacturing or trade associations undertake them and serve the needs of all the firms in the industry.
- **4. Micro level forecasting and macro level forecasting:** Micro level forecasting may take the form of company forecasting or industry forecasting. Macro level forecasting on the other economic environment and business condition in the country as a whole. The national income growth rates, production indices, price indices provide useful insights in to the future demand for most of the commodities. Governmental organizations provide the base data to forecast the demand.

# **Factors affecting demand forecast**

- **1. Nature of goods:** Demand forecasting differs on the basis of the fact that the goods may be producer goods, consumer goods or services ect. A part from this demand forecasting also depends on the basis of necessaries, comfortable goods and luxuries.
- **2. Level of competition:** Market competition affects the process of demand forecasting in a highly competitive market, the forecast is conservative taking into account the actions of competitors. It also depends on the future outlook of the industry due to entry of new firms
- **3. Price:** Demand forecasting is deeply influenced by a firms pricing policy. Higher prices in future may influences future demand of the product or service unless it is supplemented by high quality of product.
- **4. Level of technology:** Rapid changes in technology have the potential of rendering the existing products obsolete in future. Technological factor plays an important role in arriving at a reliable demand forecast in future.
- **5. Economic outlook:** Future economic development plays an important role to forecasting demand in future. Positive economic development due to high level of investment liberalization, globalization etc. gives enough reason to have an optimistic demand forecast for future

## **Importance of demand forecasting:**

- **1. Production planning and product scheduling:** A business firm cannot function in wilderness. It has to take crucial decisions about what to produce and how much to produce. This is turn depends upon its estimates of future demand for the product, if the forecasted demand is likely to rise, the firm can plan expansion of its production capabilities to meet the growing demand at the right point of time in the eventuality of declining demand it should resort to product improvement, diversification, design changes or even pursue an aggressive sales promotion strategy.
- **2. Inventory planning:** Demand forecasting is useful for the firm to acquire the right quantum of inventory at the right point of time to meet the needs of the production department and the same time without unnecessarily locking up the finances of the firm in inventory accumulation.
- **3. Capital planning:** Increased production requires increased capital resources fixed as well as working capital. Availability of demand forecasts helps the firm to mobilize the capital resources in time.
- **4. Marketing strategy:** Demand forecasting will be useful in devising appropriate. Sales promotions or marketing strategies if the demand forecasting indicates a declining trend in sales. It should resort to intensive sales promotion campaign to sustain its sales. Demand forecasting will also help the firm in setting sales targets to the sales personnel.
- **5. Manpower planning:** If firm has to recruit and trains the appropriate level of work force this calls for forecasting the demand well in advance so that the required contingent of the labour resources could be obtained.
- **6.Pricing strategies:** Devising and setting the optimum pricing depends upon the forecasting demand if the forecasting indicates a declining share in the market demand then it has to slash the process to sustain demand for the product over a longer period it can change prices subject to the other considerations.

# 7. Methods of demand forecasting:-

- **1. Survey method:** These methods are generally used in short term estimates of demand surveys are conducted to collect information about future purchase intentions of potential customers. These are three types of survey methods.
- **a) Direct interview method:** in this method the field workers approach the potential consumers and interview them. They ask question like what quantity of the product they are willing to buy at various prices in a given period. All potential consumers may be interviewed or some selected group form different parts of the market may be interviewed if all consumers are interviewed it is called complete enumeration survey method. It only some groups are interviewed it is called sample survey method.

Complete enumeration survey method (census method) is costly and time consuming it is not practicable where consumers are widely dispersed. Further, the consumers may not be aware of their future plans. Their answers are mostly hypothetical. They may suddenly change their plans. However, sample survey method is simpler less costly and less time consuming method this is widely used by business house and government agencies. But one cannot completely relay on this method.

- **b) Executives Judgment Method:** Under executive judgment demand forecasting are prepared on the basis of knowledge and experience of executive of the enterprise. A meeting may be organized and sales estimates are prepared on the basis of discussion with executives.
- **C)** Expert opinion survey method: This method is also known as Delphi method. This method is used to estimate short term demand is to collect the opinions of those who have the understanding of the market. Some firms may be having sales representatives for each region for each city and so on. These representatives for each region, for each city and so on. These representatives are in close touch with market conditions. They know the future plans of customers and their reaction to price changes of likely demand for the area they represent. Their estimates are added together to obtain the total.

Sometimes, the opinions of the executives of different departments are collected, marketing, finance etc. their views are evaluated by the top executives. At times the opinions of outside experts are gathered. The views of wholesaler, distributors, market. Survey experts and economists are gathered. These opinions and views are analyzed and conclusions are made firm them.

Delphi method is quite sound but it could be tedious and costly in the situations where the number of experts is not too large and they are co-operative, and the researcher has the necessary fund and the authority to perform the task. The Delphi method could be appropriate for demand forecasting.

- 1) Market studies and experiments method: Under this method, the determinates of demand (price, campaign, quality, etc.) are manipulated to know the effects on sales. The market experiments may be conducted to estimate the demand; price can be carried in one part of the market to sales. Similarly advertisement packages will be altered in another segment of the market. Quality of the product may be changed in another part. These factors influencing demand may be varied in different parts of the market at the same time or they may be varied at different times in the same market. Different prices may be associated with different sales on this basis price and another relationship van be established. The method of controlled experiment in quite new. It is not generally used because it is time consuming and risky it may lead to unfavorable reactions among consumers and dealers
- **2. Statistical methods:** These method uses time series data and cross section data for long-term demand estimates. Statistical methods are superior techniques in demand estimation. The method of estimation is scientific. Estimates are based on the theoretical relationships between independent and dependent variable. The element of subjectivity is minimum under these methods. The estimates are more reliable, they involve lesser costs, and the statistical methods used are.
- a) Time series analysis: It is an arrangement of statistical data in a chronological order. i.e., in accordance with its time of occurrence. It reflects the dynamic place of steady movement of a phenomenon over a period of time. Most of the variables in business, economics and commerce may be related to price, production, consumption, national income, foreign trade, foreign exchange reserves, investment, sales, projects, dividends etc. are all time series data spread over long period of time. The data may be presented in the form of a table or a graph. Here, the time

series data on the variable under forecast are used to fit a trend line or a curve graphically. Trend line can be worked out by fitting a trend equation to time series data through least squares method or some other estimation method.

- **b) Economic barometer:** This method forecast the future based on the occurrence of present events, first we have to see whether there exists a relationship between the demand for a commodity or product and certain economic indicator. The above relationship can be established through the method of least square. For example: demand for tractors depends on the farmer's income or agriculture income.
- c) Regression method: Regression and correlation are used for forecasting demand. Based on past data the future trend is forecast. If the functional relationship is analyzed with one independent variables it is multiple correlations. In correlation we analyses the nature of relation between the variables while in regression. The extent of relation between the variables is analyzed. The results are expressed in mathematical form. Therefore it is called as econometric model building. The main advantage of this method is that it provides the values of the independent variables from within the model itself. Thus it fears the forecaster from the difficulty of estimating them exogenously.

#### **Question bank**

#### I. Essay questions

- a. Define managerial economics. Explain its nature, scope and importance?
- b. Define Demand and explain the factors that influence the demand of product?
- c. What is Law of demand? Explain its assumptions and exceptions?
- d. What is elastic demand? Explain its types of demand elasticity and types of price elasticity demand?
- e. Explain various factors governing demand forecasting and methods of demand forecasting?

#### II. Short note answer questions.

- a. What are Giffen goods?
- b. Define Micro economics
- c. Define the Law of demand
- d.Define managerial economics
- e. What is price elasticity of demand?
- f. Define elasticity of demand
- g. What is price elasticity of demand?
- h. Define demand forecasting
- i. Give examples of complementary goods and substitute goods
- j. Macro economics