UNIT-I

INTRODUCTION TO MANAGERIAL ECONOMICS

Introduction to Economics

Economics is a study of human activity both at individual and national level. The economists of early age treated economics merely as the science of wealth. The reason for this is clear. Every one of us in 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". It was only during the eighteenth century that Adam Smith, the Father of Economics, defined economics as the study of nature and uses of national wealth'.

Dr. Alfred Marshall, one of the greatest economists of the nineteenth century, 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". Thus, it is one side, a study of wealth; and on the other, and more important side; it is the study of man. As Marshall observed, the chief aim of economics is to promote 'human welfare', but not wealth. The definition given by AC Pigou endorses the opinion of Marshall. Pigou defines Economics as "the study of economic welfare that can be brought directly and indirectly, into relationship with the measuring rod of money".
Prof. Lionel Robbins defined Economics as "the science, which studies human behaviour as a relationship between ends and scarce means which have alternative uses". With this, the focus of economics shifted from 'wealth' to human behaviour'.

Lord Keynes defined economics as 'the study of the administration of scarce means and the determinants of employments and income".

TYPES OF ECONOMICS

Microeconomics

The study of an individual consumer or a firm is called microeconomics (also called the *Theory of Firm*). Micro means 'one millionth'. Microeconomics deals with behavior and problems of single individual and of micro organization. Managerial economics has its roots in microeconomics and it deals with the micro or individual enterprises. It is concerned with the application of the concepts such as price theory, Law of Demand and theories of market structure and so on.

Macroeconomics

The study of 'aggregate' or total level of economics activity in a country is called *macroeconomics*. It studies the flow of economics resources or factors of production

(such as land, labour, capital, organisation and technology) from the resource owner to the business firms and then from the business firms to the households. It deals with total aggregates, for instance, total national income total employment, output and total investment. It studies the interrelations among various aggregates and examines their nature and behaviour, their determination and causes of fluctuations in the. It deals with the price level in general, instead of studying the prices of individual commodities. It is concerned with the level of employment in the economy. It discusses aggregate consumption, aggregate investment, price level, and payment, theories of employment, and so on.

Though macroeconomics provides the necessary framework in term of government policies etc., for the firm to act upon dealing with analysis of business conditions, it has less direct relevance in the study of theory of firm.

Management

Management is the science and art of getting things done through people in formally organized groups. It is necessary that every organisation be well managed to enable it to achieve its desired goals. Management includes a number of functions: *Planning, organizing, staffing, directing, and controlling*. The manager while directing the efforts of his staff *communicates* to them the goals, objectives, policies, and procedures; *coordinates* their efforts; *motivates* them to sustain their enthusiasm; and *leads* them to achieve the corporate goals.

Managerial Economics

Introduction

Managerial Economics refers to the firm's decision making process. It could be also interpreted as "Economics of Management" or "Economics of Management". Managerial Economics is also called as "Industrial Economics" or "Business Economics".

DEFINITIONS OF MANAGERIAL ECONIMICS:

1) **MC Crutgan and Moyer:-**

"Managerial Economics is the application of economics theory and methodology to decision making problems faced by both public and private institutions"

2) **MC Nair and Meriam**:-

"Managerial economics consists of the use of modes of thought to analysis business situations".

3) **Spencer and Siegelman:-**

"Marginal economics is the integration of economic theory with business practice for the purpose of facilitating decision making and forward planning by management".

4) **Haynes mote and paul:-**

"Managerial economics refer to those aspects of economic and its tools of analysis most relevant to the firm decision making process".

5) **Joel dean:-**

"Use of economic analysis in formulating policies is known as managerial economics"

6) **Edwin mans field:-**

"Managerial economics is concerned with application of economics concepts and economics analysis to the problem of formulating rational managerial decisions".

Thus managerial economics is the process of application of the principles, technical and concepts of economics to solve the managerial problems of a business and industrial enter price.

Nature of Managerial Economics

Managerial economics is, perhaps, the youngest of all the social sciences. Since it originates from Economics, it has the basis features of economics, such as assuming that other things remaining the same (or the Latin equivalent ceteris paribus). This assumption is made to simplify the complexity of the managerial phenomenon under study in a dynamic business environment so many things are changing simultaneously. This set a limitation that we cannot really hold other things remaining the same. In such a case, the observations made out of such a study will have a limited purpose or value. Managerial economics also has inherited this problem from economics.

Further, it is assumed that the firm or the buyer acts in a rational manner (which normally does not happen). The buyer is carried away by the advertisements, brand loyalties, incentives and so on, and, therefore, the innate behaviour of the consumer will be rational is not a realistic assumption. Unfortunately, there are no other alternatives to understand the subject other than by making such assumptions. This is because the behaviour of a firm or a consumer is a complex phenomenon.

The other **features** of managerial economics are explained as below:

(a) Close to microeconomics: Managerial economics is concerned with finding the solutions for different managerial problems of a particular firm. Thus, it is more close to microeconomics.

(b) Operates against the backdrop of macroeconomics: The macroeconomics conditions of the economy are also seen as limiting factors for the firm to operate. In other words, the managerial economist has to be

aware of the limits set by the macroeconomics conditions such as government industrial policy, inflation and so on.

(c) ***Normative statements***: A normative statement usually includes or implies the words 'ought' or 'should'. They reflect people's moral attitudes and are expressions of what a team of people ought to do. For instance, it deals with statements such as 'Government of India should open up the economy. Such statement are based on value judgments and express views of what is 'good' or 'bad', 'right' or ' wrong'. One problem with normative statements is that they cannot to verify by looking at the facts, because they mostly deal with the future. Disagreements about such statements are usually settled by voting on them.

(d) ***Prescriptive actions***: Prescriptive action is goal oriented. Given a problem and the objectives of the firm, it suggests the course of action from the available alternatives for optimal solution. If does not merely mention the concept, it also explains whether the concept can be applied in a given context on not. For instance, the fact that variable costs are marginal costs can be used to judge the feasibility of an export order.

(e) ***Applied in nature***: 'Models' are built to reflect the real life complex business situations and these models are of immense 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 methods to conceptualize the problem, identify that alternative and determine the best course of action.

(f) ***Offers scope to evaluate each alternative***: Managerial economics provides an opportunity to evaluate each alternative in terms of its costs and revenue. The managerial economist can decide which is the better alternative to maximize the profits for the firm.

(g) ***Interdisciplinary***: The contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy, psychology, organizational behavior, sociology and etc.

(h) ***Assumptions and limitations***: Every concept and theory of managerial economics is based on certain assumption and as such their validity is not universal. Where there is change in assumptions, the theory may not hold good at all.

Scope of Managerial Economics:

The scope of managerial economics refers to its area of study. Managerial economics refers to its area of study. Managerial economics, Provides management with a strategic planning tool that can be used to get a clear perspective of the way the business world works and what can be done to maintain profitability in an ever-

changing environment. Managerial economics is primarily concerned with the application of economic principles and theories to five types of resource decisions made by all types of business organizations.

a. The selection of product or service to be produced.
b. The choice of production methods and resource combinations.
c. The determination of the best price and quantity combination
d. Promotional strategy and activities.
e. The selection of the location from which to produce and sell goods or service to consumer.

The production department, marketing and sales department and the finance department usually handle these five types of decisions.
The scope of managerial economics covers two areas of decision making

a. Operational or Internal issues
b. Environmental or External issues

a. Operational issues:
Operational issues refer to those, which wise within the business organization and they are under the control of the management. Those are:

1. Theory of demand and Demand Forecasting
2. Pricing and Competitive strategy
3. Production cost analysis
4. Resource allocation
5. Profit analysis
6. Capital or Investment analysis
7. Strategic planning

1. Demand Analyses and Forecasting:

A firm can survive only if it is able to the demand for its product at the right time, within the right quantity. Understanding the basic concepts of demand is essential for demand forecasting. Demand analysis should be a basic activity of the firm because many of the other activities of the firms depend upon the outcome of the demand fore cost. Demand analysis provides:

1. The basis for analyzing market influences on the firms; products and thus helps in the adaptation to those influences.
2. Demand analysis also highlights for factors, which influence the demand for a product. This helps to manipulate demand. Thus demand analysis studies not only the price elasticity but also income elasticity, cross elasticity as well as the influence of advertising expenditure with the advent of computers,

demand forecasting has become an increasingly important function of managerial economics.

2. Pricing and competitive strategy:

Pricing decisions have been always within the preview of managerial economics. Pricing policies are merely a subset of broader class of managerial economic problems. Price theory helps to explain how prices are determined under different types of market conditions. Competitions analysis includes the anticipation of the response of competitions the firm's pricing, advertising and marketing strategies. Product line pricing and price forecasting occupy an important place here.

3. Production and cost analysis:

Production analysis is in physical terms. While the cost analysis is in monetary terms cost concepts and classifications, cost-out-put relationships, economies and diseconomies of scale and production functions are some of the points constituting cost and production analysis.

4. Resource Allocation:

Managerial Economics is the traditional economic theory that is concerned with the problem of optimum allocation of scarce resources. Marginal analysis is applied to the problem of determining the level of output, which maximizes profit. In this respect linear programming techniques has been used to solve optimization problems. In fact lines programming is one of the most practical and powerful managerial decision making tools currently available.

5. Profit analysis:

Profit making is the major goal of firms. There are several constraints here an account of competition from other products, changing input prices and changing business environment hence in spite of careful planning, there is always certain risk involved. Managerial economics deals with techniques of averting of minimizing risks. Profit theory guides in the measurement and management of profit, in calculating the pure return on capital, besides future profit planning.

6. Capital or investment analyses:

Capital is the foundation of business. Lack of capital may result in small size of operations. Availability of capital from various sources like equity capital, institutional finance etc. may help to undertake large-scale operations. Hence

efficient allocation and management of capital is one of the most important tasks of the managers. The major issues related to capital analysis are:

1. The choice of investment project
2. Evaluation of the efficiency of capital
3. Most efficient allocation of capital

Knowledge of capital theory can help very much in taking investment decisions. This involves, capital budgeting, feasibility studies, analysis of cost of capital etc.

7. Strategic planning:

Strategic planning provides management with a framework on which long-term decisions can be made which has an impact on the behavior of the firm. The firm sets certain long-term goals and objectives and selects the strategies to achieve the same. Strategic planning is now a new addition to the scope of managerial economics with the emergence of multinational corporations. The perspective of strategic planning is global.

It is in contrast to project planning which focuses on a specific project or activity. In fact the integration of managerial economics and strategic planning has given rise to be new area of study called corporate economics.

B. Environmental or External Issues:

An environmental issue in managerial economics refers to the general business environment in which the firm operates. They refer to general economic, social and political atmosphere within which the firm operates. A study of economic environment should include:

a. The type of economic system in the country.
b. The general trends in production, employment, income, prices, saving and investment.
c. Trends in the working of financial institutions like banks, financial corporations, insurance companies
d. Magnitude and trends in foreign trade;
e. Trends in labour and capital markets;
f. Government's economic policies viz. industrial policy monetary policy, fiscal policy, price policy etc.

The social environment refers to social structure as well as social organization like trade unions, consumer's co-operative etc. The Political environment refers to the

nature of state activity, chiefly states' attitude towards private business, political stability etc.

The environmental issues highlight the social objective of a firm i.e.; the firm owes a responsibility to the society. Private gains of the firm alone cannot be the goal.

The environmental or external issues relate managerial economics to macro economic theory while operational issues relate the scope to micro economic theory. The scope of managerial economics is ever widening with the dynamic role of big firms in a society.

DEMAND ANALYSIS

Introduction & Meaning:

Demand in common parlance means the desire for an object. But in economics demand is something more than this. According to Stonier and Hague, "Demand in economics means demand backed up by enough money to pay for the goods demanded". This means that the demand becomes effective only it if is backed by the purchasing power in addition to this there must be willingness to buy a commodity.

Thus demand in economics means the desire backed by the willingness to buy a commodity and the purchasing power to pay. In the words of "Benham" "The demand for anything at a given price is the amount of it which will be bought per unit of time at that Price". (Thus demand is always at a price for a definite quantity at a specified time.) Thus demand has three essentials – price, quantity demanded and time. Without these, demand has to significance in economics.

LAW of Demand:

Law of demand shows the relation between price and quantity demanded of a commodity in the market. In the words of Marshall, "the amount demand increases with a fall in price and diminishes with a rise in price".

A rise in the price of a commodity is followed by a reduction in demand and a fall in price is followed by an increase in demand, if a condition of demand remains constant.

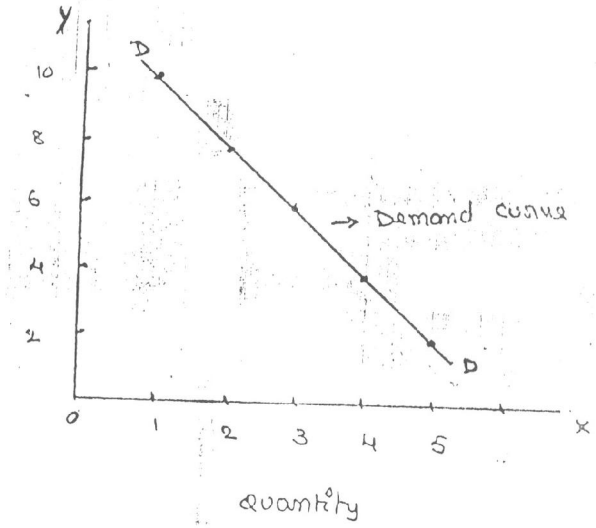
The law of demand may be explained with the help of the following demand schedule.

Demand Schedule.

Price of Appel (In. Rs.)	Quantity Demanded
10	1
8	2
6	3
4	4
2	5

When the price falls from Rs. 10 to 8 quantity demand increases from 1 to 2. In the same way as price falls, quantity demand increases on the basis of the demand schedule we can draw the demand curve.

Price



The demand curve DD shows the inverse relation between price and quantity demand of apple. It is downward sloping.

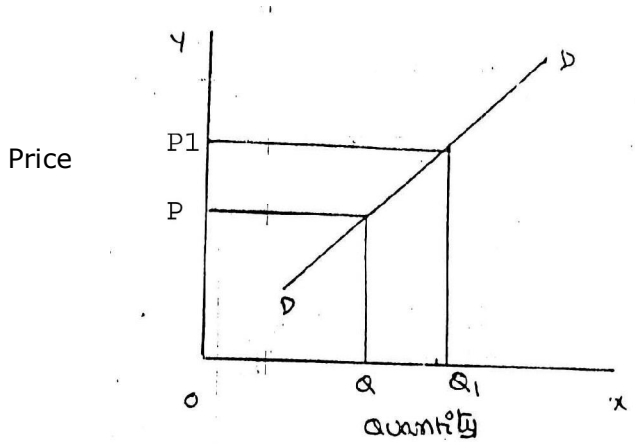
Assumptions:

Law is demand is based on certain assumptions:

1. This is no change in consumers taste and preferences.
2. Income should remain constant.
3. Prices of other goods should not change.
4. There should be no substitute for the commodity
5. The commodity should not confer at any distinction
6. The demand for the commodity should be continuous
7. People should not expect any change in the price of the commodity

Exceptional demand curve:

Some times the demand curve slopes upwards from left to right. In this case the demand curve has a positive slope.



When price increases from OP to Op1 quantity demanded also increases from to OQ1 and vice versa. The reasons for exceptional demand curve are as follows.

1. Giffen paradox:

The Giffen good or inferior good is an exception to the law of demand. When the price of an inferior good falls, the poor will buy less and vice versa. For example, when the price of maize falls, the poor are willing to spend more on superior goods than on maize if the price of maize increases, he has to increase the quantity of money spent on it. Otherwise he will have to face starvation. Thus a fall in price is followed by reduction in quantity demanded and vice versa. "Giffen" first explained this and therefore it is called as Giffen's paradox.

2. Veblen or Demonstration effect:

'Veblan' has explained the exceptional demand curve through his doctrine of conspicuous consumption. Rich people buy certain good because it gives social distinction or prestige for example diamonds are bought by the richer class for the prestige it possess. It the price of diamonds falls poor also will buy is hence they will not give prestige. Therefore, rich people may stop buying this commodity.

3. Ignorance:

Sometimes, the quality of the commodity is Judge by its price. Consumers think that the product is superior if the price is high. As such they buy more at a higher price.

4. Speculative effect:

If the price of the commodity is increasing the consumers will buy more of it because of the fear that it increase still further, Thus, an increase in price may not be accomplished by a decrease in demand.

5. Fear of shortage:

During the times of emergency of war People may expect shortage of a commodity. At that time, they may buy more at a higher price to keep stocks for the future.

5. Necessaries:

In the case of necessaries like rice, vegetables etc. people buy more even at a higher price.

Factors Affecting Demand:

There are factors on which the demand for a commodity depends. These factors are economic, social as well as political factors. The effect of all the factors on the amount demanded for the commodity is called Demand Function.
These factors are as follows:

1. Price of the Commodity:

The most important factor-affecting amount demanded is the price of the commodity. The amount of a commodity demanded at a particular price is more properly called price demand. The relation between price and demand is called the Law of Demand. It is not only the existing price but also the expected changes in price, which affect demand.

2. Income of the Consumer:

The second most important factor influencing demand is consumer income. In fact, we can establish a relation between the consumer income and the demand at different levels of income, price and other things remaining the same. The demand for a normal commodity goes up when income rises and falls down when income falls. But in case of Giffen goods the relationship is the opposite.

3. Prices of related goods:

The demand for a commodity is also affected by the changes in prices of the related goods also. Related goods can be of two types:

(i). Substitutes which can replace each other in use; for example, tea and coffee are substitutes. The change in price of a substitute has effect on a commodity's demand in the same direction in which price changes. The rise in price of coffee shall raise the demand for tea;

(ii). Complementary foods are those which are jointly demanded, such as pen and ink. In such cases complementary goods have opposite relationship between price of one commodity and the amount demanded for the other. If the price of pens goes up, their demand is less as a result of which the demand for ink is also less. The price and demand go in opposite direction. The effect of changes in price of a commodity on amounts demanded of related commodities is called Cross Demand.

4. Tastes of the Consumers:

The amount demanded also depends on consumer's taste. Tastes include fashion, habit, customs, etc. A consumer's taste is also affected by advertisement. If the taste for a commodity goes up, its amount demanded is more even at the same price. This is called increase in demand. The opposite is called decrease in demand.

5. Wealth:

The amount demanded of commodity is also affected by the amount of wealth as well as its distribution. The wealthier are the people; higher is the demand for normal commodities. If wealth is more equally distributed, the demand for necessaries and comforts is more. On the other hand, if some people are rich, while the majorities are poor, the demand for luxuries is generally higher.

6. Population:

Increase in population increases demand for necessaries of life. The composition of population also affects demand. Composition of population means the proportion of young and old and children as well as the ratio of men to women. A change in composition of population has an effect on the nature of demand for different commodities.

7. Government Policy:

Government policy affects the demands for commodities through taxation. Taxing a commodity increases its price and the demand goes down. Similarly, financial help from the government increases the demand for a commodity while lowering its price.

8. Expectations regarding the future:

If consumers expect changes in price of commodity in future, they will change the demand at present even when the present price remains the same. Similarly, if consumers expect their incomes to rise in the near future they may increase the demand for a commodity just now.

9. Climate and weather:

The climate of an area and the weather prevailing there has a decisive effect on consumer's demand. In cold areas woolen cloth is demanded. During hot summer days, ice is very much in demand. On a rainy day, ice cream is not so much demanded.

10. State of business:

The level of demand for different commodities also depends upon the business conditions in the country. If the country is passing through boom conditions, there will be a marked increase in demand. On the other hand, the level of demand goes down during depression.

ELASTICITY OF DEMAND

Elasticity of demand explains the relationship between a change in price and consequent change in amount demanded. "Marshall" introduced the concept of elasticity of demand. Elasticity of demand shows the extent of change in quantity demanded to a change in price.

In the words of "Marshall", "The elasticity of demand in a market is great or small according as the amount demanded increases much or little for a given fall in the price and diminishes much or little for a given rise in Price"

Elastic demand: A small change in price may lead to a great change in quantity demanded. In this case, demand is elastic.

In-elastic demand: If a big change in price is followed by a small change in demanded then the demand in "inelastic".

Types of Elasticity of Demand:

There are three types of elasticity of demand:

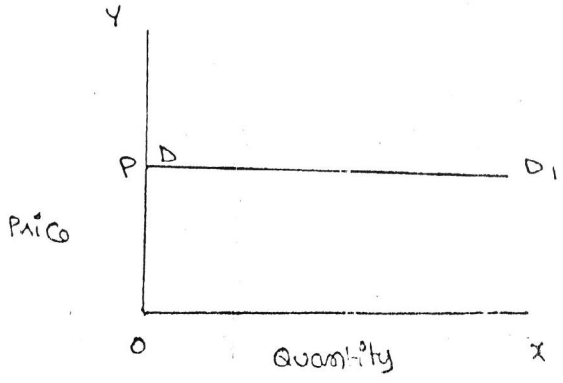
1. Price elasticity of demand
2. Income elasticity of demand
3. Cross elasticity of demand

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

MEASUREMENT OF PRICE ELASTICITY OF DEMAND

A. Perfectly elastic demand:

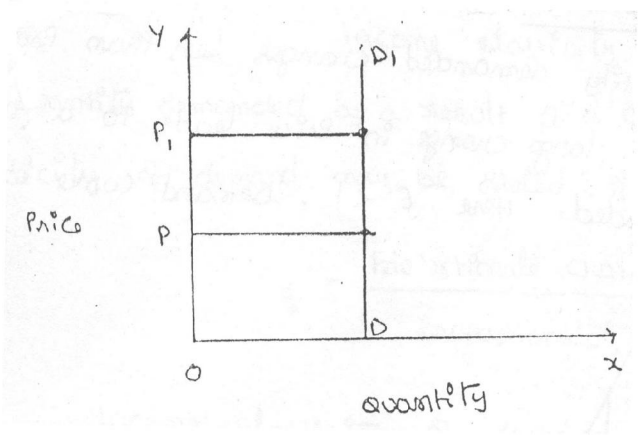
When small change in price leads to an infinitely large change is quantity demand, it is called perfectly or infinitely elastic demand. In this case E=∞



The demand curve DD1 is horizontal straight line. It shows the at "OP" price any amount is demand and if price increases, the consumer will not purchase the commodity.

B. Perfectly Inelastic Demand

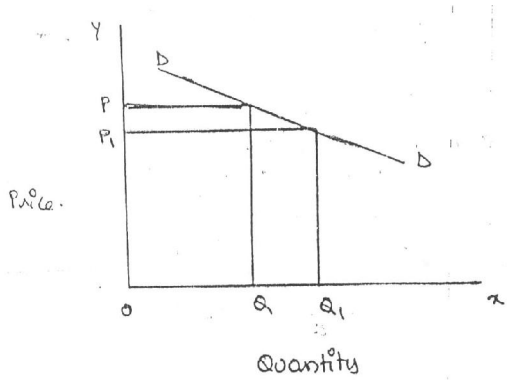
In this case, even a large change in price fails to bring about a change in quantity demanded.



When price increases from 'OP' to 'OP', the quantity demanded remains the same. In other words the response of demand to a change in Price is nil. In this case 'E'=0.

C. Relatively elastic demand:

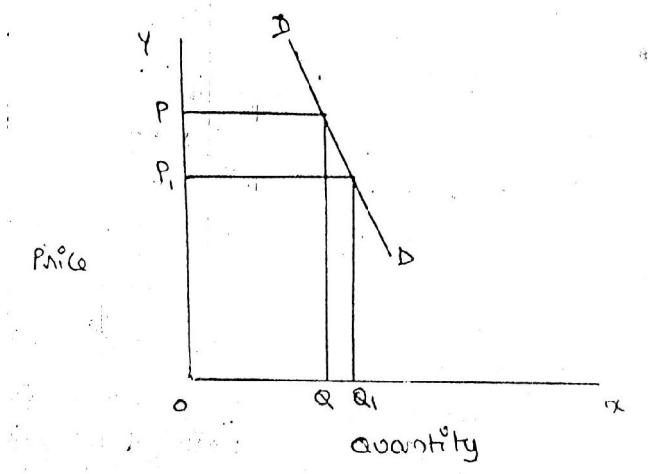
Demand changes more than proportionately to a change in price. i.e. a small change in price loads to a very big change in the quantity demanded. In this case
E > 1. This demand curve will be flatter.



When price falls from 'OP' to 'OP', amount demanded in crease from "OQ' to "OQ1' which is larger than the change in price.

D. Relatively in-elastic demand.

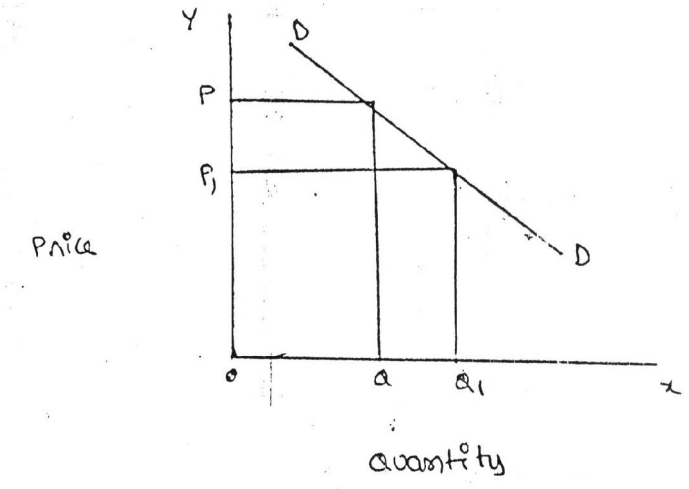
Quantity demanded changes less than proportional to a change in price. A large change in price leads to small change in amount demanded. Here E < 1. Demanded carve will be steeper.



When price falls from "OP' to 'OP1 amount demanded increases from OQ to OQ1, which is smaller than the change in price.

E. Unit elasticity of demand:

The change in demand is exactly equal to the change in price. When both are equal E=1 and elasticity if said to be unitary.



When price falls from 'OP' to 'OP1' quantity demanded increases from 'OP' to 'OP1', quantity demanded increases from 'OQ' to 'OQ1'. Thus a change in price has

resulted in an equal change in quantity demanded so price elasticity of demand is equal to unity.

Factors influencing the elasticity of demand

Elasticity of demand depends on many factors.

1. Nature of commodity:

Elasticity or in-elasticity of demand depends on the nature of the commodity i.e. whether a commodity is a necessity, comfort or luxury, normally; the demand for Necessaries like salt, rice etc is inelastic. On the other band, the demand for comforts and luxuries is elastic.

2. Availability of substitutes:

Elasticity of demand depends on availability or non-availability of substitutes. In case of commodities, which have substitutes, demand is elastic, but in case of commodities, which have no substitutes, demand is in elastic.

3. Variety of uses:

If a commodity can be used for several purposes, than it will have elastic demand. i.e. electricity. On the other hand, demanded is inelastic for commodities, which can be put to only one use.

4. Postponement of demand:

If the consumption of a commodity can be postponed, than it will have elastic demand. On the contrary, if the demand for a commodity cannot be postpones, than demand is in elastic. The demand for rice or medicine cannot be postponed, while the demand for Cycle or umbrella can be postponed.

5. Amount of money spent:

Elasticity of demand depends on the amount of money spent on the commodity. If the consumer spends a smaller for example a consumer spends a little amount on salt and matchboxes. Even when price of salt or matchbox goes up, demanded will not fall. Therefore, demand is in case of clothing a consumer spends a large proportion of his income and an increase in price will reduce his demand for clothing. So the demand is elastic.

6. Time:

Elasticity of demand varies with time. Generally, demand is inelastic during short period and elastic during the long period. Demand is inelastic during short period

because the consumers do not have enough time to know about the change is price. Even if they are aware of the price change, they may not immediately switch over to a new commodity, as they are accustomed to the old commodity.

7. Range of Prices:

Range of prices exerts an important influence on elasticity of demand. At a very high price, demand is inelastic because a slight fall in price will not induce the people buy more. Similarly at a low price also demand is inelastic. This is because at a low price all those who want to buy the commodity would have bought it and a further fall in price will not increase the demand. Therefore, elasticity is low at very him and very low prices.

Importance of Elasticity of Demand:

The concept of elasticity of demand is of much practical importance.

1. Price fixation:

Each seller under monopoly and imperfect competition has to take into account elasticity of demand while fixing the price for his product. If the demand for the product is inelastic, he can fix a higher price.

2. Production:

Producers generally decide their production level on the basis of demand for the product. Hence elasticity of demand helps the producers to take correct decision regarding the level of cut put to be produced.

3. Distribution:

Elasticity of demand also helps in the determination of rewards for factors of production. For example, if the demand for labour is inelastic, trade unions will be successful in raising wages. It is applicable to other factors of production.

4. International Trade:

Elasticity of demand helps in finding out the terms of trade between two countries. Terms of trade refers to the rate at which domestic commodity is exchanged for foreign commodities. Terms of trade depends upon the elasticity of demand of the two countries for each other goods.

5. Public Finance:

Elasticity of demand helps the government in formulating tax policies. For example, for imposing tax on a commodity, the Finance Minister has to take into account the elasticity of demand.

6. Nationalization:

The concept of elasticity of demand enables the government to decide about nationalization of industries.

Demand Forecasting

Introduction:

The information about the future is essential for both new firms and those planning to expand the scale of their production. Demand forecasting refers to an estimate of future demand for the product.

It is an 'objective assessment of the future course of demand". In recent times, forecasting plays an important role in business decision-making. Demand forecasting has an important influence on production planning. It is essential for a firm to produce the required quantities at the right time.

It is essential to distinguish between forecasts of demand and forecasts of sales. Sales forecast is important for estimating revenue cash requirements and expenses. Demand forecasts relate to production, inventory control, timing, reliability of forecast etc. However, there is not much difference between these two terms.

Types of demand Forecasting:

Based on the time span and planning requirements of business firms, demand forecasting can be classified in to 1. Short-term demand forecasting and
2. Long – term demand forecasting.

1. Short-term demand forecasting:

Short-term demand forecasting is limited to short periods, usually for one year. It relates to policies regarding sales, purchase, price and finances. It refers to existing production capacity of the firm. Short-term forecasting is essential for formulating is essential for formulating a suitable price policy. If the business people expect of rise

in the prices of raw materials of shortages, they may buy early. This price forecasting helps in sale policy formulation. Production may be undertaken based on expected sales and not on actual sales. Further, demand forecasting assists in financial forecasting also. Prior information about production and sales is essential to provide additional funds on reasonable terms.

2. Long – term forecasting:

In long-term forecasting, the businessmen should now about the long-term demand for the product. Planning of a new plant or expansion of an existing unit depends on long-term demand. Similarly a multi product firm must take into account the demand for different items. When forecast are mode covering long periods, the probability of error is high. It is vary difficult to forecast the production, the trend of prices and the nature of competition. Hence quality and competent forecasts are essential.

Prof. C. I. Savage and T.R. Small classify demand forecasting into time types. They are 1. Economic forecasting, 2. Industry forecasting, 3. Firm level forecasting. Economics forecasting is concerned with the economics, while industrial level forecasting is used for inter-industry comparisons and is being supplied by trade association or chamber of commerce. Firm level forecasting relates to individual firm.

Methods of forecasting:

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 are associated with the high values 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 give by buyers, sales man or other experts may be, at times, misleading. This is the reason why most of the manufacturers favour to test their product 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.

E. ***Delphi Method:***

A variant of the survey method is Delphi method. It is a sophisticated method to arrive at a consensus. Under this method, a panel is selected to give suggestions to solve the problems in hand. Both internal and external experts can be the members of the panel. Panel members one kept apart from each other and express their views in an anonymous manner. There is also a coordinator who acts as an intermediary among the panelists. He prepares the questionnaire and sends it to the panelist. At the end of each round, he prepares a summary report. On the basis of the summary report the panel members have to give suggestions. This method has been used in the area of technological forecasting. It has proved more popular in forecasting. It has provided more popular in forecasting non-economic rather than economic variables.

QUESTIONS

1. What is managerial economics? Explain its focus are as
2. Point out the importance of managerial economics in decision making
3. What are the contributions and limitations of economic analysis in business decision making
4. Managerial Economics is the discipline which deals with the applications of economic theory to business management discuss.
5. Explain the fundamental concepts of managerial economics
6. Discuss the nature & Scope of Managerial economics
7. Managerial Economics is the study of allocation of resources available to a firm or other unit of management among the activities of that unit explains.
8. Explain the nature of problems studies in managerial economics. What is the importance of the study of such problems in business management?
9. Explain the role and responsibilities of a managerial economics?
10. "Managerial Economics is an integration of economic theory and with business practice for the purpose of facilitating decision making and forward planning" explain.
11.

12. What is meant by elasticity of demand? How do you measure it? What are determinates of elasticity of demand?
13. What is the utility of demand forecasting? What are the criteria for a good forecasting method? Forecasting of demand for a new product? ' Economic indicators'
14. What is promotional elasticity of demand? How does if differ from cross elasticity of demand.
15. Explain in law of demand. What do you mean by shifts in demand curve?
16. What is cross elasticity of demand? Is it positive for substitute or complements? Show in a diagram relating to the demand for coffee to the price of tea?
17. Income elasticity of demand and distinguish its, various tapes. How does it differ from pure elasticity of demand?
18. What is meant by demand? Everyone desires a Maruti 800 Car – Does this mean that the demand for Maruti Car is large?
19. Calculate price elasticity of demand:

    Q1= 4000 P1= 20

    Q2= 5000 P2= 19
20. What is demand analysis? Explain the factor influencing the demand for a product?
    What are the various factors that influence the demand for a computer.

QUIZ

1. Managerial Economics as a subject gained popularity first in_____. ( )
   (a) India (b) Germany (c) U.S.A (d) England

2. When the subject Managerial Economics gained popularity? ( )
   (a) 1950 (b) 1949 (c) 1951 (d) 1952

3. Which subject studies the behavior of the firm in theory and practice? ( )
   (a) Micro Economics (b) Macro Economics
   (c) Managerial Economics (d) Welfare Economics

4. Which subject bridges gap between Economic Theory and Management Practice? ( )
   (a) Welfare Economics (b) Micro Economics
   (c) Managerial Economics (d) Macro Economics

5. Application of Economics for managerial decision-making is called____. ( )
   (a) Macro Economics (b) Welfare Economics
   (c) Managerial Economics (d) Micro Economics

6. Which areas covered by the subject "Managerial Economics". ( )
(a) Operational issues (b) Environmental issues
(c) Operational & Environmental issues (d) None

7. The relationship between Managerial Economics and Economic Theory is like that of Engineering Science to Physics (or) Medicine to _____. ( )
(a) Mathematics (b) Economics
(c) Biology (d) Accountancy

8. Making decisions and processing information are the two Primary tasks of the Managers . It was explained by the subject _____. ( )
(a) Physics (b) Engineering Science
(c) Managerial Economics (d) Chemistry

9. Managerial Economics is close to_____Economics ( )
(a) National (b) Business (c) Micro (d) Industrial

10. The theory of firm also called as_____. ( )
(a) Welfare Economics (b) Industrial Economics
(c) Micro Economics (d) None

11. "Any activity aimed at earning or spending money is called ____activity". ( )
(a) Service activity (b) Accounting activity
(c) Economic activity (d) None

12. Who explained the "Law of Demand"? ( )
(a) Joel Dean (b) Cobb-Douglas
(c) Marshall (d) C.I.Savage & T.R.Small

13. Demand Curve always _____ sloping. ( )
(a) Positive (b) Straight line (c) Negative (d) Vertical

14. Geffen goods, Veblan goods and speculations are exceptions to___. ( )
(a) Cost function (b) Production function
(c) Law of Demand (d) Finance function

15. Who explained the "Law of Demand"? ( )
(a) Cobb-Douglas (b) Adam smith
(c) Marshall (d) Joel Dean

16. When PE = $\propto$ (Price Elasticity of Demand is infinite), we call it ___. ( )
(a) Relatively Elastic (b) Perfectly Inelastic
(c) Perfectly Elastic (d) Unit Elastic

17. Income Elasticity of demand when less than 'O' (IE = $<$ O), it is termed as _____. ( )
(a) Income Elasticity less than unity (b) Zero income Elasticity
(c) Negative Income Elasticity (d) Unit Income Elasticity

18. The other name of inferior goods is _____. ( )
(a) Veblan goods (b) Necessaries
(c) Geffen goods (d) Diamonds

19. Estimation of future possible demand is called _____. ( )

(a) Sales Forecasting (b) Production Forecasting
(c) Income Forecasting (d) Demand Forecasting

20. How many methods are employed to forecast the demand ( )
(a) Three (b) Four
(c) Two (d) Five

21. What is the formula for Price Elasticity of Demand? ( )
(a) $\frac{\text{\% of change in the Price}}{\text{\% of change in the Demand}}$ (b) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Income}}$
(c) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Price}}$ (d) $\frac{\text{\% of change in the Demand of 'X'}}{\text{\% of change in the Price of 'Y'}}$

22. When a small change in price leads great change in the quantity demand, We call it _____. ( )
(a) Inelastic Demand (b) Negative Demand
(c) Elastic Demand (d) None

23. When a great change in price leads small change in the quantity demand, We call it _____. ( )
(a) Elastic Demand (b) Positive Demand
(c) Inelastic Demand (d) None

24. "Coffee and Tea are the _____ goods". ( )
(a) Relative (b) Complementary
(c) Substitute (d) None

25. Consumers Survey method is one of the Survey Methods to forecast the__( )
(a) Sales (b) Income
(c) Demand (d) Production

26. What is the formula for Income Elasticity of Demand? ( )
(a) $\frac{\text{\% of change in the Income}}{\text{\% of change in the Demand}}$ (b) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Price}}$
(c) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Income}}$ (d) $\frac{\text{\% of change in the Demand of 'X'}}{\text{\% of change in the Price of 'Y'}}$

27. What is the formula for Cross Elasticity of Demand? ( )
(a) $\frac{\text{\% of change in the Price of 'X'}}{\text{\% of change in the Demand of 'Y"}}$ (b) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Price}}$
(c) $\frac{\text{\% of change in the Demand of 'X'}}{\text{\% of change in the Price of 'Y'}}$ (d) $\frac{\text{\% of change in the Demand}}{\text{\% of change in the Income}}$

28. When PE = 0 (Price Elasticity of Demand is Zero), we call it ___. ( )
(a) Relatively Elastic demand (b) Perfectly Elastic demand
(c) Perfectly Inelastic demand (d) Unit Elastic demand

29. When PE =>1 (Price Elasticity of Demand is greater than one), We call it ___. ( )
(a) Perfectly Elastic demand (b) Perfectly inelastic demand
(c) Relatively Elastic demand (d) relatively inelastic demand

30. When PE =<1 (Price Elasticity of Demand is less than one),
We call it ___. ( )
(a) Perfectly inelastic demand (b) Relatively Elastic demand
(c) Relatively inelastic demand (d) perfectly Elastic demand

31. When PE =1 (Price Elasticity of Demand is one), we call it ___. ( )
(a) Perfectly Elastic demand (b) Perfectly inelastic demand
(c) Unit elastic demand (d) Relatively Elastic demand

32. When Income Elasticity of demand is Zero (IE = 0), It is termed as ___. ( )
(a) Negative Income Elasticity (b) Unit Income Elasticity
(c) Zero Income Elasticity (d) Infinite Income Elasticity

Note: Answer is "C" for all the above questions.

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