Presentation
for
MANAGERIAL ECONOMICES

by

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INTRODUCTION TO MANAGERIAL ECONOMICES

INTRODUCTION

The word "economics" is derived from a Greek word “QIKONOMUS", which means "household management" or "management of house affairs“ however, economics considers how a society provides for its needs. Its most basic need is survival; which requires food, clothing and shelter.

Economics is the social science of studying the production, distribution and consumption of goods and services. ...

Definitions of Managerial Economics

"The integration of economic theory with business practice for the purpose of facilitating decision-making and forward planning by management"– Spencer and Siegelman

" The study of how to direct scarce resources in a way that most efficiently achieves a managerial goal". --- Michael R.baye

Features of Economics

Of all the above alternatives, which one do I choose? How do I behave in satisfying my unlimited wants with the scarce resources?

Types of Economics

MICRO ECONOMICS

- **The study of an individual consumer or a firm is called microeconomics (also called the Theory of the Firm)**
- **It deals with behavior and problems of single individual and micro organization.**
- **It concerns with the application of the concepts such as price theory , Law of Demand and theories of market structures and so on.**

MACRO ECONOMIC

- **The study of 'aggregate ' or total level of economic activity in a country is called macroeconomics.**
- **It include national income analysis , balance of payments, theories of employment, and so on.**
- **It provides the necessary framework in term of government policies etc.,**

Nature of Managerial Economics

Close to micro economics

Operate against the backdrop of micro economics

Normative statements

Perspective actions

Applied in nature

Offers scope to evaluate each alternative

Interdisciplinary

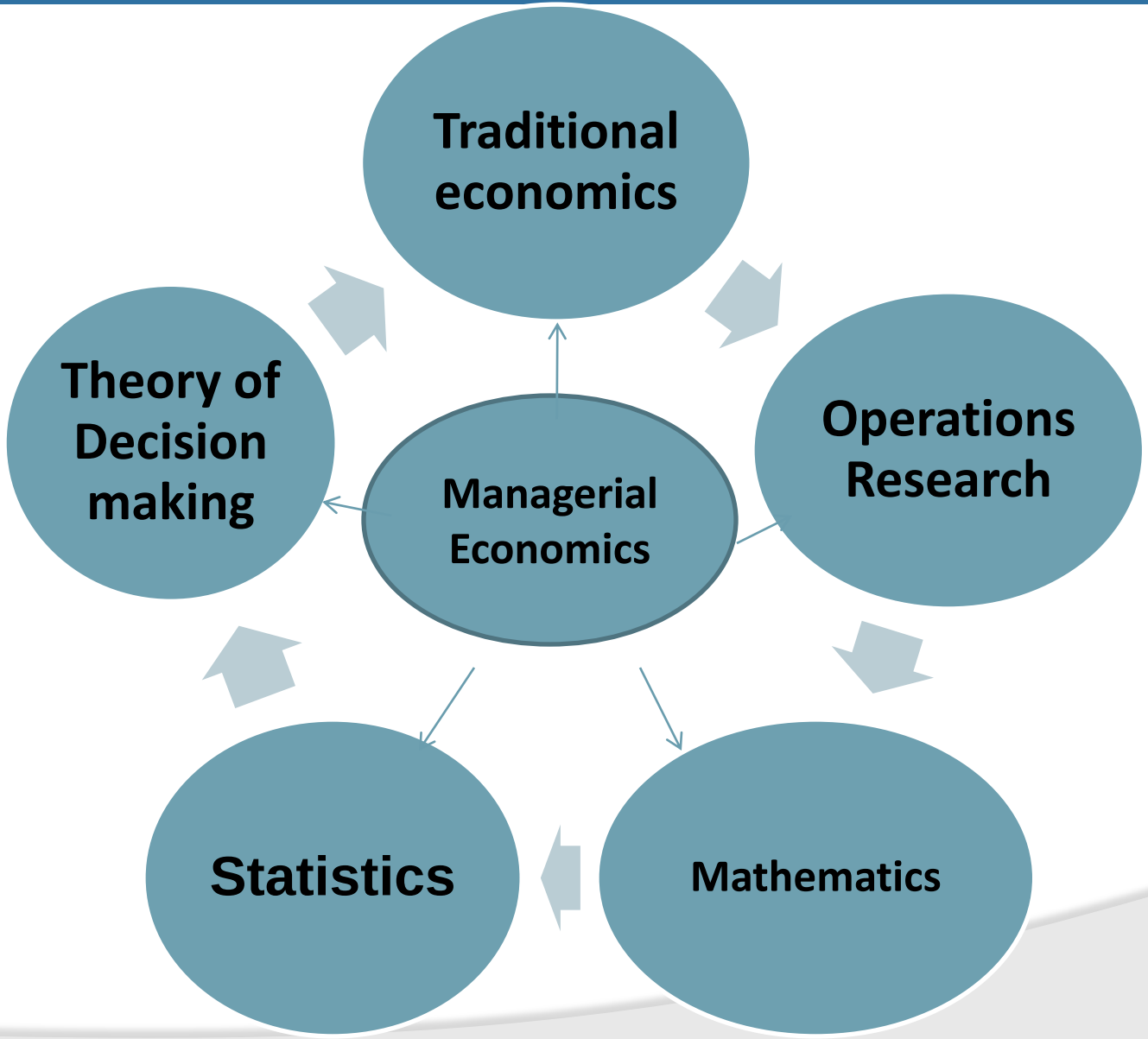
Scope of Managerial Economics

A professional managerial economist has to integrate concepts and methods from all these disciplines and functional areas in order to understand and analyze practical managerial problems.

Objectives of the firm

- Demand analysis and Demand forecasting
- Production and cost
- Competition
- Pricing and output
- Profit
- Investment and capital budgeting
- Product policy, sales promotion, and Market Strategy

Relation with other subjects



Concept of opportunity cost

In microeconomic theory, the opportunity cost, also known as alternative cost, is the value (not a benefit) of the choice of a best alternative cost while making a decision.

A choice needs to be made between several mutually exclusive alternatives; assuming the best choice is made, it is the "cost" incurred by not enjoying the benefit that would have been had by taking the second best available choice.

The New Oxford American Dictionary defines it as "the loss of potential gain from other alternatives when one alternative is chosen.

Concept of opportunity cost

" Opportunity cost is a key concept in economics, and has been described as expressing "the basic relationship between scarcity and choice." [The notion of opportunity cost plays a crucial part in attempts to ensure that scarce resources are used efficiently.

Thus, opportunity costs are not restricted to monetary or financial costs: the real cost of output forgone, lost time, pleasure or any other benefit that provides utility should also be considered an opportunity cost.

Incremental concept

The incremental concept is probably the most important concept in economics and is certainly the most frequently used in Managerial Economics. Incremental concept is closely related to the mar-ginal cost and marginal revenues of economic theory.

The two major concepts in this analysis are incremental cost and incremental revenue. Incremental cost denotes change in total cost, whereas incremental revenue means change in total revenue resulting from a decision of the firm.

Incremental concept

The incremental principle may be stated as follows: A decision is clearly a profitable one if

(i) It increases revenue more than costs.

(ii) It decreases some cost to a greater extent than it increases others.

(iii) It increases some revenues more than it decreases others.

(iv) It reduces costs more than revenues.

Equi-Marginal Concept

One of the widest known principles of economics is the equi-marginal principle. The principle states that an input should be allocated so that value added by the last unit is the same in all cases. This generalization is popularly called the equi-marginal.

Let us assume a case in which the firm has 100 unit of labor at its disposal. And the firm is involved in five activities viz., A, B, C, D and E. The firm can increase any one of these activities by employing more labor but only at the cost i.e., sacrifice of other activities.

Equi-Marginal Concept

An optimum allocation cannot be achieved if the value of the marginal product is greater in one activity than in another. It would be, therefore, profitable to shift labor from low marginal value activity to high marginal value activity, thus increasing the total value of all products taken together.

Concept of Time Perspective

The time perspective concept states that the decision maker must give due consideration both to the short run and long run effects of his decisions. He must give due emphasis to the various time periods. It was Marshall who introduced time element in economic theory.

The economic concepts of the long run and the short run have become part of everyday language. Managerial economists are also concerned with the short run and long run effects of decisions on revenues as well as costs. The main problem in decision making is to establish the right balance between long run and short run.

Concept of Time Perspective

In the short period, the firm can change its output without changing its size. In the long period, the firm can change its output by changing its size. In the short period, the output of the industry is fixed because the firms cannot change their size of operation and they can vary only variable factors. In the long period, the output of the industry is likely to be more because the firms have enough time to increase their sizes and also use both variable and fixed factors.

Discounting Concept

This concept is an extension of the concept of time perspective. Since future is unknown and incalculable, there is lot of risk and uncertainty in future. Everyone knows that a rupee today is worth more than a rupee will be two years from now.

This appears similar to the saying that —a bird in hand is more worth than two in the bush.
This judgment is made not on account of the uncertainty surround-ing the future or the risk of inflation.

It is simply that in the intervening period a sum of money can earn a return which is ruled out if the same sum is available only at the end of the period.

Discounting Concept

In technical parlance, it is said that the present value of one rupee available at the end of two years is the present value of one rupee available today.

The mathematical technique for adjusting for the time value of money and computing present value is called _discounting‘.

Risk and Uncertainty

Managerial decisions are actions of today which bear fruits in future which is unforeseen. Future is uncertain and involves risk. The uncertainty is due to unpredictable changes in the business cycle, structure of the economy and government policies.

This means that the management must assume the risk of making decisions for their institution in uncertain and unknown economic conditions in the future. Firms may be uncertain about production, market prices, strategies of rivals, etc. Under uncertainty, the consequences of an action are not known immediately for certain

Risk and Uncertainty

Economic theory generally assumes that the firm has perfect knowledge of its costs and demand relationships and of its environment. Uncertainty is not allowed to affect the decisions. Uncertainty arises because producers simply cannot foresee the dynamic changes in the economy and hence, cost and revenue data of their firms with reasonable accuracy.

ELASTICITY OF DEMAND

Demand Analysis

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

Dealing with a good demanded by an individual we call it as **Individual demand**

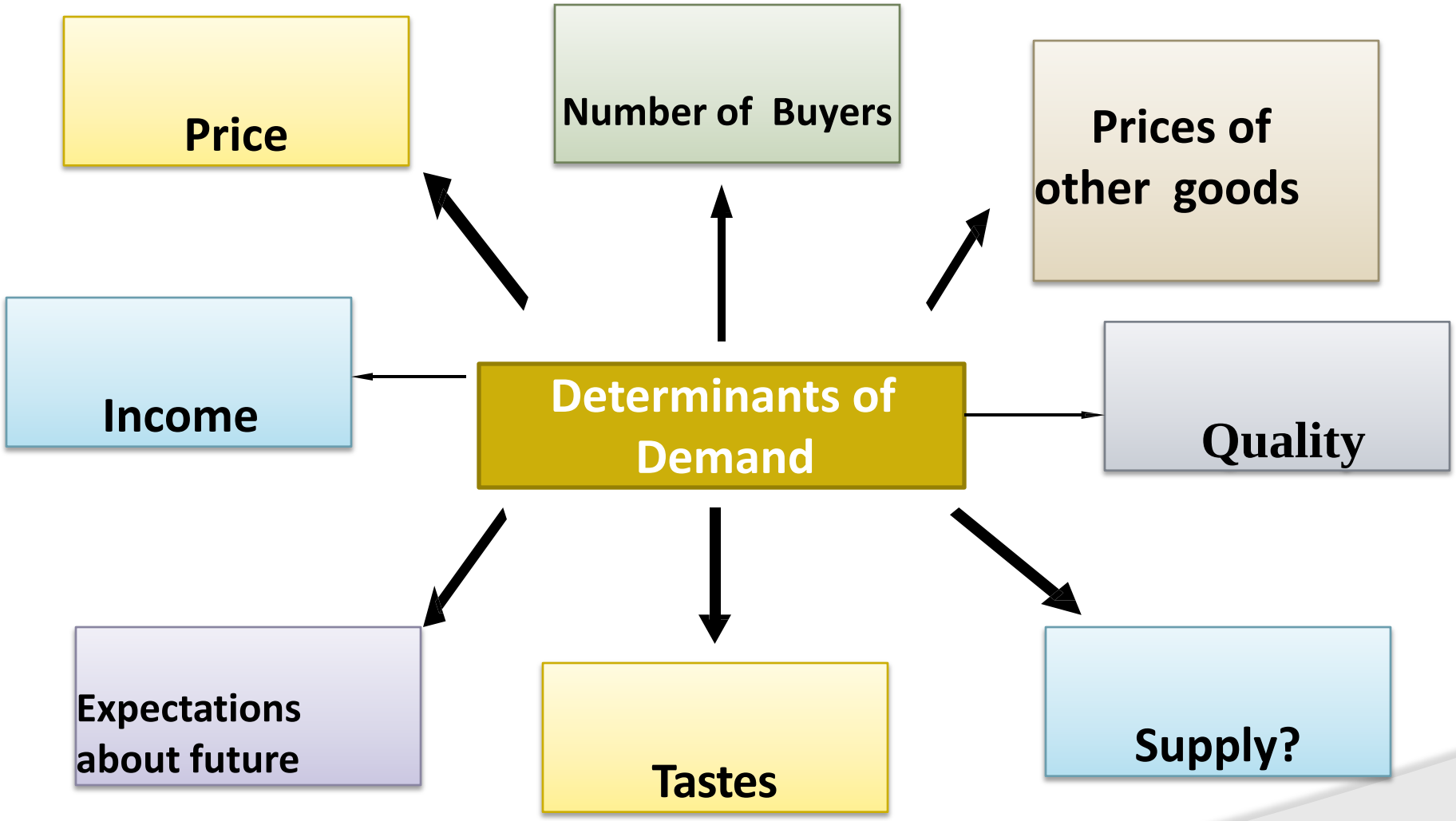
If the good is demanded by a household we call it as **house hold demand**

If all the individuals/ house holds together demanded we call it as **Market demand (or) Aggregate Demand**.

Nature and Types of Demand

The nature of Demand is better understood when we see these variations given below

Consumer Goods vs. Producer Goods	• Example : Bread, apple / Machinery , cars
Autonomous Demand vs. Derived Demand	• Example : super specialty Hospital/ around that Hospital
Durable vs. Perishable Demand	• Example : Milk, Vegetables / TV, Mobile Phone
Firm Demand vs. Industry Demand	• Example : Cement by firm / cement by whole industry
Short-run demand vs. Long-run Demand	• Example: Seasonal products vs. Non-Seasonal Products
New demand vs. Replacement Demand	• Example : New Model car / Washing machine
Total market and segment market Demand	• Example : Sugar / Sweet making industry-Sugar


Price
Number of Buyers
Prices of other goods
Income
Determinants of Demand
Quality
Expectations about future
Tastes
Supply?

Demand Function

Meaning : A mathematical expression of the relationship between quantity demanded of the commodity and its determinants is known as the demand function.

When this relationship relates to the demand by an individual consumer it is known as individual demand function, while if it relates to the market it is called market demand function.

Market Demand Function

$$Q_{dx} = f(Px, Y, P_{1,\ldots\ldots} P_{n-1}, T, A, Ey, Ep, P, D, u)$$

Where

Q_{dx} = Quantity demanded of good X

Px = Price of the product X

Y = Level of Household income

P1…pn-1 = Price of all other related Products in Economy

T = Tastes of the Consumer

A = Advertising

Ey = Consumer expected future income

Ep = consumer's expectations about future prices

P = Population

D = Distribution of consumers like age, gender, income

U = refers to all those determinants which are not covered

Individual Demand Function

$$Q_{dx} = f(Px, Y, P_{1,\ldots\ldots} P_{n-1}, T, A, Ey, Ep, u)$$

Where

QDX = Quantity demanded of good X

Px = Price of the product X

Y = Level of Household income

P1…pn-1 = Price of all other related Products in Economy

T = Tastes of the Consumer

A = Advertising

Ey = Consumer expected future income

Ep = consumer's expectations about future prices

U = refers to all those determinants which are not covered

Law of Demand

Meaning: **Law of demand states that higher the price lower the quantity demanded, and vice versa, other things being constant.**

$$Q_{dx} = f(p)$$

The Assumptions of Law of Demand

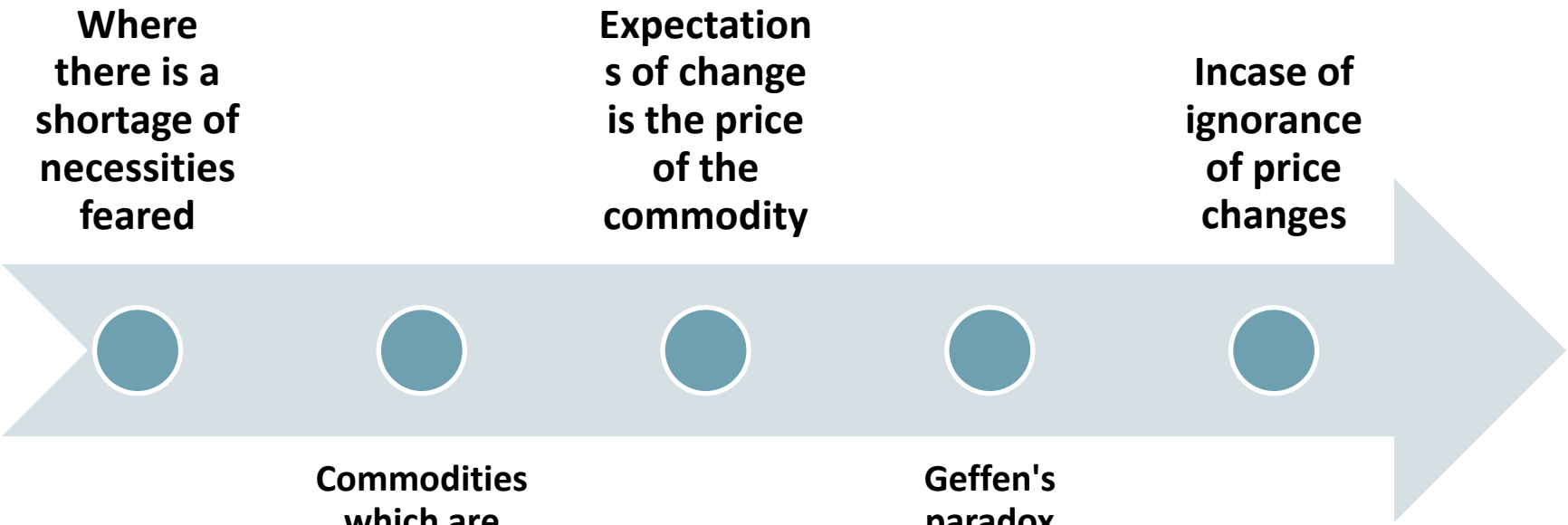
Law of Demand is based on the following assumptions. The Law will hold good only if the following assumptions are fulfilled.
That the tastes and fashions of the people remain unchanged.

That the people's income remains unchanged / constant.
That the prices of related goods remain unchanged / same.

That there are no substitutes for the commodity in the market.
That the commodity is not the one which has prestige value such as diamonds etc.

That the demand for the commodity should be continuous.
That the people should not expect any change in the price of the commodity.

Exceptions to the Law of Demand



Elasticity of Demand

Most of the times , it is not enough to understand the increase or decrease in price and its consequential impact of change in the quantity demanded. It is necessary to find out the extent of increase or decrease in each variables for taking certain managerial decisions.

Definition : " The percentage change in quantity demanded caused by one percent change in the demand determinant under consideration , while other determinants are held constant."

$$E = \frac{\text{Percentage change in quantity demanded of good X}}{\text{Percentage change in determinant Z}}$$

Symbolically it may be stated as

$$\varepsilon = \frac{\text{Percentage change in quantity demanded of good X}}{\text{Percentage change in determinant Z}}$$

Symbolically, it may be stated as:

$$\varepsilon = \frac{\Delta Q / Q}{\Delta Z / Z} = \frac{\Delta Q}{\Delta Z} \cdot \frac{Z}{Q}$$

Where refers to elasticity of demand

Refers to change

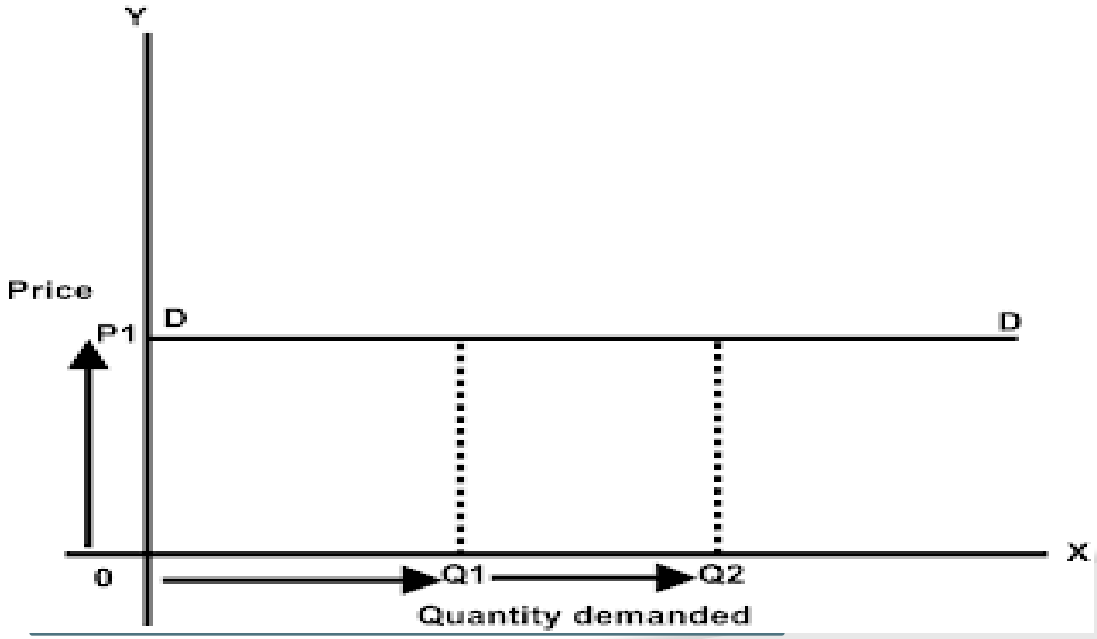
q Refers to quantity demanded, and

Z refers to demand determinant which may be one of the following;

- Current price of the commodity
- Current price of related good
- Current income
- The expected price of the commodity , and
- Advertisement expenditure ,etc

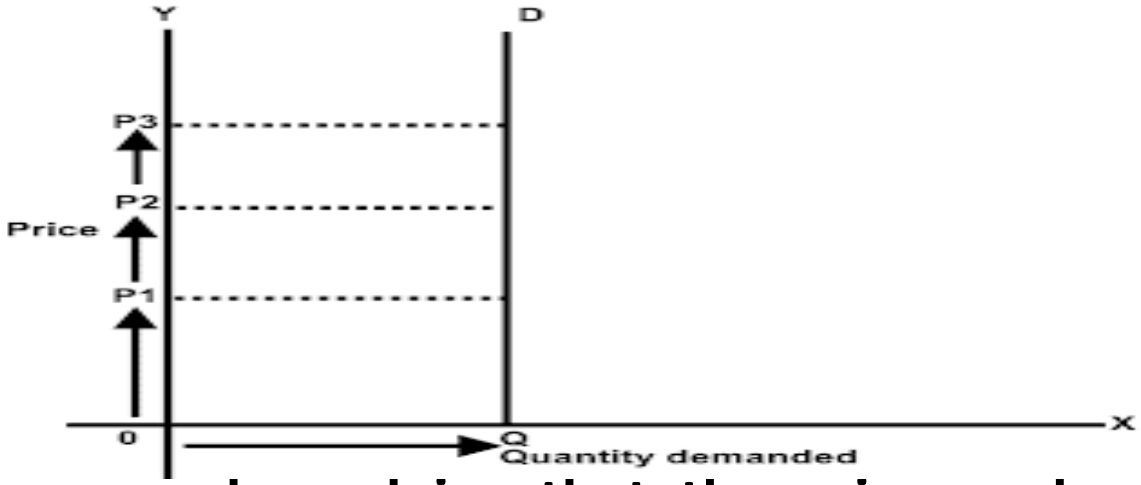
Measurement of Elasticity

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 perfectly elastic. In such cases , even a small increase in price will lead to complete fall in demand.



Perfectly Inelastic demand

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

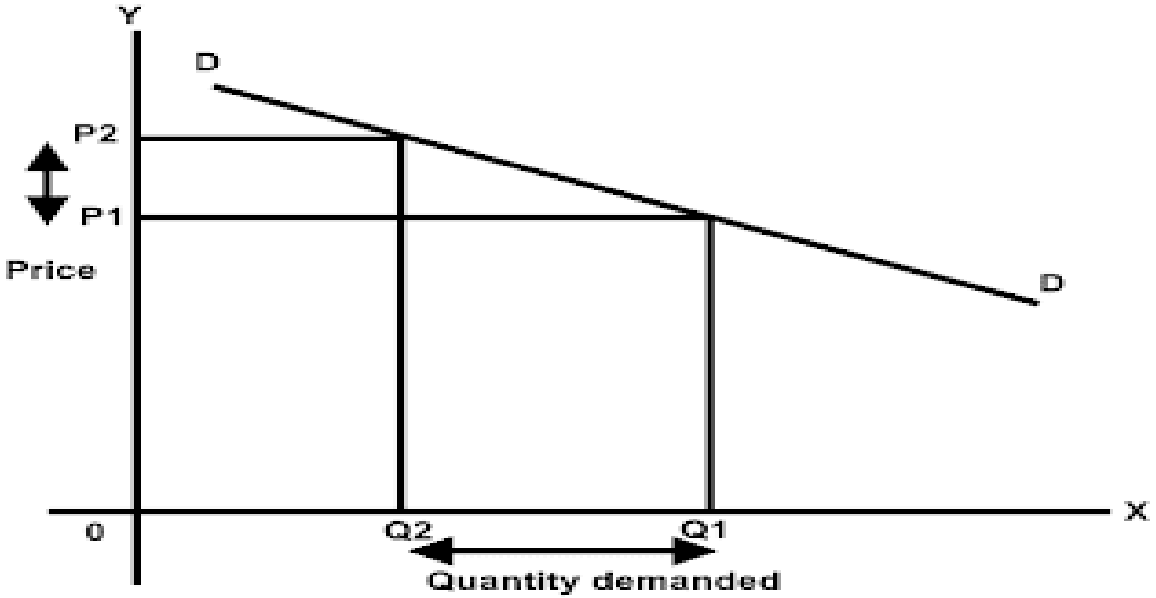


Above graph explains that there is no change in the quantity demanded though there is change in price, say increase or decrease.

The increase in price from OP to OP1, the quantity demanded has not fallen down. Similarly there is a fall in the price from OP3 to OP2 , the quantity demanded remains unchanged.

Relatively Elastic Demand

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



The above graph explains that the quantity demanded increases from OQ1 to OQ2 because of a decrease in price from OP1 to OP2. the extent of increase in the quantity demanded is greater than the extent of in the price.

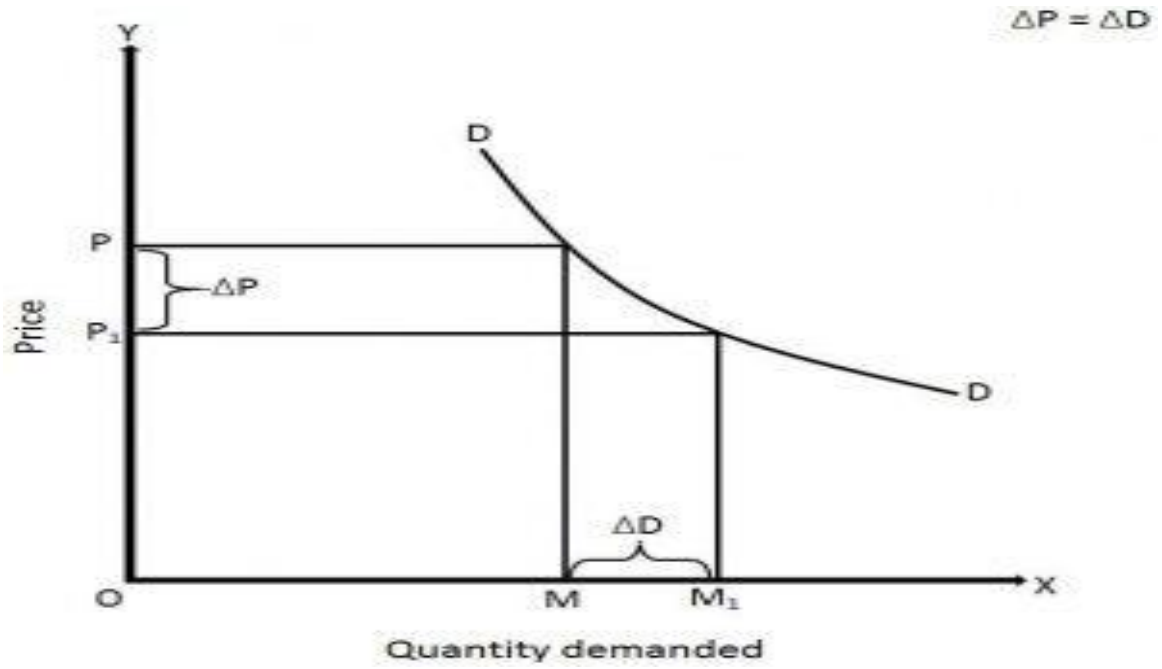
Relatively Inelastic Demand

The demand is said to be relatively inelastic when the change in demand is less the change in the price.

The above graph explains that the quantity demanded increase from OQ1 to OQ2 because of a decrease in price from OP1 to OP2. The extent of increase in the quantity demanded is lesser than the extent of fall in the price.

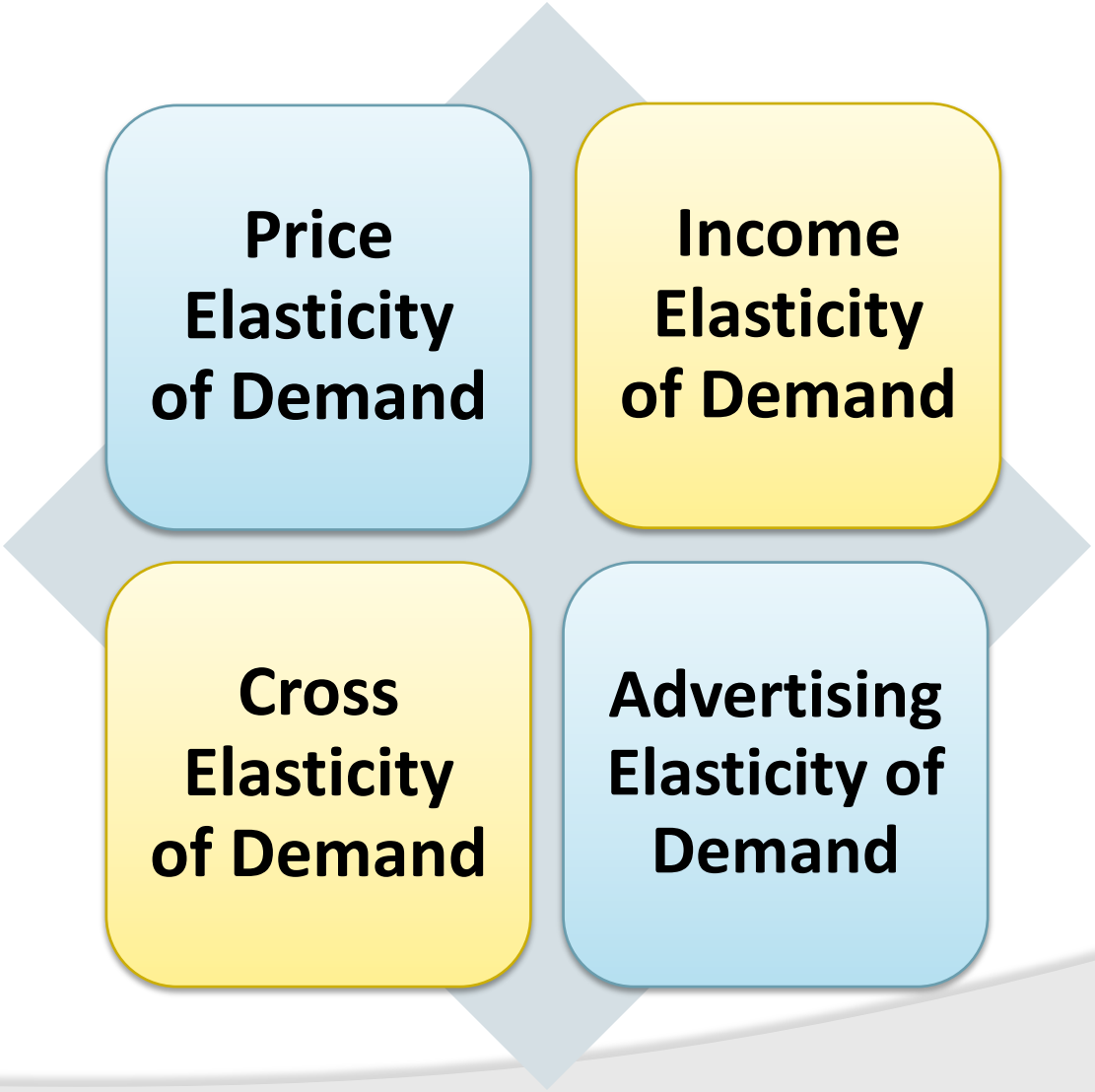
Unit Elasticity

The elasticity in demand is said to be unity when the change in demand is equal to the change in price.



From the above graph the quantity demanded increases from OM1to OM2 because of decrease in price from OP1 to OP. The extent of increase in the quantity demanded equal to the extent of fall in the price.

Types of Elasticity of Demand



Price Elasticity of Demand

Meaning: *The measure of relative responsiveness of quantity demanded curve is known as price elasticity of demand*. It can be represented mathematically as, price elasticity of demand.

$$= \frac{\text{Proportionate change in quantity demanded of good X}}{\text{Proportionate change in price of good X}} = -\frac{(Q_2 - Q_1)/Q_1}{(P_2 - P_1)/P_1}$$

(Minus sign is put to make the value of ε absolute)

Where q1 and p1 are original quantity and price respectively, and q2 and p2 are the new quantity and price respectively. The above equation can be written as

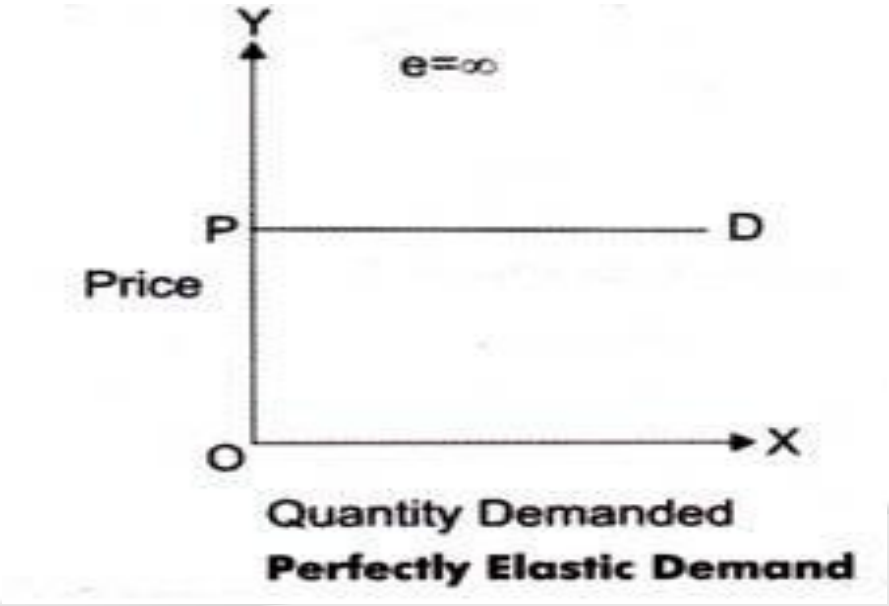
$$\varepsilon = -\frac{\Delta Q / Q_1}{\Delta P / P_1} = -\frac{\Delta Q}{Q_1} \cdot \frac{P_1}{\Delta P} = -\frac{\Delta Q}{\Delta P} \cdot \frac{P_1}{Q_1}$$

DD is the demand curve of a consumer for good. At price =Rs 10, 4 units of good X are demanded .When price goes down to Rs.8 quantity demanded increases to 6. So $\Delta P = 8-10 = -2$: and $\Delta Q = 6-4 = 2$, and $\left(\frac{2}{-2}\right)\left(\frac{10}{4}\right) = 2.5$

Types of Price Elasticity

In fact, it is the nature of a commodity which is responsible for differing elasticity's of demand in case of different commodities.

1.Perfectly elastic Demand (e=∞) . Where no reduction in price is needed to cause an increase in quantity demanded.



Perfectly Elastic Demand

2. Absolutely inelastic demand : (e=0). Where a change in price, however large, causes no change in quantity demanded

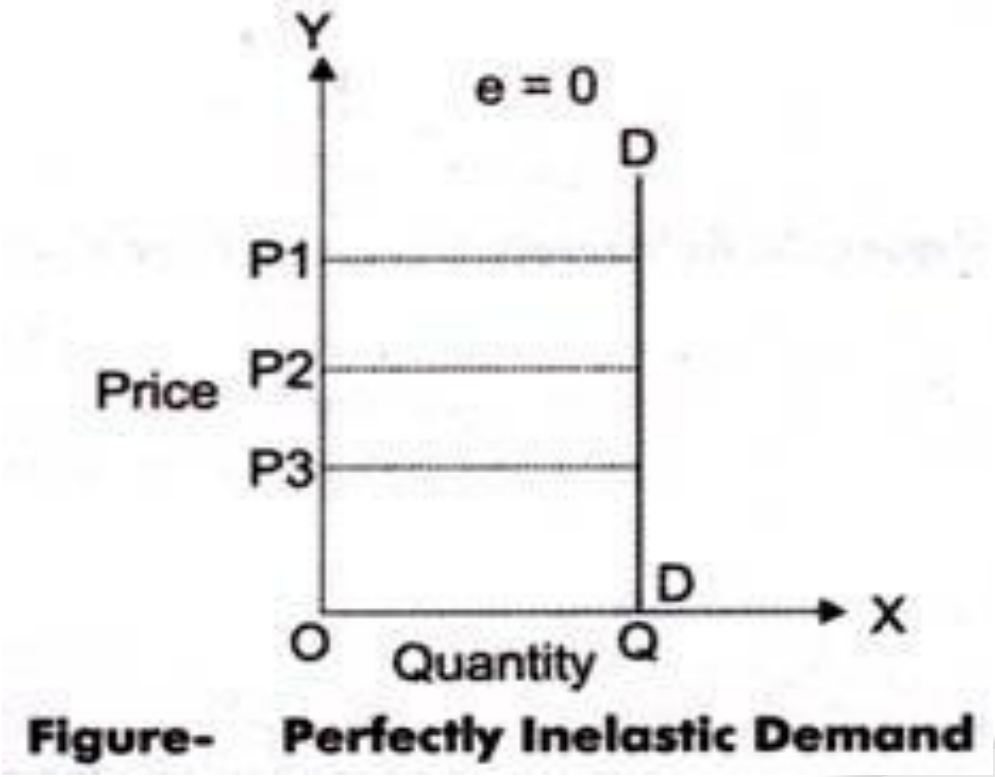


Figure- Perfectly Inelastic Demand

3. Unit elasticity of demand (e=1). Where a given proportionate change in price causes an equally proportionate change in quantity demanded (in this case the demanded curves takes the form a rectangular hyperbola).

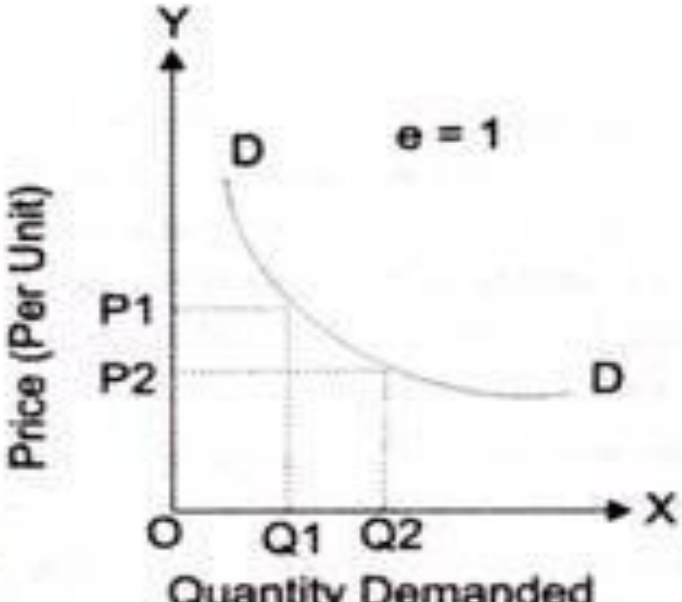


Figure- Unitary Elastic Demand

4. Relatively elastic Demand (e>1)

Where a change in price causes a more than proportionate change in quantity demanded.

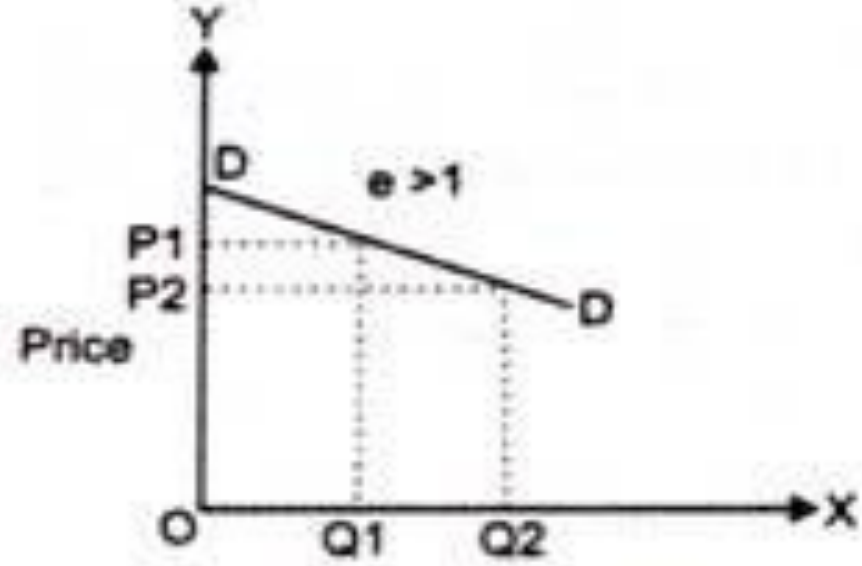


Figure- Relatively Elastic Demand

5. Relatively inelastic Demand (e<1) :

Where a change in price causes a less than proportionate change in quantity demanded.

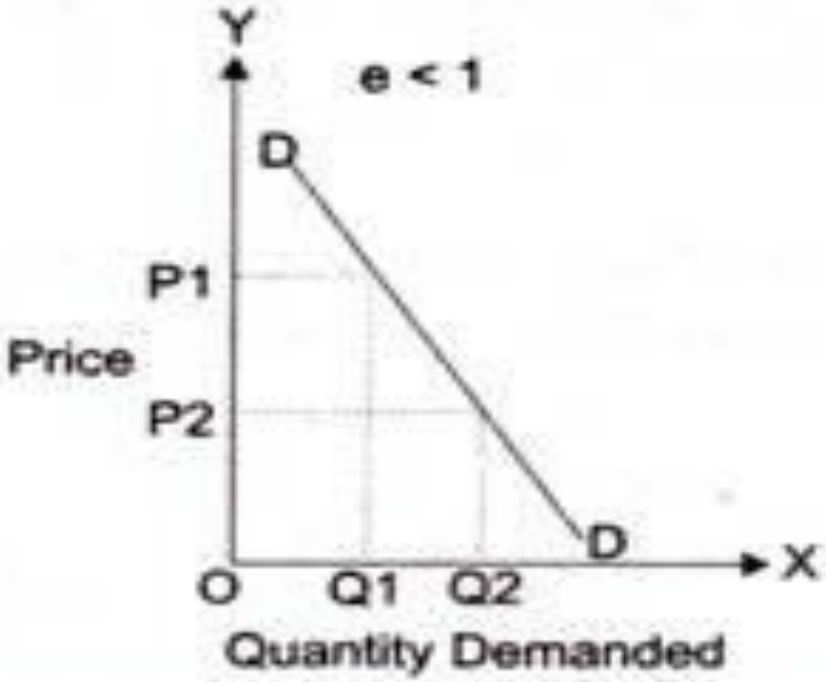


Figure-. Relatively Inelastic Demand

Income Elasticity of Demand

Income elasticity of demand for a commodity shows the extent to which a consumer's demand for the commodity changes as a result of a change in his income .like price elasticity of demand, the income elasticity of demand may be a defined as a ratio of percentage change in the quantity demand of a good, say x, to the percentage change income of the consumer .symbolically,

$$E_y = \frac{\text{Percentage change in the quantity demanded of good X}}{\text{Percentage change in income of the consumer}}$$

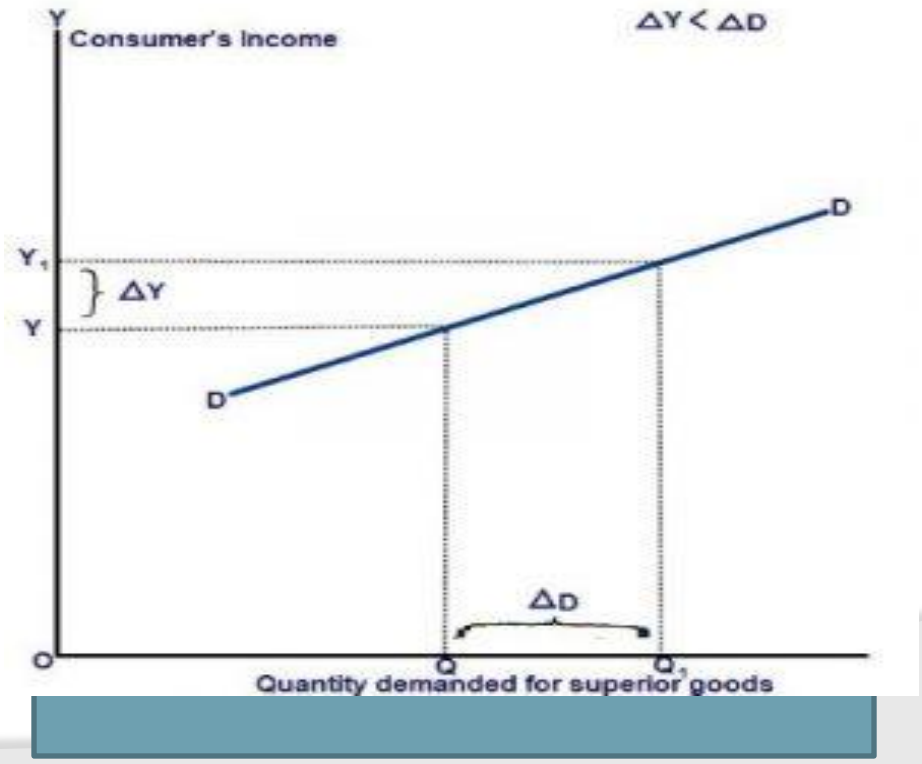
$$= \frac{\Delta q_x}{q_x} / \frac{\Delta Y}{Y}$$

Where q = quantity demand; and

Y = income level of consumer.

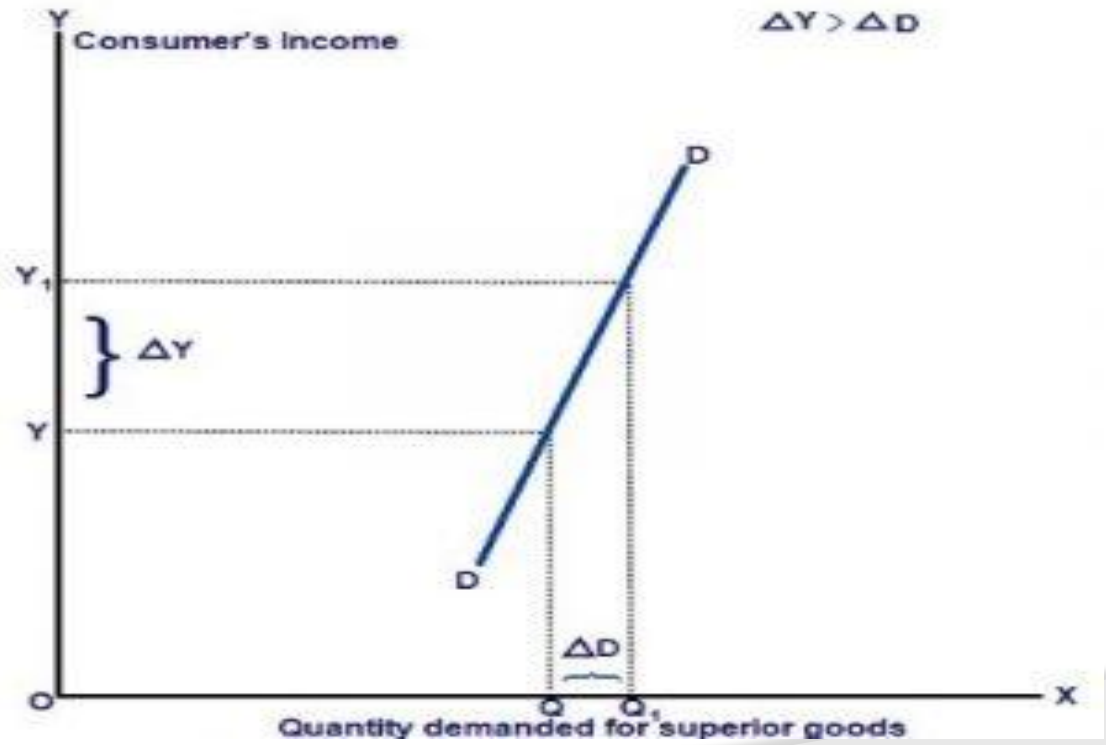
Types of Income Elasticity

High income elasticity: this is shown in figure. Here the values of the coefficient E is greater than unity, which implies that quantity demanded of good X increases by a larger percentage than the income of the consumer.



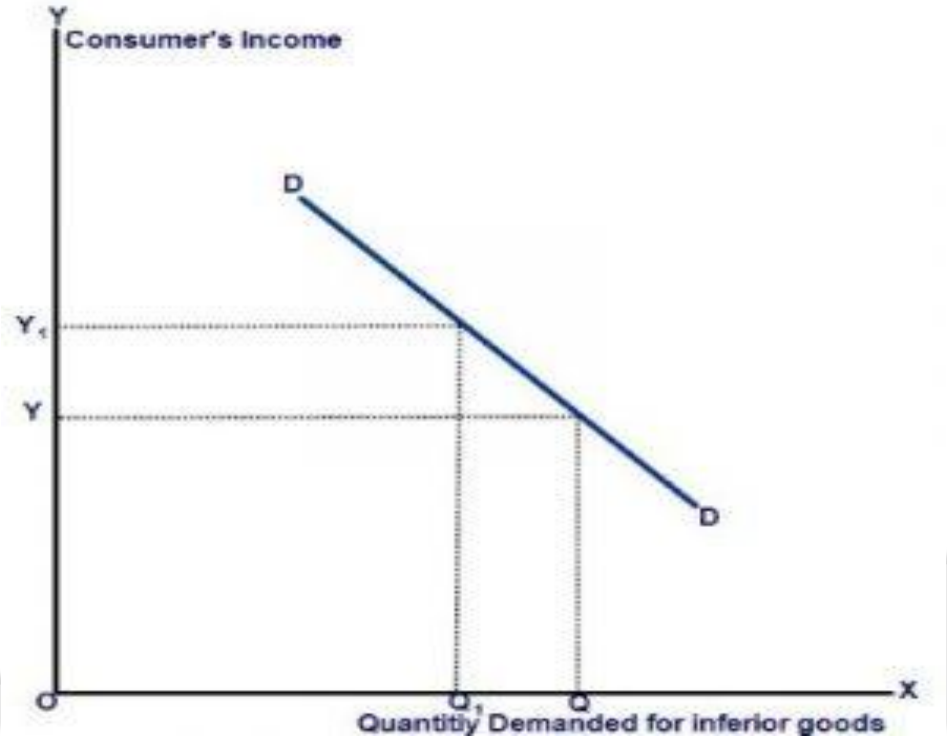
Unitary income elasticity: the figure shows an income-demand curve having this property. It indicates that the percentage change in quantity demand is equal to the percentage change in money income.

Low income elasticity: Income elasticity is elasticity is low if the relative change in quantity demanded is less than the relative change in money income is shown in figure.



Zero income elasticity: **Here, a change in income will have no effect on the quantity demanded, like in case of salt .so; the value of the coefficient is equal to zero .such a demand curve is shown in figure.**

Negative income elasticity: As pointed out above, inferior goods have negative income elasticity of demand. This is shown in figure it explains that less is bought at lower incomes. The value of the coefficient is less than zero or negative in this case.



Cross Elasticity Of Demand

Cross elasticity of demand is defined as the ratio of the percentage change in demand for one good to the percentage change in the price of some other related to good comes about. This change in the demand for one good due to a change in the price of some other good comes about because of the fact that the two goods may be either substitutes or complements to each other. Once we assume that two commodities x and y are related the expression of cross-elasticity of demand would be,

$$e_{XY} = \frac{\Delta qx}{qx} + \frac{\Delta py}{py} = \frac{\Delta qx}{\Delta py} \times \frac{py}{qx}$$

The same formula is used to find cross elasticity of demand, irrespective of they being substitutes or complements. Their differences are reflected in the sign of gross elasticity (e_{xy}).

Cross elasticity (e_{xy}) will have positive sign if two goods are substitutes.

Cross elasticity (e_{xy}) will have negative sign if two goods are complements. .

PROMOTIONAL (OR, ADVERTISING) ELASTICITY OF DEMAND:

Meaning: advertisement occupies an important place in a competitive or a partially competitive market economy. Its consists of visual and oral activities with an aim to create or expand for the product of the service.

"Advertising elasticity of demand measures the response of quantity demand to change in expenditure on advertising and other sales promotion activities."

The point formula for advertising elasticity of demand is:

$$\varepsilon_A = \frac{\Delta Q}{\Delta A} \cdot \frac{A}{Q}$$

Where q =quantity of good X soled, and A = units of advertising expenditure on good X.

Factors Governing Elasticity of Demand

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

a) Nature of the Product
b) Time Frame
c) Degree of postponement
d) Number of alternative uses
e) Tastes and preferences of the consumer
f) Availability of close substitutes
g) In case of complementary goods
h) Level of prices

Significance of Elasticity of Demand

A. Prices of factors of production
B. Price fixation
C. Government Policies
- Tax polices
- Raising bank deposits
- Public utilities
- Revaluation or devaluation of currencies
- Formulate government policy

D. Forecasting Demand
E. Planning the levels of output and price

Arc And Point Elasticity

POINT ELASTICITY: Point elasticity of demand relates to the elasticity at a particular point on the demand curve .The formula of elasticity of demand for point elasticity is already given as equation;

$$\varepsilon = \frac{\Delta Q}{\Delta Z} \cdot \frac{Z}{Q}$$

In ΔZ is taken as very small, $\Delta Q / \Delta Z$ approximates to the slope of the demand curve in the neighborhood of original z and q. In other words, when ΔZ approaches its limit of zero, then $\lim_{\Delta Z \to 0} \frac{\Delta Q}{\Delta Z}$ becomes, $\frac{dQ}{dZ}$. Thus

$$\varepsilon = \frac{dQ}{dZ} \cdot \frac{Z}{Q}$$

For example, for a demand function q=10 -3p, the elasticity for p=2 would be:

$$\varepsilon = \frac{dQ}{dP} \cdot \frac{P}{Q} = (-3)\frac{2}{4} = -1.5$$

In case the demand function contains a number of variables that affect demand, then the point elasticity for each of these demand determinants, z p can be found with the help of partial derivatives q/z.

Arc Elasticity

ARC ELASTICITY: If instead of measuring elasticity by taking z -> 0 (as we do in case of point elasticity) we measure it over larger segment of the demand curve, we get arc elasticity measure .The arc elasticity is the measure of the demand curve. In the figure the end points of the arc are (p1, q1) and (q2, q2).

Coordinates of the mid-point would, therefore, be $\left(\frac{P_1+P_2}{2}, \frac{Q_1+Q_2}{2}\right)$. The changes between the end points would be ΔP and ΔQ. The elasticity at the mid- point of the arc (i.e., arc elasticity) would be:

$$E = \frac{\Delta Q}{\left(\frac{Q_1+Q_2}{2}\right)} \div \frac{\Delta P}{\left(\frac{P_1+P_2}{2}\right)} = \frac{\Delta Q}{\Delta P} \cdot \frac{P_1+P_2}{Q_1+Q_2}$$

Techniques of Demand Forecasting

Subjective (qualitative) methods :

Rely on human judgment and opinion.

- **Buyers opinion**
- **Sales force Composite**
- **Market Stimulation**
- **Test marketing**
- **Expert's opinions**
- **Group Discussion**
- **Delphi Method**

Techniques of Demand Forecasting

Quantitative methods : use mathematical or simulation models based on historical demand or relationships between variables.

- Trend projection
- Smoothing technique
- Barometric Techniques
- Economic Techniques

Moving Average Method

This method considers that the average of past events determine the future events. In other words, this method provides consistent results when the past events are consistent and unaffected by wide changes.

BAROMETRIC TECHNIQUES : In this method 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.

In this method difficult to determine the time lag between the change in one variable and change in the forecast variable.

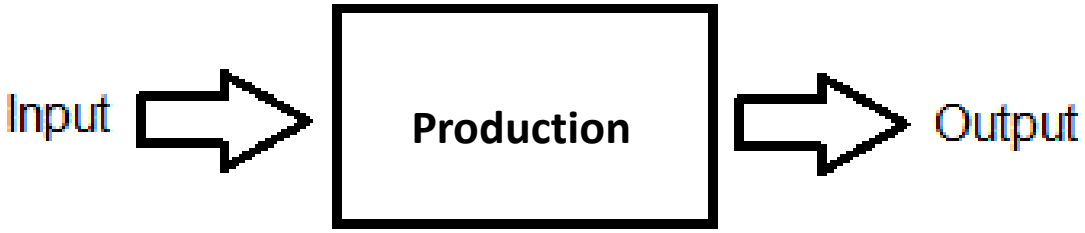
Ex: Number of scooters vs. Income level

PRODUCTION ANALYSIS

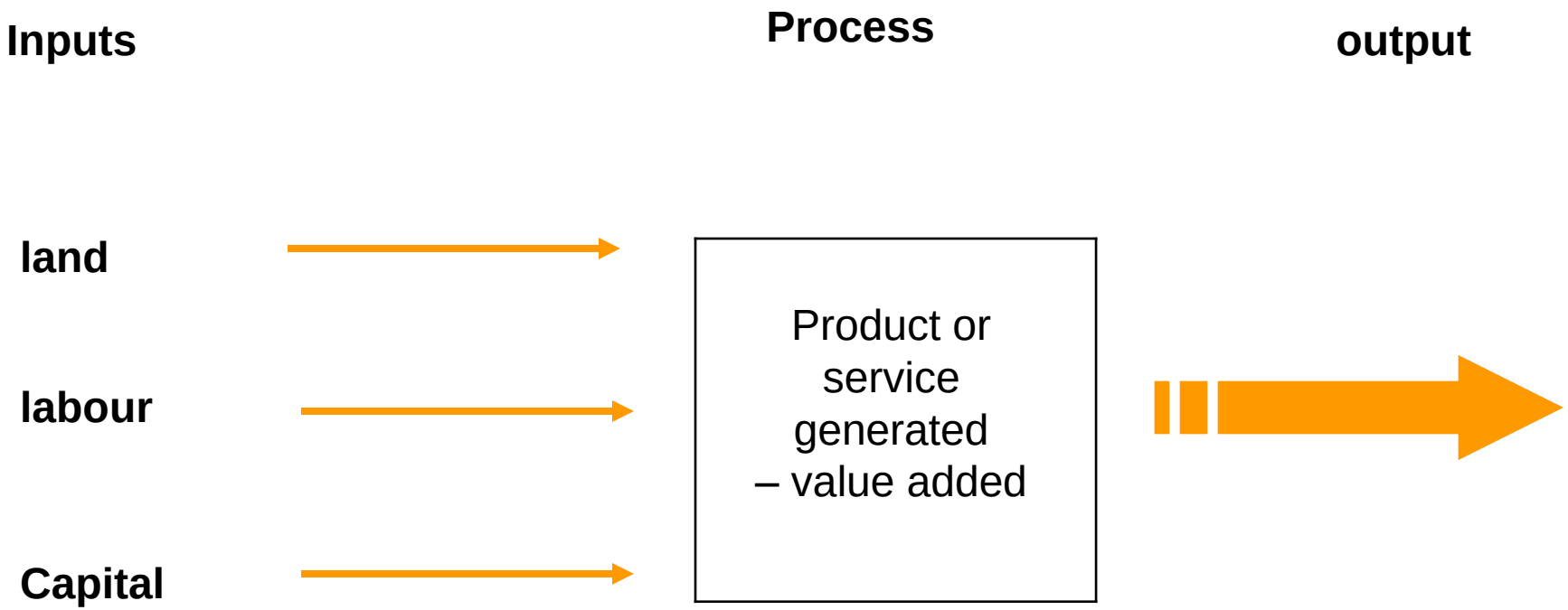
Theory Of Production Analysis

WHAT IS PRODUCTION

It's an activity that transforms input into output.



Production Function



Production Function

Mathematical representation
of the relationship:

$$Q = f(K, L, La)$$

Output (Q) is dependent upon the amount of capital (K), Land (L) and Labour (La) used

Uses of Production Function

- How to obtain Maximum output
- Helps the producers to determine whether employing variable inputs /costs are profitable
- Highly useful in longrun decisions
- Least cost combination of inputs and to produce an output

Types Of Production Function

Types

Short –Run
(Inputs kept constant
One input **(Labour**) is varied)

Long – Run
(Varying all inputs)

Law of variable proportion

Law of returns to scale

Production factor with one variable input

The Law of returns state that when at least one factor of production is fixed and when all other factors are varied, the output in the initial stage will increase at an increasing rate and after reaching certain level of output the total output will increase at declining stage

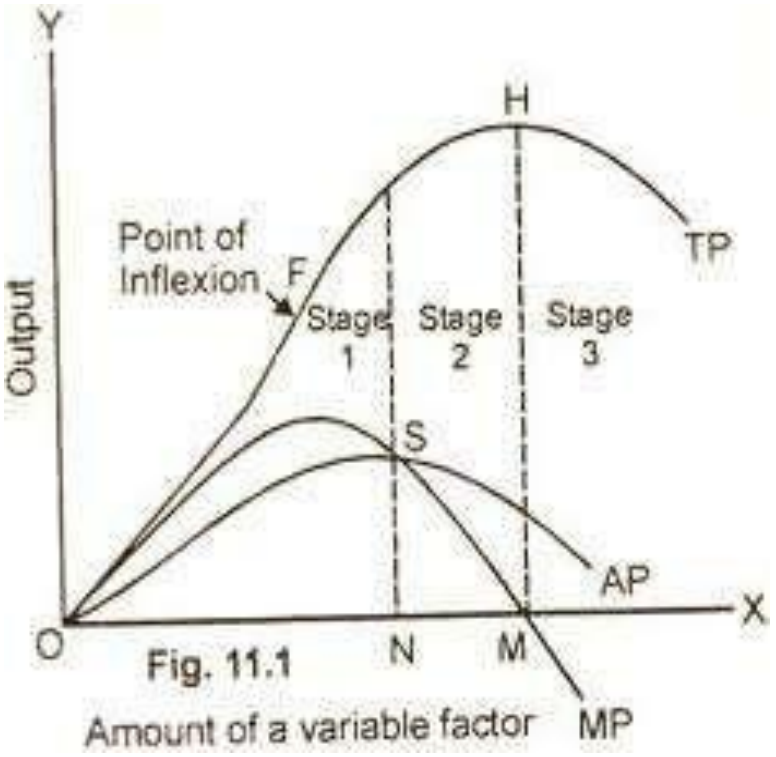


Fig. 11.1

Production function with two variable input

Normally both capital and labour are required to produce a product. To some extent, these two inputs can be substituted for each other . Hence the producer may choose any combination of labour and capital to give the required output

Isoquants

A isoquant is a firm's counterpart of the consumer's indifference curve. An isoquant is a curve that shows all the combinations of inputs that yield the same level of output. 'Iso' means equal and 'quant' means quantity.

Therefore, an isoquant represents a constant quantity of output.

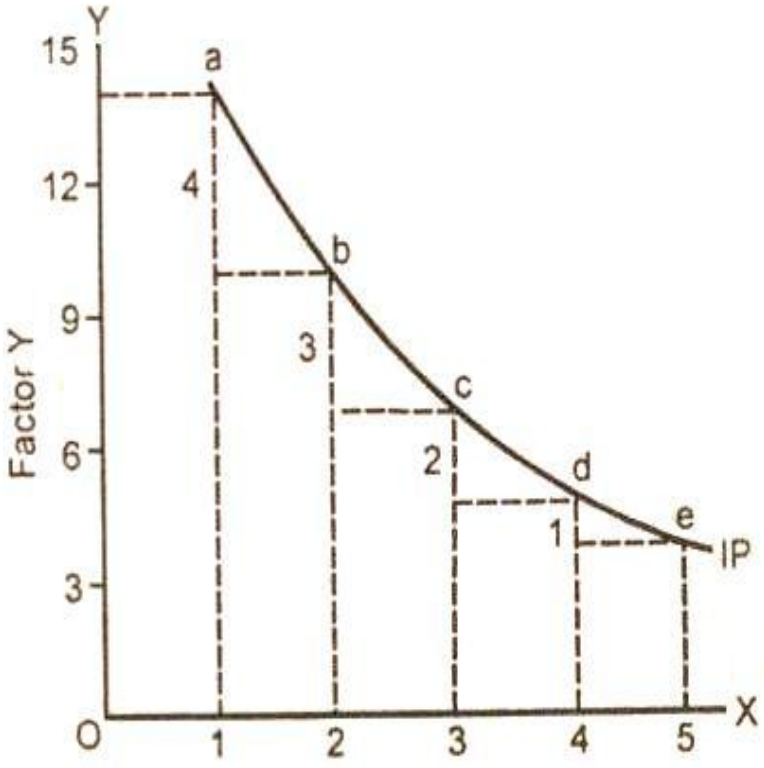


Fig. 12.1

Features of isoquant

1. Downward sloping
2. Convex to origin
3. Do not intersect
4. Do not touch axes

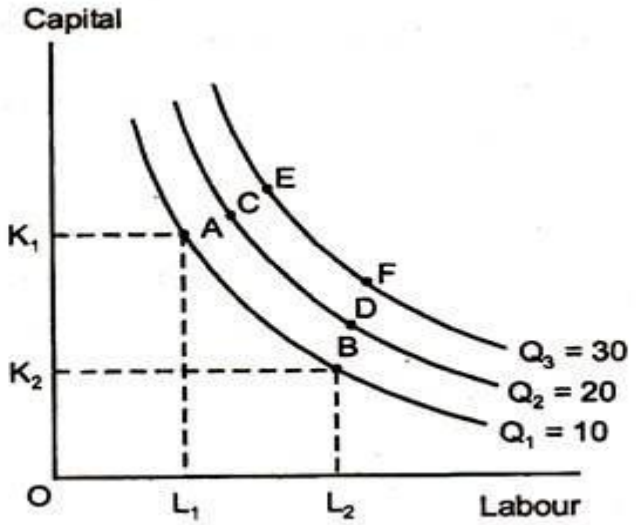


Fig. 6.3 : Isoquant Curve/Isoquant Map

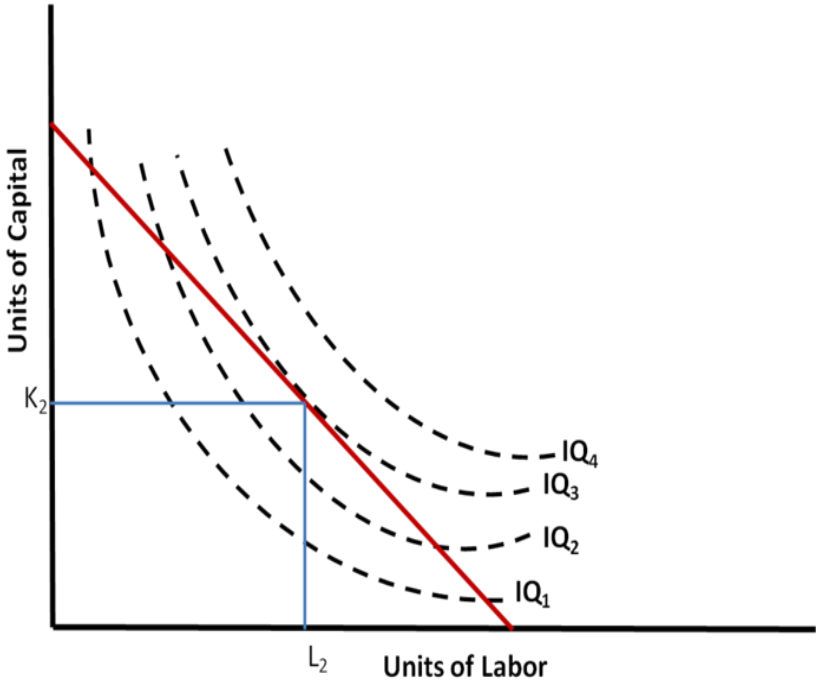
Marginal Rate Of Technical Substiitution

The MRTS refers to the rate at which one input factor is substituted with the other to attain a given level of output. in other words the lesser units of input must be compensated by increasing amount of other input to produce the same level of output

$$MRTS = \frac{\text{Change in one input, say, CAPITAL}}{\text{Change in another input, say LABOUR}}$$

Isocosts

In economics an isocost line shows all combinations of inputs which cost the same total amount. ... The slope is: The isocost line is combined with the isoquant map to determine the optimal production point at any given level of output.



Cobb Douglas Production Function

P=bLaC1-a

Where p= total output

L=the index of employment of labour in manufacturing

C= the index of fixed capital in manufacturing

The function estimated for the USA by Cobb Douglas is

$$p=1.01L0.75C0.25$$

The production Function shows that one percent change in labour input, capital remains the same, is associates with a 0.75 percentage change in out put, similarly one percent change in capital labour remaining same is associated with 0.25 percentage change in output

Returns to sale & returns to factors

Returns to scale refer to returns enjoyed by the firm as a result of change in all the inputs. It explain the behavior of the returns when the inputs are changed simultaneously

Law of returns to sale:

There are three laws of returns governing production function

Law of increasing Returns to scale

Law of constant Returns to scale

Law of Decreasing Returns to scale

Returns to Factor

Returns to Factor is also called factor productivities. Productivity is the ratio of output to inpute. Factor productivity refers to the short run relationship of input and output

Return to factor refer to the output or return generated as a result of change in one or more factors keeping the other factors unchanged

The Change in productivity can be measured in terms of
(a)Total Productivity
(b)Average productivity
(c) Marginal Productivity

Economies Of Scale

The economics of scale results because of increase in the scale of production

ALFRED MARSHEL divides the economics of scale into two groups

1. Internal
2. External

External Economies

External Economics Refers to all the firms in the industry as the industry expands

External economics can be grouped under three types

- Economies of concentration
- Economies of R&D
- Economies of welfare

Cost-output And Estimation

What is cost?

In producing a commodity a firm has to employ an aggregate of various factors of production such as land, labour, capital and entrepreneurship.

- These factors are to be compensated by the firm for their contribution in producing the commodity.
- This compensation (factor price) is the cost.

Definition of Cost

A cost is relevant if it is affected by a management decision.
– Historical cost is incurred at the time of procurement
– Replacement cost is necessary to replace inventory.

There are two types of cost associated with economic analysis:
– Opportunity cost is the value that is forgone in choosing one activity over the next best alternative
– Out-of-pocket cost is actual transfer of value that occur

Definition of Cost

There are two types of cost associated with time

– Incremental cost varies with the range of options available in the decision making process.

– Sunk cost does not vary with decision options.

Cost Concept & Types

OPPORTUNITY COST:

Opportunity cost of a product is value of the next best alternative forgone (that is not chosen).

It can also defined as the revenue forgone for not making the best alternative use.

The concept of opportunity cost is useful for manager in decision making

Economic Cost

This cost includes explicit and implicit cost both. In other words, economic cost includes both recorded and unrecorded cost.

Explicit Cost is the actual money expenditure on inputs or payments made to the outsiders for hiring the factor services.

Example – wages paid to employees, payment for raw materials etc.

Implicit Cost is the cost of self supplied factors . Example- Interest on own capital ,Rent of own land etc.

The sum of explicit cost and implicit cost is the total cost of production of a commodity.

Accounting Cost

- Accounting cost is the cost based upon accounting records in the book of accounts.
- They are recorded in the book of accounts when they are actually incurred . Its based on Accrual concept.
- Accounting costs are explicit cost and must be paid.

Incremental and Sunk Costs

Incremental costs are closely related to marginal costs, incremental costs refers to the total additional cost associated with the expand in output.

Sunk Costs are those which cannot be altered, increased or decreased by varying the rate of output.

Short Run and long run costs

Short run costs are costs that vary with variation in output. Short run costs are the same as variable costs

Long run costs are costs that are incurred on fixed assets like plant, machinery, etc

Total Cost

Total cost is the actual money spends to produce a particular quantity of output.

It is the summation of fixed and variable costs

TC = TFC+ TVC

- TFC(Total Fixed Cost):

Total fixed costs, i.e the cost of plant, building, equipment etc. remain fixed with a change in output.

- TVC(Total Variable Cost):

The total variable cost i.e the cost of labour, raw material etc varies with the variation in output.

Average Cost

Average cost is the total cost of producing per unit of commodity. It can be found out as follows
AC= AFC +AVC

AC= Total cost/no.of units produced

- AFC (Average fixed Cost)-

Fixed cost of producing per unit of the commodity.

AFC= total fixed cost / no. of units produced.

- AVC (Average Variable Cost)

Variable cost of producing per unit of the commodity.

AVC= total fixed cost / no. of units produced.

Marginal Cost

- Marginal cost is the additional to total cost when one more unit of output is produced .
- It can be arrived by dividing the change in total cost by the change in total output

Cost-output Relationship

Cost-output relationship has 2 aspects

- Cost-output relationship in the short run,
- Cost-output relationship in the long run

- The SHORT RUN is a period which doesn't permit alterations in the fixed equipment (machinery , building etc.) & in the size of the org.

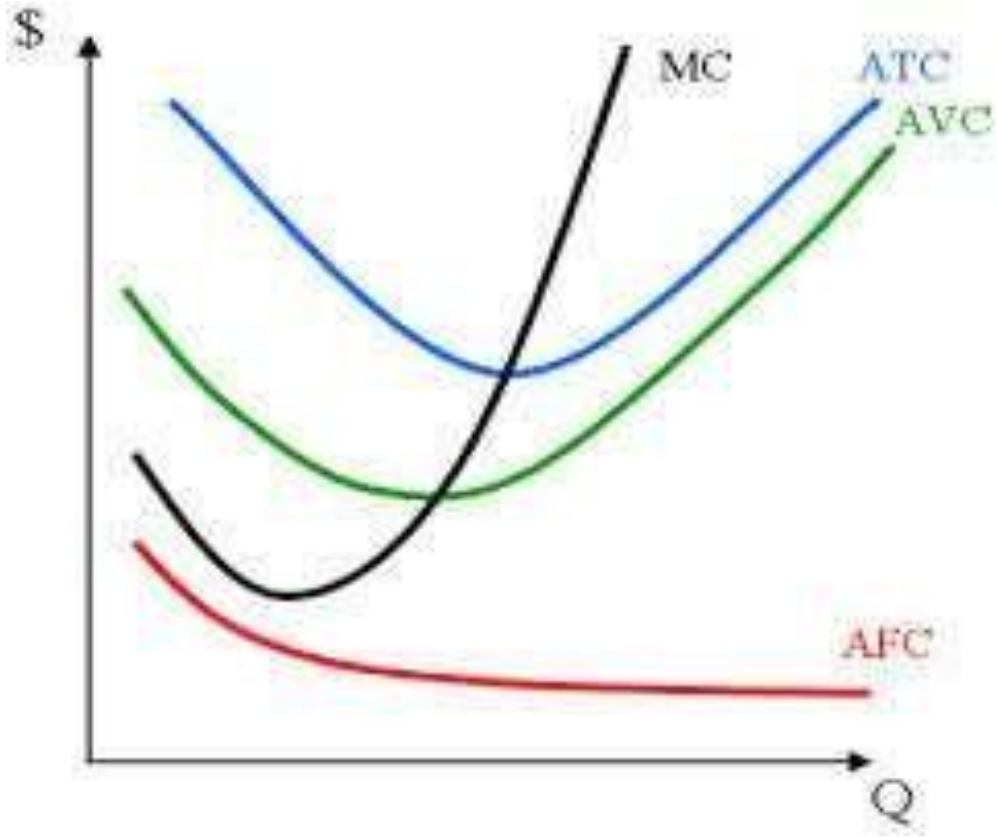
- The LONG RUN is a period in which there is sufficient time to alter the equipment (machinery, building, land etc.) & the size of the org. output can be increased without any limits being placed by the fixed factors of production

Short Run can be studied in terms of

Short Run may be studied in terms of

- Average Fixed Cost
- Average Variable Cost
- Average Total cost

Behaviour Of Cost In The Short- Run



Total, average & marginal cost

- Total, average & marginal cost

TC) = TFC + TVC, rise as output rises

1.Total cost (TC) = TFC +TVC, rise as output rises
2.Average cost (AC) = TC/output
3. Marginal cost (MC) = change in TC as a result of changing output by one unit

Fixed cost & variable cost

Total fixed cost (TFC) = cost of using fixed factors = cost that does not change when output is changed,

Total variable cost (TVC) = cost of using variable factors = cost that changes w

Average Fixed Cost and Output

The greater the output, the lower the fixed cost per unit, i.e. the average fixed cost.

Total fixed costs remain the same & do not change with a change in output.

MARKET STRUCTURE & PRICING PRACTICES

Market Structure

- Market: A regular gathering of people for the purchase and sale of provisions, livestock, and other commodities.

- Market structure: It is the interconnected characteristics of a market, such as the number and relative strength of buyers and sellers, degree of freedom in determining the price, level and forms of competition, extent of product differentiation and ease of entry into and exit from the market

Types Of Market Structure

Perfect Competition

1. All firms sell an identical product.
2. All firms are price takers.
3. All firms have a relatively small market share.
4. Buyers know the nature of the product being sold and the prices charged by each firm.
5. The industry is characterized by freedom of entry and exit.

   It is also referred as “PURE COMPETITION”.

Perfect Competition

1. Large no. of sellers
2. Large no. of buyer
3. Homogeneous products
4. Free entry and exit
5. Perfect knowledge
6. Perfect mobility of factors of production
7. Seller is the price-taker

Perfect Competition

- **Potatoes**

- Potatoes are sold in markets where all vendors sell homogenous products at homogeneous prices.

•Example- Potato is sold at markets etc. where all vendors sell homogenous products, i.e. potato.

Monopoly

- A Monopoly is a market structure in which there is only one producer/seller for a product. In other words, the single business *is* the industry.
- Entry into such a market is restricted due to high costs or other impediments, which may be economic, social or political.

Monopolistic Competition

- Monopolistic competition is a type of imperfect competition such that one or two producers sell products that are differentiated from one another as goods but not perfect substitutes .

  (such as from branding, quality, or location).
- In monopolistic competition, a firm takes the prices charged by its rivals as given and ignores the impact of its own prices on the prices of other firms.
- Consumers may like some special thing in the particular brand.

Monopolistic Competition

Duopoly

- A situation in which two companies own all or nearly all of the market for a given product or service.

- It is a specific type of oligopoly where only two producers exist in one market.

- In reality, this definition is generally used where only two firms have dominant control over a market.

- In the field of industrial organization, it is the most commonly studied form of oligopoly due to its simplicity.

Oligopoly

- It is a situation in which a particular market is controlled by a small group of firms.
- An oligopoly is a market form in which a market or industry is dominated by a small number of sellers (oligopolists). Because there are few sellers, each oligopolist is likely to be aware of the actions of the others.
- The decisions of one firm influence, and are influenced by, the decisions of other firms.

Price & Output Determination

Perfect Competition for Short run

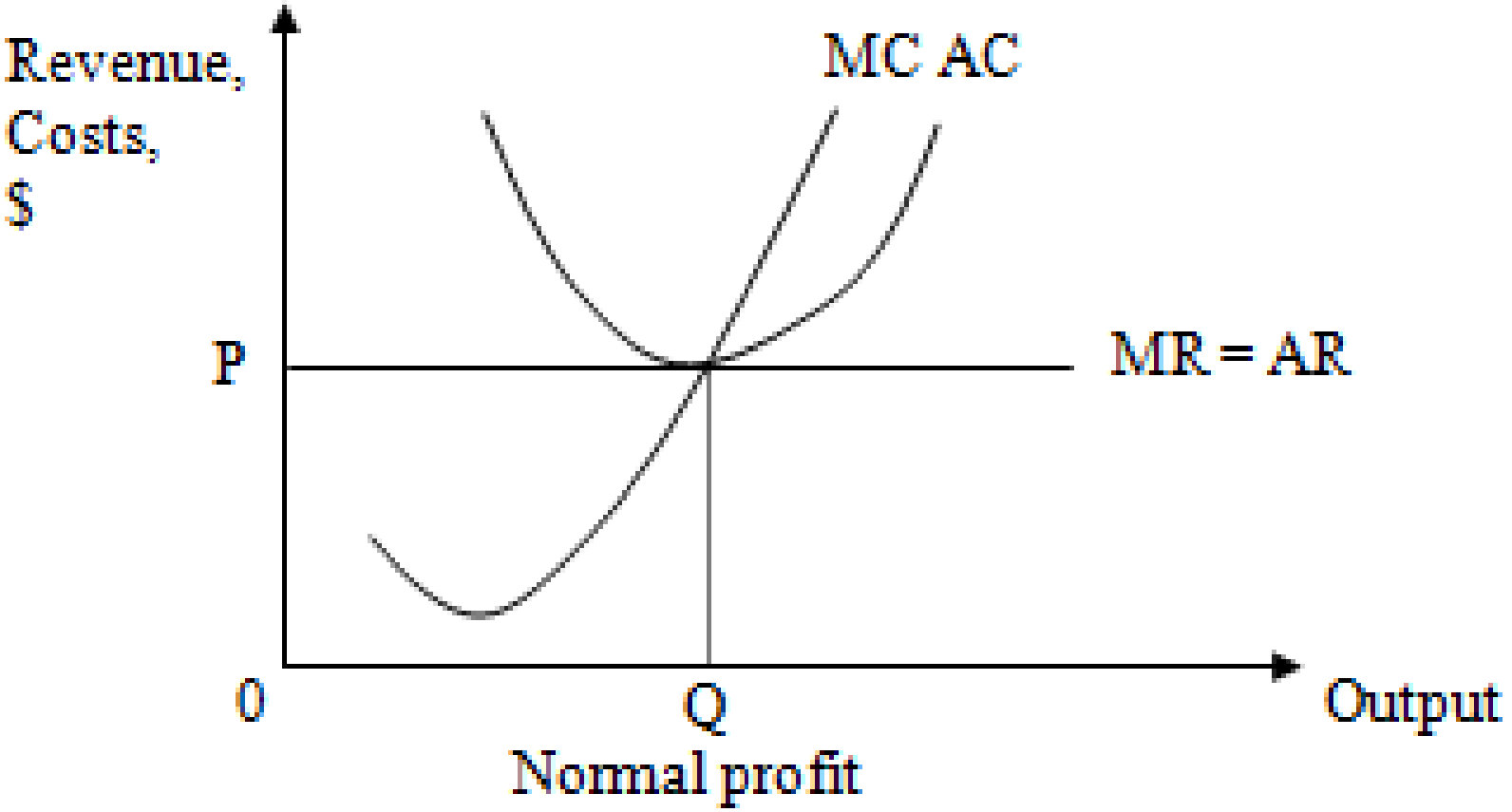
- Under perfect competition Price determined by the market
- In short run one can make any changes in variable factors but it does not allow any change in fixed factors.
- Every firm under perfect competition produces same cost curve.
- Under perfect competition for short run always the demand curve and average revenue curve will be one and a same.

Perfect Competition For Short Run

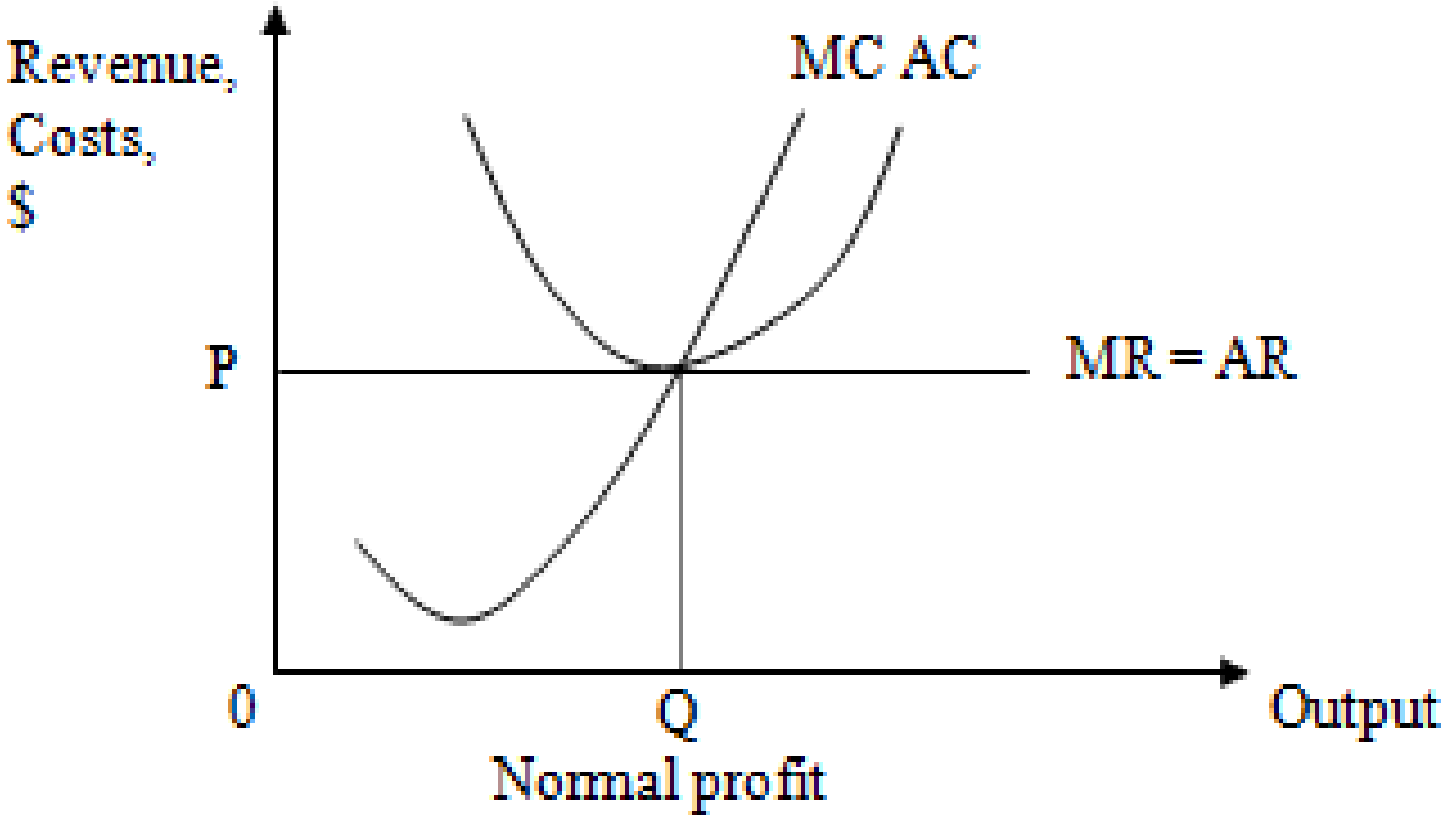
- Firm sales additional units at the same price so that average revenue curve and marginal revenue curve will be one and a same.
- Avg. cost curve and Marginal cost curve as usual found normally as “U” shaped.
- In short run there are three possibilities as below to earn profit:Super Normal Profit,Normal Profit,Sub Normal Profit
- After attaining the equilibrium the firm will not increase or decrease its output.

Equilibrium = MR = MC

Perfect Competition For Short Run



Perfect Competition For Long Run



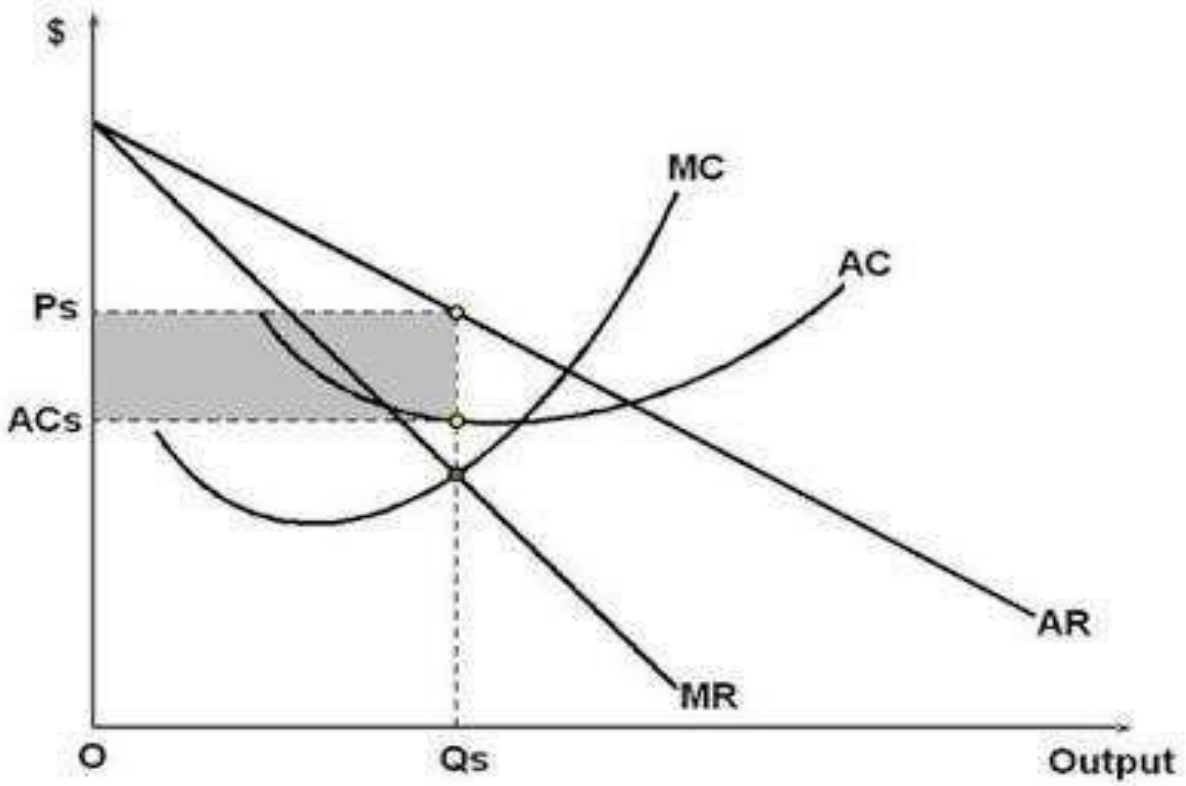
Price Determination Under Monopoly For Short Run

Short run period allows change in variable factors only. In Monopoly the firm will achieve its equilibrium . where MR = MC

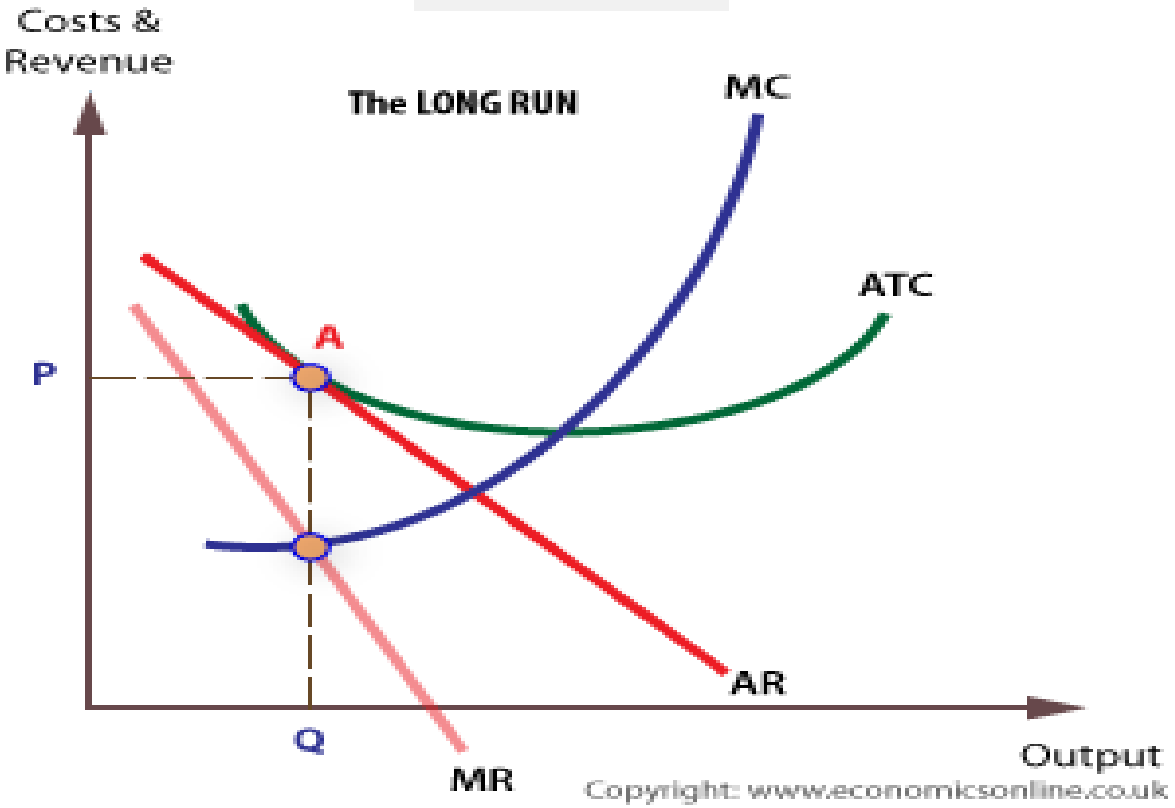
In short run there are three possibilities as below to earn profit:

- Super Normal Profit
- Normal Profit
- Sub Normal Profit

Price Determination Under Monopoly For Short-Run

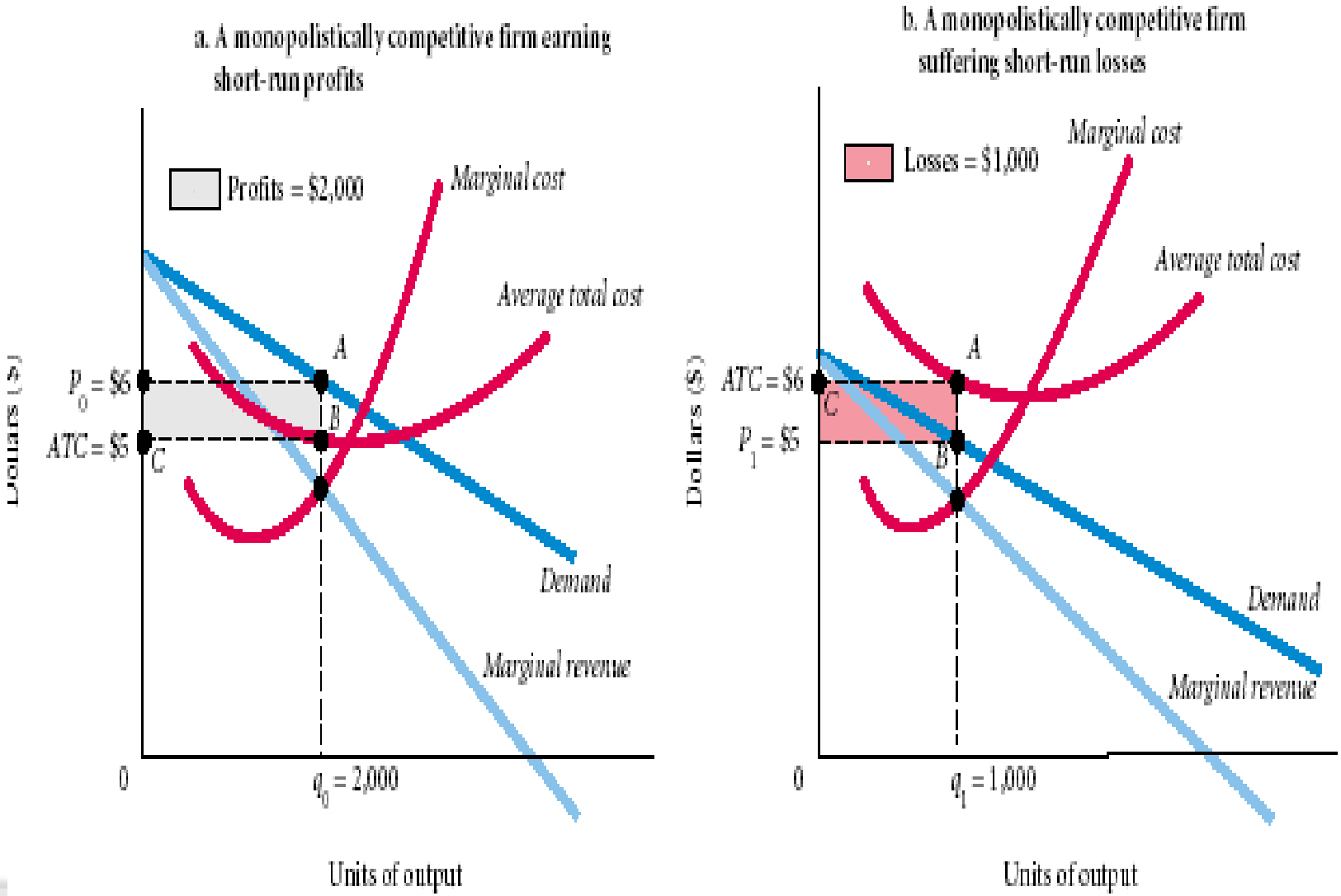


Price Determination Under Monopoly For Long Run



Price Determination Under Monopolistic For Short Run

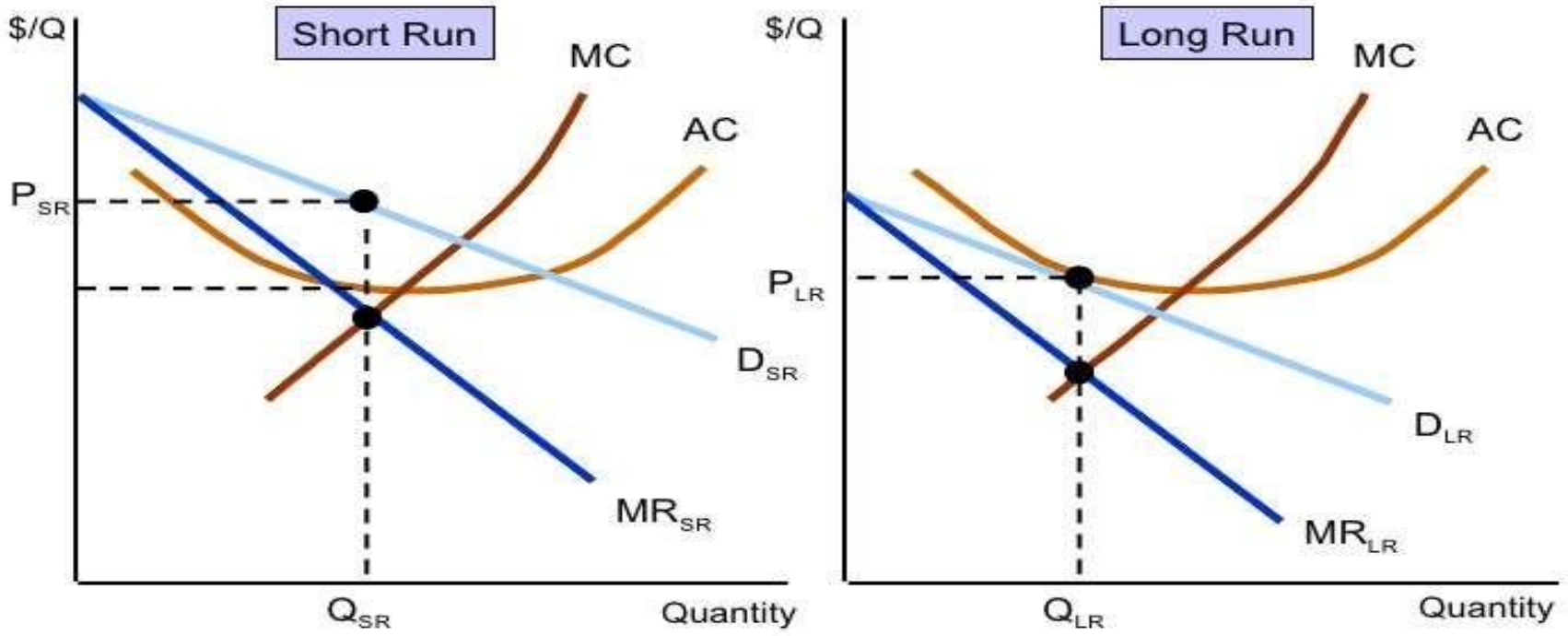
- Long run is that period which allows the firm to change the factors of production that is fixed and variable.
- If the existing firms are earning super normal profit then there will be new entry in the market this will be resuled in the firm will only earn Normal profit.
- But compared to supply demand not increased so that the firm will start selling at a lower price.
- Same would be done by the other firms to maintain their sales. Thus, price will increase and super normal profit will disappear.


a. A monopolistically competitive firm earning short-run profits
Profits = $2,000
Marginal cost
Average total cost
A
P_0 = $6
B
ATC = $5
C
Demand
Marginal revenue
0
q_0 = 2,000
Units of output
Dollars ($)
b. A monopolistically competitive firm suffering short-run losses
Losses = $1,000
Marginal cost
Average total cost
A
ATC = $6
C
P_1 = $5
B
Demand
Marginal revenue
0
q_1 = 1,000
Units of output
Dollars ($)

Price Determination Under Monopolistic For Long Run

- Long run is that period which allows the firm to change ll the factors of production that is fixed and variable.
- If the existing firms are earning super normal profit then there will be new entry in the market this will be resuled in the firm will only earn Normal profit.
- Thus, total supply of the group will increase.
- But compared to supply demand not increased so that the firm will start selling at a lower price.

A Monopolistically Competitive Firm in the Short and Long Run



Pricing Philosophy

The term "business organization" refers to how a business is structured.

It refers to a commercial or industrial enterprise and the people who constitute it.

Types Of Business Organisations

- Sole Proprietorship
- Joint Hindu Family Business
- Partnership Firm
- Joint Stock Company
- 1.) Private Limited

  2.) Public Limited
- Co-operative Society

Sole Proprietership

When the ownership and management of a business are in control of one individual the form of business is called sole proprietorship.

Sole Proprietership

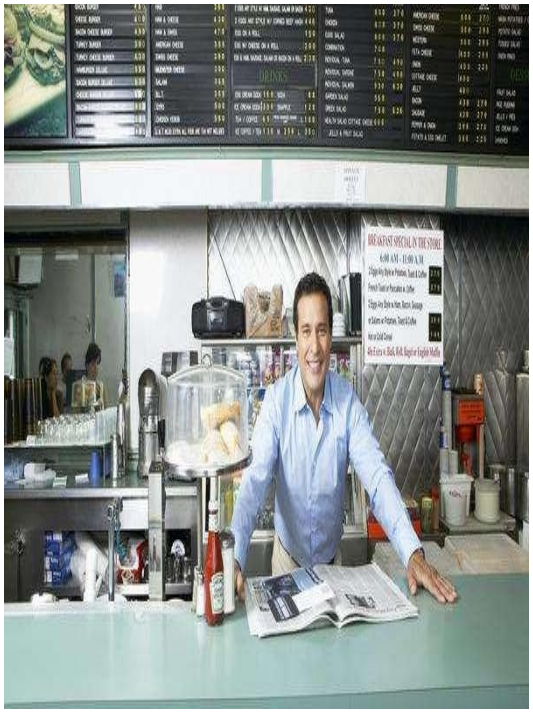
Characteristics:

- The business enterprise is owned by one single individual (i.e. both profit and risk belong to him)
- Owner is the Manager
- Owner is the only source of Capital
- The proprietor and business enterprise are same in the eyes of the law.

Advantages Of Sole Propreitorship

- Easy formation
- Better Control

  (Prompt decisionmaking and Flexibility in Operations)
- Subject to fewer regulations
- Not subject to corporate income tax
- Ownership of all profits



Disadvantages Of Solo Ropreitorship

- Owner has unlimited liability
- Difficult to raise capital
- Business has a limited life
- Difficult to do business beyond a certain size

Partnership Firm

A Partnership consists of two or more individuals in business together

Advantages Of Partnership

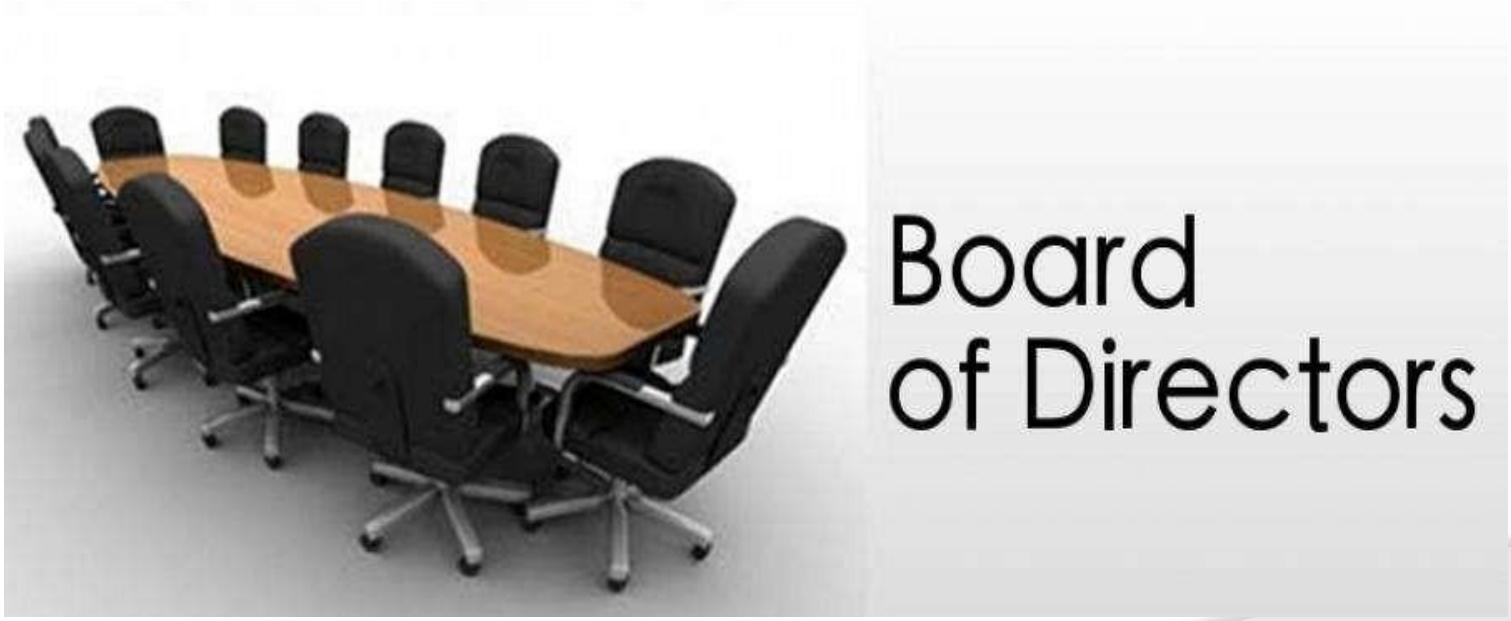
- Easy Formation
- Larger Resources
- Sharing Of Risk
- Better Management and Flexibility of Operation
- No corporate income tax
- Subject to fewer regulations as compared to companies

Disadvantages Of Partnerships

- Unlimited Liability
- Limited Life
- Difficult to raise capital
- Chances of Dispute

Joint Stock Company

A joint stock company is a voluntary association of people who contribute money to carry on business

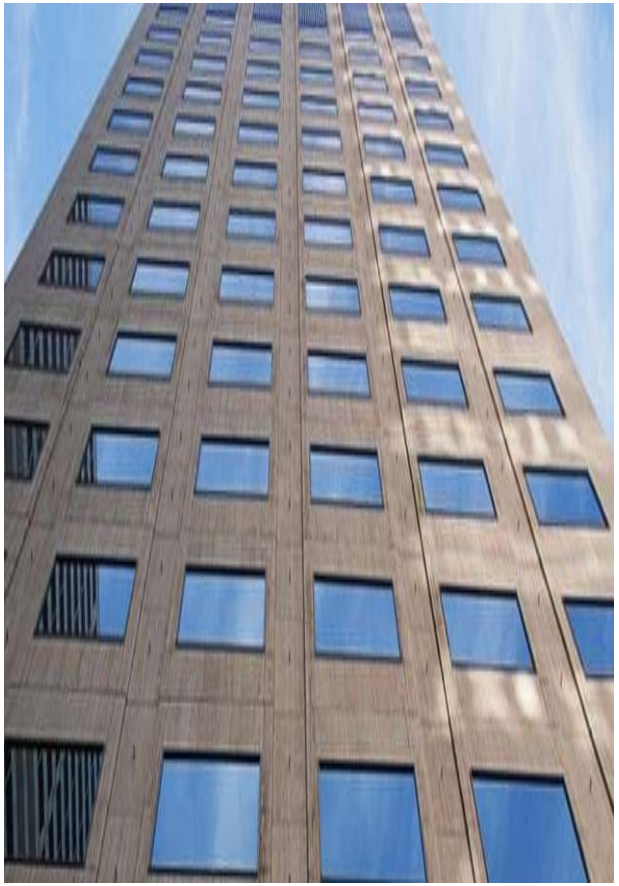


Characteristics Of A Corporation

- It is considered as a separate legal entity
- It comes into formation after all formalities under the Indian Companies Act 1956 are completed
- Management and ownership is completely separate
- Capital is raised through shares which are transferable

Advantages Of A Corporation

- Limited liability of the shareholders & promoter
- Can easily raise capital
- Have unlimited life
- Ease of transfer of ownership



Disadvantages Of A Corporation

- Formation is not easy
- Excessive Government Regulation
- Subject to Corporate Tax and Dividend Tax (Double Taxation)
- Delay in Policy Decisions
- Control by a Group

Two Types Of Corporations

1private Company:

- Closely held by a few people
- Minimum 2 and maximum 50 shareholders
- Stocks cannot be traded on exchanges and private equity cannot be raised
- Less regulations as compared to Public Companies

2. Public Company

- Stocks are held by a large number of people
- Minimum 7 shareholders and no limit for maximum
- Can be listed on stock exchange and can go public
- Have to follow many laws with regards to the board composition and AGM.

Co-operative Society

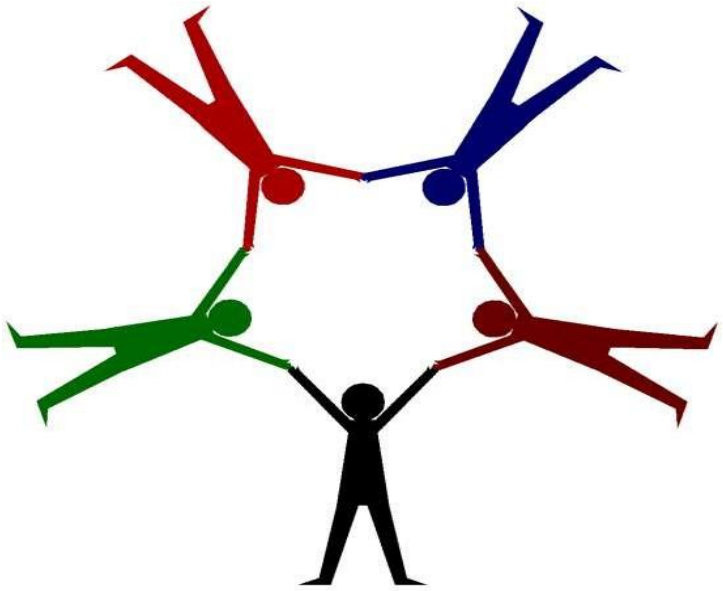
It is a voluntary association of people or business to achieve a an economic goal with a social perspective

Advantages Of Co-operative

- Easy Formation
- Limited Liability
- Stability
- Democratic Management
- State Assistance

Disadvantages Of a Cooperative

- Possibility of conflict
- Long decision making process
- Not enough capital




Thank you