

STUDY MATERIAL

**DEPARTMENT OF COMMERCE
H.H THE RAJAHS COLLEGE(AUTO)
PUDUKKOTTAI
B. COM I SEMESTER
SUBJECT: BUISNESS ECONOMICS
SUBJECT CODE: 18UCOA1**

SEMESTER – I
AC-I BUSINESS ECONOMICS
SUB.CODE:18UCOA1

Objective: The basic objective of this course is to familiarise the students with the concepts and tools of business economics as applicable to decisions making in contemporary business environment.

Unit – I

Introduction: Definition, Nature and Scope of Economics – Tools of Economic Analysis – Micro and Macro Economics – Decision making in Business – Meaning of Business Economics- The Economic System – Objectives of the Business Firm.

Unit – II

Demand Analysis: Types of Demand – Law of Demand – Utility Analysis of Demand – Elasticity of Demand and Demand Forecasting – Production function and law of returns: Factors of production – Law of variable proportions – The law of returns to scale – Economies of scale.

Unit – III

Analysis of Supply: Law of Supply: Production and supply – supply schedule and supply curve – Determinants of supply – Measurement of Elasticity of supply – Types of supply curves.

Unit – IV

Competitions and Theories of Factors of Production: Perfect Competition – Imperfect Competition – Theories of Rent, Wages, Interest and Population

Unit – V

Cost and Revenue: Concepts of Cost – Cost of Production in short and long period – Demand and revenue curves – Relation between average and marginal revenue – Break Even Analysis.

Text Books

1. Business Economics by **M.C.Seth.**
2. Business Economics by **Sankaran**

Reference Books

1. Business Economics by **K.P.M. Sundaram**
2. Business Economics by **A.K.Sharma**

Websites and e-learning sources

1. www.ddegjust.ac.in/bba/bba-103
2. www.icsi.in/businesseconomics
3. www.unishivaji.ac.in/disedu/home

Learning Outcomes

Upon successful completion of the course a student will be able to

1. Understand how demand and supply interact in various market structures to determine the price and quantity of goods produced.
2. Understand the links between household behaviour and the economic models of demand.
3. Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve.
4. Understand the links between production costs and the economic models of supply.

UNIT- I

Business Economics

Definition of Business Economics

In the words of E.F. Brigham and J.Pappas “business economics is the application of economic theory and methodology to business administration practice.”

According to Joel Dean “ The purpose of Managerial Economics is to show how economic analysis can be used in formulating business policies”

Nature of Business Economics

1. Micro in nature
2. Rational approach
3. Prescriptive applicable in business
4. Combination of positive and normative
5. Quantitative dimension

Objectives of business economics

- a. To plan select and utilize available resources
- b. To improve the organization viability
- c. To forecast risk and uncertainty
- d. Integration of theory and practice
- e. Realistic target
- f. Policy making
- g. Economizing of resources
- h. Good return

Importance of business economics

- Suitable tool kit from economics
- Knowledge from other disciplines
- Decision in complicated environment
- Competent model builder
- Coordination of functional area

- Social and economic welfare goals

Scope of Business Economics

1. Demand analysis and forecasting
2. Cost and production analysis
3. Pricing decisions
4. Profit management
5. Capital management

Role and Responsibilities of Business Economist

- Deciding the forward planning
- Business environment
- Business operations
- Properly implementing government regulations
- Study about the economy
- Inflation and business sales
- Competitive environment
- Demand forecasting
- Conducting market research
- Investment decisions
- Economic and statistical information

Decision making

Business Economics involves decision making and forward planning. In order to realize the objectives of the firm, the economics principles are applied to business practice.

Economic Decisions of a firm

- a) Selection of product
- b) Selection of method of production
- c) Product line decision determination of price and quantity
- d) Right marketing mix strategy
- e) Optimum input combination allocation of resources
- f) Replacement decision \make or buy decision
- g) Shut down decision

- h) Decision on international trade
- i) Location decision
- j) Capital budgeting
- k) Forward planning

Economics

Economics is the study that deals with allocation of resources, the choices that are made by economic agents.

An economy is a system which attempts to solve the basic economic problem. That includes

- What to produce, in what quantities?
- How to produce. Whether in conservation methods or modern methods?
- When to produce. Whether in short run or long run and
- For whom to produce? Whether for more poor or less rich?

Branches of Economics

- Macro economics
- Micro economics

Macro economics

Macroeconomics is the study of the economic system as a whole. It is that branch of economics which is concerned with the decision making of a single unit of an economic system

Determinations of Macro economics

- ✓ National income
- ✓ Savings
- ✓ Investment
- ✓ Employment
- ✓ Tax collection
- ✓ Government expenditure
- ✓ Foreign trade
- ✓ Money supply

Micro economics

Micro economics is that branch of economics which is concerned with the decision making of a single unit of an economic system.

If focuses on the behavior of the individuals. Firms and their interaction in markets

Micro economics deals

- Decisions making of individual economic agents such as the producer, the consumer
- It considers small components of the whole economy
- It operates with the process of price determination in case of individual products
- It is known as price theory
- It considers optimize goals individual consumers and producers
- It studies the flow of economic resources
- It helps using formulating appropriate policies
- It takes into account the aggregates over homogenous products

Economic Systems

1. Capitalism
2. Socialism
3. Mixed economy

Capitalism

Capitalism is an economic order in which the resources are owned by a few rich and private people, and production will be done for profit.

Socialism

In a socialistic, system, the resources are owned by the state. The production and distribution of goods will be done for the welfare of the people and not for the profit of the individuals.

Mixed economy

Mixed economy is a compromise between capitalism and socialism. This system takes the best of the two systems and rejects the bad ones.

Capitalism has some merits and defects. Socialism has some merits and defects. If the merits of the two systems are combined by a judicious policy.

OBJECTIVES OF BUSINESS

Profit is the primary objective of any business organization it is an ultimate test by which an organization performance.

The basic objectives of modern business are

- Profit maximization
- To recognize human values is an organization
- To treat human resources as responsible human beings.
- To increase morale of the employers
- To ensure job satisfaction among employees through sound financial and non financial motivation
- To recognize public and social responsibilities in business
- To contribute towards public welfare and public satisfaction

UNIT – II

Meaning of Demand

In economics, demand is “the quantity of goods and services that will be bought for a given price over a period of time”.

Definition of Demand

Demand is defined as “a desire for a commodity backed by willingness and ability to pay price”

Need for studying demand Analysis

- To identify and analysis factors influencing demand
- To study the concept of electricity of demand
- To forecast future demand
- For manipulating demand
- For effective allocation of resources
- To identify the competitive adversely and position of the firm in the market.

Factors influencing individual demand

- Price of the commodity
- Individuals income
- Relative price of substitute and complementary products
- Taste and habits of the consumers

- Expectations of consumers

Factors influencing market demand

- Price of the product
- Income and wealth distribution
- Shift in consumers preference habit
- Government policy
- Spending habits and standards of living of the consumer
- Age structure of the people
- Change in fashions and culture
- Social and regional customs and traditions
- Influence of media

Types of demand from Economics perspective

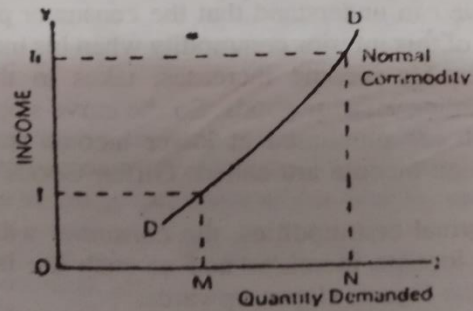
- a. Price demand
- b. Income demand
- c. Cross demand

Income demand expresses the relationship between income and the quantity demanded. The Income Demand schedule shows consumer's income in one column and the corresponding quantities of the commodity demanded in the other column. On the basis of the income demand schedule, income demand curve can be drawn.

Given in figure 7.2 is an income demand curve for a normal commodity:

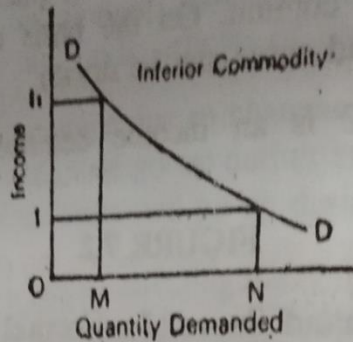
FIGURE 7.2

Income Demand Curve of a Normal Commodity



From the shape of the curve, we can understand that Income Demand curve is different from Price Demand curve; the latter slopes downwards from left to right whereas the former slopes upwards to the right. What

FIGURE 7.3
Income Demand Curve of an Inferior Commodity



From the curve we can understand that the consumer purchases lesser and lesser quantities of this inferior commodity when his income increases. The consumer, when his income increases, takes to the purchase of superior goods discarding inferior goods. So the curve slopes downwards. Inferior goods which are purchased at lower income and purchased in small quantities at high income are called 'Giffen Goods'.

In the case of normal commodities, the consumer will demand more and more when his income increases and as such the Income Demand Curve as shown in the figure, slopes upwards.

3. *Cross Demand*: Cross demand refers to the quantities of a commodity or service which will be purchased with reference to changes, not of that particular commodity, but of other inter-related commodities, other things remaining the same. It may be defined as the quantities of goods that consumers buy per unit of time at different prices of a 'related' article. The assumption is that the income of the consumer and also the price of the commodity in question will remain constant. For example, if there is a rise in price of coffee, people will demand tea and consequently the demand for tea will increase, though the price of tea remains constant and the income of the consumers remains constant. The price effect in one commodity will have a reaction on the other related commodities. The correlation between the demand of one commodity and the price of another commodity may be positive or negative depending on the relationship between the two commodities. Two related commodities may be substitutes (rivalry) or complementary goods (friendship). If they are substitutes, the increase in demand for one will decrease the demand for the other. If they are complementary goods, the increase in demand for one commodity will also result in an increase in demand for the other.

whenever the quantity demanded of tea is given on X axis. Y axis represents the price of coffee which is a substitute for tea. When the price of coffee increases, consumers will not demand coffee or the demand for coffee becomes less due to the operation of the law of demand. But the consumers will go in for 'tea' in the place of 'coffee'. The price of tea is assumed to be constant. So, whenever there is an increase in price of one commodity, the demand for the substitute commodity will increase.

In the case of complementary goods, as is shown in the figure, the price demand will have a reaction on the other commodity which is closely related or complementary. For instance, an increase in demand for pen will necessarily increase the demand for ink; so also bread and butter,

Cross Demand Curve of two Commodities which are SUBSTITUTES

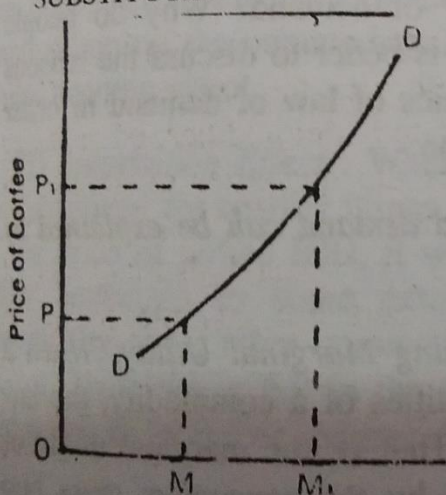
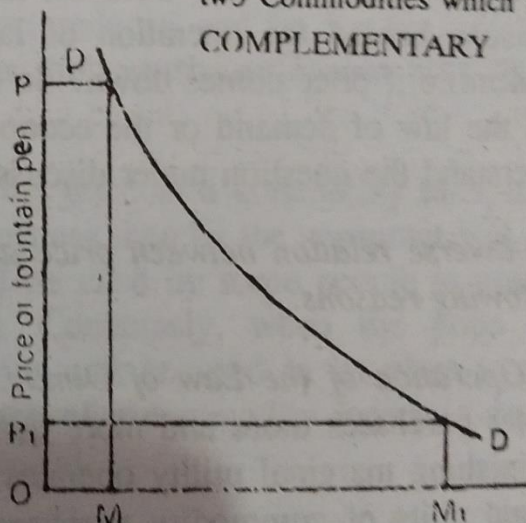


FIGURE 7.4

Cross Demand Curve of two Commodities which are COMPLEMENTARY



horses and carriages, etc. Whenever there is a fall in demand of fountain pens due to the rise in prices of fountain pens, the demand for ink will fall down, not that the price of ink has gone up but because of the price of fountain pen has gone up. Since both are directly and proportionately related, the demand curve will be sloping down.

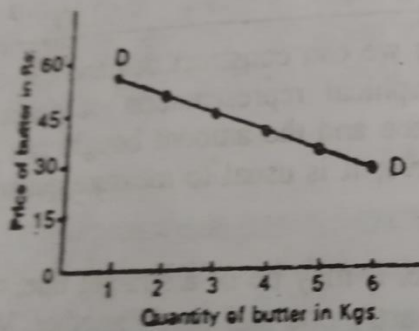
From the discussion of these three types of demand, we can draw some generalized conclusions about the behaviour of the consumer or a household demanding various commodities.

The Law of Demand

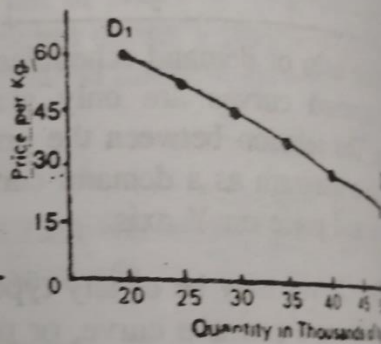
The law Demand indicates the relationship between the price of a commodity and the quantity demanded in the market. It may be stated as follows: Other things being equal, the quantity demanded extends with a fall in price and contracts with a rise in price. That is to say, the quantity demanded varies inversely with the price. In simple language it means that a person will purchase more of a commodity when its price falls and he will purchase more of a commodity when its price rises. Therefore, the greater the amount to be sold, the lower must be price to attract purchasers.

Marshall defines the law thus “the greater the amount to be sold, the smaller must be the price at which it is offered in order that it may find purchasers. Or in other words, the amount demanded increase with a fall in price and diminished with a rise in price.” This law rests upon the firm logic. The law tells the direction of change in demand with change in price.

Demand curve of individual consumer of butter



Demand curve of a market selling butter



together, which will be bought in the country at different levels of income. This curve relates to 'Aggregate Demand' of the economy. The law of demand which we are going to study is applicable to only individual and market demand curves and also seller's average revenue curve. It does not apply to 'Aggregate Demand curve'. Only those curves, (individual market and seller's average revenue curves) which are subjected to the operation of the law of demand will slope downwards from left to right. The aggregate demand curve is entirely in a different category and does not slope downwards.

Exception to the law of demand

- The Giffen goods
- The Veblen law
- Belief of the consumers
- The tendency of the consumers
- Economic conditions
- Speculations
- Snob effect
- Change in fashion

Elasticity of Demand

The concept of elasticity of demand holds an important place in business economics. It is gaining significant importance in economic theory and formulating suitable economic policies.

Alfred Marshall defined elasticity of demand as “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 price and diminishes much or little for a given rise in price.”

Types of Elasticity of Demand

Demand Forecasting

A forecast is a prediction or estimation of a future situation, under given conditions. Demand forecast will help the manager to take the following decisions effectively.

Forecasting simply refers to estimating or anticipating future events.

Factors Affecting Demand forecasting

- a. Prevailing business conditions
- b. Conditions within the industry
- c. Conditions within the firm
- d. Factors affecting export trade
- e. Market behavior
- f. Sociological conditions
- g. Psychological conditions
- h. Competitive conditions

Factor of Production

- Land
- Labour
- Capital
- Organization

Production Function

The production function is a representation of the various technological recipes from which a firm can choose to configure its production process.

In Particular, the production function tells us the maximum quantity of output the firm can produce given the quantities of the inputs that it might employ.

It can be an equation, table or graph showing the maximum output of a commodity that a firm can produce per period of time with each set of outputs. Both inputs and outputs are generally measured in physical rather than in monetary units.

The production function can be expressed as

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

Where

Q is the physical quantity of output per unit of time

F is functional relationship

L is the quantity of labour used,

K is the quantity of capital employed

MODERN APPROACH TO THE LAWS OF RETURNS

(v) Finally, it is also assumed that the entire operation is for short-run, as in the long-run all inputs can be variable.

Three Stages of the Law

The behaviour of the output when the varying quantity of one factor is combined with a fixed quantity of the other can be divided into three distinct stages. The three stages could be better understood by the Table 12.3.

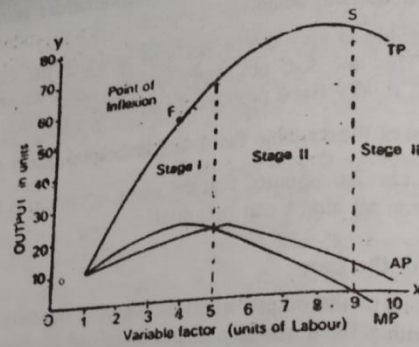
With data of the schedule, the law is illustrated by means of a figure-12.3 by taking the variable factor in the X axis and the output in the Y axis.

STAGE I: In this stage, the total product increases at an increasing rate. The Total Product Curve (TP) increases sharply upto the point F. i.e., fourth combination where the marginal product (MP) is at the maximum.

TABLE 12.3

Fixed Factor (Machine) (1)	Variable Factor (Labour) (2)	Total Production in units (3)	Average Production in units (4)	Marginal Production in units (5)
1+	1	10	10.0	10
1+	2	22	11.0	12
1+	3	36	12.0	14
1+	4	52	13.0	16
1+	5	66	13.2	14
1+	6	76	12.6	10
1+	7	80	11.4	4
1+	8	82	10.2	2
1+	9	82	9.1	0
1+	10	78	7.8	-4

Figure 12.3



Afterwards, *i.e.*, beyond F, the total product curve increases at a diminishing rate, as the marginal product falls, but is positive. The point F where the total product stops increasing at an increasing rate and starts increasing at a diminishing rate is called the point of inflexion. At this point, the marginal product is at the maximum. So stage I refers to the increasing stage where the total product, the marginal product and average product are increasing. It is the *Increasing Returns Stage*.

Stage II: In the Second Stage, the total product continues to increase, but at the diminishing rate until it reaches the point S where it completely stops to increase any further. At this the Second Stage ends. In this stage, the marginal product and average products are declining but are positive. At the end of the second Stage, at point S, the total product is at the maximum and the marginal product is zero. It is cutting the x axis. The second Stage is the *Stage of Diminishing Returns*.

Stage III: In this Stage, the total Product declines and therefore the TP curve slopes downwards. The marginal product becomes negative cutting the X axis. This Stage is called the *Negative Returns Stage*.

Thus, the total product, Marginal product and average product pass through three phases *viz.*, increasing, diminishing and negative returns stage. The law of variable proportions is nothing but the combination of the Law of Increasing and Diminishing Returns.

Now, the question is in which Stage the producer will seek to produce the commodities. Being rational, a producer will not come to the third Stage where the marginal product becomes negative; he will not produce to get negative returns. The producer will also not choose to produce in Stage I, as he will not be making the best use of the fixed factor and he will not be utilizing fully the opportunity.

THREE PHASES OF RETURN

output increases in the same proportion, returns to scale are said to be constant. Thus, a doubling or trebling of scale would result in doubling or trebling of returns (output).

If the increase in all factors leads to a more than proportionate increase in output, returns to scale are said to be increasing. Thus, a doubling of the scale will result in output being *more* than double. If the scale is trebled the output will be *more* than treble.

TABLE 12.5
Table showing Returns to Scale

Sl. No.	Scale	Total Product of Corn in Units	Marginal Product or Returns in Units	
(1)	1 Labour +2 acres of Land	4	4	Stage I Increasing Returns
(2)	2 Labour +4 acres of Land	10	6	
(3)	3 Labour +6 acres of Land	18	8	
(4)	4 Labour +8 acres of Land	28	10	Stage II Constant Returns
(5)	5 Labour +10 acres of Land	38	10	
(6)	6 Labour +12 acres of Land	48	10	Stage III Decreasing Returns
(7)	7 Labour +14 acres of Land	56	8	
(8)	8 Labour +16 acres of Land	62	6	

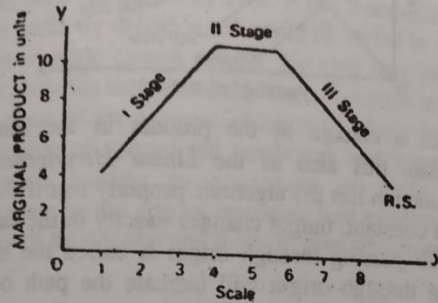
If the increase in all factors leads to less than proportionate increase in output, returns to scale are said to be 'decreasing'.

Let us take an example, numerically to explain the behaviour of returns to scale.

In the table 12.5, when 1 labourer and 2 acres of land are employed, the total product is 4 units of corn. The input is doubled, i.e., 2 labourers and 4 acres are employed. The output of corn is more than double as the marginal output goes up from 4 units to 6 units. When the scale is trebled, the total output is more than treble and the marginal output goes up from 6 units to 8 units. When the output is at 4 labourers and 8 acres of land

the total output has reached 10 units. Up to this stage, we have increasing returns. Later on till Sl. No. 6 the marginal output remains constant at 10 units. This is the second stage or constant returns stage. Afterwards the marginal output declines to 8 and 6 units. This the third stage or the Decreasing returns stage. The data of the table 12.5 can be represented in the figure 12.5 given:

FIGURE 12.5
Returns to Scale



CONSTANT RETURNS TO SCALE
(Linear Homogenous Production Function)

We have seen that if we increase all factors (*i.e.*, scale) in a given proportion and the output increases in the same proportion, returns to scale are said to be constant. The constant returns to scale can be explained with the help of the scale line and Iso-product map.

The figure 12.6 given illustrates the Constant Returns to Scale. An equal product map has been drawn with the assumption that only two factors, *viz.*, X and Y required.

In order to judge whether or not return to scale are Constant, we have drawn a straight line OP passing through the origin indicating the increase in scale as we move upward. OP is the scale line. It will be seen from the figure that successive equal product curves are equidistant from each other along the scale line OP drawn. Thus along the line OP, $AB = BC = CD = DE$. The distance between the successive equal product curves being the same along the scale line passing through the origin, we can understand that if both factor 'x' and factor 'y' (Labour and Capital) are increased in a given proportion, output expands in the same proportion. Therefore, the figure displays constant returns to scale.

UNIT - III

SUPPLY FUNCTIONS

Supply of commodity refers to the various quantities of the commodity which a seller is willing and able to sell at different prices in a given market at a point of time, other things remaining the same.

Supply is what the seller is able and willing to offer for sale. The quantity supplied is the amount of particular commodity that a firm is willing and able to offer for sale at a particular price during a given time period.

Supply Schedule: Is a table showing how much of a commodity, firms can sell at different prices.

Supply Curve: A graphical representation of how much of a commodity a firm sells at different prices. The supply curve is upward sloping from left to right. Therefore the price elasticity of supply will be positive.

Determinants of Supply

- a. The cost of factors production
- b. The state of technology
- c. External factors
- d. Tax and subsidy
- e. Transport
- f. Price
- g. Price of other goods

Factors Influencing Elasticity of Supply

1. Nature of the commodity
2. Time period
3. Scale of production
4. Size of production
5. Size of the firm and number of products
6. Natural factors
7. Nature of production

Types of Supply Curves

1. Supply of a firm and supply of an Industry

We should understand first that the concept of industry as a group of firms or many firms producing an identical product, and in economic theory it connotes perfectly competitive industry.

This means , an industry consists of many firms, all of whom are producing a homogeneous or standardized product.

2. Vertical Supply curve

This type of vertical supply curve can be had in Very short period market where perishables are supplied. The supply of perishables, like, milk, Vegetables, fruits, etc.,

3. Backward sloping supply curve

This backward sloping supply curve is a common feature in developing countries, particularly in “agricultural Labour”. In developing countries where workers have unit elastic demand for money income, an increase in money wages may induce them to curtail their work.

The law of Supply

Is the relationship between price of the commodity and quantity of that commodity supplied. i.e. an increase in price will lead to an increase in quantity supplied and vice versa

SUPPLY is defined as “how much of goods will be offered for sale at a given time.

Law supply

Supply Schedule and Law of Supply

Just as demand Schedule, supply of different quantities placed on the market at different prices are mentioned with the help of a schedule called supply schedule. Supply also is related to time, place and price like demand. The supply schedule represents the functional relationship between the quantity supplied and the prices. Given below is an imaginary supply schedule:

TABLE 13.1

SUPPLY SCHEDULE OF COMMODITY X

Price in Rs.	Quantity supplied in units
3	40
4	50
5	60
6	75
7	90

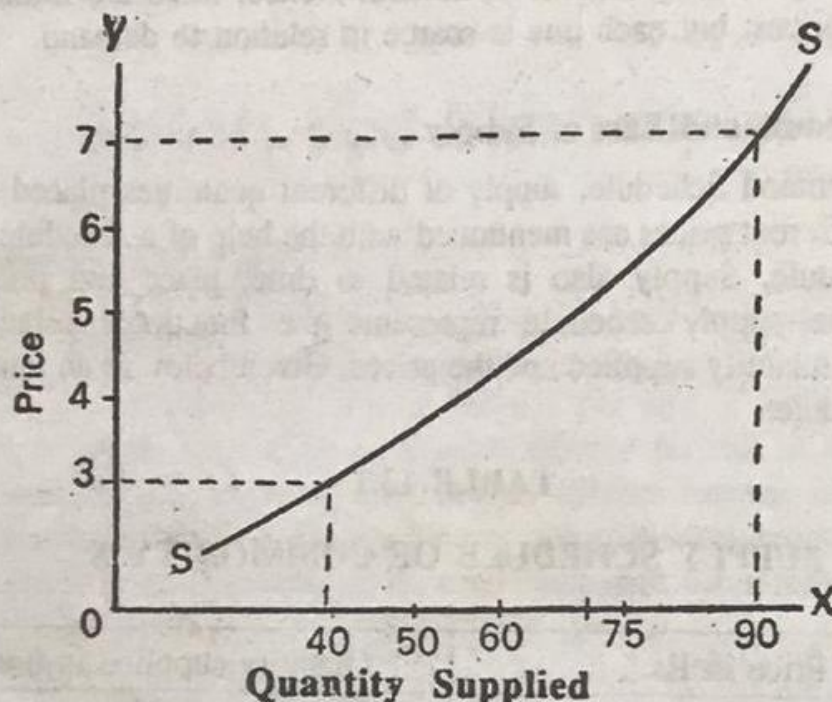
The Law of Supply

From the schedule, we can understand that when the price is the highest, *i.e.*, Rs. 7 per unit, the supply is maximum, *i.e.*, 90 units and when the price falls to Rs. 3, the supply gets contracted to 40 units. So, there is functional relationship between the price and quantity supplied. This relation is stated in the form of a law called the law of supply which is just the opposite of law of demand. The Law of Supply states that "other things being constant, the price of a commodity has a direct influence on the quantity supplied. As the price of a commodity rises, its supply is extended; as the price falls, its supply is contracted". Large quantities are supplied at higher prices and small quantities are supplied,

The supply Curve

On the basis of the schedule given, we can draw the supply curve taking quantities supplied on the X axis and price on the Y axis as the figure 13.1

Figure 13.1.



The supply curve SS slopes upwards from left to right showing larger supplies at a higher price.

Determinants of Supply or Assumptions of a Supply Schedule and Curve

The supply schedule and the curve are prepared and drawn on certain assumptions. The factors which are likely to "change" the supply should be kept constant. The determinants of supply, except the price factor, have been kept constant. What are the other factors influencing supply?

(i) *Number of Firms or Sellers:* Supply in a market depends on the number of firms or sellers producing and selling in the market. When the sellers are few, the supply will be small. If they are in large numbers, the supply will also be large. Hence, every schedule of supply is prepared on the assumption that the number of firms producing the particular commodity, the scale of production and rate of production are all constant. If this assumption is not made, any change in number of firms, scale of production, etc., will push up the supply curve to the right.

ELASTICITY OF SUPPLY

Elasticity of supply of a commodity is defined as the responsiveness of quantity supplied to a unit change in price of that commodity.

Kinds of Supply Elasticity

1. Price elasticity of supply

Price elasticity of supply measures the responsiveness of changes in quantity supplied to a change in price.

2. Perfectly inelastic

If there is no response in supply to change in price

3. Inelastic supply

The proportionate change in supply is less than the change in price

4. Unitary elastic

The percentage change in quantity supplied equals the change in price

5. Elastic

The change in quantity supplied is more than the change in price

6. Perfectly elastic

Suppliers are willing to supply is more than the change in price

UNIT – IV

Theory of Rent

Rent is the income derived from the land, the free gift of nature. Now the modern economists use the term rent for all factors of production.

Ricardian Theory of Rent

According to Ricardo, rent is the payment for the use of only land and is different from contractual rent which includes the returns on capital investment made by the landlord in the form of wells, irrigation structures besides the payment for the use of land.

The marginal productivity theory is based on the following assumptions.

1. There is perfect competition.
2. All units of a factor are homogeneous. It means that one unit of a factor is the same as the other.
3. Factors can be substituted for each other. That is all factors are interchangeable.
4. The theory is based on the law of diminishing returns as applied to business

Modern theory of rent

1. Rent is the payment for the use of land. This is determined by the demand and supply of land.

2. Rent accrues not only to Land, but also to all the factors of production

THEORY OF WAGES

Wage is defined as the price paid for the services rendered by the labour in the production process.

Wage Fund theory

The wage fund theory states that wages depend upon the proportion between population and capital. At any time, only a fixed amount of capital is allotted for payment of wages to labour. This is called wage fund theory.

The fixed number of workers willing to work represents the supply of labour. The wages at any time are determined by the ratio between the amount of wage of fund and the total supply of labour.

MARGINAL PRODUCTIVITY THEORY OF WAGES

Marginal productivity Theory, wages will be equal to the value of marginal productivity of labour.

Assumptions:

1. It assumes the existence of perfect competition.
2. All labourers are homogeneous in character.
3. The theory is based on the law of diminishing marginal returns.
4. It assumes that different factors can substitute each other.

INTEREST

Interest is the price paid for the use of loanable funds (capital) used in the production process.

According to the Wicksell the interest is, " the payment made by the borrower of capital, by virtue of its productivity, as reward for his abstinence"

THEORIES OF INTEREST

1. Loanable Fund Theory of Interest
2. Keynes Liquidity Preference Theory of Interest and
3. Modern Theory of Interest or Neo Keynesian Theory of Interest.

Classical theory of Interest

Classical Theory of Interest is termed as the demand and Supply theory of interest.

Criticism of classical theory

1. Full employment is not possible
2. The level of income brings equality is S and I
3. No independent savings and Investment schedule.
4. Past and hoarded savings determine the supply of funds

Loanable Funds Theory of Interest

According to this theory, rate of interest is determined by demand and supply of loanable funds.

- a) Investment demand
- b) Consumption Demand
- c) Demand for Hoarding

Keynesian or Modern Theory of Interest

According to the modern theory, the four determinants, namely, savings, investment, Liquidity preference and the supply of money are integrated along with income and determine the rate of interest.

Criticism of Keynesian Theory of Interest

1. Not considering the real factors
2. Bonds are not only alternatives
3. No liquidity without savings

Profit Theories

- a) Rent Theory of Profits
- b) The wages theory of Profits
- c) The Dynamic Theory of Profits
- d) Risk Bearing Theory of profits
- e) Uncertainty Bearing Theory of profits
- f) Innovation theory of profits
- g) Marginal productivity theory of profit

Theories of Population

1. The Malthusian theory of population
2. The optimum theory of population
3. The Biological theory of population
4. The theory of Demographic transition

Malthusian theory of population

Robert Malthus (1766 – 1834)

- a) The power of population is infinitely greater than the power in the earth to produce subsistence for men.
- b) Population when unchecked, increases in geometrical ratio
- c) By the law of our nature which makes food necessary to the life of man, the effects of these two unequal powers must be kept equal
- d) This implies a strong and constantly operating check on population from the difficulty of subsistence
- e) This natural inequality of the two powers of population and of production in the earth, and that great law of our nature which must constantly keep effects equal forms the great difficulty, that to me appears insurmountable in the way to perfectibility of society

The optimum Theory of population

The optimum theory of population is explained with a hypothesis. It assumes that at any given time the capital resources and factors of production in a country are given.

Criticism of optimum theory of population

- a. There is no fixed optimum for a country as such. The optimum population at any time would depend on available natural resources
- b. It is exceedingly difficult to find out the optimum level of population for a country.
- c. The theory takes into consideration only the economic aspect in deciding the optimum level.
- d. Even from an economic point of view, the optimum level may not assure the best standard of living, to every one in the absence of distributive justice.
- e. The optimum theory is vague and self-contradictory.

PERFECT COMPETITION

Definition of Perfect Competition

Perfect Competition is defined “as a condition of market in which there will be fluidity and mobility of factors of production so that the number of firms and the size of firms can freely increase or decrease.

Features and conditions of Perfect Competition

- a. Large number of buyers and sellers
- b. Homogeneous Product
- c. Free entry and exit conditions
- d. Perfect knowledge on the part of buyers and sellers
- e. Perfect mobility of factors of production
- f. Absence of transport cost
- g. Absence of Government or artificial restriction

Factors of Production

Production can take place only with the combination of factors of Production, viz., Land, Labour, Capital and Organization. In modern economics, Enterprise has come to a very important role in production.

- a. Land
- b. Labour
- c. Capital
- d. Organization

What is land in Economics?

Land as factor of production has wide connotation than what is understood in ordinary language. Land in economics means all those things animate or inanimate which are given by nature freely and are helpful in production.

What is Capital in economics?

Capital may be defined as that part of wealth other than land, which is used for further production of wealth. Obviously all capital is wealth.

Functions of Capital

- a. Capital provides subsistence
- b. Capital provides equipment
- c. Capital provides Raw materials
- d. Capital facilitates effective marketing

Labour

Labour has been defined as “any exertion of mind or body undergone partly or wholly with a view to some good, other than the pleasure derived directly from the work”

Characteristics of labour

- a. Labour cannot be separated from the labourer himself and both terms are synonymous.
- b. Labour is perishable. This means that the labourer cannot preserve his labour.
- c. Labour must be undergone not for its own sake but with a view to some reward.
- d. Labour involves strain and Sacrifice
- e. The labour must result in the certain of wealth

Advantages of Division of Labour

- a. Labour becomes effective
- b. Savings of time and gain in skill
- c. Mechanical efficiency and industrial gains
- d. Promotion of Invention
- e. Improvement in the quality of the product

Limitations of Divisions of Labour

- a. The extent of the market
- b. The machinery of commerce
- c. Nature of employment

ORGANIZATION AND ENTERPRISE

Organization may be defined as the attempt towards bringing the various factors of production and co-ordinate them in such a way that effective co-operation of these could be had in producing commodities and services.

ROLE AND FUNCTIONS OF AN ENTREPRENEUR

Internal functions

1. Assembling the factors of production
2. The organization of the labour force
3. Provision of proper tools,

External functions

1. Purchasing of raw materials
2. Determination of quality and quantity of output
3. Risk undertaking.

UNIT- V

COST ANALYSIS

The cost function refers to the mathematical relation between cost of a product and the various determinants of costs.

Understanding cost

In the economic sense there are certain costs which are implicit in nature. This refers to the value of the inputs owned and used by the firm in its own production activity. Even though the firm does not incur any actual expenditure to use these inputs, they are not free since firm can sell them or rent them out to other firms.

Determinants of cost

- Cost of raw material
- The efficiency of the production variables
- Plant size
- Output stability
- Lot size
- Laws of returns
- Levels of capacity utilization
- Time Span
- Technology

- Experience
- Product assortments
- Logistics and supply chain
- Government subsidies and incentives

Cost classification

- a. Economic cost : accounting costs are recorded with the intention of preparing the balance sheet and profit and loss statements which are intended for the legal, financial and tax purposes of the company.
- b. Explicit costs: Explicit costs are those expenses that involve cash payments
- c. Implicit costs : implicit costs are the costs of the factor units that are owned by the employer himself.
- d. Fixed cost: There are inputs used over a period of time for producing more than one batch goods. The costs incurred in these are called fixed cost.
- e. Variable cost: The increase in output increases the firm variable cost. In simple terms the variable cost increases alongside the increase in production.
- f. Opportunity cost: The cost of a factor of production is the reward that factor could have yielded in the next best alternative occupation.
- g. Sunk cost : Those which are not altered by any change. They are the costs incurred in the past.

BREAK – EVEN ANALYSIS

The break even analysis has considerable significance for economic research, business decision making company management, investment analysis and public policy.

BEA helps to identify the level of output and sales volume at which the firm breaks even.

BREAK -EVEN POINT (BEP)

Break-even Point

The break-even point (BEP) or break-even level represents the sales amount—in either unit (quantity) or revenue (sales) terms—that is required to cover total costs, consisting of both fixed and variable costs to the company. Total profit at the break-even point is zero. There is no profit and no loss. The total revenue is equal to the total cost of production. In BEA, the break-even point is located at that level of output or sales at which the net income or profit is zero. At this point total cost is equal to total revenue. The amount of money which the firm receives by the sale of its output in the market is known as revenue.

Hence the break -even point is the no profit no loss point. However the object or the BEA is not just to determine the break - even point (BEP), but to understand the financial relationship among cost, revenue and the rate of output .It is also called cost -volume - profit analysis.

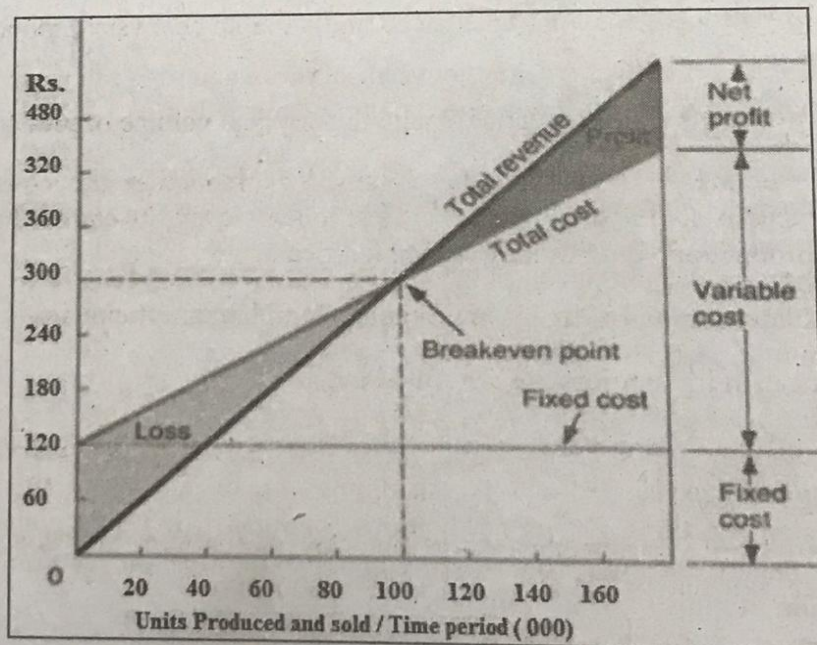


Figure 9.2. Graph highlighting Break-Even Point

The graph highlighted in figure 6.2 shows the break-even point of an organization. The total revenue curve (TR) and total cost curve (TC) is given. When they produce 100 units the total cost and total revenue is equal that is Rs.3, 00, 000 which is at the intersecting point of the curves. Break-even point always denotes the quantity produced or sold to equalize the revenue and cost.

When the firm produces less than 100 units the revenue earned is less than the cost of production ($TR < TC$) therefore in the initial period the firm incurs loss which is shown in the graph. Through selling more than 100 units the revenue increases more than the cost of production therefore the difference increases and provides profit to the organization ($TR > TC$). It can be calculated with the help of the following formula.

$$\text{Break even quantity} = \frac{\text{TFC}}{\text{Selling Price} - \text{AVC}}$$

$$\text{To decide a quantity to achieve a targeted profit} = \frac{\text{TFC} + \text{targeted profit}}{\text{Selling Price} - \text{AVC}}$$

$$\text{Safety margin} = \frac{\text{Sales} - \text{BEP}}{\text{Sales}} \cdot 100$$

Assumptions of Break-Even Analysis

1. The concept of cost variability is valid. Costs are classified as fixed and variable costs.
2. Fixed cost are remaining unchanged and variable cost vary proportionately with volume of output.
3. All revenue is perfectly variable with the physical volume of production
4. The volume of sales and the volume of production are equal.
5. It assumes no improvement in technology and labour efficiency
6. Changes in input prices are also ruled out
7. Sale price in the product is assumed constants the giving linearity property to total revenue cost
8. There is only one product or in the case of multiple products, the sales will remains constant
9. The efficiency of the plant can be predicted

Importance of Break Even analysis to business decisions

- a. Profit planning
- b. Product planning
- c. Target capacity
- d. Activity planning
- e. Price decision
- f. Promotional decision
- g. Safety margin
- h. Distribution decision

Limitations of Break- Even Analysis

- Break-even analysis is based on accounting data
- This analysis is static in character
- It is based on the assumption of given relationship of costs and revenue to output
- Selling costs are especially difficult to handle in Break-Even analysis

Cost- output Relations

The cost output relationship plays an important role in determining the optimum level of production.

The relation between cost and output is technically described as the cost function.

$$TC = f(Q)$$

Where

TC = Total Cost

Q = Quantity

Produced F = function

Cost output Relationship in Short-run

In the short run a change in output is possible only by making changes in the variable inputs like raw materials, labour ect. Inputs like land and building, plant and machinery etc. are fixed in the short run.

$$TC = TFC + TVC$$

$$TFC = TC - TVC$$

$$TVC = TC - TFC$$

TC = TFC when the output is zero

$$AC = TC / Q$$

It is the total of average fixed cost (TFC/Q) and average variable cost(TVC/Q)

$$MC = TC_n - TC_{n-1}$$

Graph showing short-run cost output relationship

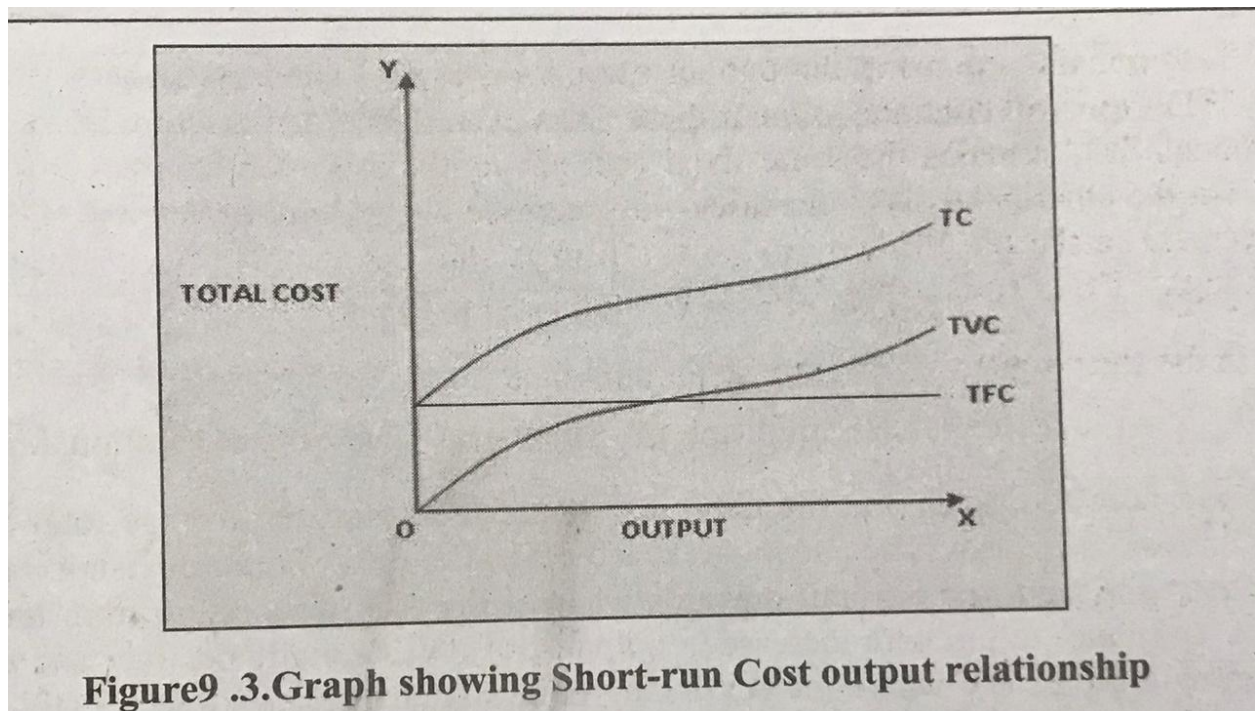


Figure 9.3. Graph showing Short-run Cost output relationship

Cost output Relationship in long –run

Cost output Relationship in Long-run

The previous section provides insight into the cost and output relationship in short-run, now let us discuss the cost and output relationship in Long-run.

Long run is the period during which all inputs are variable. Thus all costs are variable in the long run. The length of time of the long run depends on the industry. In some service industries such as photocopying, the period of the long run may be only a few months or weeks. It all depends on the length of time required for the firm to be able to vary all inputs. The Long run cost of production is the least possible cost of Production of producing any given level of output when all the inputs one variable including of course the size of the plant. A long run cost curve depicts the functional relationship between output and the long run cost of production as just defined.

In the long-run a firm can increase or decrease its output according to its demand, by having more or less of all the factors of production. The firms are able to expand the scale of their operation in the long-run by purchasing larger quantities of all the inputs. Thus in the long-run all factors become variable. The long-run cost-output relations therefore imply the relationship between total costs and total output. As the change in production in the long-run is possible by changing the scale of production, the long-run cost-output relationship is influenced by the law of returns to scale.

In order to understand how the long run average cost curve is derived, we consider three short run average cost curves as shown in Figure 11. These short run cost curves (SACs) are also called plant curves. In the short run the firm can be operating on any short run average cost curve given the size of the plant. Suppose that these are the only three plants which are technically possible. Given the size of the plant, the firm will be increasing or decreasing its output by changing the amount of the variable inputs.

But in the long run, the firm chooses among the three possible sizes of plants as depicted by short run average curve (SAC_1 , SAC_2 , and SAC_3). In the long run, the firm will examine with which size of plants or on which short run average cost curve its hold operate to produce a given level of output, so that the total cost is minimum. It will be seen from the diagram that up to OB amount of output, the firm will operate on the SAC_1 , though it could also produce with SAC_2 . Up to OB amount of output, the production on SAC_1 results in lower cost than on SAC_2 . For example, if the level of output OA is produced with SAC_1 , it will cost AL per unit and if it is produced with SAC_2 it will cost AH and we can see that AH is more than AL . Similarly, if the firm plans to produce an output which is larger than OB but less than OD , then it will not be economical to produce on SAC_1 . For this, the firm will have to use SAC_2 . Similarly, the firm will use SAC_3 for output larger than OD . It is thus clear that, in the long run, the firm has a choice in the employment of plant and it will employ that plant which yields minimum possible unit cost for producing a given output.

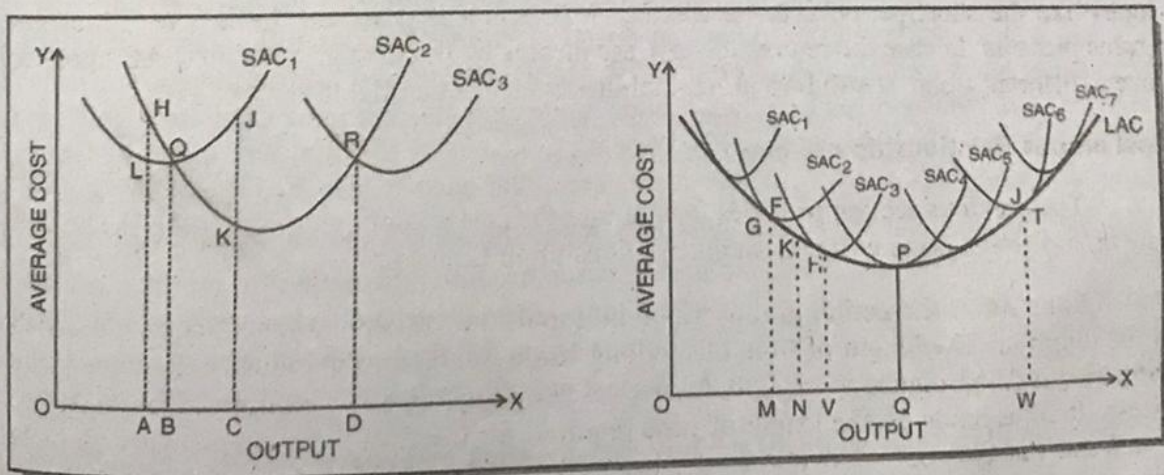


Fig. 9.6 : Short run Average Cost Curves

Fig. 9.7 : Long run Average Cost Curves

REVENUE CURVES

The revenue curves vary strongly according to the type of market competition.

Classification of Revenues

The revenue can be classified or in other words can be measured in three ways such as

TR = Total Revenue

AR = Average Revenue

MR = Marginal Revenue

Each of these revenue curves has different characteristics at different market competition.

9.20 Cost Accounting

products once it has paid indirect tax, such as Value Added Tax. Revenue provides the income which a firm needs to enable it to cover its costs of production, and from which it can derive a profit. Profit can be distributed to the owners, or shareholders, or retained in the business to purchase new capital assets or upgrade the firm's technology. For Example: A firm producing 200 units of goods per month and sells it at Rs.40 per unit then its total revenue is Rs.8000 per month.

Classification of Revenues: The revenue can be classified or in other words can be measured in three ways such as Total Revenue (TR), Average Revenue (AR) and Marginal Revenue (MR). Each of these revenue curves has different characteristics at different market competition. Let us now first understand the meaning of these three revenues.

Economics

a. Total revenue (TR)

Total sum of money value received from the sales of various quantities of output of product produced during a given period of time at certain price level after deducting the tax paid to government is known as total revenue of a firm or an industry for that time period. The value of TR is found by multiplying price of the product by the quantity sold. It can be obtained by multiplying total output sold (Q) by the corresponding price (P).

$$TR = P \times Q$$

b. Average revenue (AR)

Average revenue (AR), is revenue per unit, and is found by dividing TR by the quantity sold, Q. AR is equivalent to the price of the product.

$$AR = TR / Q$$

c. Marginal revenue

Marginal revenue (MR) is the revenue generated from selling one extra unit of a good or service. It can be found by finding the change in TR following an increase in output of one unit. MR can be both positive and negative.

$$MR = TR_n - TR_{n-1}$$

Where, TR_n is the total revenue obtained from the sales of nth unit of output and TR_{n-1} is the total revenue obtained from the sales of (n-1)th unit of output. In other words, marginal revenue is the change in total revenue due to change in the quantity sold on the market by one unit.

Revenue curves

- a. **Total revenue Curve:** Initially, as output increases total revenue (TR) also increases, but at a decreasing rate. It eventually reaches a maximum and then decreases with further output. Less competition in a given market is likely to lead to higher prices and the possibility of higher super-normal profits.

- b. **Average revenue Curve:** However, as output increases the average revenue (AR) curve slopes downwards. The AR curve is also the firm's demand curve.

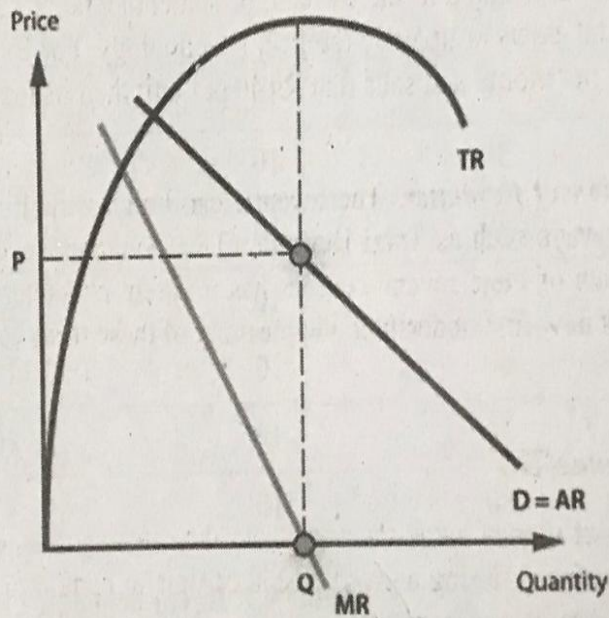


Figure 9.9: Graph showing the Revenue curves

- c. **Marginal revenue Curve:** The marginal revenue (MR) curve also slopes downwards, but at twice the rate of AR. This means that when MR is 0, TR will be at its maximum. Increases in output beyond the point where $MR = 0$ will lead to a negative MR.