Managerial Economics & Financial Analysis (19A52602B)

LECTURE NOTES

III-B.TECH & II-SEM

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

Course Code	MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS	L	T	P	C
19A52602b		3	0	0	3

	(Common to All branches of Engineering)		
Pre-requisite	**NIL**	**Semester**	**III**

Course Objectives:

- To inculcate the basic knowledge of micro economics and financial accounting
- To make the students learn how demand is estimated for different products, input-output relationship for optimizing production and cost
- To Know the Various types of market structure and pricing methods and strategy
- To give an overview on investment appraisal methods to promote the students to learn how to plan long-term investment decisions.
- To provide fundamental skills on accounting and to explain the process of preparing financial statements

Course Outcomes (CO):

- Define the concepts related to Managerial Economics, financial accounting and management.
- Understand the fundamentals of Economics viz., Demand, Production, cost, revenue and markets
- Apply the Concept of Production cost and revenues for effective Business decision
- Analyze how to invest their capital and maximize returns
- Evaluate the capital budgeting techniques
- Develop the accounting statements and evaluate the financial performance of business entity.

UNIT - I	**Managerial Economics**

Introduction – Nature, meaning, significance, functions, and advantages. Demand-Concept, Function, Law of Demand - Demand Elasticity- Types – Measurement. Demand Forecasting- Factors governing Forecasting, Methods. Managerial Economics and Financial Accounting and Management.

UNIT - II	**Production and Cost Analysis**

Introduction – Nature, meaning, significance, functions and advantages. Production Function– Least-cost combination– Short run and Long run Production Function- Isoquants and Isocosts, MRTS - Cobb-Douglas Production Function - Laws of Returns - Internal and External Economies of scale. Cost & Break-Even Analysis - Cost concepts and Cost behavior- Break-Even Analysis (BEA) - Determination of Break-Even Point (Simple Problems)-Managerial significance and limitations of Break-Even Analysis.

UNIT - III	**Business Organizations and Markets**

Introduction – Nature, meaning, significance, functions and advantages. Forms of Business Organizations- Sole Proprietary - Partnership - Joint Stock Companies - Public Sector Enterprises. Types of Markets - Perfect and Imperfect Competition - Features of Perfect Competition Monopoly-Monopolistic Competition–Oligopoly-Price-Output Determination - Pricing Methods and Strategies	
UNIT - IV	**Capital Budgeting**
Introduction – Nature, meaning, significance, functions and advantages. Types of Working Capital, Components, Sources of Short-term and Long-term Capital, Estimating Working capital requirements. Capital Budgeting– Features, Proposals, Methods and Evaluation. Projects – Pay Back Method, Accounting Rate of Return (ARR) Net Present Value (NPV) Internal Rate Return (IRR) Method (sample problems)	
UNIT - V	**Financial Accounting and Analysis**
Introduction – Nature, meaning, significance, functions and advantages. Concepts and Conventions-Double-Entry Book Keeping, Journal, Ledger, Trial Balance- Final Accounts (Trading Account, Profit and Loss Account and Balance Sheet with simple adjustments). ***Financial Analysis*** - Analysis and Interpretation of Liquidity Ratios, Activity Ratios, and Capital structure Ratios and Profitability.	
Textbooks: 1. Varshney&Maheswari: Managerial Economics, Sultan Chand, 2013. 2. Aryasri: Business Economics and Financial Analysis, 4/e, MGH, 2019	
Reference Books:	
1. Ahuja Hl Managerial economics Schand,3/e,2013 2. S.A. Siddiqui and A.S. Siddiqui: Managerial Economics and Financial Analysis, New Age International, 2013. 3. Joseph G. Nellis and David Parker: Principles of Business Economics, Pearson, 2/e, New Delhi. 4. Domnick Salvatore: Managerial Economics in a Global Economy, Cengage, 2013.	
Online Learning Resources:	
https://www.slideshare.net/123ps/managerial-economics-ppt https://www.slideshare.net/rossanz/production-and-cost-45827016 https://www.slideshare.net/darkyla/business-organizations-19917607 https://www.slideshare.net/balarajbl/market-and-classification-of-market https://www.slideshare.net/ruchi101/capital-budgeting-ppt-59565396 https://www.slideshare.net/ashu1983/financial-accounting	

UNIT – I

INTRODUCTION TO MANAGERIAL ECONOMICS

1) Define Managerial Economics. Explain its nature and scope.

Meaning & Definition:

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

In the words of E.F.Brigham and J.L. Pappas Managerial Economics is "the applications of economics theory and methodology to business administration practice".

C.I.Savage&T.R.Small therefore believes that managerial economics "is concerned with business efficiency"

Nature of Managerial Economics:

a) Close to microeconomics
b) Operates against the back drop of macroeconomics
c) Normative statements
d) Prescriptive actions
e) Applied in nature
f) Offers scope to evaluate each alternative
g) Interdisciplinary
h) Assumptions and limitations

Scope of Managerial Economics:

The scope of managerial economics covers two areas of decision making

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

A. Operational issues:

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

1. Theory of demand and Demand Forecasting
2. Pricing and Competitive strategy
3. Production cost analysis

4. Resource allocation
5. Profit analysis
6. Capital or Investment analysis
7. Strategic planning

B. Environmental or External Issues:

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

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

2) Enumerate the relationship of financial accounting and management with Managerial Economics?

Managerial Economics refers to the firm's decision making process. It could be also interpreted as "Economics of Management". The economic analysis also a part of human analysis or mind analysis, so it does totally inter related each other. The major objectiveof the managerial economics is profit maximization.

Relation with Financial Accounting:

a) Capital Budgeting
b) Budgetary control
c) Cost and revenue
d) Financial analysis and information
e) Generation and interpretation of accounting data

Relationship with Management:

a) Assumptions

b) Decision making

c) Allocation of resources

d) Planning and controlling

e) Organizing and directing

<u>DEMAND ANALYSIS AND LAW OF DEMAND</u>

3) Define demand function and explain the determinants of demand.

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

Mathematically the demand function for a product can be expressed –

$$Q_d = f(P, I, T, P_R, E_P, E_I, S_P, D_C, A, O)$$

Determinants of demand:

a) Price of the product (P)

b) Income level of the consumer (I)

c) Tastes and preferences of the consumer (T)

d) Prices of related goods which may be substitute (P_R)

e) Expectations about the prices in future (E_P)

f) Expectations about the incomes in future (E_I)

g) Size of the population (S_P)

h) Distribution of the consumers over different regions (D_C)

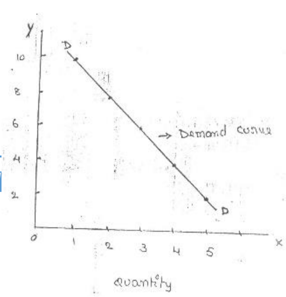
i) Advertising efforts (A)

j) Any other factor capable of effecting the demand (O)

4) Define law of demand with its exceptions?

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

Assumptions:



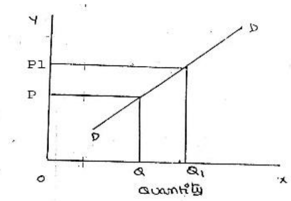
Law of demand is based on certain assumptions:

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

Law of demand slopes downwards when the demand curve inverse relation between price and quantity demand.

The reasons for exceptional demand curve slopes every time upward areas follows.

1. Giffen paradox
2. Veblen or Demonstration effect
3. Ignorance
4. Speculative effect price
5. Fear of shortage
6. Necessaries



5) What is meant by elasticity of demand and types of elasticity of demand?

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

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

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

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

TYPE OF ELASTISITY OF DEMAND

1. **Price elasticity of demand**

$$\text{Price elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity X}}{\text{Proportionate change in the price of commodity X}}$$

   a) Elastic price demand- E>1
   b) Inelastic price Demand- E<1
   c) Unit price elasticity - E=1

2. **Income elasticity of demand**

$$\text{Income Elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity X}}{\text{Proportionate change in the income of people}}$$

   a) Zero income elasticity - Ey=0
   b) Negative Income elasticity - Ey<0
   c) Unit income elasticity - Ey=1
   d) Income elasticity greater than unity - Ey>1
   e) Income elasticity less than unity – Ey<1

3. **Cross elasticity of demand**

$$\text{Cross elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity “X”}}{\text{Proportionate change in the price of commodity “Y”}}$$

   a) In case of substitutes, cross elasticity of demand is positive
   b) In case of compliments, cross elasticity is negative
   c) In case of unrelated commodities, cross elasticity of demanded is zero

4. **Advertising elasticity of demand – is always POSITIVE**

Proportionate change in the quantity demand of commodity X

Advertising elasticity= --

Proportionate change in the advertisement cost

6) **Explain how do you measure elasticity of demand? Explain different types of price elasticity of demand?**

Measure of elasticity of demand:

a) Perfectly elastic demand- E=∞
b) Perfectly Inelastic Demand- E=0
c) Relatively elastic demand- E>1
d) Relatively in- elastic demand - E<1
e) Unit elasticity of demand- E=1

Types of Price elasticity of demand

a) Elastic price demand- E>1
b) Inelastic price Demand- E<1
c) Unit price elasticity - E=1

7) **Explain the significance of elasticity and the factors influencing elasticity**

Significance of Elasticity of demand:

1. Price fixation
2. Production
3. Distribution
4. International Trade
5. Public Finance
6. Nationalization

Factors influencing the elasticity of demand:

Elasticity of demand depends on many factors.

1. Nature of commodity
2. Availability of substitutes
3. Variety of uses
4. Postponement of demand
5. Amount of money spent
6. Time
7. Range of Prices

8) What is the contemporary importance of managerial economics?

Managerial economics decides the business is going towards profit or loss. That's why it has its own priority on optimization of resources. Means to decrease the cost and increase the profit.

a) Useful in business organization and policies
b) Profit Planning and controlling
c) Creates demand for casting
d) Price determination
e) Demand forecasting
f) Solutions for taxation
g) Understanding the mechanism of economic system
h) Analysis of effects of government policies
i) Supporting the manufacture
j) Gives in right directions (decision making)
k) Maintaining and distribution of profit
l) Measurement of the efficiency of the firm

9) What are the needs for demand forecasting? Explain the factors governing of demand forecasting?

<u>**Need for demand forecasting**</u>

a) Estimate & Assessment of future demand
b) Business decision-making
c) Production planning
d) Estimating of revenue and expenditures
e) Distinguish between forecast of demand and sales

f) Time and reliability of forecast

Factors governing Demand Forecasting

a) Functional nature of demand
b) Forecasting levels
c) Types of forecasting
d) Degree of orientation
e) Established or new products
f) Nature of goods
g) Degree of competition
h) Market demand
i) Functional nature of market demand

10) What do you understand by demand forecasting? Explain different methods of demand forecasting?

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

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

a) Estimate & Assessment of future demand
b) Business decision-making
c) Production planning
d) Estimating of revenue and expenditures
e) Distinguish between forecast of demand and sales
f) Time and reliability of forecast

Methods of forecasting:

Several methods are employed for forecasting demand. All these methods can be grouped under Survey method and statistical method. Survey methods and statistical methods are further subdivided into different categories.

1. **Survey Method:**
    - **a) Opinion survey method-** This method is also known as sales- force composite method (or) collective opinion method. The salesmen are more knowledge. They can be important source of information. They are cooperative.
    - b) **Expert opinion method-** Firms in advanced countries make use of outside experts for estimating future demand.
    - c) **Delphi Method-** A variant of the survey method is Delphi method.
    - d) This method has been used in the area of technological forecasting.
    - e) **Consumer's interview method-** contacted personally to know about their plans and preference regarding the consumption of the product. This method seems to be the most ideal method for forecasting demand
2. **Statistical Methods:**
    - a) **Time series analysis or trend projection methods-** presented either in a tabular form or a graph.

      1. Trend line by observation 2. Least square method 3. Moving averages methods 4. Exponential smoothing
    - b) **Barometric Technique-** (1) Construction Contracts awarded for buildingMaterials (2) Personal income (3) Agricultural Income.(4) Employment (5) Gross national income (6) Industrial Production (7) Bank Deposits
    - c) **Regression and correlation method-** provides the values of the independent variables from within the model itself

THEORY OF PRODUCTION AND COST ANALYSIS

PRODUCTION FUNCTION

1. Define production function. Explain Isocosts and Isoquants.

The production function expresses a functional relationship between physical inputs and physical outputs of a firm at any particular time period. The output is thus a function of inputs. Mathematically production function can be written as

Q= f (A, B, C, D)

Where "Q" stands for the quantity of output and A, B, C, D are various input factors such as land, labour, capital and organization. Here output is the function of inputs. Hence output becomes the dependent variable and inputs are the independent variables.

ISOCOSTS:

The term Isocosts is derived from the words 'iso' and 'cost' – 'Iso' means equal and 'cost' implies cost. Isocost therefore, means equal costs. Isocosts that refers to that cost curve that represents the combination of inputs that will cost the producer the same amount of money.

If the level of production changes the cost changes and thus the isocost curve move to upward and vice versa.

ISOQUANTS:

The term Isoquants is derived from the words 'iso' and 'quant' – 'Iso' means equal and 'quent' implies quantity. Isoquant therefore, means equal quantity. A family of iso-product curves or isoquants or production difference curves can represent a production function with two variable inputs, which are substitutable for one another within limits.

The curve of Isoquant also called as the product indifference curve.

For a given output level firm's production become,

$$\mathbf{Q = f\,(L, K)}$$

Where 'Q', the units of output is a function of the quantity of two inputs 'L' and 'K'.

Assumptions:

1. There are only two factors of production, viz. labour and capital.
2. The two factors can substitute each other up to certain limit
3. The shape of the isoquant depends upon the extent of substitutability of the two inputs.
4. The technology is given over a period.

Features of ISO quants:

1. Downward sloping
2. Convex to origin
3. Do not interest
4. Do not touch axis

2. A) MRTS

Marginal rate of Technical Substitution

The MRTS refers to the rate at which one input factor is substituted with the other to attain a given level of output.

5 units of decrease in labor and compensated by an increase in one unit of capital, resulting in MRTS 5:1

$$MRTS = \frac{\text{Change in one input}}{\text{Change in another input}} = -\frac{K \ \triangle}{L \ \triangle}$$

B) Least cot combination

The manufacturer has to produce at lower costs to attain higher profits. The isocosts and ISOquants can be used to determine the input usage that minimizes the cost of production.

C) Cobb Douglas production function

Production function of the linear homogenous type is invested by Juntwicksell and first tested by C. W. Cobb and P. H. Dougles in 1928. This famous statistical production function is known as Cobb-Douglas production function. Originally the function is applied on the empirical study of the American manufacturing industry. Cabb – Douglas production function takes the following mathematical form.

$Y = (AK^{X} L^{1-x})$

Where

Y=output

K=Capital

L=Labour

A, ∞=positive constant

3. **Explain the law of returns with diagram.**

The law of returns to scale explains the behavior of the total output in response to change in the scale of the firm, i.e., in response to a simultaneous to changes in the scale of the firm, i.e., in response to a simultaneous and proportional increase in all the inputs. More precisely, the Law of returns to scale explains how a simultaneous and proportionate increase in all the inputs affects the total output at its various levels.

When a firm expands, its scale increases all its inputs proportionally, then technically there are three possibilities.

(i) The total output may increase proportionately

(ii) The total output may increase more than proportionately

(iii) The total output may increase less than proportionately.

4. Explain internal and external economies of scale?

Production may be carried on a small scale or o a large scale by a firm. When a firm expands its size of production by increasing all the factors, it secures certain advantages known as economies of production. Marshall has classified these economies of large-scale production into internal economies and external economies.

Causes of internal economies:

Internal economies are generally caused by two factors

1. Indivisibilities 2. Specialization.

<u>Internal Economies:</u>

Internal economies may be of the following types.

A. Technical Economies.

B. Managerial Economies:

C. Marketing Economies:

D. Financial Economies:

E. Risk bearing Economies:

F. Economies of Research:

G. Economies of welfare:

External Economies.

Business firm enjoys a number of external economies, which are discussed below:

A) Economies of Concentration:

B) Economies of Information

C) Economies of Welfare:

D) Economies of Disintegration:

Thus internal economies depend upon the size of the firm and external economies depend upon the size of the industry.

5. Explain the economies of large scale of production.

Internal and external diseconomies are the limits to large-scale production. It is possible that expansion of a firm’s output may lead to rise in costs and thus result diseconomies instead of economies. When a firm expands beyond proper limits, it is beyond the capacity of the manager to manage it efficiently. This is an example of an internal diseconomy. In the same manner, the expansion of an industry may result in diseconomies, which may be called external diseconomies. Employment of additional factors of production becomes less efficient and they are obtained at a higher cost. It is in this way that external diseconomies result as an industry expands.

The major diseconomies of large-scale production are discussed below:

Internal Diseconomies:

A. Financial Diseconomies
B. Managerial diseconomies
C. Marketing Diseconomies
D. Technical Diseconomies
E. Diseconomies of Risk-taking

External Diseconomies:

When many firm get located at a particular place, the costs of transportation increases due to congestion. The firms have to face considerable delays in getting raw materials and sending finished products to the marketing centers. The localization of industries may lead to scarcity of raw material, shortage of various factors of production like labour and capital, shortage of power, finance and equipments. All such external diseconomies tend to raise cost per unit.

COST ANALYSIS

6. What is cost analysis? Explain the concept of cost?

Profit is the ultimate aim of any business and the long-run prosperity of a firm depends upon its ability to earn sustained profits. Profits are the difference between selling price and cost of production. In general the selling price is not within the control of a firm but many costs are under its control. The firm should therefore aim at controlling and minimizing cost.

A managerial economist must have a clear understanding of the different cost concepts for clear business thinking and proper application.

1. Opportunity costs and outlay costs
2. Explicit and implicit costs
3. Historical and Replacement costs
4. Short – run and long – run costs
5. Out-of pocket and books costs
6. Fixed and variable costs
7. Post and Future costs

8. Traceable and common costs
9. Avoidable and unavoidable costs
10. Controllable and uncontrollable costs
11. Incremental and sunk costs
12. Total, average and marginal costs
13. Accounting and Economics costs

COST-OUTPUT RELATIONSHIP

A proper understanding of the nature and behavior of costs is a must for regulation and control of cost of production. The cost of production depends on money forces and an understanding of the functional relationship of cost to various forces will help us to take various decisions. Output is an important factor, which influences the cost.

The cost-output relationship plays an important role in determining the optimum level of production. Knowledge of the cost-output relation helps the manager in cost control, profit prediction, pricing, promotion etc. The relation between cost and its determinants is technically described as the cost function.

C= f (S, O, P, T ….)

Where:

C= Cost (Unit or total cost)

S= Size of plant/scale of production

O= Output level

P= Prices of inputs

(a) Cost-Output Relation in the short-run:

The cost concepts made use of in the cost behavior are total cost, Average cost, and marginal cost.Total cost is the actual money spent to produce a particular quantity of output. Total cost is the summation of fixed and variable costs.

TC=TFC+TVC

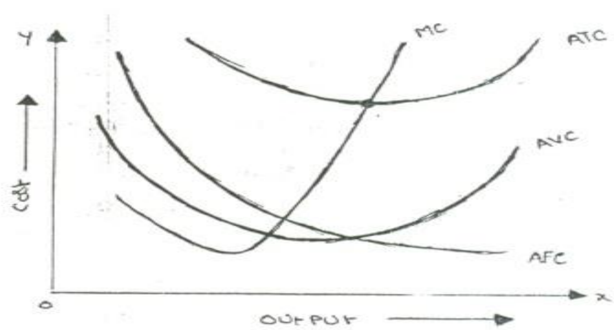
Up to a certain level of production total fixed cost i.e., the cost of plant, building, equipment etc, remains fixed. But the total variable cost i.e., the cost of labour, raw materials etc., Vary with the variation in output. Average cost is the total cost per unit. It can be found out as follows.

AC= TC/Q

The total of average fixed cost (TFC/Q) keep coming down as the production is increased and average variable cost (TVC/Q) will remain constant at any level of output.

Marginal cost is the addition to the total cost due to the production of an additional unit of product. It can be arrived at by dividing the change in total cost by the change in total output.

In the short-run there will not be any change in total fixed cost. Hence change in total cost implies change in total variable cost only.



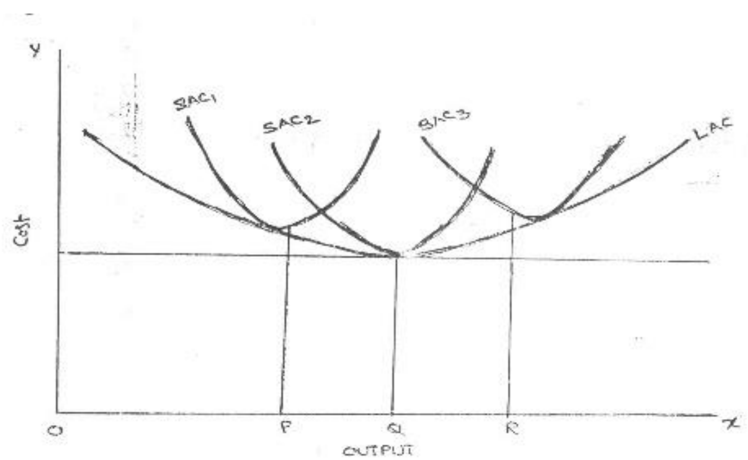
b. Cost-Output Relationship in the long-run:

Long run is a period, during which all inputs are variable including the one, which are fixes in the short-run. In the long run a firm can change its output according to its demand. Over a long period, the size of the plant can be changed, unwanted buildings can be sold staff can be increased or reduced. The long run enables the firms to expand and scale of their operation by bringing or 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 the total cost and the total output. In the long-run cost-output relationship is influenced by the law of returns to scale.

In the long run a firm has a number of alternatives in regards to the scale of operations. For each scale of production or plant size, the firm has an appropriate short-run average cost curves. The short-run average cost (SAC) curve applies to only one plant whereas the long-run average cost (LAC) curve takes in to consideration many plants.

The long-run cost-output relationship is shown graphically with the help of "LCA' curve.



7. **Explain the breakeven point?**

Break – Even- Point: If we divide the term into three words, then it does not require further explanation.

Break-Divide

Even-Equal

Point-Place or Position

Break Even Point refers to the point where total cost is equal to total revenue. It is a point of no profit, no loss. This is also a minimum point of no profit, no loss. This is also a minimum point of production where total costs are recovered. If sales go up beyond the Break Even Point, organization makes a profit. If they come down, a loss is incurred.

1. Break Even point (Units) = $\frac{\text{Fixed Expenses}}{\text{Contribution per unit}}$
2. Break Even point (In Rupees) = $\frac{\text{Fixed expenses}}{\text{Contribution}}$ X sales

Important:

1) Profit and Loss Account
2) Relationship between cost, volume and profit
3) Long term planning
4) Useful for forecasting
5) Serves as a tool of cost control

8. What is break-even analysis? State its merits and demerits?

The study of cost-volume-profit relationship is often referred as BEA. The term BEA is interpreted in two senses. In its narrow sense, it is concerned with finding out BEP; BEP is the point at which total revenue is equal to total cost. It is the point of no profit, no loss. In its broad determine the probable profit at any level of production.

Merits:

a) Information provided by the Break Even Chart can be understood more easily than those contained in the profit and Loss Account and the cost statement.
b) Break Even Chart discloses the relationship between cost, volume and profit. It reveals how changes in profit. So, it helps management in decision-making.
c) It is very useful for forecasting costs and profits long term planning and growth
d) The chart discloses profits at various levels of production.
e) It serves as a useful tool for cost control.

f) It can also be used to study the comparative plant efficiencies of the industry.

g) Analytical Break-even chart present the different elements, in the costs – direct material, direct labour, fixed and variable overheads.

Demerits:

a) Break-even chart presents only cost volume profits. It ignores other considerations such as capital amount, marketing aspects and effect of government policy etc., which are necessary in decision making.

b) It is assumed that sales, total cost and fixed cost can be represented as straight lines. In actual practice, this may not be so.

c) It assumes that profit is a function of output. This is not always true. The firm may increase the profit without increasing its output.

d) A major drawback of BEC is its inability to handle production and sale of multiple products.

e) It is difficult to handle selling costs such as advertisement and sale promotion in BEC.

f) It ignores economics of scale in production.

g) Fixed costs do not remain constant in the long run.

h) Semi-variable costs are completely ignored.

i) It assumes production is equal to sale. It is not always true because generally there may be opening stock.

j) When production increases variable cost per unit may not remain constant but may reduce on account of bulk buying etc.

k) The assumption of static nature of business and economic activities is a well-known defect of BEC.

9. Explain in details the concepts of BEA?

The concept of Break Even analysis is -

A. Fixed cost

B. Variable cost

C. Contribution
D. Margin of safety
E. Angle of incidence
F. Profit volume ratio
G. Break-Even-Point

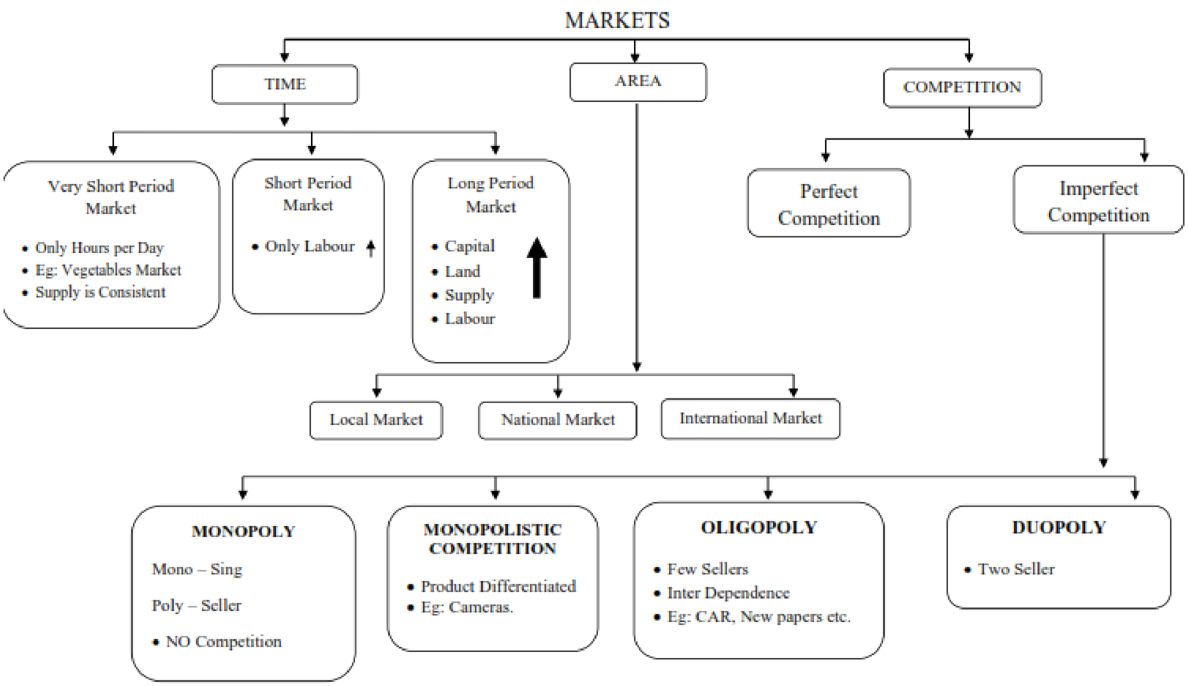
UNIT – III
MARKETS AND NEW ECONOMIC ENVIRONMENT

1. Define markets and explain how markets are classified?

A market may be also defined as the demand made by a certain group of potential buyers for a good or service. The former one is a narrow concept and later one, a broader concept.

Economists describe a market as a collection of buyers and sellers who transact over a particular product or product class (the housing market, the clothing market, the grain market etc.).
For business purpose we define a market as people or organizations with wants (needs) to satisfy, money to spend, and the willingness to spend it.

Market structure describes the competitive environment in the market for any good or service. A market consists of all firms and individuals who are willing and able to buy or sell a particular product. This includes firms and individuals currently engaged in buying and selling a particular product, as well as potential entrants.



2.What is a perfect and imperfect market? Describe its features.

Perfect competition refers to a market structure where competition among the sellers and buyers prevails in its most perfect form. In a perfectly competitive market, a single market price prevails for the commodity, which is determined by the forces of total demand and total supply in the market.

Features of Perfect Competition

The following features characterize a perfectly competitive market:

- A large number of buyers and sellers
- Homogeneous product
- Free entry and exit
- Perfect knowledge
- Indifference
- Non-existence of transport costs
- Perfect mobility of factors of production

Features of Imperfect Competition

- Monopoly
- Monopolistic Competition
- Oligopoly
- Duopoly

Features of monopoly

The following are the features of monopoly:

1. Single person or a firm
2. No close substitute
3. Large number of Buyers
4. Price Maker
5. Supply and Price
6. Downward Sloping Demand Curve

Features of Monopolistic Competition

The important features of monopolistic competition are:

1. Existence of Many firms
2. Product Differentiation
3. Large Number of Buyers
4. Free Entry and Exist of Firms
5. Selling costs
6. Imperfect Knowledge

Features of Oligopoly

The main features of oligopoly are: The term oligopoly is derived from two Greek words, oligos meaning a few, and pollen meaning to sell. Oligopoly is the form of imperfect competition where there are a few firms in the market, producing either a homogeneous product or producing products, which are close but not perfect substitute of each other.

1. Few Firms
2. Interdependence
3. Indeterminate Demand Curve
4. Advertising and selling costs
5. Price Rigidity

1. Explain features of monopolistic competition. How price and out-put is determined ?

Perfect competition and pure monopoly are rate phenomena in the real world. Instead, almost every market seems to exhibit characteristics of both perfect competition and monopoly. Hence in the real world it is the state of imperfect competition lying between these two extreme limits that work. Edward. H. Chamberlain developed the theory of monopolistic competition, which presents a more realistic picture of the actual market structure and the nature of competition.

Features of Monopolistic Competition

The important features of monopolistic competition are:

a) Existence of Many firms
b) Product Differentiation
c) Large Number of Buyers
d) Free Entry and Exist of Firms
e) Selling costs
f) Imperfect Knowledge

Price – Output Determination under Monopolistic Competition

Since under monopolistic competition different firms produce different varieties of products, different prices for them will be determined in the market depending upon the demand and cost conditions. Each firm will set the price and output of its own product. Here also the profit will be maximized when marginal revenue is equal to marginal cost.

Short-run equilibrium of the firm

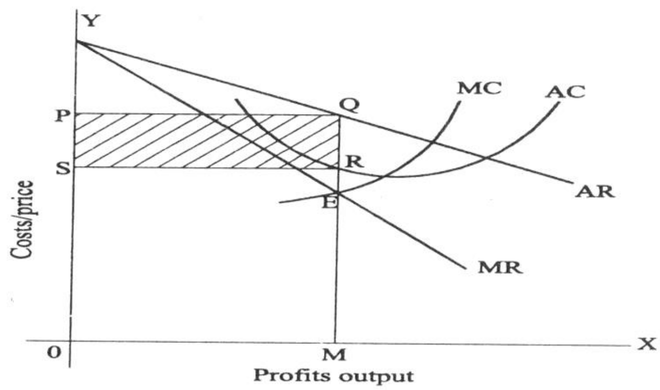


Fig. 6.15

If the demand and cost conditions are less favorable the monopolistically competitive firm may incur loss in the short-run

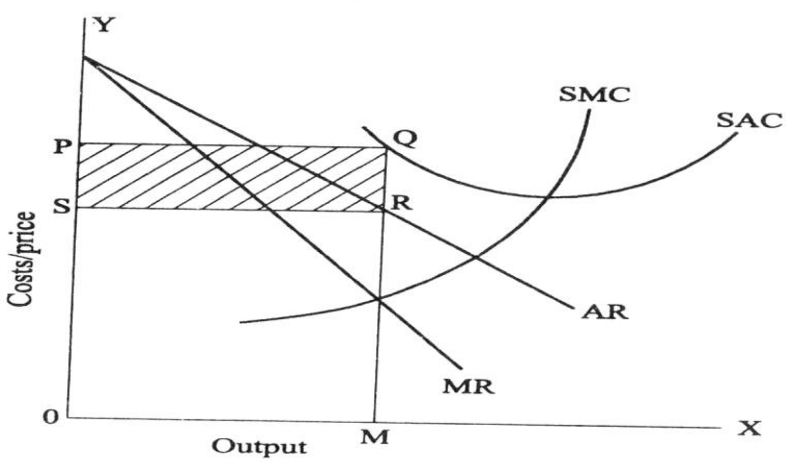


Fig. 6.16

Long – Run Equilibrium of the Firm:

A monopolistically competitive firm will be long – run equilibrium at the output level where marginal cost equal to marginal revenue. Monopolistically competitive firm in the long run attains equilibrium where MC=MR and AC=AR Fig 6.17 shows this trend.

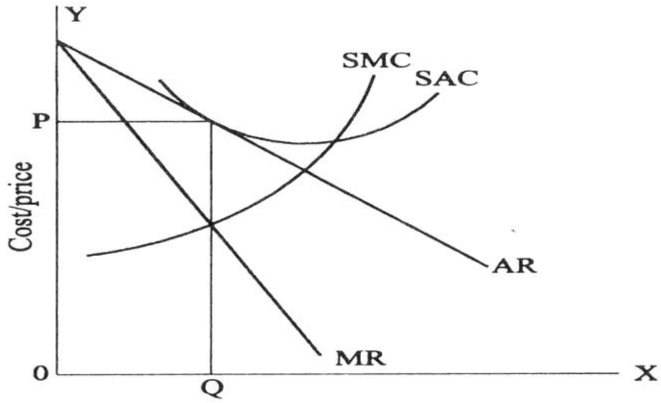


Fig. 6.17

Price determinants – Demand and supply

The price of a product is determined by the demand for and supply of that product. According to Marshall the role of these two determinants is like that of a pair of scissors in cutting cloth. It is possible that at times, while one pair is held fixed, the other is moving to cut the cloth. Similarly, it is conceivable that there could be situations under which either demand or supply is playing a passive role, and the other, which is active, alone appear to be determining the price. However, just as one pair of scissors alone can never cut a cloth, demand or supply alone is insufficient to determine the price.

Equilibrium Price

The price at which demand and supply of a commodity is equal known as equilibrium price.

<u>Price output determination under MONOPOLY</u> (Equilibrium Point)

The monopolistic firm attains equilibrium when its marginal cost becomes equal to the marginal revenue. The monopolist always desires to make maximum profits. He makes maximum profits when MC=MR. He does not increasing his output if his revenue exceeds his costs. But when the costs exceed the revenue, the monopolist firm incur loses. Hence the monopolist curtails his production. He produces up to that point where additional cost is equal to the additional revenue (MR=MC). Thus point is called equilibrium point.

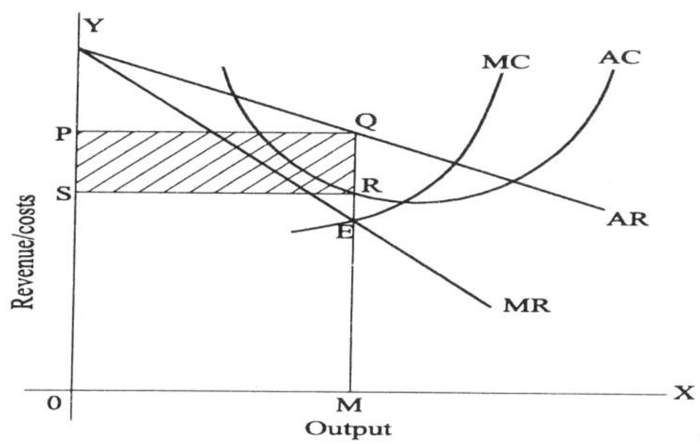


Fig. 6.12

The above diagram (Average revenue) = MQ or OP

Average cost = MR

Profit per unit = Average Revenue-Average cost=MQ-MR=QR

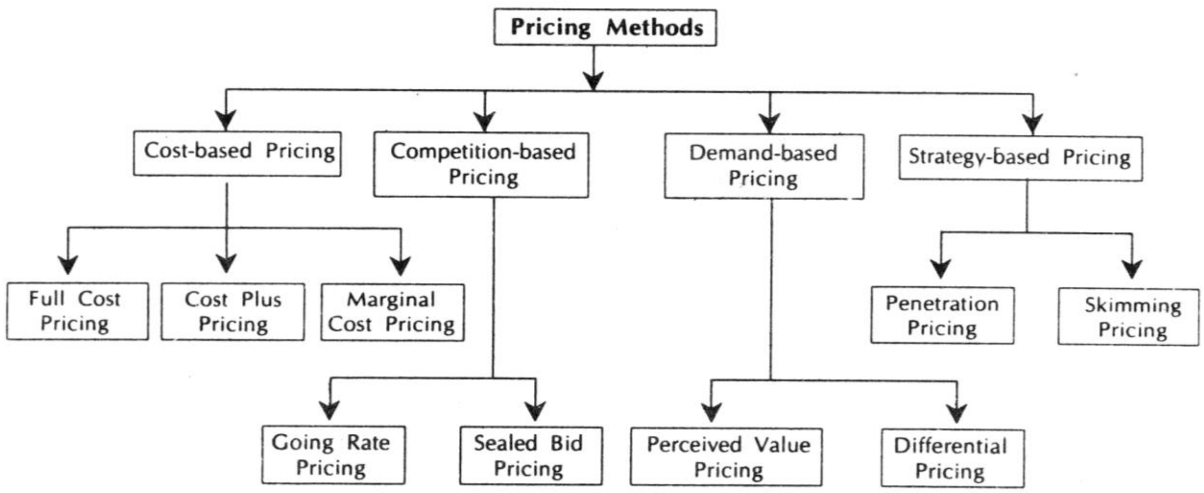
Total Profit = QRXSR=PQRS

The area PQRS resents the maximum profit earned by the monopoly firm.

But it is not always possible for a monopolist to earn super-normal profits. If the demand and cost situations are not favorable, the monopolist may realize short run losses

5)Explain various pricing methods followed by business organizations?

The micro – economic principle of profit maximization suggests pricing by the marginal analysis. That is by equating MR to MC. However the pricing methods followed by the firms in practice around the world rarely follow this procedure. This is for two reasons; uncertainty with regard to demand and cost function and the deviation from the objective of short run profit maximization.



PRICING OBJECTIVES:

1. **Monitory pricing objectives:**
   a) To achieve a targeted return on investment
   b) To maximize the profits
   c) To increase sales volume
   d) Pricing stabilization
2. **Non-monitory pricing objectives**
   a) Society oriented objectives
   b) Maximize market share
   c) Operation oriented objectives
   d) Patronase oriented objectives

PRICING POLICY: the pricing policy of a company sends out signals about the company philosophies. It helps in creating that perception in customers mind.

a) Negotiations

b) Quality

c) Discounts

BUSINESS FEATURES AND EVALUATION OF DIFFERENT FORMS OF BUSINESS ORGANIZATION

6) Explain the features of sole trade organization. Discuss the merits and demerits of sole trade form of organization.

The sole trader is the simplest, oldest and natural form of business organization. It is also called sole proprietorship. 'Sole' means one. 'Sole trader' implies that there is only one trader who is the owner of the business. It is a one-man form of organization wherein the trader assumes all the risk of ownership carrying out the business with his own capital, skill and intelligence. He is the boss for himself. He has total operational freedom. He is the owner, Manager and controller.

Features:

a) It is easy to start a business under this form and also easy to close.

b) He introduces his own capital. Sometimes, he may borrow, if necessary

c) He enjoys all the profits and in case of loss, he lone suffers.

d) He has unlimited liability which implies that his liability extends to his personal properties in case of loss.

e) He has a high degree of flexibility to shift from one business to the other.

f) Business secretes can be guarded well

g) There is no continuity. The business comes to a close with the death, illness or insanity of the sole trader. Unless, the legal heirs show interest to continue the business, the business cannot be restored.

h) He has total operational freedom. He is the owner, manager and controller.

i) He can be directly in touch with the customers.

j) He can take decisions very fast and implement them promptly.

k) Rates of tax, for example, income tax and so on are comparatively very low.

Merits

The following are the merits of the sole trader from of business organization:

a) Easy to start and easy to close
b) Personal contact with customers directly
c) Prompt decision-making
d) High degree of flexibility
e) Secrecy
f) Low rate of taxation
g) Direct motivation
h) Total Control
i) Minimum interference from government
j) Transferability

Demerits

The following are the demerits of sole trader form:

a) Unlimited liability
b) Limited amounts of capital
c) No division of labour
d) Uncertainty
e) Inadequate for growth and expansion
f) Lack of specialization
g) More competition
h) Low bargaining power

7) Explain the features, merits and limitations of Joint Stock Company?

The joint stock company emerges from the limitations of partnership such as joint and several liability, unlimited liability, limited resources and uncertain duration and so on. Normally, to take part in a business, it may need large money and we cannot foretell the fate of business. It is not literally possible to get into business with little money. Against this background, it is interesting to study the functioning of a joint stock company. The main principle of the joint stock company from is to provide opportunity to take part in business with a low investment as possible say Rs.1000. Joint Stock Company has been a boon for investors with moderate funds to invest.

The word ‘ company’ has a Latin origin, com means ‘ come together’, pany means ‘ bread’, joint stock company means, people come together to earn their livelihood by investing in the stock of company jointly.

Features

This definition brings out the following features of the company:

1. Artificial person
2. Separate legal existence
3. Voluntary association of persons
4. Limited Liability
5. Capital is divided into shares
6. Transferability of shares
7. Common Seal
8. Perpetual succession
9. Ownership and Management separated
10. Winding up
11. The name of the company ends with ‘limited’

Advantages:

The following are the advantages of a joint Stock Company

a) Mobilization of larger resources
b) Separate legal entity

c) Limited liability
d) Transferability of shares
e) Liquidity of investment
f) Inculcates the habit of savings and investments
g) Democracy in management
h) Economics of large scale production
i) Continued existence
j) Institutional confidence
k) Professional management
l) Growth and Expansion

Disadvantages

a) Formation of company is a long drawn procedure
b) High degree of government interference
c) Inordinate delays in decision-making
d) Lack or initiative
e) Lack of responsibility and commitment
f) Lack of responsibility and commitment

8) Explain features of partnership with its merits and demerits.

Partnership is an improved from of sole trader in certain respects. Where there are like-minded persons with resources, they can come together to do the business and share the profits/losses of the business in an agreed ratio. Persons who have entered into such an agreement are individually called ‘partners’ and collectively called ‘firm’. The relationship among partners is called a partnership.

Indian Partnership Act, 1932 defines partnership as the relationship between two or more persons who agree to share the profits of the business carried on by all or any one of them acting for all.

Features

a) Relationship
b) Two or more persons

c) There should be a business
d) Agreement
e) Carried on by all or any one of them acting for all

The following are the other features:

i. Unlimited liability
ii. Number of partners
iii. 10 partners is case of banking business
iv. 20 in case of non-banking business
v. Division of labour
vi. Personal contact with customers
vii. Flexibility

Advantages:

The following are the advantages of the partnership from:

a) Easy to form
b) Availability of larger amount of capital
c) Division of labour
d) Flexibility
e) Personal contact with customers
f) Quick decisions and prompt action
g) The positive impact of unlimited liability

Disadvantages:

The following are the disadvantages of partnership:

a) Formation of partnership is difficult
b) Liability:
c) Lack of harmony or cohesiveness

d) Limited growth
e) Instability
f) Lack of Public confidence

9) Explain different types of public sector enterprises?

Public enterprises occupy an important position in the Indian economy. Today, public enterprises provide the substance and heart of the economy. Its investment of over Rs.10,000crore is in heavy and basic industry, and infrastructure like power, transport and communications. The concept of public enterprise in Indian dates back to the era of pre-independence.

Features:

- Under the control of a government department
- More financial freedom
- Like any other government department
- Budget, accounting and audit controls
- More a government organization, less a business organization

Advantages

1. Effective control
2. Responsible Executives
3. Less scope for mystification of funds
4. Adds to Government revenue

Disadvantages:

1. Decisions delayed
2. No incentive to maximize earnings
3. Slow response to market conditions
4. Redtapism and bureaucracy
5. Incidence of more taxes

10) Explain the impact of liberalization, privatization and globalization on Indian economy?

The economy of India had undergone significant policy shifts in the beginning of the 1990s. This new model of economic reforms is commonly known as the LPG or liberalization, privatization and globalization model.

Liberalization: liberalization is a very broad term that usually refers to fewer government regulations and restrictions in the economy in exchange for greater participation of private entity. According to M.Dhanuja: Liberalization is related to that state of economic conditions in which rules, regulations and controls are eliminated to promote competition.

The main aim of liberalization was to dismantle the excessive regulatory framework which acted as a barrier for industries growth. Major purpose of liberalization was free the large private sector from the bureaucratic control if therefore started dismantling the industrial licensing and controls.

Nature of Liberalization:

1. Freedom in fixing price
2. Reduction in restriction
3. Increase competitiveness
4. Reforms of the banking system
5. Increase of foreign investment

Factors favoringLiberalization:

1. Severe economic situation
2. Success of export-promotion, industrialization and failure of import-substitution industrialization
3. globalization

THE POSITIVE AND NEGATIVES IMPACTS OF LIBERALISATION IN INDIA

Positive impact:

1. Improvement in healthcare
2. Growth of agriculture
3. Liberalization and employment
4. Liberalization and economic growth
5. Liberalization and mergers in India

Negative impact:

1. Reduces profit
2. Exploitation of workers
3. Reduces economic freedom
4. Short-term adjustments
5. Effect on capital

PRIVATISATON:

Privatization is part of the process of rethinking the welfare state. Society is searching for new ways of delivering services because of our collective sence of efficiency. “Privatization where applied has achieved some measures of success in the local government”

According to Butler “privatization is the transfer of government assets or functions to the private sector”.

NATURE OF PRIVATISATION:

1. Transfer of ownership
2. Increased competition
3. Increased efficiency
4. Increased opportunities
5. Effectiveness of deal depends on host country

MODE OF PRIVATISATON:

1. Initial public offering
2. Strategic sale
3. Sale of foreigners
4. Equal-Access voucher programmes
5. Management-employee buy-out
6. Franchising

7. Leasing
8. Liquidation
9. Denationalization
10. Managerial privatization
11. Contracting out

IMPACT OF PRIVATISATION

1. **Positive impact:**
   - Provides momentum in the competitive sector
   - Fosters sustainablecompetitive advantage
   - Improves financial health
   - Better services to the customers
   - Beneficial for the growth of employees
   - Escalates the performance benchmark
2. **Negative impact:**
   - Ignores social objectives
   - Lack of transparance
   - Loses the mission
   - High employee turnover
   - Support to unifair practices
   - Conflict of interest
   - Escalates price inflation

Globalization: Globalization is the process of international integration arising from the interchange of worldviews products, ideas and other aspects of culture. Advances in transaction telecommunication etc.

Globalization is a powerful real aspects of the new world system and it represents one of the most influential forces in determining the future course of the planet.

According to charless Hill "Globalisation is the shift towards a more integrated and interdependent world economy.

Globalization has 2 main components

1. The globalisato of markets
2. The globalization of production

Nature of globalization:

1. Improved technology in transportation and telecommunications
2. Movement of people and capital
3. Diffusion of knowledge
4. NGO’s and MNC’s
5. Rapid discontinuous change
6. Growing complexity
7. Increased number and diversity of participants

FACTORS GOVERNING GLOBALISATION:

1. Human resources
2. Growing entrepreneurship
3. Growing domestic market
4. Niche markets
5. Expanding markets
6. NGO’s
7. Competition
8. Economic liberalization

IMPACT OF GLOBALISATION:

Positive:

- Huge amount of foreign investment
- Provides employment
- Updated technology
- Free flow of capital
- Increase in indusrialisation
- Balanced development of world economy
- Culture exchange
- Demand for a variety of products

Negative:

1. Reduced job and income
2. Poor laborpracticesand environmental policies

3. Heterogeneity of problems
4. Risks and uncertainties
5. Short term gains
6. Social security
7. Reluctance of developed and developin countries
8. Globalization and the world's poor

Evaluation of LPG

- Giant and Lilliputians compete
- FII more opportunistic
- Costly debt servicing
- Public sector employees disgruntled
- Decline in purchasing power
- Declining personal savings
- Disappearing competitive edge
- Increasing sickness in industries
- Unfavorable government policies
- Dumping grounds
- Anti-dumping duties
- Benefit of LPG marginalized

UNIT – IV

Financial Accounting and Financial Analysis

Introduction:

As you are aware, every trader generally starts business for purpose of earning profit. While establishing business, he brings own capital, borrows money from relatives, friends, outsiders or financial institutions. Then he purchases machinery, plant, furniture, raw materials and other assets. He starts buying and selling of goods, paying for salaries, rent and other expenses, depositing and withdrawing cash from bank. Like this he undertakes innumerable transactions in business.

2.1 Meaning of Accounting:

Thus, book-keeping is an art of recording the business transactions in the books of original entry and the ledges. Accountancy begins where Book-keeping ends. Accountancy means the compilation of accounts in such a way that one is in a position to know the state of affairs of the business. The work of an accountant is to analyze, interpret and review the accounts and draw conclusion with a view to guide the management in chalking out the future policy of the business.

2.2 Definition of Accounting:

Smith and Ashburne: "Accounting is a means of measuring and reporting the results of economic

activities."

R.N. Anthony: "Accounting system is a means of collecting summarizing, analyzing and reporting in monetary terms, the information about the business.

American Institute of Certified Public Accountants (AICPA): "The art of recording, classifying and summarizing in a significant manner and in terms of money transactions and events, which are in part at least, of a financial character and interpreting the results thereof."
Thus, accounting is an art of identifying, recording, summarizing and interpreting business transactions of financial nature. Hence accounting is the Language of Business.

2.3 Branches of Accounting

UNIT- V
CAPITAL AND CAPITAL BUDGETING

Introduction:

Finance is the prerequisite to commence and vary on business. It is rightly said to be the lifeblood of the business. No growth and expansion of business can take place without sufficient finance. It shows that no business activity is possible without finance. This is why; every business has to make plans regarding acquisition and utilization of funds.
However efficient a firm may be in terms of production as well as marketing if it ignores the proper management of flow of funds it certainly lands in financial crunch and the very survival of the firm would be at a stake.

1. Explain the different sources of raising finance for corporate sector?

In case of proprietorship business, the individual proprietor generally invests his own savings to start with, and may borrow money on his personal security or the security of his assets from others. Similarly, the capital of a partnership from consists partly of funds contributed by the partners and partly of borrowed funds. But the company from of organization enables the promoters to raise necessary funds from the public who may contribute capital and become members (shareholders) of the company. In course of its business, the company can raise loans directly from banks and financial institutions or by issue of securities (debentures) to the public. Besides, profits earned may also be reinvested instead of being distributed as dividend to the shareholders.

Source of Company Finance

Based upon the time, the financial resources may be classified into

1. Sources of long term
2. Sources of short – term finance.
3. Some of these sources also serve the purpose of medium – term finance.

I. The Source of Long – Term Finance Are:

1. Issue of shares
2. Issue debentures
3. Loan from financial institutions
4. Retained profits and
5. Public deposits

II. Sources of Short-term Finance are:

1. Trade credit
2. Bank loans and advances and
3. Short-term loans from finance companies.

2. **What is working capital? Explain the factors governing working capital requirements.** Illustrate:

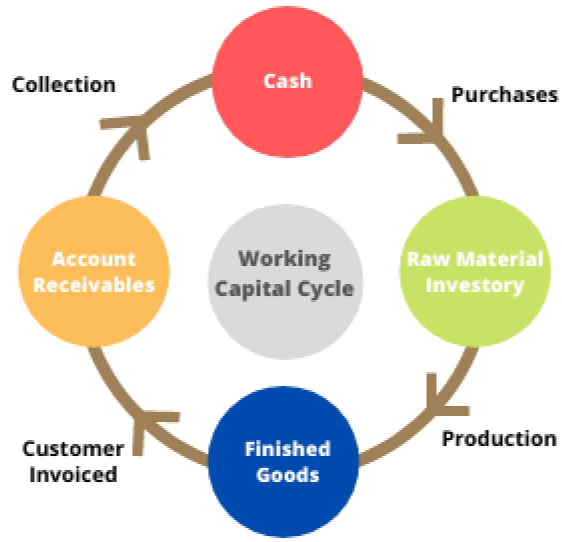
Finance is required for two purpose viz. for it establishment and to carry out the day-to-day operations of a business. Funds are required to purchase the fixed assets such as plant, machinery, land, building, furniture, etc., on long-term basis. Investments in these assets represent that part of firm's capital, which is blocked on a permanent of fixed basis and is called fixed capital. Funds are also needed for short-term purposes such as the purchase of raw materials, payment of wages and other day-to-day expenses, etc. and these funds are known as working capital.

Factors Determining the Working Capital Requirements:

There are a large number of factors such as the nature and size of business, the character of their operations, the length of production cycle, the rate of stock turnover and the state of economic situation etc. that decode requirement of working capital. These factors have different importance and influence on firm differently. In general following factors generally influence the working capital requirements.

- Nature or character of business
- Size of business or scale of operations
- Production policy
- Manufacturing process/Length of production cycle
- Seasonal variations
- Working capital cycle
- Credit policy
- Business cycles
- Rate of growth of business

3. **Components of working capital and working capital cycle. Importance of WorkingCapital?**



Working capital cycle= inventory days+ Receivable days –payable days

There are two components of working capital:

a) **Gross working capital-** gross working capital refers to the capital invested in total current assets of the enterprise.In the broader sense, the term working capital refers to the gross working capital. The notion of the gross working capital refers to the capital invested in total current assets of the enterprise. Current assets are those assets, which in the ordinary course of business, can be converted into cash within a short period, normally one accounting year.

Examples of current assets:

1. Cash in hand and bank balance
2. Bills receivables or Accounts Receivables
3. Sundry Debtors (less provision for bad debts)
4. Short-term loans and advances.
5. Inventories of stocks, such as:
    a. Raw materials
    b. Work – in process

c. Stores and spares

d. Finished goods

6. Temporary Investments of surplus funds.
7. Prepaid Expenses
8. Accrued Incomes etc.

b) **Net Working Capital-** Networking capital represents the excess of current assets over current liabilities.In a narrow sense, the term working capital refers to the net working capital. Networking capital represents the excess of current assets over current liabilities.

Current liabilities are those liabilities, which are intend to be paid in the ordinary course of business within a short period, normally one accounting year out of the current assets or the income of the business. Net working capital may be positive or negative. When the current assets exceed the current liabilities net working capital is positive and the negative net working capital results when the liabilities are more than the current assets.

Examples of current liabilities:

1. Bills payable
2. Sundry Creditors or Accounts Payable.
3. Accrued or Outstanding Expanses.
4. Short term loans, advances and deposits.
5. Dividends payable
6. Bank overdraft
7. Provision for taxation etc

Importance of Working Capital:

Working capital is refereed to be the lifeblood and nerve center of a business. Working capital is as essential to maintain the smooth functioning of a business as blood circulation in a human body. No business can run successfully without an adequate amount of working capital.

The main advantages of maintaining adequate amount of working capital are as follows:

- **Solvency of the business:** Adequate working capital helps in maintaining solvency of the business by providing uninterrupted flow of production.
- **Good will:** Sufficient working capital enables a business concern to make prompt payment and hence helps in creating and maintaining good will.
- **Easy loans:** A concern having adequate working capital, high solvency and good credit standing can arrange loans from banks and others on easy and favorable terms.
- **Cash Discounts:** Adequate working capital also enables a concern to avail cash discounts on the purchases and hence it reduces costs.
- **Regular supply of raw materials:** Sufficient working capital ensures regular supply of raw materials and continuous production.
- **Regular payments of salaries wages and other day to day commitments:** A company which has ample working capital can make regular payment of salaries, wages and other day to day commitments which raises the morale of its employees, increases their efficiency, reduces wastage and cost and enhances production and profits.
- **Exploitation of favorable market conditions:** The concerns with adequate working capital only can exploit favorable market conditions such as purchasing its requirements in bulk when the prices are lower.
- **Ability to face crisis:** Adequate working capital enables a concern to face business crisis in emergencies.
- **Quick and regular return on Investments:** Every investor wants a quick and regular return on his investment. Sufficiency of working capital enables a concern to pay quick and regular dividends to its investors, as there may not be much pressure to plough back profits. This gains the confidence of its investors and creates a favorable market to raise additional funds in the future.
- **High morale:** Adequacy of working capital creates an environment of security, confidence, and high morale and creates overall efficiency in a business. Every business concern should have adequate working capital to run its business operations.

The Need or Objectives of Working Capital:

The need for working capital arises mainly due to the time gap between production and realization of cash. The process of production and sale cannot be done instantaneously and hence the firm needs to hold the current assets to fill-up the time gaps. There are time gaps in purchase of raw materials and production; production and sales: and sales and realization of cash. The working capital is needed mainly for the following purposes:

a) For the purchase of raw materials.
b) To pay wages, salaries and other day-to-day expenses and overhead cost such as fuel, power and office expenses, etc.
c) To meet the selling expenses such as packing, advertising, etc.
d) To provide credit facilities to the customers and
e) To maintain the inventories of raw materials, work-in-progress, stores and spares and finishes stock etc.

Factors determining the working capital requirements:

There are a large number of factors such as the nature and size of business, the character of their operations, the length of production cycle, the rate of stock turnover and the state of economic situation etc. that decode requirement of working capital. These factors have different importance and influence on firm differently. In general following factors generally influence the working capital requirements.

a. **Nature or character of business**: The working capital requirements of a firm basically depend upon the nature of its business. Public utility undertakings like electricity, water supply and railways need very limited working capital as their sales are on cash and are engaged in provision of services only. On the other hand, trading firms require more investment in inventories, receivables and cash and such they need large amount of working capital. The manufacturing undertakings also require sizable working capital.
b. **Size of business or scale of operations:** The working capital requirements of a concern are directly influenced by the size of its business, which may be measured in terms of scale of operations. Greater the size of a business unit, generally, larger will be the requirements of working capital. However, in some cases, even a smaller concern may need more working capital due to high overhead charges, inefficient use of available resources and other economic disadvantages of small size.

c. **Production policy:** If the demand for a given product is subject to wide fluctuations due to seasonal variations, the requirements of working capital, in such cases, depend upon the production policy. The production could be kept either steady by accumulating inventories during stack periods with a view to meet high demand during the peck season or the production could be curtailed during the slack season and increased during the peak season. If the policy is to keep the production steady by accumulating inventories it will require higher working capital.

d. **Manufacturing process/Length of production cycle:** In manufacturing business, the requirements of working capital will be in direct proportion to the length of manufacturing process. Longer the process period of manufacture, larger is the amount of working capital required, as the raw materials and other supplies have to be carried for a longer period.

e. **Seasonal variations**: If the raw material availability is seasonal, they have to be bought in bulk during the season to ensure an uninterrupted material for the production. A huge amount is, thus, blocked in the form of material, inventories during such season, which give rise to more working capital requirements. Generally, during the busy season, a firm requires larger working capital then in the slack season.

f. **Working capital cycle:** In a manufacturing concern, the working capital cycle starts with the purchase of raw material and ends with the realization of cash from the sale of finished products. This cycle involves purchase of raw materials and stores, its conversion into stocks of finished goods through work–in progress with progressive increment of labour and service costs, conversion of finished stock into sales, debtors and receivables and ultimately realization of cash. This cycle continues again from cash to purchase of raw materials and so on. In general the longer the operating cycle, the larger the requirement of working capital.

g. **Credit policy:** The credit policy of a concern in its dealings with debtors and creditors influences considerably the requirements of working capital. A concern that purchases its requirements on credit requires lesser amount of working capital compared to the firm, which buys on cash. On the other hand, a concern allowing credit to its customers shall need larger amount of working capital compared to a firm selling only on cash.

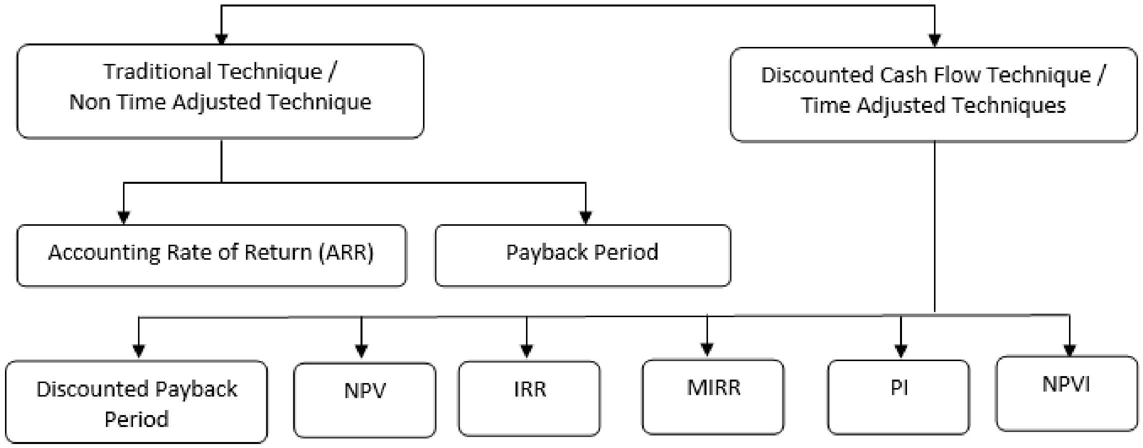
h. **Business cycles:** Business cycle refers to alternate expansion and contraction in general business activity. In a period of boom, i.e., when the business is prosperous, there is a need for larger amount of working capital due to increase in sales. On the contrary, in the times of depression, i.e., when there is a down swing of the cycle, the business contracts, sales decline, difficulties are faced in collection from debtors and firms may have to hold large amount of working capital.
i. **Rate of growth of business:** The working capital requirements of a concern increase with the growth and expansion of its business activities. The retained profits may provide for a part of working capital but the fast growing concerns need larger amount of working capital than the amount of undistributed profits.

Capital budgeting Techniques:

The capital budgeting appraisal methods are techniques of evaluation of investment proposal will help the company to decide upon the desirability of an investment proposal depending upon their; relative income generating capacity and rank them in order of their desirability. These methods provide the company a set of norms on the basis of which either it has to accept or reject the investment proposal. The most widely accepted techniques used in estimating the cost-returns of investment projects can be grouped under two categories.

a. Traditional methods
b. Discounted Cash flow methods

Techniques of Capital Budgeting



I. TRADITIONAL METHODS:

These methods are based on the principles to determine the desirability of an investment project on the basis of its useful life and expected returns. These methods depend upon the accounting information available from the books of accounts of the company. These will not take into account the concept of 'time value of money', which is a significant factor to determine the desirability of a project in terms of present value.

A. Payback period method:

It is the most popular and widely recognized traditional method of evaluating the investment proposals. It can be defined, as 'the number of years required to recover the original cash out lay invested in a project'.

According to Weston & Brigham, "The payback period is the number of years it takes the firm to recover its original investment by net returns before depreciation, but after taxes".

According to James. C. Vanhorne, "The payback period is the number of years required to recover initial cash investment.

The payback period is also called payout or payoff period. This period is calculated by dividing the cost of the project by the annual earnings after tax but before depreciation under this method the projects are ranked on the basis of the length of the payback period. A project with the shortest payback period will be given the highest rank and taken as the best investment. The shorter the payback period, the less risky the investment is the formula for payback period is

$$\text{Pay-back period} = \frac{\text{Cash outlay (or) original cost of project}}{\text{Annual cash inflow}}$$

Merits:

- It is one of the earliest methods of evaluating the investment projects.
- It is simple to understand and to compute.
- It does not involve any cost for computation of the payback period
- It is one of the widely used methods in small scale industry sector
- It can be computed on the basis of accounting information available from the books.

Demerits:

- This method fails to take into account the cash flows received by the company after the payback period.
- It doesn't take into account the interest factor involved in an investment outlay.
- It doesn't take into account the interest factor involved in an investment outlay.
- It is not consistent with the objective of maximizing the market value of the company's share.
- It fails to consider the pattern of cash inflows i. e., the magnitude and timing of cash inflows.

B. Accounting (or) Average Rate of Return Method (ARR): It is an accounting method, which uses the accounting information repeated by the financial statements to measure the probability of an investment proposal. It can be determined by dividing the average income after taxes by the average investment i.e., the average book value after depreciation.

According to 'Soloman', accounting rate of return on an investment can be calculated as the ratio of accounting net income to the initial investment, i.e.,

$$\textbf{ARR} = \frac{\text{Average net income after taxes}}{\text{Average Investment}} \times 100$$

$$\text{Average net income after taxes} = \frac{\text{Total Income after Taxes}}{\text{No. of Years}}$$

$$\text{Average investment} = \frac{\text{Total Investment}}{2}$$

On the basis of this method, the company can select all those projects who's ARR is higher than the minimum rate established by the company. It can reject the projects with an ARR lower than the expected rate of return. This method can also help the management to rank the proposal on the basis of ARR. A highest rank will be given to a project with highest ARR, where as a lowest rank to a project with lowest ARR.

Merits:

It is very simple to understand and calculate.

- It can be readily computed with the help of the available accounting data.
- It uses the entire stream of earning to calculate the ARR.

Demerits:

- It is not based on cash flows generated by a project.
- This method does not consider the objective of wealth maximization
- IT ignores the length of the projects useful life.
- It does not take into account the fact that the profits can be re-invested.

II: DISCOUNTED CASH FLOW METHODS:

The traditional method does not take into consideration the time value of money. They give equal weight age to the present and future flow of incomes. The DCF methods are based on the concept that a rupee earned today is more worth than a rupee earned tomorrow. These methods take into consideration the profitability and also time value of money.

A. Net present value method (NPV)

The NPV takes into consideration the time value of money. The cash flows of different years and valued differently and made comparable in terms of present values for this the net cash inflows of various period are discounted using required rate of return which is predetermined.

According to Ezra Solomon, "It is a present value of future returns, discounted at the required rate of return minus the present value of the cost of the investment."

NPV is the difference between the present value of cash inflows of a project and the initial cost of the project.

According the NPV technique, only one project will be selected whose NPV is positive or above zero. If a project(s) NPV is less than 'Zero'. It gives negative NPV hence. It must be rejected. If there are more than one project with positive NPV's the project is selected whose NPV is the highest.

The formula for NPV is

NPV= Present value of cash inflows – investment.

C1 C2 C3 Cn

NPV = ------ + ------- + -------- + -------

(1+K)

Co- investment

C1, C2, C3… Cn= cash inflows in different years. K= Cost of the Capital (or) Discounting rate

D= Years.

Merits:

- It recognizes the time value of money.
- It is based on the entire cash flows generated during the useful life of the asset.
- It is consistent with the objective of maximization of wealth of the owners.
- The ranking of projects is independent of the discount rate used for determining the present value.

Demerits:

- It is different to understand and use.
- The NPV is calculated by using the cost of capital as a discount rate. But the concept of cost of capital. If self is difficult to understood and determine.
- It does not give solutions when the comparable projects are involved in different amounts of investment.
- It does not give correct answer to a question whether alternative projects or limited funds are available with unequal lines.

B. Internal Rate of Return Method (IRR)

The IRR for an investment proposal is that discount rate which equates the present value of cash inflows with the present value of cash out flows of an investment. The IRR is also known as cutoff or handle rate. It is usually the concern's cost of capital.

According to Weston and Brigham "The internal rate is the interest rate that equates the present value of the expected future receipts to the cost of the investment outlay.

When compared the IRR with the required rate of return (RRR), if the IRR is more than RRR then the project is accepted else rejected. In case of more than one project with IRR more than RRR, the one, which gives the highest IRR, is selected.

The IRR is not a predetermine rate, rather it is to be trial and error method. It implies that one has to start with a discounting rate to calculate the present value of cash inflows. If the obtained present value is higher than the initial cost of the project one has to try with a higher rate. Likewise if the present value of expected cash inflows obtained is lower than the present value of cash flow. Lower rate is to be taken up. The process is continued till the net present value becomes Zero. As this discount rate is determined internally, this method is called internal rate of return method.

P1 - Q

IRR = L+ --------- X D

P1 –P2

L- Lower discount rate

P1 - Present value of cash inflows at lower rate.

P2 - Present value of cash inflows at higher rate.

Q- Actual investment

D- Difference in Discount rates.

Merits:

- It consider the time value of money
- It takes into account the cash flows over the entire useful life of the asset.
- It has a psychological appear to the user because when the highest rate of return projects are selected, it satisfies the investors in terms of the rate of return an capital
- It always suggests accepting to projects with maximum rate of return.
- It is inconformity with the firm's objective of maximum owner's welfare.

Demerits:

- It is very difficult to understand and use.
- It involves a very complicated computational work.
- It may not give unique answer in all situations.

C. Probability Index Method (PI)

The method is also called benefit cost ration. This method is obtained cloth a slight modification of the NPV method. In case of NPV the present value of cash out flows are profitability index (PI), the present value of cash inflows are divide by the present value of cash out flows, while NPV is a absolute measure, the PI is a relative measure.

It the PI is more than one (>1), the proposal is accepted else rejected. If there are more than one investment proposal with the more than one PI the one with the highest PI will be selected. This method is more useful in case of projects with different cash outlays cash outlays and hence is superior to the NPV method.