

**CHAPTER 4****MARGINAL COSTING****PART A: THEORY****❖ MARGINAL COST AND MARGINAL COSTING**

Marginal cost is defined as cost of producing one additional unit. Thus, marginal cost is the amount by which total cost changes when there is a change in output by one unit.

**Marginal Cost means Variable Cost. Marginal cost per unit remains unchanged irrespective of the level of activity or output.** Marginal cost is the sum total of direct material cost, direct labour cost, variable direct expenses and all variable overheads.

Under Marginal Costing technique, only variable costs are charged to cost units, the fixed costs attributable to a relevant period are written off in Costing Profit & Loss Account against the contribution for that period. Under Marginal Costing Technique, fixed costs are treated as period costs.

Marginal Costing is also known as:

- **Contributory Costing**
- **Variable Costing**
- **Comparative Costing**

**❖ ABSORPTION COSTING**

Under Absorption Costing Technique, both variable cost and fixed costs are charged to cost units. Under Absorption Costing Technique, fixed cost is treated as product cost. In short, the cost of a finished unit in inventory will include direct materials, direct labour, and both variable and fixed manufacturing overhead.

Absorption Costing is also known as:

- **Full Costing**
- **Full Absorption Method**

**❖ STOCK VALUATION**

Value of closing stock under Absorption Costing Technique will be higher as compared to value of closing stock under Marginal Costing Technique because of fixed cost element.

❖ **DISTINCTION BETWEEN MARGINAL COSTING AND ABSORPTION COSTING**

<b>MARGINAL COSTING</b>	<b>ABSORPTION COSTING</b>
Only variable cost is charged to products and inventory valuation.	Total cost (both fixed and variable) is charged to the cost of products and inventory valuation.
Fixed cost is not included in the cost of products. It is transferred to Costing Profit and Loss Account.	Fixed cost is included in the cost of products.
Stocks are valued only at variable costs. Stock values are lower in Marginal costing than in Absorption costing.	Opening and closing stocks are valued at total cost which includes both fixed and variable costs. Stock values in Absorption costing are, therefore, higher than in Marginal costing.
Profitability is judged by the contribution made by various products or departments.	Profitability is measured by profit earned by various products or departments.
Cost data helps to know the total contribution and contribution of each product.	Cost data is arrived on conventional pattern and hence is only the net profit for each product that is arrived at.
Difference in valuation of opening and closing stock does not affect the unit cost of production	Valuation of opening and closing stock is affected due to the fixed costs.

❖ **ADVANTAGES OF MARGINAL COSTING**

- **Simplified Pricing Policy**  
Since marginal (variable) cost per unit remains constant from period to period over a short span of time, firm’s decisions on pricing policy can be taken.
- **Proper recovery of overheads**  
Overheads are recovered in costing on the basis of pre-determined rates. Under marginal costing technique, fixed overheads are excluded and hence there will be no problem of under or over recovery of overheads.
- **Shows Realistic Profit**  
Under Marginal costing technique, the stock of finished goods and work-in-progress are carried on variable cost basis and the fixed expenses are written off to profit and loss account. This shows the true profit of the period.
- **How much to produce**  
Marginal costing helps in the preparation of break-even analysis which shows the effect of increasing or decreasing production activity on the profitability of the company.
- **Helps in decision making**  
Marginal costing helps the management in taking a number of business decisions like make or buy, discontinuance of a particular product, replacement of machines etc.

**❖ LIMITATIONS OF MARGINAL COSTING**

- Sales staff may make mistake of marginal cost for total cost and sell at a price which will result in loss or los profits. Hence, sales staff should be cautioned while giving marginal cost.
- Overheads of fixed nature cannot be altogether excluded particularly in large contracts, while valuing the work-in-progress.
- Some of the assumptions regarding the behaviour of various costs are not necessarily true in realistic situation. For example: the assumption that fixed cost will remain static throughout is not correct.
- Marginal cost ignores time factor and investment. The marginal cost of two jobs may be the same but the time taken for their completion and the cost of machines used may differ. The true cost of a job which takes longer time and uses costlier machine would be higher. This fact is not disclosed by marginal costing.

**❖ DECISION MAKING AREAS OF MARGINAL COSTING**

- **Fixation of Selling price**
  - ✓ Under normal circumstances
  - ✓ Under special market (export market) or a special customer
  - ✓ During recession
  - ✓ At marginal cost or below marginal cost.
- **Decisions relating to most profitable product mix**
  - ✓ Selection of optimal product mix
  - ✓ Substitution of one product with another
  - ✓ Discontinuing or dropping of a product line
- **Acceptance or rejection of a special offer**
- **Decisions relating to make or buy**
- **Retaining or replacing a machine**
- **Expanding or Contracting**

**❖ COST-VOLUME-PROFIT ANALYSIS AND ITS OBJECTIVES**

It is a technique that may used by the management to evaluate how costs and profits are affected by changes in the volume of business activities. Managers are quite often faced with decisive situations involving sales level, sales mix, selling prices and the right combination of these factors that will produce acceptable profits. As a result of change in operating conditions or change in economic environmental factors, the value of and the relationship among these variables also change.

Cost Volume Profit analysis is the analysis of three variables i.e. cost, volume and profit. Such an analysis explores the relationship between costs, revenue, activity levels and the resulting profit. It aims at measuring variation in cost and volume.

### **Importance of CVP analysis**

- The behaviour of cost in relation to volume.
- Volume of production or sales, where the business will break even.
- Sensitivity of profits due to variation in output.
- Amount of profit for a projected sales volume.
- Quantity of production and sales for a targeted profit level.

An understanding of CVP analysis is extremely useful to management in budgeting and profit planning. It elucidates the impact of the following on the net profit:

- Changes in selling prices
- Changes in volume of sales
- Changes in variable cost
- Changes in fixed cost

### **❖ ASSUMPTIONS OF COST VOLUME PROFIT (BREAK EVEN) ANALYSIS**

- All costs are easily classified into fixed costs and variable costs.
- Both revenue and cost functions are linear over the range of activity under consideration.
- Prices of output and input remains unchanged.
- Productivity of the factors of production will remain the same.
- The state of technology and the process of production will not change.
- There will be no significant change in the levels of inventory.
- The company manufactures a single product.
- In case of a multi-product company, the sales mix will remain unchanged.

### **❖ PROFIT VOLUME RATIO**

The Profit volume (PV Ratio) is the relationship between contribution and sales. It is also termed as contribution to sales ratio.

### **Significance of PV Ratio**

- PV Ratio is considered to be the basic indicator of the profitability of the business.
- The higher the PV Ratio, the better it is for a business. In the case of a firm enjoying steady business conditions over a period of years, the PV Ratio will also remain stable and steady.
- If PV Ratio is improved, it will result in better profits.

### **Improvement of PV Ratio**

- By reducing the variable cost
- By increasing the selling price
- By increasing the share of products with higher PV Ratio in the overall sales ratio

**Uses of PV Ratio**

- To compute the variable costs for any volume of sales
- To measure the efficiency or to choose a most profitable product line. The overall profitability of the firm can be improved by increasing the sales or output of a product giving a higher PV Ratio
- To determine break-even point and the level of output required to earn a desired profit
- To decide more profitable sales-mix

**❖ MAIN USES OF BREAK EVEN CHART****Break even chart facilitates:**

- Break even point
- Margin of safety
- Angle of incidence
- Sales required to earn desired amount of profit
- Fixed Cost, Variable Cost, Total Cost, Sales, Profit at various levels of operations.
- Inter firm comparisons
- Change in sales volume
- Change in Selling price
- Change in Variable Cost
- Change in fixed cost

**❖ STATE THE LIMITATIONS OF BREAK EVEN ANALYSIS**

- All costs cannot be separated into variable and fixed costs with accuracy.
- Fixed costs may change because of change in management policy or after a range of activity.
- Selling price may change because of increase or decrease in output, market demand & supply, competition etc.
- In case of multiple products, the sales mix need not necessarily be constant.
- Entire production need not necessarily be sold in practise
- Time value of money is ignored.

**❖ ANGLE OF INCIDENCE**

It is the angle of intersection between total sales line and total cost line drawn in the case of break even chart. It indicates the rate at which profits are earned. The larger the angle, the higher the rate of profit or vice versa.

**❖ KEY FACTOR OR LIMITING FACTOR**

Key factor is a factor which limits the activities of an undertaking. The extent of its influence must first be assessed while preparing functional budgets and taking decisions about the profitability of the product. Some of the examples of key factor are:

- Shortage of Raw Material
- Shortage of Labour
- Plant Capacity available (Machines)
- Sales Capacity Available
- Cash Available

**PART B: PRACTICAL**

**Q.1 Vidhi Corporation Ltd.** has prepared the following budget for the year 2020 - 2021

Sales units	15,000
Fixed Expenses	Rs. 34,000
Sales Value (Rs. 10/- per unit)	Rs. 1,50,000
Variable cost Rs. 6 per unit	

**Find** (i) P/V ratio (ii) Break even point (iii) Margin of safety (iv) MOS Ratio (v) BEP Ratio

**Q.2** The following data have been extracted from the books of Alfa Ltd.

<b>Year</b>	<b>Sales Rs.</b>	<b>Profit Rs.</b>
2019	5,00,000	(Loss) (25,000)
2020	7,50,000	1,00,000

**You are required to calculate :**

- (i) P/V Ratio
- (ii) Fixed Cost
- (ii) Break-even Sales
- (iv) Profit on sales of Rs. 4,00,000
- (v) Sales to earn a profit of Rs. 1,25,000.

