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UNDERSTANDING COST BEHAVIOUR AND COST - VOLUME - PROFIT ANALYSIS

CH.Naga Venkata Samba Siva Rao, M.Com., Lecturer, Sir C.R.Reddy College, Eluru. M.Vani Sai Priya, M.Com., Lecturer, Sir C.R.Reddy College, Eluru. M.Sri Jyothika, III B.Com (Computers), Sir C.R.Reddy college, Eluru.

ABSTRACT : Standing how costs change in response to changes in activity levels. It's a crucial aspect of cost analysis, helping businesses make informed decisions about pricing, production, and overall profitability. Cost analysis, in turn, is the study of how costs are incurred and how they relate to different aspects of a business, such as production, sales, and various operational activities.

Keywords: Costing, Cost Behaviour, Cost Analysis, Costing factors

Here's a more detailed breakdown:

Cost Behavior Analysis:

Understanding Cost Changes:

Cost behavior analysis focuses on how costs behave (increase, decrease, or remain constant) as activity levels (like production, sales, or labor hours) change.

Categorizing Costs:

Costs are typically classified into three main types based on their behavior:

Fixed Costs: Costs that remain constant regardless of the level of activity within a relevant range (e.g., rent, salaries).

Variable Costs: Costs that change directly with the level of activity (e.g., direct materials, direct labor).

Mixed Costs: Costs that have both fixed and variable components (e.g., utility bills).

Importance for Decision-Making:

Understanding cost behavior helps businesses:

Predict Costs: Forecast future costs based on anticipated activity levels.

Control Costs: Identify areas where costs can be reduced or optimized.

Set Prices: Determine appropriate pricing strategies based on cost structures.

Make Strategic Decisions: Evaluate the financial implications of various business decisions, such as production levels, product mix, and investment projects.

COST CLASSIFICATION



Basem Waheed

Cost Analysis:

Comprehensive Cost Study:

Cost analysis involves a broader study of how costs are incurred and how they relate to various aspects of the business.

Cost Drivers:

Cost analysis identifies cost drivers, which are factors that influence costs.

Cost-Benefit Analysis:

This is a common type of cost analysis that compares the costs of a project or decision with its potential benefits.

Tools and Techniques:

Cost analysis utilizes various tools and techniques, including:

Cost Accounting: Methods for tracking and allocating costs to different products, services, or departments.

Break-Even Analysis: Determining the sales volume needed to cover all costs.

Budgeting and Forecasting: Creating financial plans for future periods.

In essence, cost behavior analysis is a key component of overall cost analysis, providing insights into how costs change in response to activity levels, which is crucial for informed decision-making and financial planning.



The factors that influence cost behavior are as follows:

Raw materials' availability and quality used for production.

The location of the business and its nearness to the market.

The transportation cost incurred for the transportation of raw materials and finished products.

The power supply used for production and its nearness to the factory where the goods are produced.

The labor supply, their skills, and the wages they are given.

The source of financing the production process and the business activities.

The climate and its impact on raw materials and labor efficiency.

The government rules and the taxes imposed.

The scope of the business, outsourcing parts of the production process or services to other organizations, and the ability to tap resources.

The production size and its suitability.

Formula

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The management uses a mathematical cost function to determine cost behavior. It can also be plotted on a graph.

The cost behavior formula is as follows:

Cost Function: $y = MX + b$

where,

b is the fixed cost

M is the variable cost and,

X is the number of units produced.

The management uses the following assumptions to simplify the use of a cost behavior formula:

The variation in the total cost results from the variation in a cost driver.

One can summarize the cost behavior into a linear function within a relevant range. The range can imply the field within which the cost and activity level relationship exists.

Examples of Cost Behavior

Let us understand the concept with the help of the following examples:

Example #1

Amacon Company manufactures computers. The rent of the factory where the computers are manufactured is \$1,00,000 per month. The cost of raw materials required for one computer unit is \$1,000. Every month the company manufactures 100 units of computers. The cost of production every month is $\$1,00,000 + (1000 \times 100)$ USD = $\$1,00,000 + \$1,00,000$, which is \$2,00,000.

After a certain point, Amacon Company decides to expand its monthly production. It starts producing 120 units of computers. Thus, the monthly production cost changes to $\$1,00,000 + (1000 \times 120) = \$1,00,000 + \$1,20,000$, which is \$2,20,000. This is a cost-behavior analysis example.

Example #2

The USA's fruit and vegetable market size is expected to grow by \$25.39 billion in 2027. The rise in veganism is a contributing factor. Since consumers are willing to shift from animal-based products to plant-based products, the production of fruits and vegetables and increasing consumer demands are also increasing. The production cost has recently shifted due to modern technologies being used for higher productivity. Several innovative agricultural tools and methods are being employed, the cost of which is higher than the traditional farming methods. This is a cost behavior analysis example.

Importance

The importance of cost behavior is discussed below:

#1 - Creating A Budget

The behavior of certain costs is a significant factor the management considers while creating a budget. This budget helps plan future activities and keeps provisions for meeting unprecedented changes in the business process. The budget also helps in forecasting future conditions.

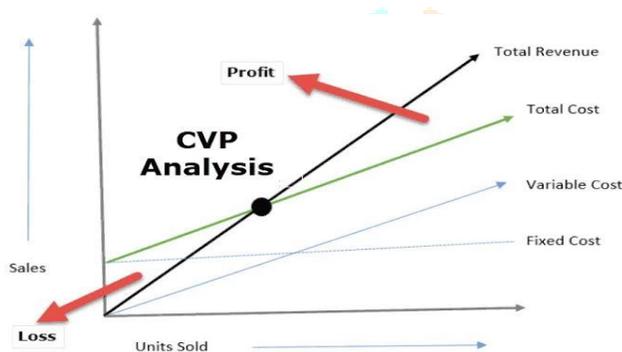
#2 - Controlling Cost

The management uses this cost analysis to control the overall cost of the business. This, in turn, helps the managers in making financial decisions that help increase the profit margin.

#3 - Analyzing Cost-Volume-Profit

Cost-volume-profit is the study of how a shift in production volume can impact a business's profit. This behavior analysis is instrumental in analyzing cost-volume-profit, a critical factor in strategic business decisions.

Cost-volume-profit (CVP) analysis, also known as break-even analysis, is a tool used to understand how changes in costs, volume, and selling prices affect a company's profit. It helps businesses determine the break-even point, calculate the sales volume needed to achieve a target profit, and forecast profits under different scenarios.



Key aspects of CVP analysis:

Understanding the relationship between costs, volume, and profit:

CVP analysis helps businesses understand how changes in fixed and variable costs, selling prices, and sales volume impact profitability.

Calculating the break-even point:

The break-even point is the sales volume at which a company's total revenue equals its total costs, resulting in neither profit nor loss.

Determining the sales volume needed to achieve a target profit:

CVP analysis can be used to calculate the sales volume required to reach a desired profit level.

Assessing the impact of changes in costs and prices:

It allows businesses to evaluate the effects of price changes, cost increases, or other factors on their profitability.

Supporting decision-making:

CVP analysis provides valuable insights for making informed decisions about pricing, production levels, and other strategic choices.

Formula for calculating the break-even point:

$$\text{Break-Even Point (in units)} = \text{Fixed Costs} / (\text{Selling Price per Unit} - \text{Variable Cost per Unit})$$

In simpler terms:

Fixed costs: These are costs that don't change with the level of production, such as rent, salaries, and insurance.

Variable costs: These costs change directly with the level of production, such as raw materials, labor, and packaging.

Selling price per unit: The price at which a single unit of a product or service is sold.

By understanding the relationship between costs, volume, and profit, businesses can make more informed decisions about pricing, production, and sales strategies, leading to better financial performance.

