



SNS COLLEGE OF TECHNOLOGY

An Autonomous Institution

Coimbatore-35



Accredited by NBA – AICTE and Accredited by NAAC – UGC with ‘A+’ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Department of Automobile Engineering

III YEAR/ VI SEMESTER

19MEE301 / Engineering Economics and cost Analysis

UNIT-5

Managerial Uses of Break-Even Analysis:

To the management, the utility of break-even analysis lies in the fact that it presents a microscopic picture of the profit structure of a business enterprise. The break-even analysis not only highlights the area of economic strength and weakness in the firm but also sharpens the focus on certain leverages which can be operated upon to enhance its profitability. It guides the management to take effective decision in the context of changes in government policies of taxation and subsidies.

The break-even analysis can be used for the following purposes:

Safety Margin:

The break-even chart helps the management to know at a glance the profits generated at the various levels of sales. The safety margin refers to the extent to which the firm can afford a decline before it starts incurring losses. The formula to determine the sales safety margin is:

$$\text{Safety Margin} = (\text{Sales} - \text{BEP}) / \text{Sales} \times 100$$

From the numerical example at the level of 250 units of output and sales, the firm is earning profit, the safety margin can be found out by applying the formula

$$\text{Safety Margin} = 250 - 150 / 250 \times 100 = 40\%$$

This means that the firm which is now selling 250 units of the product can afford to decline sales upto 40 per cent. The margin of safety may be negative as well, if

the firm is incurring any loss. In

Target

profit

The break-even analysis can be utilised for the purpose of calculating the volume of sales necessary to achieve a target profit. When a firm has some target profit, this analysis will help in finding out the extent of increase in sales by using the following formula:

Target Sales Volume = Fixed Cost + Target Profit / Contribution Margin per unit

By way of illustration, we can take Table 1 given above. Suppose the firm fixes the profit as Rs.100, then the volume of output and sales should be 250 units.

Only at this level, it gets a profit of Rs.

100. By using the formula, the same result will be obtained.

Change

In Price

The management is often faced with a problem of whether to reduce prices or not. Before taking a decision on this question, the management will have to consider a profit. A reduction in price leads to a reduction in the contribution margin. This means that the volume of sales will have to be increased even to maintain the previous level of profit. The higher the reduction in the contribution margin, the higher is the increase in sales needed to ensure the previous profit.