

Education for Knowledge, Science and Culture.”

— Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

VIVEKANAND COLLEGE, KOLHAPUR

(AUTONOMOUS)

Department of Commerce

Calculation of Break Even Point (BEP)

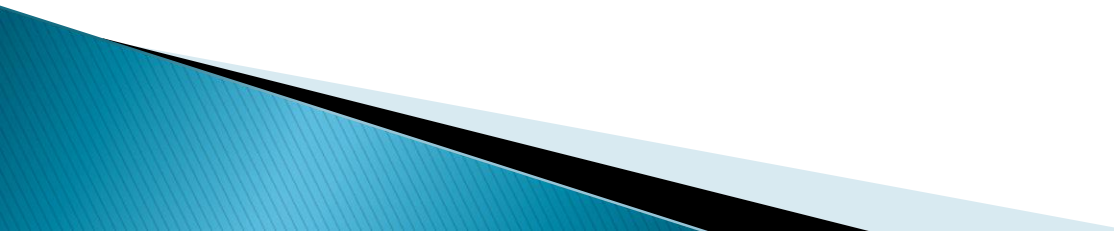


Mr. Umesh Dhondiram Dabade

(M. Com. , M. Phil., SET, GDC&A, Ph. D. (Appeared)

Asst. Professor

Calculation of BEP

1. Contribution -
 2. Profit Volume Ratio (P/V Ratio)-
 3. Break Even Point (BEP)-
 4. Additional Calculation -
 - a) Desired Sales -
 - b) Desired Profit-
 - c) Margin of Safety-
- 

Contribution

$$\begin{aligned}\text{Contribution} &= \text{Sales} - \text{Variable Cost} \\ &= \text{Fixed Cost} + \text{Profit} \\ &= \text{Fixed Cost} - \text{Loss} \\ &= \text{Sales} \times \text{P/V Ratio}\end{aligned}$$

$$\text{Contribution (Per Unit)} = \text{Sales (Per Unit)} - \text{Variable cost (Per Unit)}$$

Profit Volume Ratio (P/V Ratio)

$$\text{Profit Volume Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

$$\text{Profit Volume Ratio} = \frac{\text{Changes in Contribution}}{\text{Changes in Sales}} \times 100$$

$$\text{Profit Volume Ratio} = \frac{\text{Changes in Profit}}{\text{Changes in Sales}} \times 100$$

Break Even Point (BEP)

$$\text{Break Even Point (in Rs.)} = \frac{\text{Total Fixed Cost}}{\text{Profit Volume Ratio}}$$

$$\text{BEP(In Per Unit)} = \frac{\text{Total Fixed Cost}}{\text{Contribution per Unit}}$$

Desired Sales and Desired Profit

$$\text{Desired Sales} = \frac{\text{Desired Profit} + \text{Fixed Cost}}{\text{Profit Volume Ratio}}$$

$$\text{Desired Profit} = (\text{Desired Sales} \times \text{PV Ratio}) - \text{Fixed Cost}$$

Margin of Safety

Margin of Safety = Actual Sales – BEP Sales

$$\text{Margin of Safety} = \frac{\text{Profit}}{\text{Profit Volume Ratio}}$$

$$\text{Margin of Safety (P.U)} = \frac{\text{Profit}}{\text{Contribution per unit}}$$

*(Profit = Margin of safety x P/V Ratio)