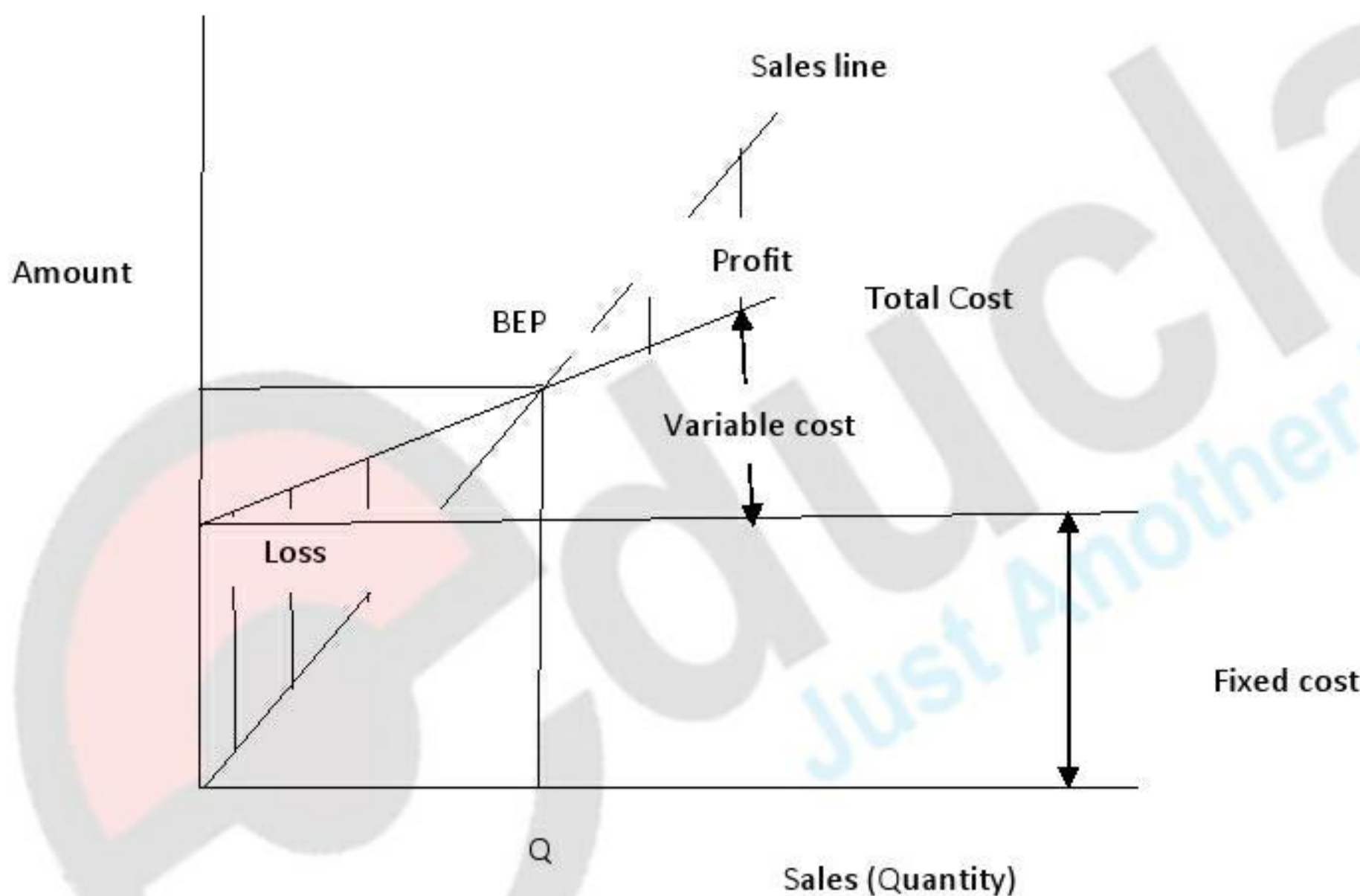


Break even analysis seeks to analyse break even point, Bp is the point of equality between sales and cost bp indicates no profit no loss situation for a firm. It is good technique managing sales & cost. Total cost include total fix cost & total variable cost. Total fix cost include employee salary rent of factory, Bills, insurance premium, maintenance of building. Total fix cost do not change with the change in the quantity of production, they remain fixed whatever the output is increased or decreased or even it becomes zero. In other words expenses on fixed factors remain unchanged irrespective of the level of output.



Formulae:

Contribution=Sales-Variable cost.

Contribution=fixedcost+profit.

$P/V \text{ ratio} = \text{Contribution}/\text{sales} * 100$

So, $P/V \text{ ratio} = \text{change in profit}/\text{change in output sales}$

Margin of safety= actualsales-Breakevensales(BES).

BFS(Rs)= F / PVratio

BES(units)=F / Contribution/unit amount.

Margin of safety= Margin/PV ratio

1. The following information is extracted from the records of ABC limited.

Fixed Cost(F)	Rs. 50,000
Selling price/unit(S)	Rs. 10
Variable cost/unit(V)	Rs. 6

You are required to determine:

P/V ratio.

Breakevenpoint in terms of value (Rs).

Breakevenpoint in terms of units.

Margin of safety when actual sales is 15,000 units.

Prepare a break even chart

Soln:

Contribution=Sales-Variable cost.

$$=10-6 =4$$

Contribution=4

P/V ratio= Contribution/sales*100

$$=4/10*100$$

$$=40$$

P/V ratio=40.

Breakevenpoint in terms of value (Rs).

$$= \text{BFS(RS)} = F / \text{PVratio}$$

$$50,000/40*100$$

$$=125000$$

$$\text{BFS(RS)}=125000$$

Breakevenpoint in terms of units.

$$= \text{BES(units)} = F / \text{Contribution(unit amount.)}$$

$$=50,000/4$$

$$=1250$$

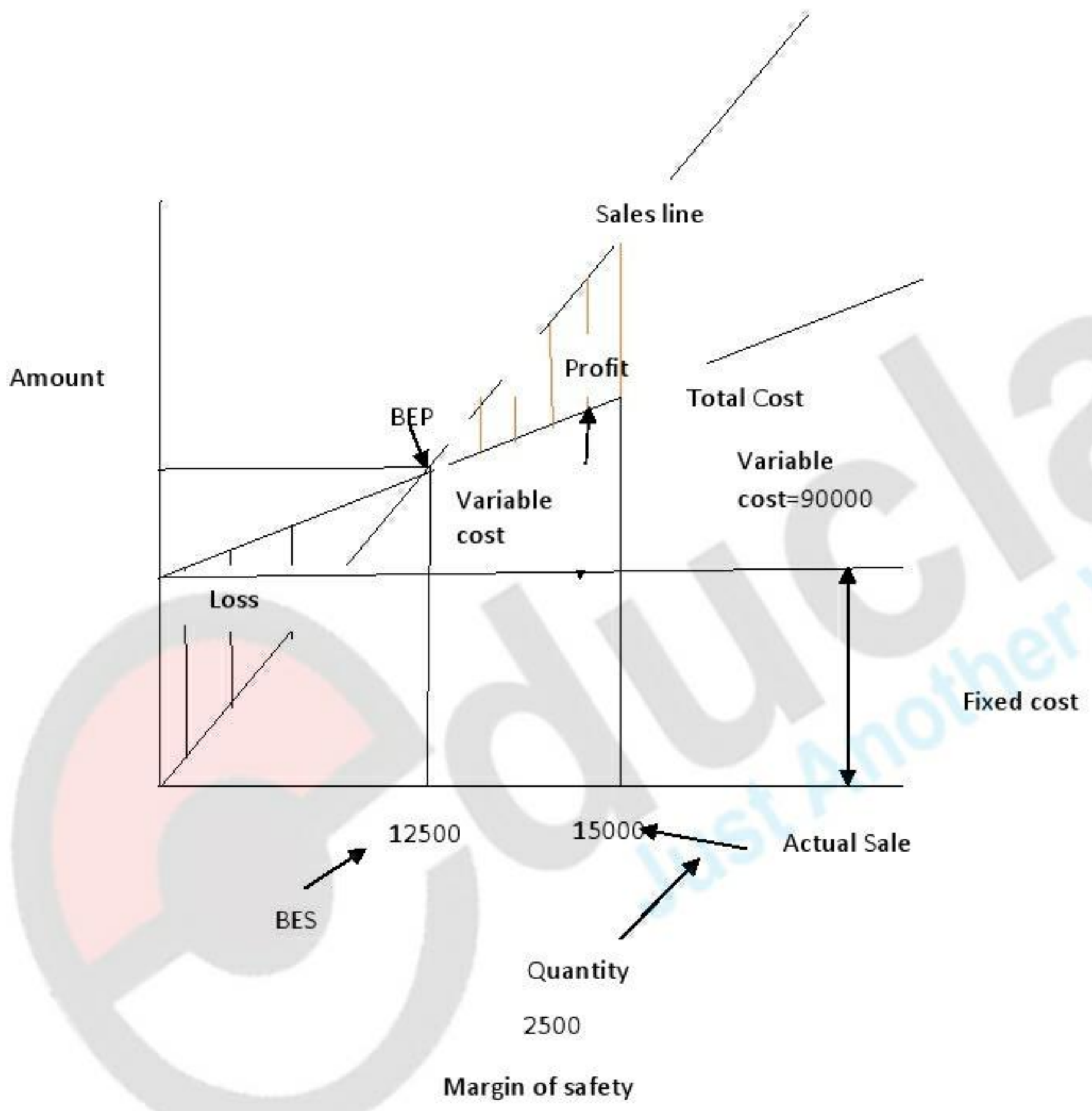
$$\text{BES(units)}=1250$$

Margin of safety when actual sales is 15,000 units.

$$=15000 - \text{BFS(RS)}$$

$$=15000 - 12500$$

$$=2500$$



2. Calculate P/v ratio, BES & MOS following info:

	2003	2004
Sales(units)	10000	15000
Profit	5000	6000
Fixes Cost	20000	

P/V Ratio: $\text{Change in profit} / \text{Change in sales(units)} * 100$

Soln:

P/V Ratio: $\text{Change in profit} / \text{Change in sales(units)} * 100$

$$= 6000 - 5000 / 15000 - 10000 * 100$$

$$= 1000 / 5000 * 100$$

$$= 20\%$$

$$\text{BES} = F / 20\%$$

$$\text{BES} = F / \text{PV ratio}$$

$$= 20000 / 20 * 100$$

$$= 10000$$

$$\text{Margin of safety} = \text{Profit} / \text{P/V ratio}$$

$$= 6000 / 20 * 100$$

$$= 30000$$