

## An analysis of cost volume profit of Nestlé limited

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### Abstract

Cost volume profit analysis scrutinizes the relationship between changes in activity and changes in total sales revenue, cost and profit. It may provide very useful information particularly for a business that is commencing operations or facing difficult economic conditions. Cost volume profit analysis determines how many units of a product must be sold so that the business reaches its break-even point. It allows the business to consider the effect on profits of various changes in operating costs and revenues such as a reduction in selling price or an increase in fixed cost to determine the sales volume required to achieve a specific profit level and to establish the amount by which the current sales level can decrease before losses are incurred.

**Keywords:** Contribution, P/V ratio, Break-even point, Break-even ratio.

### Introduction

The amount of profit in any firm is based on factors namely cost, selling price, volume of sales and volume of production. Cost determines selling price to arrive at the desired level of profit. The selling price affects the volume of sales, the volume of sales directly affects the volume of production and the volume of production in turn influences cost. Cost volume profit analysis is developed to understand the relationship between these factors.

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The three elements involved in cost volume profit analysis are,

- Cost - the expenses involved in producing or selling a product of service.
- Volume - the number of units produced or the amount of services sold.
- Profit - the difference between the selling price of a product or service and the cost to produce or provide it

### Statement of the problem

Profit is necessary for the survival and growth of every business enterprise. If the business doesn't make profit it will not survive in the growing competitive world. So, In every business in case of realisation of profit, cost of every product and the profit which has to be fixed, plays an important role, this can be determined with the help of cost volume profit analysis. Every business should cross the no profit no loss point to realise the profit. For this reason they should calculate the break-even point and focus all the resources of the business to work towards crossing it.

### Review of literature

"Dr. Ilhan Dalci" (2005) has conducted "a study on Cost volume profit analysis" with the objectives to understand how traditional cost volume profit analysis leads managers to make wrong decision and also to make a comparison between activity based cost volume profit analysis and the traditional

cost volume profit analysis. The secondary data have been collected from various sources like annual reports of the companies, journals, articles, publications and websites. The study has found that under traditional cost volume profit analysis, costs are categorized strictly as fixed or variable with respect to number of products produced and sold, but some costs that are fixed with respect to the volume are not fixed with respect to other factors and due to this traditional cost volume profit analysis may not generate accurate information. It has also been identified that predicting total costs requires multiple cost factors such as number of output produced, number of units sold at which will be covered by activity based cost volume profit analysis. The study has concluded that traditional cost volume profit analysis includes only volume based cost drivers whereas activity based cost volume profit analysis includes multiple cost drivers which proves more accurate.

Edna Gunderson (2009) conducted "a study on Cost Volume Profit Analysis" with the objectives to identify the essential elements of cost volume profit analysis and to show that the cost volume profit analysis helps in decision making. Break-even point and contribution have been used to analyze the collected data. The findings are break-even point can be calculated as either the minimum sales quantity or the minimum revenue required to avoid a loss or profit. The cost volume profit model can also be used to calculate target operating income. Managers also use cost volume profit analysis to take other decisions, mainly strategic. Different choices can affect selling prices, variable costs and fixed costs. Therefore the author has concluded by suggesting that the cost volume profit model proves better in making managerial decisions.

### Objectives

- To ascertain the contribution and P/V ratio of Nestle Ltd,
- To analyse the Break-Even point in rupees and Break-Even ratio.

**Research Tools**

The study is based on secondary data. It has been collected from the financial reports of the Nestle Company Ltd., from the period of 2012-2013 to 2015-2016 and also from online publications, articles, journals and websites.

**Data Analysis and Interpretation**

**Contribution**

Contribution is the difference between sales and variable cost or marginal cost of sales. It may also be defined as the excess of selling price over variable cost per unit.

**Contribution = Sales - Variable cost**

**Table 1:** Contribution (in Rs. in crores)

Year	Sales (Rs)	Variable Cost (Rs)	Contribution (Rs)
2012	83023.01	48371.71	34651.31
2013	90619.02	50572.72	40046.32
2014	98062.71	56653.73	41409.00
2015	81232.72	43234.71	37998.00
2016	74908.00	44530.42	30377.61

Source: www.annualreportofnestle.com

The above table depicted that the contribution is highest (41409.00 Rs. in crores) in the year 2014, and it is lowest (30377.61 Rs. in crores) in the year 2016. Sales has to be improved so as to increase the contribution.

**Profit Volume Ratio**

Profit volume ratio, also called 'contribution ratio' or 'marginal ratio' reveals the rate of contribution per product as a percentage of turnover. It indicates the relationship of contribution to turnover.

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

**Table 2:** Profit Volume ratio (in Rs. in crores)

Year	Sales (Rs)	Contribution (Rs)	P/V Ratio (Rs)
2012	83023.01	34651.32	41.74
2013	90619.02	40046.32	44.19
2014	98062.71	41409.04	42.23
2015	81232.71	37998.01	46.78
2016	74908.01	30377.60	40.55

Source: www.annualreportofnestle.com

It is noted from the table no.2, during the study period profit volume ratio is higher (46.78%) in the year 2015 and it is lower (40.55%) in the year 2016. P/V ratio has to be increased for the betterment of the firm.

**Break-Even point (in rupees)**

Break-even analysis is a method of studying the relationship among sales revenue, variable cost and fixed cost to determine the level of operation at which all the costs are equal to its sales revenue and this point is known as No Profit No Loss point.

**Break-Even point =  $\frac{\text{Fixed cost} * \text{Sales}}{\text{Contribution}}$**

**Table 3:** Break-even point (in Rs. in crores)

Year	Fixed Cost (Rs)	Contribution (Rs)	Sales (Rs)	Break-Even Point (Rs)
2012	4366	34651.31	83023.03	10460.75
2013	4366	40046.32	90619.01	9879.63
2014	4366	41409.01	98062.72	10339.34
2015	4366	37998.02	81232.71	9333.70
2016	4366	30377.63	74908.02	10766.10

Sources: www.annualreportofnestle.com

It is clear from the table no 3, breakeven point is higher in the year 2016 and it is lower in the year 2015. Increase in sales and contribution is essential for the stability of break-even point.

**Break-Even Ratio**

Break-Even Ratio is the relationship between break-even sales and actual sales of a business concern. Break-even ratio is ascertained by the following formula:

**Break-Even ratio =  $\frac{\text{Break even sales} * 100}{\text{Actual sales}}$**

**Table 4:** Break-even ratio (in Rs. in crores)

Year	Break-Even Point (Rs)	Actual Sales (Rs)	Break-Even Ratio (Rs)
2012	10460.75	83023.01	12.60
2013	9879.63	90619.01	10.90
2014	10339.34	98062.72	10.54
2015	9333.70	81232.72	11.49
2016	10766.11	74908.01	14.37

Source: www.annualreportofnestle.com

It is inferred from the table no.4, Break-even Ratio is higher (14.37%) in the year 2016 and lower (10.54%) in the year 2014. Break-even point only determines the break even ratio, it is crucial to improve break-even point to enhance the break even ratio in the business is inevitable.

**Findings and suggestions**

- During the study period (2012-2016) sales of the company were fluctuating. Hence, sales has to improve to increase the contribution.
- P/V ratio is high (46.78%) in the year 2015 and low (40.55%) in the year 2016. Both the key factors used in p/v ratio i.e., contribution and sales shows a fluctuating trend which is the reason for the instability in p/v ratio. Steps must be taken to improve sales for the stability of p/v ratio.
- Break-even point in rupees is higher in the year 2016 and lower in the year 2015. Increase in sales and contribution is essential for the stability of break-even point.
- Break-even ratio is high in the year 2016 with a percent of 14.37 and low in the year 2014 with a percent of 10.54. Break-even point only determines the break even ratio, it is crucial to improve break-even point to enhance the break even ratio in the business is inevitable.

**Conclusion**

This study aims at cost volume profit analysis in Nestlé (Ltd) for the period of 2012-2016. From the above findings it has been concluded that the overall cost volume profit of Nestle Ltd is highly performed. Overall sale of the Nestle is performing well and they should maintain. Cost volume profit analysis examines the behaviour of changes in the output level,

selling price, variable cost per unit and fixed cost of a product or service.

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