NCCS Research Journal, Issue 2, October 2023, ISSN NO: 2822

Received Date: June 2023 Revised: August 2023 Accepted: October 2023

Performance Analysis of Trading Company Through Cost Volume Profit (A Case Study of Salt Trading Corporation Limited)

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Abstract

The objective of the research is to analyze the performance of a Trading Company through cost-volume-profit with reference to Salt Trading Corporation Limited. The major goal of this paper is to scrutinize the financial performance from 2069-70, as well as its influence on the economic growth of Nepal. According to the findings, Salt Trading Corporation has a low contribution margin, low P/V ratio, high breakeven point, and low margin of safety. It further indicates that cost and breakeven point have a positive correlation as sales price and breakeven point have a negative correlation. The company's condition is very poor and requires effective improvement in the given situation.

Keywords: Cost-volume-profit analysis, Salt Trading Corporation Limited, Break-even point.

Introduction

Salt Trading Corporation (STC) Limited is one of the largest business organizations in Nepal which was established as the pioneer Public Private Partnership (PPP) of the Government of Nepal. It was established over five decades back (13th September 196 and 3), the corporation was launched with the objective to avoid iodized common salt, as salt is not produced in Nepal and depends on import from India, for all citizens of the country. In its long run of dedicated service to the nation, STC has contributed to ensuring proper

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supply and distribution of essential daily consumable goods, eroding black-marketing by regulating market and artificial scarcity and industrial development in Nepal. With an equity share ratio comprising 79:21 of investment from private: to public, STC is managed by the joint effort of state (Government) and private (shareholders). Cost–Volume–Profit (CVP) analysis is a study of the relationship between sales, volume, expenses, revenue, and profit. It is the systematic exploration of the relationship between company cost, volume (Sales revenue), and profit. It explores the idea about how small changes in one variable impact on rest of the variables (Chapagain, S. (2014). Cost-volume-profit analysis is a simple but flexible tool for exploring potential profit based on cost strategies and pricing decisions. While it may not provide detailed analysis, it can prevent "do-nothing" management paralysis by providing insight on an overview basis (Tulvinschi & Khirita, 2009).

Statement of the Problem

Salt Trading Corporation Limited is one of the leading service undertakings in the Nepali economy. It serves as one of the largest public sector taxpayers to the Government. Further, it offers a huge number of employments that substantially help the government to downsize the unemployment rate. There is no practice of clear segregation of fixed, variable, and unit variable costs for different products in the company. Also, there is no practice of using Cost volume profit analysis tools for major decision-making (Dhakal, N. (2014). Specifically, when we talk about CVP and PPC, no study to date has been conducted in the public sector trading industry. Therefore, this study was conducted to smack the gap. This study stated the following research questions. What is the profit volume ratio of STCL? and What is the relationship between cost, volume, and profit of the company?

Objective of the Study

The overall objectives of this study are to analyze the cost volume profit of Salt Trading Corporation Limited (STCL). The specific objectives of this study are highlighted as follows:

1. To examine the profit volume ratio of the STCL.
2. To ascertain the break-even profit for STCL

3. To study the relationship among the cost, volume, and profit of the company

Literature Review

The performance evaluation of trading companies is a critical aspect of financial management, aiming to assess their profitability, operational efficiency, and sustainability. Cost-volume-profit (CVP) analysis plays a vital role in this evaluation process by providing insights into how changes in costs, volumes, and prices affect a company's profitability. This literature review explores the application of CVP analysis to assess the performance of trading companies, with a specific focus on Salt Trading Corporation Limited. CVP analysis, also known as break-even analysis, is a financial management tool that examines the relationships between costs, volumes of sales or production, and profits. It allows organizations to determine their break-even point and understand the impact of changes in key variables on their bottom line. CVP analysis consists of fixed costs, variable costs, contribution margin, and break-even point. Trading companies like Salt Trading Corporation Limited engage in the buying and selling of goods without undergoing a transformation process. For such entities, CVP analysis holds unique relevance. It helps in assessing the impact of changes in the volume of goods traded and pricing strategies on profitability. CVP analysis can be used to determine the minimum sales volume required to cover fixed costs, indicating the level of activity necessary for sustainability.

Methodology

This entire research design followed the quantitative data to analyze the data. The secondary data have been extensively used for this study. These secondary data were gathered from published and unpublished documents and annual reports of Salt Trading Corporation Limited (STCL), scholars' research articles and journals, books, and published theses from different campus libraries.

Population and Sample

There are 37 public enterprises operating in Nepal and they are considered as the population of the study. Out of these companies, Salt Trading Corporation Limited (STCL) has been selected as a sample using judgment sampling. Among them, only 23 PEs have been privatized.

Data Analysis Tools

The collected data is arranged systematically and identified. The available information is grouped as per the need of research work in order to meet the research objective. The collected data are presented in the appropriate form of tables and charts.

Accounting / Financial Tools

(i) Contribution-Margin Approach

$$\text{Break-even Sales (in Units)} = \frac{\text{Fixed Expenses}}{\text{Contribution margin per Unit}}$$

$$\text{Break-even Sales (in RS)} = \frac{\text{Fixed Cost}}{\text{Contribution Margin Ratio}}$$

or

$$\text{Break-even Sales (in RS)} = \frac{\text{Fixed Cost}}{\frac{\text{Profit}}{\text{Volume}}\text{ Ratio}}$$

Contribution Margin = Sales Revenue – Variable cost

(ii) Profit-Volume Ratio (P/V Ratio):

$$\text{P/V Ratio} = 1 - \frac{\text{Variable Cost}}{\text{Sales}}$$

$$\text{P/V Ratio} = \frac{\text{Contribution Margin}}{\text{Sales}}$$

or

$$\text{P/V Ratio} = \frac{\text{Fixed Cost+Profit}}{\text{Sales}}$$

Profit = (Sales × P/V Ratio) – Fixed Cost

Profit = (Actual Sales-Break-even Sales) ×P/V Ratio

Profit = (Actual Sales-Break-even Sales Unit) ×Unit Contribution Margin

(iii) Margin of Safety = (Actual Sales- Break-even Sales)

$$\text{Margin of Safety in Units} = \frac{\text{Profit}}{\text{Contribution Margin Per Unit}}$$

$$\text{Margin of Safety (in Rs.)} = \frac{\text{Profit}}{\text{P/VRatio}}$$

$$\text{Margin of Safety Ratio} = \frac{\text{Margin of Safety}}{\text{Actual Sales}}$$

(iv) Profitability Ratio

Net Profit Margin $= \frac{\text{Net Profit}}{\text{Sales}}$

Statistical Tools

In this research following regression model is extracted in order to interpret the result.

Profit = $\beta_0+\beta_1$SR+β_2VC+β_3FC+e_i…… (i)

Where,

Profit = Net profit/loss of Salt Trading Corporation Limited

SR = Sales Revenue

VC = Variable cost

FC = Fixed Cost

TC = Total cost = Variable Cost + fixed Cost

e_i = Error terms

Likewise, β_0 is the Y-intercept, and β_1, β_2, and β_3 are partial slope coefficients of sales revenue, variable cost and fixed cost of Salt Trading Corporation Limited.

Variables

In this research, one dependent and three independent variables have been shown in the following manner.

Dependent Variable

Net Profit: Profit is the excess amount of total cost over total revenue. Hence it is the function of several factors such as changes in sales volume, cost, and prices.

Independent Variables

Sales Revenue: Sales revenue is the major source of income for any company. The company generates profit and operates the organization by selling its goods or services to consumers.

Variable Cost: A variable cost is a cost that changes in direct proportion to changes in the cost driver activity. Thus, the variable cost, which varies according to the level of production or output, is called variable cost (Diktta, B.D. (2015).

Fixed Cost: The cost, that remains unchanged to an entire range of production or output, is called fixed cost. Such types of fixed costs include like rent, insurance premiums, salaries, depreciation, and property taxes.

Total Cost: Total cost includes both total variable cost and total fixed cost.

Empirical analysis

The research paper analyzes the profit-volume ratio and the relationship between cost-volume and profit of the company. Various tools have been used to analyze the inter-related relationship between these variables. Analyzing the performance of a trading company, through cost-volume-profit (CVP) analysis can provide valuable insights into its financial health and operational efficiency. CVP analysis helps in understanding how changes in sales volume, costs, and selling prices impact the company's profitability. The analysis of the relationship between profit and volume is known as profit-volume analysis. The two factors profit and volume are interconnected and dependent on each other. Profit depends on sales; selling price to a greater extent will depend upon the volume of production. Hence, there is an inter-relationship between cost, volume, and profit. Profit is the function of a variety of factors; it is affected by changes in sales volume, cost, and prices. Profit may be affected by the changes (increases or decreases) in the price, volume, variable cost, fixed cost, and other combination factors.

An increase in variable cost will lower the P/V ratio, push up the BEP and reduce profit. On the other hand, if the variable cost declines, the P/V ratio will increase, BEP will be lowered and profit will rise (Akmese, K, Buyuksalvarci, & Akmese, H. 2016). The P/V ratio establishes the relationship between contribution and sales value. It is expressed in the following formula.

$$\text{Profit Volume Ratio (Contribution Margin Ratio)} = \frac{Contribution\ Margin}{Sales}$$

$$= \frac{Sales - Variable\ Cost}{Sales}$$

$$= \frac{Contribution\ Margin\ Per\ Unit\ (CMPU)}{SellingPricePerUnit\ (SPPU)}$$

$$= 1 - \frac{Variabel\ Cost\ \ Per\ Unit\ (VCPU)}{SellingPricePerUnit\ (SPPU)}$$

This ratio is further evaluated by comparing the changes in contribution to changes in sales or changes in profit to changes in sales. Likewise, any increase in contribution margin would mean an increase in profit only because fixed cost is assumed to be constant at all levels of production. It is depicted in the following formula.

$$\text{Profit Volume Ratio (Contribution Margin Ratio)} = \frac{Change\ in\ Contribution\ Margin}{Change\ in\ Sales}$$

$$= \frac{Change\ in\ Profit}{Change\ in\ Sales}$$

This ratio is useful for the determination of the desired level of output or profit and for the calculation of variable costs for any value sales. The variable costs can be expressed as under:

VC = Sales (1- P/V ratio).

Various types of analysis have been carried out to understand the overall performance of the company.

Sales Trend Analysis

Last five years data have been used to analyze the overall sales of the company.

Overall, Sales

STCL is the trading corporation. The sales are given below:

Table: Overall, Sales

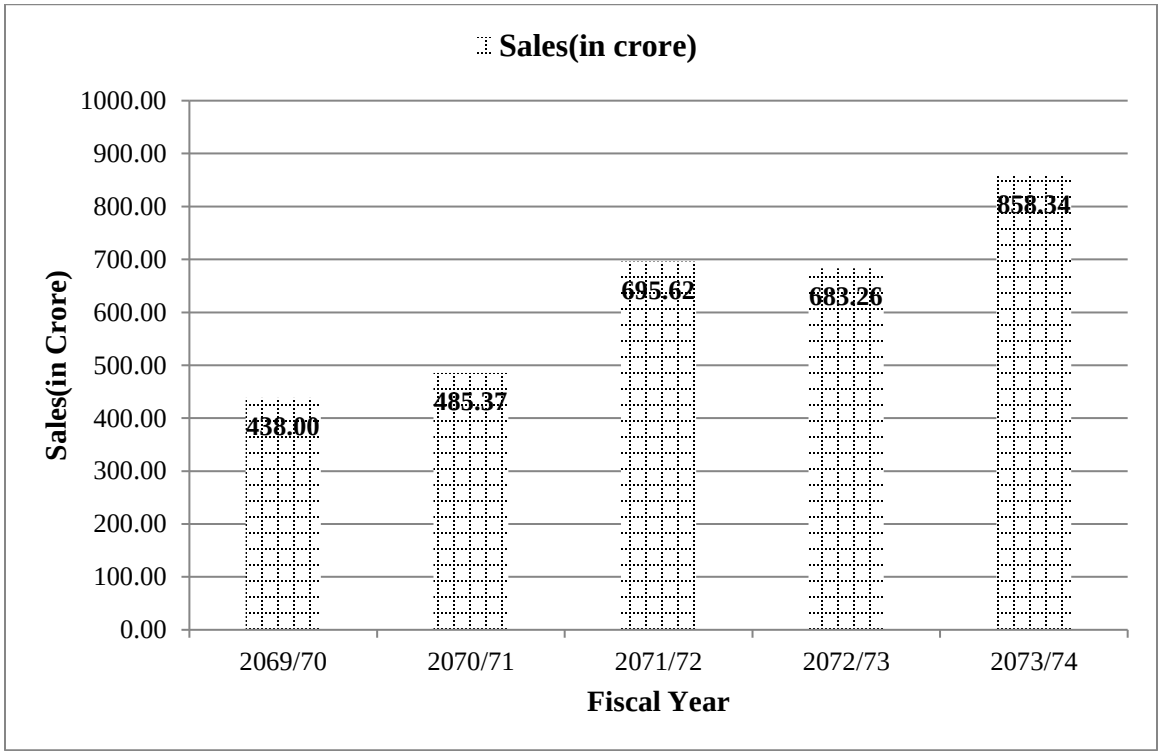
Year / **Details**	**2069/70**	**2070/71**	**2071/72**	**2072/73**	**2073/74**

Total Sales	438.00	485.37	695.62	683.26	858.34
Changes in Sales	-	10.81%	43.31%	-1.77%	25.62%

Source: Annual Report of STCL 2073/74. (NRs in crore)

The overall sales of the company can be seen from the following graphical presentation.

Figure: STCL Last five years sales



Source: Annual Report of STCL 2073/74

The figure above shows that the different years' sales values with different in the bar diagram. The chart above clearly demonstrates that the sales trend of the SLTC is not constant.

Products Sales

STCL has six different products namely: 1. Consumable material 2. Agricultural material 3. Fuel, lubricant, and tyre tubes 4. Machine and equipment 5. Construction material and 6. Other material. The sales values of each product are presented in the following table.

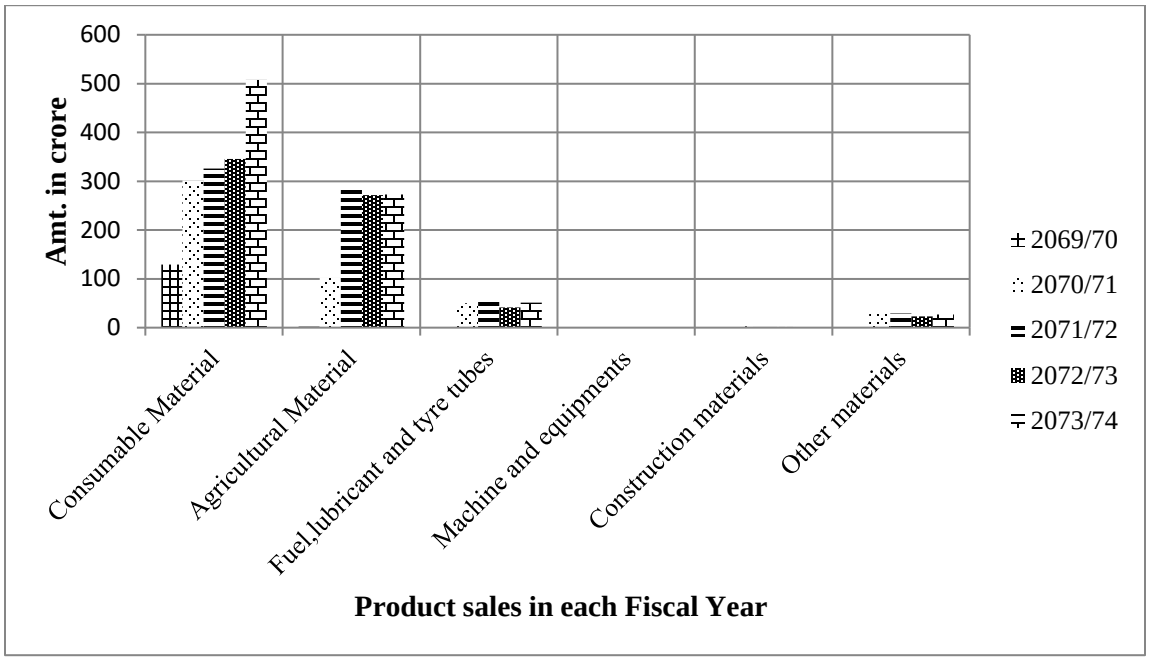
Table: Product wise Sales

Products \ Year		2069/70	2070/71	2071/72	2072/73	2073/74
Consumable material	Amount (Rs.)	129.26	301.41	325.73	345.76	507.73
	Change (%)	-	133.18	8.06	6.14	46.84
Agricultural material	Amount (Rs.)	1.88	103.33	287.36	271.74	272.56
	Change (%)	-	93.93	178.09	-5.43	0.30
Fuel, lubricant and tyre tubes	Amount (Rs.)	1.00	50.15	52.27	41.40	51.08
	Change (%)	-	4,915	4.22	-20.79	23.38
Machine and equipment's	Amount (Rs.)-	0.04	.0071	0.03	0.0036	-
	Change (%)	-	-82.25	322.53	-88	-
Construction materials	Amount (Rs.)	-	2.49	1.56	1.50	0.88
	Change (%)	-	-	-37.34	-3.84	-41.33
Other materials	Amount (Rs.)	0.27	27.97	28.65	22.83	27.08
	Change (%)	-	10,259	2.43	-20.31	18.61

Source: Annual Report of STCL, 2073/74. (NRs in crore)

Table 4.2 shows that total sales of consumable products were on an increasing trend during the fiscal year 2069/70 to 2073/74. SLTC recorded a 4,915 percent sales record in selling fuel and tyre lubricants during the fiscal year 2070/71.

Figure: Product-wise sales



Variable Cost Analysis

Variable cost varies in direct proportion to change in output or activities level, but per unit is constant within one financial year (Giri, 2011). According to the company's annual reports, variable cost is costs covering cost of sales were as follows:

Table: Variable Cost Details

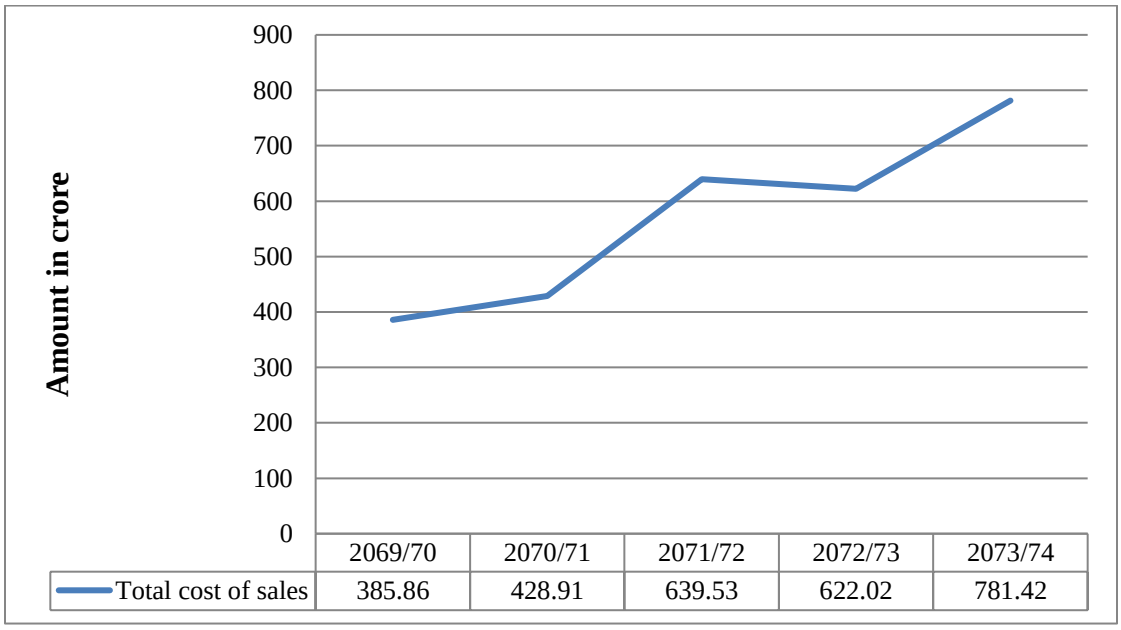
Year / Details	2069/70	2070/71	2071/72	2072/73	2073/74
Purchases	286.61	479.91	474.95	533.12	739.88
Add: Opening inventory	154.51	143.43	312.37	257.55	280.49
Less: Closing inventory	143.43	312.37	257.55	280.49	362.03

Add: Business expenses	88.16	117.94	109.76	111.82	123.07
Total cost of sales	385.86	428.91	639.53	622.02	781.42
Sales value	438.00	485.37	695.62	683.26	858.34

Source: Annual Report of STCL, 2073/74. (NRs. in crore)

Table 4.3 shows the fluctuating trend in the variable cost sheet. Variation in variable cost of sales, opening inventory, purchases and business expenses for different year is due to internal and external factors. The position of variable of the company can be clearly seen from the following graphic presentation.

Figure: Trend of Variable Cost



Fixed Cost Analysis

Fixed cost remains constant in total amount despite the changes in the level of activity within a fiscal year. According to STCL's annual report, fixed cost was classified into following patterns.

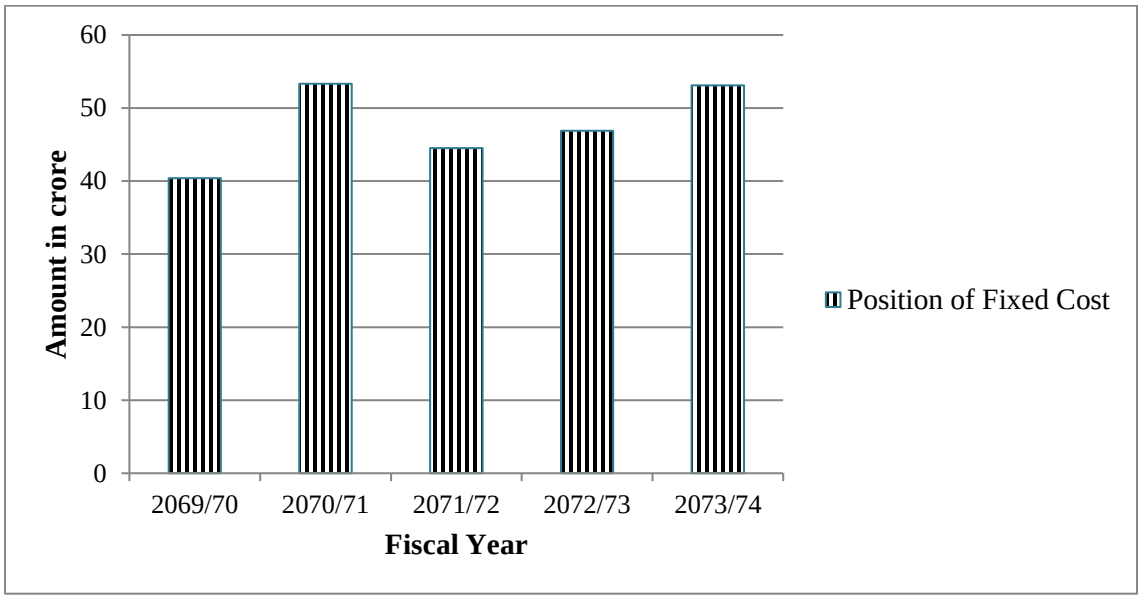
Table: STCL Fixed Cost Details

Details / Year	Administrative cost		Interest expenses		Depreciation expenses		Total cost	
	Cost	% change	Cost	% change	Cost	% change	Cost	% change
2069/70	9.07	-	30.65	-	0.67	-	40.39	-
2070/71	11.87.	30.87	40.79	33.08	0.66	-1.49	53.32	32.01
2071/72	9.72	-18.11	33.70	-17.38	1.11	68.18	44.53	-16.48
2072/73	10.21	5.04	35.48	5.28	1.18	6.30	46.87	5.25
2073/74	10.76	5.38	41.02	15.61	1.32	11.86	53.10	13.29

Source: Annual Report of STCL, 2073/74. (NRs. in crore)

Above table shows that administrative expenses, interest and depreciation expenses for different fiscal years.

Figure: **Position of Fixed Cost**



Income Statement Analysis

Income is computed by deducting all expenditure from turnover. It is a surplus of sales over expenditure. High income indicates good performance whereas low income indicates poor showing of the company.

Table: STCL Income Statement Details

Year / Details	2069/70	2070/71	2071/72	2072/73	2073/74
1. Sales	438.00	485.37	695.62	683.26	858.34
2. Variable cost	385.86	428.91	639.53	622.02	781.42
3. Contribution margin (1-2)	52.14	56.46	56.09	61.24	76.92
4. Fixed cost	40.39	53.32	44.53	46.87	53.10
5. Net income (3-4)	11.75	3.14	11.56	14.37	23.82
6. Net profit margin (1÷5)	37.27	154.57	60.17	47.54	36.03
7. PV ratio (3 ÷1)	0.11	0.11	0.08	0.08	0.08
8. % of FC on sales (4÷1)	0.09	0.10	0.06	0.06	0.06
9. % of VC on total cost (2÷2+4)	0.90	0.88	0.93	0.92	0.93
10. % of FC on total cost (4÷2+4)	0.09	0.11	0.06	0.07	0.06
11. Operating leverage (3÷5)	4.43	17.98	4.85	4.26	3.22

Source: Annual Report of STCL, 2073/74. (NRs. in crore)

Net income represents operating income only. Non-operating income and non-operating expenses were not incorporated in this analysis. The net profit margin of the company was 37.27 percent, 154.57 percent, 60.17 percent, 47.54 per cent and 36.03 per cent in the fiscal year 2069/70, 2070/71, 2071/72, 2072/73 and 2073/74 respectively. It indicates that net profit of the company was in fluctuating and the profit decreased in the last two fiscal years. Sales, variable costs, fixed cost and operating profit of the company can be clearly seen in the following graphical presentation.

Figure: **Sales, Variable Cost, Fixed cost and Profit**

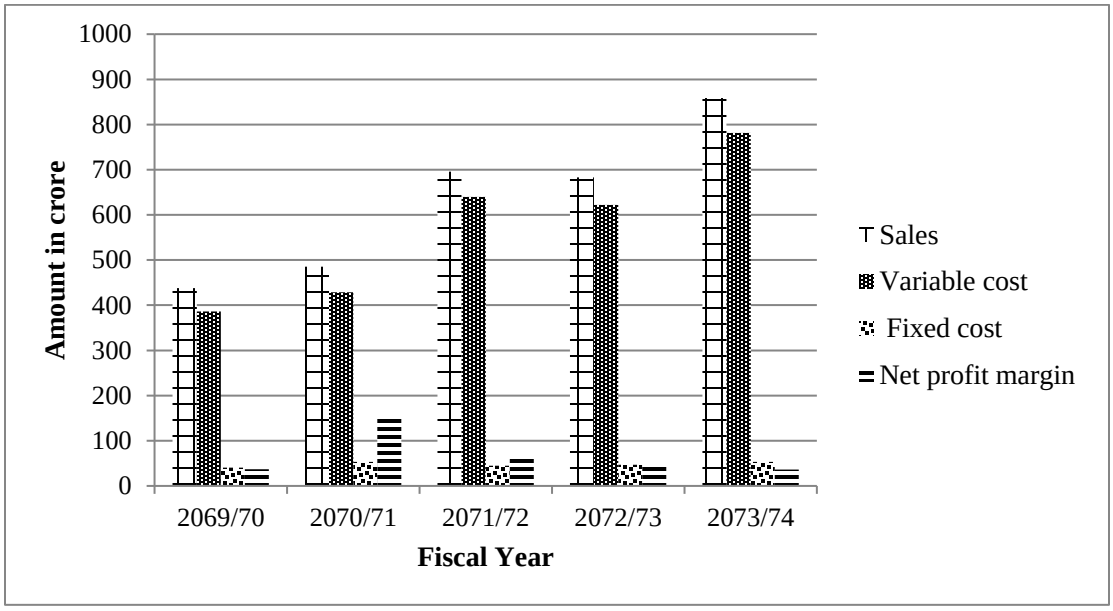


Figure 4.5 shows sales, variable cost, fixed cost, and net profit margin.

Analysis of Correlation between Sales and Net Profit

The degree of correlation is measured by correlation coefficient. Here, Karl Pearson's coefficient of correlation, a most popular method, is used to determine the coefficient of correlation between sales and net profit.

Table: Analysis of Correlation between Sales and Net Profit

FY	**Sales (x)**	**Profit (y)**	**xy**	**x^2**	**y^2**
2069/70	438.00	11.75	5146.5	191844	138.06

2070/71	485.37	3.14	1524.06	235584	9.85
2071/72	695.37	11.56	8038.47	483539	133.63
2072/73	683.26	14.37	9818.44	466844	206.49
2073/74	858.34	23.82	20445.65	736747	567.39
Total	$\sum x = 3160.34$	$\sum y = 64.64$	$\sum xy = 44973.12$	$\sum x^2 = 2114558$	$\sum y^2 = 1055.4$

Source: Annual report of STCL, 2073/74. (NRs. in crore)

Correlation Coefficient (r)

$$\frac{N\sum xy - \sum x.\sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 44973.12 - 3160.34 \times 64.64}{\sqrt{5 \times 2114558 - (3160.34)^2}\sqrt{5 \times 1055.4 - (64.64)^2}}$$

$$= \frac{224865.6 - 204284.38}{\sqrt{585041}\ \sqrt{1099}}$$

$$= \frac{20581.22}{764.88 \times 33.15}$$

$$= 0.81$$

Probable Error (P.E.) = $0.6745 \times \frac{1 - r^2}{\sqrt{n}}$

$$= 0.6745 \times \frac{1 - 0.81^2}{\sqrt{5}}$$

$$= 0.6745 \times \frac{0.3439}{2.2361}$$

$$= 0.6745 \times 0.1537$$

$$= 0.1036$$

The value of correlation coefficient is 0.81. This indicates that there is positive correlation between sales and net profit. The value of correlation coefficient suggests that if sales increase, net profit also increases but not in same manner.

Break-Even Analysis

BEP analysis is most widely known form the CVP analysis. BEP is that point of sales at which neither there will be neither profit nor loss. The BEP of the company in Rs. is presented in the following table.

Table: Break Even Point Details

Year / Details	2069/70	2070/71	2071/72	2072/73	2073/74
BEP (Rs.)	367.18	484.72	556.62	585.87	663.75
Change (%)	-	32.01	14.83	5.25	13.29
BEP (Ratio)	0.84	0.99	0.80	0.86	0.77

Source: Annual Report of STCL, 2073/74. (NRs. in crore)

Where,

(a) BEP (Rs.) = $\frac{\text{Fixed cost}}{\text{P/V Ratio}}$

(b) BEP (Ratio) = $\frac{BEP\ sales\ (Rs.)}{Actual\ sales\ (Rs.)}$

Table 4.9 shows that the BEP (Rs.) were in fluctuating trend. The main reasons of fluctuating BEP were the change in fixed cost and change in variable cost. The change in contribution margin or profit volume ratio was also the root of cause of reduction and deduction in BEP.

Margin of Safety Analysis

Margin of safety is the excess of actual sales over the breakeven sales volume. Thus, it provides a certain amount of cushion to the company to avoid less (Pradhan, S. (2013). The margin of safety can be expressed as a percentage by dividing the margin of safety by actual sales margin of safety and safety margin ratio of the company are presented in the following table.

Table: Margin of Safety Details

Year / Details	2069/70	2070/71	2071/72	2072/73	2073/74
Margin of safety (Rs.)	70.82	0.65	139	97.39	194.59
MOS Ratio (%)	0.16	0.001	0.19	0.14	0.22

Source: Annual report of STCL, 2073/74. (NRs. in crore)

Margin of Safety (MoS) = Actual Sales – BEP Sales

Margin of Safety Ratio = $\frac{Margin\ of\ Safety}{Actual\ Sales}$

In the above table it can be clearly seen the actual position of the margin of safety of the company. The margin of safety of company was in fluctuating trend. The margins of safety of company were 70.82, 0.65, 139, 97.39 and 194.59 in the fiscal year 2069/70 to 2073/74 respectively.

Sales Mix and Break-Even Analysis

Here, Salt Trading Corporation Limited has six different products. So the company is defined as multi-product organization. Through it is very difficult to calculate product wise BEP for the company due to the different sales price and cost price of the product the following procedure is used to calculate product wise BEP.

a. Sales mix (Rs.) = $\frac{Individual\ sales\,(Rs.)}{Total\ \ sales\,(Rs.)}$

b. Weighted P/V ratio = Sales mix (Rs) x P/V ratio of each product

Or

Weighted contribution margin = Sales mix (Unit) x Contribution margin of each product

c. Overall BEP (Rs.) = $\frac{Total\ \ fixed\ \ \text{cos}t}{Weighted\ \ P/V\ \ ratio}$

d. Product wise BEP (Rs.) = Overall BEP (Rs.) x Sales mix (Rs.) of each product.

The product wise BEP in Rs. of the company are presented in the following table.

Table: Product wise BEP (Rs.)

Details / **Fiscal year**		**Consumable material**	**Agricu-ltural material**	**Fuel, lube, tyres,**	**Machine and equipment's**	**Construction materials**	**Other materials**
2069/70	BEP (Rs)	367.18	336.58	367.18	310.69	336.58	367.18
	BEP (%) Ratio	1.01	0.93	1.01	0.86	0.93	1.01
2070/71	BEP (Rs)	458.46	458.46	458.07	422.49	458.46	459.48
	BEP (%) Ratio	0.94	0.94	0.94	0.87	0.94	0.94
2071/72	BEP (Rs)	558.02	558.02	557.32	133.60	534.57	557.32
	BEP (%) Ratio	0.80	0.80	0.80	0.19	0.76	.80

2072/73	BEP (Rs)	523.10	500.78	420.35	500.21	476.80	522.51
	BEP (%) Ratio	0.76	0.73	0.61	0.73	0.69	0.76
2073/74	BEP (Rs)	592.63	592.63	592.63	-	584.15	591.97
	BEP (%) Ratio	0.69	0.69	0.69	-	0.68	0.68

Source: Annual Report of STCL, 2073/74. (NRs. in crore)

BEP (Rs) = Fixed Cost/PV Ration

PV Ratio= CM/Sales of individual product

The above table shows that BEP of the company for each product largely decreased and increased within the period of five years.

Sensitivity of CVP Analysis

The analysis of cost behavior facilities the use of CVP technique to know the degree of impact on financial result which is known as "sensitivity analysis" (Wagle, Y. (2013). The following table provides the insights into the "sensitivity analysis."

Table: Different Factors Affecting CVP Analysis

Factors	**Effects in P/V ratio**	**Effects in BEP**	**Effective in profit**
Sales revenue:			
Increase	No effect	No effect	Increase
Decrease	No effect	No effect	Decrease
Variable cost:			

Increase Decrease	Decrease Increase	Increase Decrease	Decrease Increase
Fixed cost: Increase Decrease	 No effects No effects	 Increase Decrease	 Decrease Increase

Source: Annual Report of STCL, 2073/74.

Effects of Changes in Sales Value

Any increase or decrease in the sales value will have effect in profit. There will be changes in profitability as the changes occur in operating leverage.

Table: Income Statement with Change of Sales Value of the Fy 2073/74

Details	**Original**	**Change in Sales Value**	
		10% Increase	**10% Decrease**
Sales revenue	858.34	944.17	772.50
Les: Variable cost	781.42	781.42	781.42
Contribution margin	76.92	162.75	(8.92)
Fixed cost	53.10	53.10	53.10
Profit	23.82	109.65	(44.18)
CM ratio	0.08	0.17	0.0115
BEP	663.75	312.35	4617.39

Source: Annual Report of STCL, 2073/74. (NRs. in crore)

Table shows that with the increase in sales value by 10 percent the profit of the company will be increase by 109.65 percent. Similarly, with the decrease in sales value by 10 percent the profit of the company will decrease by 44.18 percent. The sales value is changed by the same percentage when changes are made in sales by 10 percent.

Effect of Change in Variable Cost

The impact of change in variable cost on profit is straight forward if it does not cause any change in sales revenue and fixed cost. An increase in variable cost will lower P/V ratio, push up the BEP and reduce profit. On the other hand, if the variable cost decline, P/V ratio will increase. BEP will be low and profit will rise.

Table: Statement with Change of Variable Cost for the Fiscal Year 2073/74

Details	**Original**	**Change in variable cost**	
		10% Increase	**10% Decrease**
Sales revenue	858.34	858.34	858.34
Les: Variable cost	781.42	859.56	703.28
Contribution margin	76.92	(1.22)	155.06
Fixed cost	53.10	53.10	53.10
Profit	23.80	(54.32)	101.96
CM ratio	0.08	(0.0014)	0.18
BEP	663.75	37928.57	295.00

Source: Annual report of STCL, 2073/74. (NRs. in crore)

Above table no. 4.14 shows that with 10 percent increase in variable cost, break-even point increase by 663.75 percent which indicates that variable cost and break-even point have positive and proportionate relationship.

Effect of Changes in Fixed Cost

A change in fixed cost does not influence P/V ratio. An increase in fixed cost will push up BEP but reduce profit. It increased and decreased of fixed cost by 10 percent with other factors assumed to remain same, it gets following result for the fiscal year 2073/74.

Table*:* Income Statement with Change of Fixed Cost for the FY 2073/74

Details	**Original**	**Change in fixed cost**	
		10% Increase	**10% Decrease**
Sales revenue	858.34	858.34	858.34
Les: Variable cost	781.42	781.42	781.42
Contribution margin	76.92	76.92	76.92
Fixed cost	53.10	58.41	47.79
Profit	23.82	18.51	29.13
CM ratio	0.08	0.08	0.08
BEP	663.75	730.12	597.37

Source: Annual report of STCL, 2073/74. (NRs in crore)

Above table No. 4.15 shows that 10 percent of fixed cost increase break even amount is increased by same percentage. From this situation, it can be concluded the break-even point and fixed cost has get direct proportionate relationship.

Major findings of the study

On the basis of the analysis, observation and information discussion, the following major findings have been drawn:

- Total sales of the corporation were unstable.

- Expenses of Salt Trading Corporation Limited were fluctuated. Variable cost as well as fixed cost increased or decreased during the period.
- The corporation has no details of systematic expenses planning which are essential for profit planning and control.
- Contribution margin of the corporation were Rs. 52.14, Rs. 56.46, Rs. 56.09, Rs. 61.24 and Rs. 76.92 percent in the fiscal year 2069/70 to 2073/74 respectively. It shows that the low contribution were in the fiscal year 2069/70 and 2073/74. Low contribution margin may problem to the corporation.
- From the study it is found that BEP sales analysis is the major component of the CVP analysis in the corporation.

Conclusion

Salt Trading Corporation has low contribution margin, low P/V ratio, high breakeven point and low margin of safety. The sensitivity test of CVP analysis proves that if variable and fixed cost increases, the breakeven point will also increases and if they were decreased then, the breakeven point also decreases.

It indicates that cost and breakeven point has positively correlation where as sales price and breakeven point has negatively correlation. The company's condition is very poor and requires effective improvement in situation.

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APPENDIX-I: ACTUAL SALES

Year / Products		**2069/70**	**2070/71**	**2071/72**	**2072/73**	**2073/74**
Consumable material	Amount (Rs.)	129.26	301.41	325.73	345.76	507.73
Agricultural material	Amount (Rs.)	1.88	103.33	287.36	271.74	272.56
Fuel, lubricant and tyre tubes	Amount (Rs.)	1.00	50.15	52.27	41.40	51.08
Machine and equipments	Amount (Rs.)	0.04	.0071	0.03	0.0036	-
Construction materials	Amount (Rs.)	-	2.49	1.56	1.50	0.88
Other materials	Amount (Rs.)	0.27	27.97	28.65	22.83	27.08
Total		132.45	485.35	695.6	699.23	859.33

Source: Annual Report of STCL, 73/74 (NRs. in crore)

APPENDIX-II: COST OF GOODS SOLD

Year / Details	2069/70	2070/71	2071/72	2072/73	2073/74
Purchases	286.61	479.91	474.95	533.12	739.88
Opening inventory	154.51	143.43	312.37	257.55	280.49
Closing inventory	143.43	312.37	257.55	280.49	362.03
Business expenses	88.16	117.94	109.76	111.82	123.07
Total cost of sales	385.86	428.91	639.53	622.02	781.42

Source: Annual Report of STCL, 73/74 (NRs. in crore)

APPENDIX III: PROFIT AND LOSS A/C

Particulars	2069/70	2070/71	2071/72	2072/73	2073/74
Actual sales	438.00	485.37	695.62	683.26	858.34
Cost of goods sold	385.86	428.91	639.53	622.02	781.42
Gross profit	52.14	56.46	56.09	61.24	76.92
Other income	8.32	8.24	7.07	6.44	15.28
Total	60.46	64.7	63.16	67.68	92.2
Adm. expenses	9.07	11.87	9.72	10.21	10.76
Interest expenses	30.65	40.79	33.70	35.48	41.02
Depreciation expenses	0.67	0.66	1.11	1.18	1.32
Operating profit	11.75	3.14	11.56	14.37	23.82
Gain on sale of assets (loss)	0.19	0.88	0.52	-	0.83
Earning before bonus and taxes	4.81	(3.86)	2.35	3.13	9.01
Employee bonus	0.10	-	0.26	0.31	1.00
Earning after bonus (loss)	4.71	(3.86)	2.09	2.82	8.01

Tax amount	2.95	0.17	0.59	0.53	1.68
Earning after tax (loss)	1.76	(4.03)	1.5	2.29	6.33
Opening retained earning	143.42	140.65	132.89	128.50	126.94
Closing retained earning	141.13	133.53	128.50	126.94	129.55

Source: Annual Report of STCL, 73/74 (NRs. in crore)